



THE WESTERN SOCIETY OF WEED SCIENCE 1938 – 2021

Vanelle Peterson, editor
Phil Banks, Rod Lym, and Don Morishita,
co-editors



The Western Society of Weed Science 1938 - 2021

*by Vanelle Peterson, editor
Phil Banks, Rod Lym, and Don Morishita, co-editors
with contributions from WSWS members*

Cover Photographs by Phil Westra

Cover photographs:

top (left to right): giant and green foxtails (*Setaria faberi* and *Setaria viridis*), common lambsquarters (*Chenopodium album*), field bindweed (*Convolvulus arvensis*)

bottom (left to right): kochia (*Bassia scoparia*), Palmer amaranth (*Amaranthus palmeri*), Russian thistle (*Salsola tragus*)

NOTE: Scientific names from the Weed Science Society of America *Composite List of Weeds*

FORWARD TO THE SECOND EDITION OF THE HISTORY OF THE WESTERN SOCIETY OF WEED SCIENCE (1938-2021)

By Vanelle Peterson, editor

Dr. Arnold Appleby completed a history of The Western Society of Weed Science (WSWS) for the early years 1938 through 1992; 45 meetings. In that history there is a description of the formation of the society and its early members. We can be proud that WSWS, under a different name, was the first Weed Science society in the U.S. The other regions and the national society were organized after the WSWS.

Much has changed and some things remain the same since then. The initial birth of the Western Weed Control Conference was from the Western Plant Quarantine Board (formed in 1919) whose objective was to prevent the introduction of foreign pests into the western states. Leaders in that organization encouraged a separate meeting of “the men working on weed problems from the various western states”. There is only a difference in wording between the objectives of 1938 and the objectives of the WSWS today (Table 1). Coordinated efforts in research, education, and with agencies and legislation are present in both (words in bold). The WSWS Discussion Sections originated in the early meetings, and they continue as a unique feature within the WSWS annual meetings.

Table 1. Objectives of the Western Weed Control Conference in 1938 and those of the Western Society of Weed Science 2021.	
1938 Objectives	2021 Objectives
To cooperate with other regions and agencies in the solution of weed problems.	To foster and encourage education and research in weed science.
To encourage national and state research in weed control.	To foster cooperation among state, federal and private agencies in matters of weed science.
To foster educational work on weeds through all appropriate agencies .	To aid and support commercial, private and public agencies in the solution of weed problems.
To formulate plans for organized weed control programs.	To support legislation governing weed control programs and weed research and education programs.
To function as a clearing house on weed matters.	To support the Weed Science Society of America and foster state and regional organizations and agencies interested in weed control.
To assist in the development of uniform weed, seed, and quarantine legislation in the states.	
To foster adequate national weed, seed, and quarantine legislation .	

One big change over the years has been the involvement of the agricultural chemical industry in membership and leadership. Originally industry members were not considered “suitable to be officers” of the society (from 1944 report). The first industry representative, Dick Fosse of Amchem, served as President in 1960, 22 years after the first Conference. This inclusion provides the opportunity for all individuals of the society, regardless of job responsibilities, to have a voice in the direction and leadership of the society.

Over the years, industry scientists have proven to be excellent researchers, and valuable and committed members. Before herbicide companies' consolidation there were more industry members than academic members (see Table 2). Then as companies consolidated there were almost equal numbers of members from academia and industry. There remains a steady and loyal commitment to WWS from industry members.

Governmental agencies participation has varied over the years. There were more agency members earlier (for example USDA-ARS, U.S. Forest Service, and Bureau of Reclamation) and then agency participation decreased. However, several of our Presidents made it a priority to increase their representation again in the society. They have been successful in increasing their membership.

Table 2. Representation of Western Society of Weed Science Members	
2021 (virtual meeting)	Academia 52%, Private/Industry 32%, Agencies 15%
2019 (regular in-person meeting)	Academia 55%, Private/Industry 30%, Agencies 15%
1993 (during industry consolidation)	Academia 43%, Private/Industry 47%, Agencies 9%
1970 (pre-industry consolidation)	Academia 32%, Private/Industry 50%, Agency 36%

One constant within our membership is the loyalty that we have for our society. So many comments have been made to the effect that the WWS annual meeting is the “favorite” of society meetings that members attend. Even members who move out of the west often continue to attend the WWS annual meeting and some even volunteer to be part of the WWS leadership.

As membership grew within the society, we decided to have separate sections (called Projects) for papers and posters to be presented according to similar research areas.

Our current Project listings from the Operating Procedures are:

Project 1 - Weeds of Range, Forestry, and Natural Areas

Project 2 - Weeds of Horticultural Crops

Project 3 - Weeds of Agronomic Crops

Project 4 - Teaching and Technology

Project 5 - Basic Biology and Ecology

These have changed over the years, for example Teaching and Technology used to be named Extension, Education, and Regulatory but when technology became such a large part of what we did and how we did it then the name change made sense. Our leadership is always looking to make sure that the annual meeting topics align with western weed science research and education priorities. In fact, there were so few attendees at the Range and Forestry section in the early 2000's that then-President Phil Stahlman asked me, as Member-at-Large, to attend the discussion section to ask members in that group if we should disband the Project because there were so few people attending! The decision was made not to disband the Project and the attendance in that section grew to almost dominate some annual meetings several years after that.

Areas of research priorities have changed over the years especially with the increase in research in ecology, genetics, and molecular biology. This will continue in the future; I have no doubt.

Many of the same weeds show up as concern in the early years of the society, mostly the perennials – Canada thistle, field bindweed, Russian knapweed, and whitetop. Very little is

mentioned about annual weeds in the 1938-1992 reports. However, the top 2 weeds reported in the Research Progress Reports from 1993 to 2021 were the annuals, common lambsquarters and redroot pigweed.

Finally, this document came into being when attending the 74th WSWs first (and hopefully only!) virtual meeting in 2021, I thought it was time to update the history with the 29 meetings that had passed since Arnold's history was written. My thinking was that if this project were completed in 2021 to early 2022 then it would be in time for the 75th WSWs meeting in 2022. President Sandra McDonald and the Board of Directors agreed with the idea and asked me to take the lead. I appreciate their trust to bring this together, but I knew that I could never accomplish this on my own, so I asked several Past WSWs Presidents to help. Phil Banks, Rod Lym, and Don Morishita graciously agreed to assist with this endeavor. They have been a tremendous help – each of them wrote several of the summaries of annual meetings and provided needed advice. In addition, Phil is a great record keeper and supplied many old photos and programs that could be scanned, Rod is a great editor, wrote several extra meeting summaries, edited many of the others, and co-wrote the history of the Noxious Weed Short Course with Celestine Duncan, and Don wrote the history of the Elena Sanchez Outstanding Student Scholarship and has a super memory, which in combination with his extraordinary editing was very helpful. Thanks to Sandra McDonald for support, sound advice and hints on working with Adobe Acrobat. Other WSWs members that answered my many questions and helped provide information were Carl Libby, Traci Rauch, Joan Campbell, Charlie Hicks, Gus Foster, Jeff Tichota, Jill Schroeder, and Joe DiTomaso. Graphic Designer, Angie Cummings, re-formatted Arnold Appleby's Herbicide Company "Genealogy" into a more readable format. And a special thanks to Gus Foster for the funniest email and to Kirk Howatt for giving me the best laugh during this sometimes-trying process (okay, Kirk, I will show you the secret WSWs Presidential handshake!).

NOTES:

- 1- The formatting of this history is mainly for reading as a digital copy. Therefore, page numbers for this second edition begin with the cover as page #1 unlike hard copy books where page numbering begins after the Table of Contents and Preface.
- 2- Dr. Appleby's history book was scanned in its entirety into a digital format so that it could be included in this document. You will see the Table of Contents from that book, so the original page numbers in the lower right-hand corner match the page numbers from Table of Contents from his book, not the pages in the Table of Contents for this second edition. There were several blank pages in Arnold's book which I removed so don't be alarmed and think that some of the pages were deleted.
- 3- Dr. Appleby's history book did not include many photos. I have included photos of the Board of Directors and Fellows when they were available. Some have been copied from Proceeding publications so there is a difference in the quality of the photographs. However, I thought it would be beneficial to include photographs of lower quality anyway.
- 4- Photos of the incoming Board of Directors are typically taken at the end of the annual meeting. Those photos are of the year before that Board would be responsible for an annual meeting. We chose to list the Officers and Board of Directors responsible for/at the annual meeting. So, you may see a photograph of the Board of Directors in Hawaiian clothing for a Colorado Springs meeting!
- 5- Any errors or omissions are unintentional and are my responsibility.

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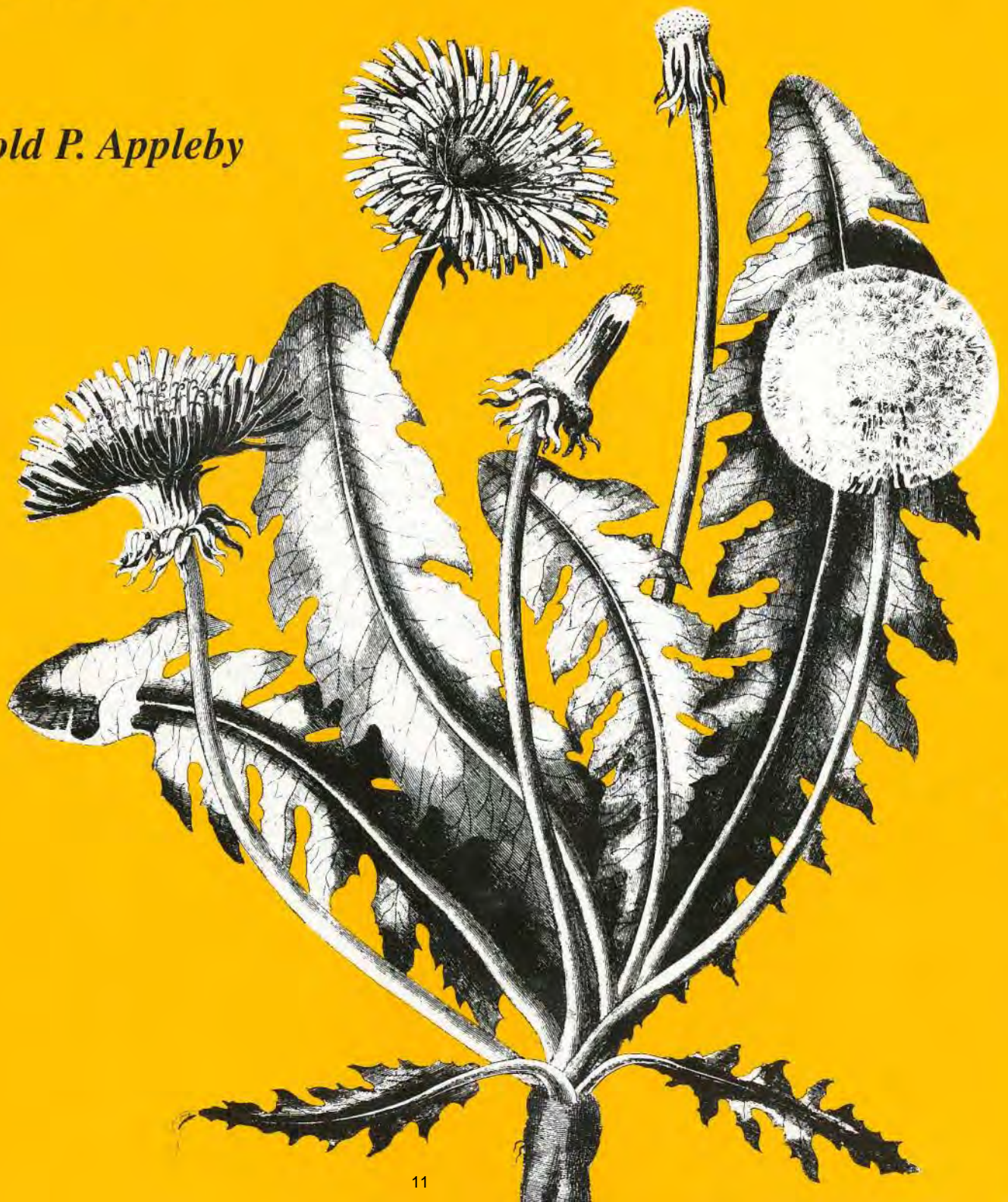
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The Western Society of Weed Science

1938-1992

Arnold P. Appleby



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PREFACE

When I was asked to compile a history of the Western Society of Weed Science, I agreed to do so with no coercion involved. I viewed it as an opportunity to delve into what seemed might be a fascinating subject. Indeed, it has turned out to be just that. Despite a bit of laborious compilation work, this has not been an onerous task, but rather a delightful period of learning and enlightenment. I appreciate that the WSWS Board of Directors has given me this opportunity.

In the early years, a representative from each state gave a report on weed problems and ongoing programs in that state. This history cannot include more than a passing summary of each annual conference in general, but WSWS members should know that a great deal of information about early activities in their individual states is contained in the old Proceedings. A considerable amount of excellent weed research was conducted in the early years that would still be of value today. For example, studies of time and extent of tillage, carbohydrate reserve patterns, seed germination, flooding, etc., is still useful information. Obviously, much less work was directed toward herbicides, particularly in pre-2,4-D days, but even in 1940, the effect of adding ammonium sulfate to herbicides, primarily Sinox, was investigated. This has been a subject of considerable interest in recent years, but we need to remember that it really is not a new idea.

WSWS, originally the Western Weed Control Conference, began with annual meetings in 1938. There was no meeting in 1943. In 1950, the decision was made to meet every two years on even-numbered

years. Only the Research Section met in the off years. The conference met in 1962 and again in 1963 and then met every two years in odd-numbered years. WSSA also met on alternate years, so by changing to odd-numbered years, WWCC avoided meeting during the same year as WSSA. This continued until 1967, when the conference resumed meeting annually. The name of the society was changed from the Western Weed Control Conference to the Western Society of Weed Science in 1968.

I have followed the general organization established by Robert N. Andersen, who compiled "North-Central Weed Control Conference: Origin and Evolution". The first chapter outlines how our Society began, and subsequent chapters summarize important and interesting (to me, at least) business of the Society for each year. I have attempted to select enough items from the Proceedings to give a sample of the research interests discussed that year. This is not intended to be an exhaustive document and inevitably, some important items may have been omitted.

This book is for reading, and I do not pretend that it is an exhaustive reference book. You will not find a great deal of statistics, lists, etc. It is a story, and I hope it will be read with that in mind.

The most readable parts of the book are the contributions from the Fellows and Honorary Members (I have used present terminology; original Honorary Members are called Fellows in this book). These tell more of the story of weed science and of WSWS than can be gleaned from the Proceedings. I appreciate their help and

also the help of individuals who collected photos and wrote information about the Fellows who are elderly or deceased. Of particular note were Larry Mitich and Dick Comes.

Dr. Alden S. Crafts wrote a history of the Conference covering the years from 1936 to 1954. This has been a useful reference in preparing this book. Wanda Graves provided Proceedings from the early years that are not included in my library. Of special importance has been Jeannette Harper, who typed, retyped, proofed, arranged photos, etc., etc.

I have felt like the chairman of a large committee, the membership of which has been all of the members of WSWs. I sincerely hope the book is reasonably accurate and that it will be a source of enjoyment to present and future WSWs members.

Arnold P. Appleby
Corvallis, Oregon

December, 1992

IN THE BEGINNING

-- The Birth of WSWs --

The Western Plant Quarantine Board was formed in 1919. It consisted primarily of entomologists and administrators, and was formed to establish quarantine barriers to the introduction of foreign insects, weeds, and other pests into the western states. The meeting of this Board on June 9 to June 11, 1936, in Boise, Idaho, was instrumental in the conception of WSWs, although the gestation period was two years. At that meeting, Harry L. Spence, Extension Agronomist in Idaho, gave a paper entitled "Our Weed Problem." He discussed at considerable length weed problems and control measures, regulatory attempts at weed control, educational programs underway, and other aspects of weed control programs in the western U.S. Importantly, he emphasized the need for coordinating the weed control work conducted by the various state organizations. He said, "I am taking the liberty of suggesting to your organization that an annual symposium be arranged as a section of the Western Plant Quarantine Board Meeting, whereby you could bring together the men working on weed problems from the various western states. It would aid materially in coordinating the various programs and furnishing a valuable opportunity to interchange suggestions in regards to our many weed problems. At present, there is no active organization, to my knowledge, studying, as a unit, the weed problems facing the various western states."

In August 1937, representatives from six states met in Boise with Henry Wallace, the Secretary of Agriculture, to present to him a picture of weed problems in the

western states. The decision was made at that meeting that an annual symposium be established to bring together the ideas of the different western states under the name of the Western States Weed Control Committee. No formal organization was established. In his opening remarks at the first official meeting in Denver, on June 16, 1938, Spence mentioned a recent organizational meeting in Tacoma, but there are no formal records of that meeting. The weed group, at least initially, would meet in conjunction with the Western Plant Quarantine Board.

The first meeting of the Western Weed Control Conference was held in Denver, Colorado, on June 16-17, 1938. A procedure was established that was followed for several years in which an official representative from each state presented a report on weed activities in that state. H.L. Spence convened the meeting and served as Chairman. He was chosen to remain Chairman for the following year as well. W.S. Ball, from California, was elected Secretary for the 1938 meeting, as well as the one in 1939. C.L. Corkins, Wyoming, was selected as Vice-Chairman.

The state representatives would sometimes call on a colleague from their state to supplement the individual reports. Official representatives from each state for the 1938 meeting are given in Table 1.

Table 1. Official state representatives to the first meeting of the Western Weed Control Conference, Denver, 1938.

	<u>Representative</u>
Arizona	O.C. Bartlett
California	Walter S. Ball
Colorado	L.W. Durrell
Idaho	H.L. Spence
Montana	Not represented
Nevada	George Schweis
New Mexico	D.C. Caylor
Oregon	George R. Hyslop
Utah	Earl Hutchings
Washington	J.I. Griner
Wyoming	C.L. Corkins

From other states and agencies

Kansas	T.F. Yost
Nebraska	W.L. Klatt
USDA, Wash. D.C.	Dr. Salman
Bur. Reclamat	M.V. Mitchell
Wash., D.C.	
Bur. Indian Affairs ¹ , Oregon	O.L Babcock

In his Presidential Address in 1965, Jess Hodgson indicated that the attendance at the 1938 conference was 24. I do not know where he obtained that figure; I cannot find any attendance figures from the 1938 Proceedings.

The 1938 meeting set the stage for the procedures of the Conference for the next several years. A Constitution and Bylaws was submitted and approved, the decision

was made to let each state select their official representative, the decision was made to solicit sustaining membership to help defray costs of the Conference, and a series of rather extensive resolutions were adopted to be forwarded to governmental agencies at the state and federal level.

Most of the first day was spent listening to individual reports from each official representative from 10 states plus visitors from Kansas, Nebraska, Washington, D.C., and the Indian Service in Oregon. Montana was not represented at the meeting. Following is a summary of comments made from each state, primarily to provide some insight into the state of weed problems and activities when our Conference began. A much less detailed summary will be presented for later years.

Arizona -- O.C. Bartlett -- Bartlett gave a 30-second report indicating that Arizona had neither definite weed laws nor a program. Counties could, under statute, declare weed districts and clean up certain weeds, such as johnsongrass.

California -- Walter Ball -- California has a huge diversity of weed problems and because of its climate, many of these weeds are problems year round. The three most important weed problems listed were camel thorn, artichoke thistle, and Austrian fieldcress. Secondary weeds included Klamathweed, whitetop, Russian knapweed, white horsenettle, and morningglory (field bindweed). Ball reported that a state organization of county agricultural commissioners, with the

¹Note: The titles (Service, Bureau, Division, etc.) of Federal Agencies are used as they appeared in the Proceedings. They may have changed since that time or they may have been used inaccurately in the Proceedings.

cooperation of the state and the counties, had a well-rounded regulatory setup that has been very effective. Much of their work has been service and education, rather than regulatory. A considerable amount of weed control work was done under a statewide WPA (Work Project Administration) project. The California Seed Council, composed of representatives of many organizations, including seed dealers, hay, grain, and feed dealers, extension service, research personnel, state seed laboratory, State Department of Agriculture, Farm Bureau, Grange, and county agricultural commissioners, has helped a great deal on weed problems.

Colorado -- L.W. Durrell -- Durrell deferred to Bruce J. Thornton, who conducted the weed control research program. He indicated that two very important problems--lack of finances and irrigation problems--hindered effective weed control. Two years of chlorate use often eliminated most weed species. He then deferred to R.H. Tucker, in the Extension Division, who indicated the following weeds in order of their importance: bindweed, whitetop, poverty weed, Canada thistle, and Russian knapweed. (Whitetop in the West commonly referred to at least four species, *Lepidium repens*, *L. draba*, *L. latifolia*, and *Hymenophyssa pubescens*. *Hymenophyssa* was later re-named *Cardaria*. Most of the time, reports did not specify which whitetop species was being discussed.). He indicated that 6 lbs of chlorate per square rod gave complete control in 50% of the cases; retreatment is sometimes necessary. Colorado has no particular seed laws. County agents had been doing some drillbox surveys and found that 80% of the farmers in a community were planting noxious weeds. Responding to a question, Thornton indicated that bindweed could be

controlled by cultivation and that 3-week intervals were as effective as 3- and 6-day intervals.

Nevada -- George Schweis -- Nevada has had a noxious weed law for several years, but has a limited amount of funds available to enforce it. Considerable progress has been made in controlling weeds in some counties. Considerable amounts of "so-called calcium chlorate" were being used with varying results and carbon disulfide also was used. On most lands, intensive cultivation was a preferred method. Their most important noxious weed, whitetop (*Lepidium draba*), had responded favorably to the cultivation method and "several hundred acres have been turned back to the owners free of weeds." Schweis called upon Mr. Stodieck, a county agent from Douglas County, to report on some of his work. He indicated that a program started in 1930 on whitetop had succeeded in eradicating 2/3 of it. This involved a heavy application of chlorates--a light application first with persistent followup. Some cleanup work was done with carbon disulfide.

Oregon -- George Hyslop -- The weed laws in Oregon were on a district level rather than a state level, primarily because the feeling was that local sentiment is required for success. He emphasized that primary efforts were directed toward education campaigns involving branch experiment stations using weed mounts and other types of activities. He reported very good results from CS₂, borax, Sinox, and chlorates. \$7,500 had been appropriated for weed research.

Washington -- J.I. Griner -- Griner reported that, "Washington has been more backward than any other state in

introducing weed control." The noxious weed law was one-year old and was not yet effective. A very large problem was that much of the seed that growers use was shipped in from out-of-state. "Twenty to forty percent of the seed comes in by mail that we cannot get." He promised that the State of Washington would cooperate with this Conference in every way. Discussion was deferred to W.V. Russell from Kittitas County. He indicated that watersheds were a severe problem and a primary source of many noxious weeds. The county used \$12,000 in 1937 for weed control. He agreed that a widespread educational program would be highly desirable.

Wyoming -- C.L. Corkins -- Primary efforts in Wyoming were on whitetop, "which is our worst offender." Three others that follow closely are bindweed, Canada thistle, and Russian knapweed. Also leafy spurge, perennial sowthistle, and white ragweed were troublesome. Pest control districts had been in operation for 5 years and considerable attention was being made to regulatory measures in cleaning up weed problems. Expenses were shared on a three-way basis, consisting of one-third from the state, one-third from the county, and one-third from the individual. Financial support was a continuing major problem. The average cost per acre thus far was about \$100. Weeds infesting federally-owned land had not been receiving attention and no cooperation had been obtained from the Bureau of Indian Affairs on Indian lands.

Utah -- Earl Hutchings -- Weed eradication was supervised by the Utah State Bureau of Land Industry. The state supervisor for the weed control program had been appointed and a weed and seed law was in place. Major weeds mentioned were

bindweed, whitetop, Russian knapweed, and Canada thistle. A quarantine, under which all seed entering Utah was subject to inspection and must carry a certificate, was enforced rigorously. Weed spread through the irrigation system was a great factor in the increased distribution of weeds. The Utah report was turned over to Selvoy J. Boyer and Ward C. Holbrook. They discussed the efforts in limiting the importation of weed seeds.

New Mexico -- D.C. Caylor -- New Mexico had no weed or seed laws and had made no particular organized attempt to control noxious weeds in the state.

Idaho -- H.L. Spence -- The weed program in Idaho has been handled by the Extension Service. They placed a great deal of emphasis on educational phases over the past 15 years, and considered it their most important activity. They had been working in connection with WPA and were now into their third year. Chemical treatments included chlorates and CS₂. He did not indicate which weeds were most important, but mentioned that leafy spurge had now been found in 19 counties.

Chairman Spence called upon some visitors from other areas.

Kansas -- T.F. Yost (Ted Yost later became the first President of the North Central States Weed Control Conference and is often called the "Father" of that Conference) -- Kansas had a relatively new weed law that allowed reimbursement of up to 50% of the cost of controlling certain noxious weeds. It was initiated only a year before, but had already generated great interest and was being used. Weed eradication is 90% by cultivation and 10% by the use of sodium chlorate. Yost said, "Federal work has been very valuable in

conducting our cultivation program." (I am assuming he meant the extensive cultivation research conducted at Fort Hays Experiment Station on field bindweed beginning in 1936.)

Nebraska -- W.L. Klatt -- Their weed law became effective in 1937 also, and had generated a great deal of interest in weed control. The legislature allotted \$50,000 for educational and administrative work. Bindweed was the worst weed problem; other important weeds were leafy spurge, puncturevine, and Canada thistle. Increasing emphasis was placed upon education through posters, notices, and warnings.

USDA representative from Washington, D.C. -- Dr. Salman -- Salman mentioned cooperative work with the State Agricultural Experiment Stations. Five experiment stations had been established at which a number of physiological studies on root reserves were being conducted. He indicated that the best time to begin cultivation of bindweed was when the plant was coming into bud, because that coincides with the time of low root reserves. Work done at Hays, Kansas, indicated that bindweed could be eradicated in large fields if cultivated for two years. Dry chlorates had been as effective as chlorates applied with a spray. Work was being done on competitive crops, but he was skeptical that weeds could be eradicated with competitive crops alone. Workers at Davis, California, found that soil high in nitrates requires a considerably greater amount of chlorates than does a soil with low nitrate content. Boron and arsenic were being used for soil sterilization and the rates must increase in heavier soils.

Representative of the Indian Service

(Oregon) -- O.L. Babcock -- Mr. Babcock indicated that state laws were not effective on Indian allotments. Indian landlords were not cooperative and were not concerned about noxious weeds. Chairman Spence responded that the experience in Idaho was different. On most reservations, they had received excellent cooperation, not only in a financial way, but in other ways.

Representative of the Department of Reclamation, Washington, D.C. -- M.V. Mitchell -- He reported that his division had been using young men from the CCC (Civilian Conservation Corps) camps and they had been very helpful. His group had prepared a series of slides for providing information to the public and that these slide sets could be made available to county agents.

Considerable open discussion ensued on the role of education in control of weeds and in limiting their spread..

On the following day, June 17, there was an open discussion among the delegates from the various states as to methods of abolishing weeds. This included the benefits of plowing to eradicate noxious weeds, comparing 3-1/2-inch with 6-inch plowing, comparable cost, frequency of plowing, and various methods and types of machinery.

George Hyslop had been closely involved in the new federal seed law, printed as House Resolution No. 10186 and commonly called the "Coffee Bill." Mr. Hyslop discussed in considerable detail the politics and potential effects of this bill. Chairman Spence reported that he had divided the U.S. into five districts and using seed laws then in force, selected six noxious weeds at random. In the 11

western states: Five state laws had all of these six weeds named as noxious in their statutes; one state had none; one had 1; one had 2; and one had 3. He stated that the 11 western states were the most uniform of any district in the United States. But the point is that there was a great lack of continuity and uniformity among the state laws. He believed that the new federal seed law would help "plug a lot of holes we have had in the past."

Considerable discussion was held on federal aid for state weed control. This was lead by Mr. Corkins from Wyoming because of his involvement in the process. He discussed various agencies from which some federal aid could be obtained and the considerable amount of politics and bureaucracy involved. Much of the discussion revolved around the Clark Bill, by Mr. Clark of Idaho, HR 9313, calling for federal funding of noxious weed control. A letter from H.A. Wallace, Secretary of Agriculture, was read, specifying reasons why the department did not approve HR 9313. The general consensus of the group was that speaking to the federal government as a unified voice, at least from the western states, and preferably from other regions as well, would be needed to solicit further support of research and educational activities directed toward weed control.

A report was heard from George Hyslop, Oregon, from the Objectives and Bylaws Committee. The name of the organization was firmly established as the Western Weed Control Conference. No attempt will be made to duplicate in this book the entire Constitution and Bylaws, but certain aspects may be of interest.

Object: To foster regional organizations and a national organization of weed control

agencies to act as regional and national clearing houses in connection with weed problems.

Purpose:

1. To cooperate with other regions and agencies in the solution of weed problems.
2. To encourage national and state research in weed control.
3. To foster educational work on weeds through all appropriate agencies.
4. To formulate plans for organized weed control programs.
5. To function as a clearing house on weed matters.
6. To assist in the development of uniform weed, seed, and quarantine legislation in the states.
7. To foster adequate national weed, seed, and quarantine legislation.

Dues were established as follows:

Official state memberships -- \$15.00

Statewide organization memberships -- \$5.00

Local organization membership -- \$2.50

Individual memberships -- \$1.00

Sustaining memberships -- \$50.00

NOTE:

In 1990-91, the WSWS membership voted to initiate Sustaining Memberships, when actually, Sustaining Membership was part of the organization since the very first meeting!

All members could participate in discussions at annual meetings, but voting power rested with the Board of Directors, consisting of the official representative from each state that had paid the official state membership dues.

The group worked in formulating and approving nine formal resolutions. Each one was discussed in some detail.

SECOND MEETING OF THE WESTERN WEED CONTROL CONFERENCE

Berkley, California
June 9-10, 1939

President -- H.L. Spence
Vice-President -- C.L. Corkins
Secretary-Treasurer -- W.S. Ball

Chairman H.L. Spence called the meeting to order and introduced Mr. Jacobsen of the California State Department of Agriculture for a welcoming address. Mr. Jacobsen spoke highly of the weed control activities in California. He mentioned that exhibits showing weeds and weed control were being displayed at the International Fair then underway.

Spence made some brief introductory remarks and stated, "The purpose of this meeting is entirely one of cooperation--an interchange of ideas and an attempt to correlate our activities in the interest of weed control work."

Walter Ball reported on correspondence exchanged with the Civilian Conservation Corps (CCC) indicating that it was willing to use its manpower to help control noxious weeds. A lack of funds and/or authority seemed to be important factors.

State representatives each gave a progress report on weed control activities in their respective states. An innovative program was reported by Mr. Kohout (Idaho) on the control of noxious perennial weeds by cultivation. The counties signed a lease with the owner, charged him about \$12.00 for a 2-year period of clean cultivation. The land was removed from the tax rolls during that time and most of the irrigation

companies waived water charges. Although the lease was signed for three years, the majority of the land was turned back after two years, with excellent control of the perennials. The land was plowed in the spring and then clean-cultivated approximately 6 days each time after the plants re-emerged.

L.E. Harris, Oregon, reported on a study of the seasonal trend of root reserves in Canada thistle. Carbohydrate reserves in uncultivated thistle reached their low point as the plants approached full bloom in early July. That was followed by a gradual increase until the end of the season. On clean-cultivated plots, the carbohydrate percentage at the beginning of the season was 25%, and by November, the carbohydrate content had decreased to the level of detection by chemical analysis. Ninety-nine percent of the thistle plants were eradicated during one season.

Of considerable interest in the early days of the conference was strengthening seed laws and pressing for a federal seed law to control the movement of weed seeds in crop seeds. For example, Utah passed a state law prohibiting the movement out of or into the state of any seed that contained noxious weed seed. The progress of a new federal weed control bill (the so-called "Clark Bill"), was discussed at

considerable length. The Clark Bill was expected to replace Senate Bill 771. The new version was primarily compiled by the U.S. Department of Agriculture. The original Bill had 294 pages; the revised Bill had 30. Spence expressed considerable satisfaction with the new version, but indicated that he thought there was still a gross misunderstanding relative to the problem of noxious weeds in the west, where weeds were more severe because a high percentage of the land was federally owned and that weeds tended to be more serious in irrigated land.

Alden Crafts gave an extensive review called, "Principles of Chemical Weed Control." He discussed the history of chemical control and mentioned sodium arsenite, sulfuric acid, sodium chlorate, carbon bisulfide, borax, Sinox, and diesel oil. W.A. Westgate, from California, gave an extensive discussion on Sinox (sodium dinitrocresol). R.M. Hagan (California) discussed "Soil Factors Affecting Movement of Carbon Bisulfide."

Representatives from the Indian Service, Forest Service, CCC, Taylor Grazing, and Agricultural Adjustment Administration (AAA) were present and were asked to discuss aspects of their respective programs. Mr. Talbot indicated that CCC labor was primarily confined to public lands, except in the case of "emergencies," when labor might be used on private land.

Spence reminded the group that, although the Conference was very much interested in legislative and regulatory matters, it was also set up to further research and educational activities.

The first weaning of WWCC from the Plant Quarantine Board was initiated. At the time of the 1939 meeting, the

Quarantine Board was tentatively planning to meet in Helena in 1940. The WWCC indicated their intention to meet in Seattle in conjunction with the Northwest Advisory Board and to inform the Quarantine Board of their plans, permitting the Board to change their meeting to Seattle if they so wished. I don't know whether they did or not, but the WWCC members clearly no longer felt any dependence on the Quarantine Board.

THIRD MEETING OF THE WESTERN WEED CONTROL CONFERENCE

Seattle, Washington

June 21-22, 1940

President -- G.R. Hyslop

Vice President -- J.I. Griner

Secretary-Treasurer -- W.S. Ball

The meeting was called to order by President George Hyslop. He introduced W.J. Robinson, Director of the Department of Agriculture, State of Washington, who welcomed the group. Secretary Ball reported that a good response had been received from the resolutions approved at the 1939 meeting. Correspondence had indicated that the representatives in Washington, D.C. were increasingly interested in weed problems and willing to assist when they could.

A few notes from the reports from the states:

Ball, California, reported that Klamath-weed continued to be a major problem. Sinox, especially mixed with ammonium sulfate, had advanced beyond the experimental stage and was being applied to large areas of grain. WPA had been helpful in controlling noxious weeds. Educational work on weed control had progressed significantly in high schools, ag college weed contests, granges, etc. In general, there was much more awareness of weed control than in previous years and progress was being made.

H.A. Morris, Montana, reported that their new state weed law was in effect and was becoming useful. Morningglory continued to be their worst weed. He concurred with reports from previous meetings that one

year of fallow controls Canada thistle .

George Schweis, Nevada, reported that a significant improvement in the contributions of the Bureau of Reclamation was evident. They were taking a much more active interest in controlling weeds on their federal land.

Lawrence Jenkins, Oregon, reported that whitetop and Russian knapweed were present in all 18 eastern Oregon counties, with whitetop also being present in five of the western Oregon counties. He gave an extensive report on many aspects of the weed control situation in the state, including educational work, regulatory work, and some results from research.

Earl Hutchins, Utah, reported that in spite of more stringent regulations, weeds were spreading in many areas of the state. Utah state law required that all seed entering Utah be free of noxious weed seed and must be inspected by the State Department of Agriculture. However, much of the feed grain entering the state had been found to contain noxious weed seed.

W.A. Harvey, Washington, reported that the most serious weeds in the Yakima Valley were four species of whitetop. He indicated that the species differ in their response to chlorates. Whitetop had been

reasonably successfully controlled with continually cultivated corn.

Ed E. Birkmaier, U.S. Forest Service, Division of Range Management, spoke on weed control in forest lands. He indicated that if attempts were made by other agencies and private individuals, the Forest Service would join in the effort to control noxious weeds.

Even in 1940, some concern was raised about over-dependence on chemical weed control. W.W. Robbins, California, stated, "We must not relegate to oblivion the old art of mastering weeds by skillful cultural measures. More and more we must associate weed control with good farming practices." This statement remains germane in 1992.

Lawrence Jenkins, Oregon, gave a paper, "An Educational Weed Control Program," in which he discussed various methods of distributing weed control information. Many of these methods were common then, as now, including preparation of sets of colored weed slides, weed control bulletins, weed tours, etc. One approach seldom seen in recent times was exhibiting a few of the worst weeds in flowerpots in store windows in the various counties.

L.E. Harris, Oregon, presented an extensive paper, "Spraying Annual Weeds in Grasses." Much of his talk concentrated on the characteristics and performance of Sinox. He indicated that in one trial, the average of clean ryegrass seed increased from 161 lb/A in the check plots to 921 lb/A in plots treated with the Sinox-ammonium sulfate combination. The stimulatory effect of ammonium sulfate on the performance of Sinox was discussed. Acidification was considered, but he noted that sulfuric acid did not cause any

appreciable activation of the Sinox, even though it significantly lowered the pH level of the solution.

Other papers were given by S.C. Salmon, Bureau of Plant Industry, USDA, on the 1940 Weed Research Conference held in Nebraska; C.I. Seely, Bureau of Plant Industry, Genesee, Idaho, on root reserve studies; W.O. Passmore, Washington, on the ag conservation program; and H.E. Morris, Montana, on seed inspection for better weed control. Ball read a paper by C.L. Corkins and A.B. Elledge, Wyoming, on continuous burning to eradicate noxious weeds. Among other information, they reported a surprising observation that a "searing" burning was more effective at reducing field bindweed than a "heavy" burning. No explanation of that result was offered. Dr. Crafts of California was asked to make some physiological studies on the effect of the searing treatment.

There was considerable discussion of the federal seed act and its relationship to various state seed acts. Several resolutions were passed.

FOURTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

Salt Lake City, Utah

June 27-28, 1941

President -- C.L. Corkins

Vice President -- G.G. Schweis

Secretary-Treasurer -- W.S. Ball

George Schweis presided in the absence of C.L. Corkins. After the usual welcoming speeches, Harry Spence of Idaho made some introductory remarks about the state of weed control. His remarks were in a cautionary vein, indicating that the international situation was gloomy, resources may need to be diverted for national defense purposes, and every effort must be made to not let the Weed Conference be diverted from its purposes.

Walter Ball reported a new development in California--the discovery of activity from sodium metaborate sprays on perennial weeds.

William Harvey, Washington, reported on experiments on whitetop and bracken fern. He indicated that D.C. McCulloch, a veterinarian from WSU, had found that seeds of *Amsinkia intermedia* caused hard-liver disease of swine.

R.J. Evans, Utah, reported that in 1937-38, seven weed experimental farms were located around the state for work on selected noxious perennial weeds. Data from those stations were becoming available and should prove to be quite helpful in weed control programs.

Hutchings, Utah, reported on an interesting technique to be used with Utah's weed control program. Red signs

were posted on property currently in the program and being actively worked. These were replaced by blue signs in fields that had been released back to the owner. This kept the program visible, provided additional incentives for growers to carry through with the program, and demonstrated success.

R.N. Raynor, California, gave an extensive paper on tests of selective herbicides. A new compound, dinitro ortho-cyclohexyl-phenol and some derivatives were compared with the standard Sinox (dinitro ortho cresol). The new compound was certainly active, but offered no superiority over the standard Sinox. He also reported on extensive studies on the effect of humidity on the cresol materials.

T.F. Yost, Kansas, gave an extensive report on "Kansas Bindweed Eradication Program," plotting the progress of that program with data on acres treated, percentages of growers involved, etc.

Other formal reports included, "Sorption of Carbon Disulfide by Soil" prepared by H.A. Hanneson and presented by R.N. Raynor; G.G. Schweis on state and federal seed laws; L.H. Mitchell on "Weed Control on Federal Reclamation Projects"; and R.S. Rosenfels on whitetop control in Nevada.

W.W. Robbins chaired a general discussion session with numerous questions and answers among the group on a variety of topics. This format was quite popular with the group. Chairman Schweis thanked Robbins for acting as discussion leader and said, "While this Weed Conference is only four years old, I want to say that this has been one of the most interesting meetings I have attended." Thus, the general reputation for the Western Society of Weed Science as the "discussion" Society may have been born in the very early days.

FIFTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

**Salem, Oregon
June 26-27, 1942**

President -- W.W. Robbins
Vice President -- E. Hutchings
Secretary-Treasurer -- W.S. Ball

President Robbins presided as chairman of the Conference. A number of state representatives were absent because of difficulties in transportation.

Ball, California, reported on a meeting with the chairman of the War Board, who indicated that weed control programs must be continued because of their importance in the program of "food for victory." One of the detrimental effects of the war was the evacuation of large acreages of land because of the incarceration of Japanese farmers, leaving a considerable amount of the land to persons who were not skilled in farming. They were buying the cheapest seed available, thus introducing many weeds, and were not adept at carrying out intelligent weed control programs. Many hundreds of acres of camelthorn and Australian fieldcress had been cleaned up, primarily through cultivation, and turned back to the growers. A new practice was the use of a light fuel oil, sprayed at 60-70 gal/A under about 400 lb pressure for weed control in carrots. This reduced the cost from about \$70.00 for hand-weeding to about \$8.00 per acre. Ammonium sulfamate had been effective for controlling johnsongrass, but it was not as effective on many weeds as claimed by commercial salesmen. There was considerable interest in planting guayule because of its promise for providing material for rubber. Hand-weeding was

costing approximately \$450.00 per acre. Dr. Robbins reported that the fine oil used in carrots was doing a fairly good job in guayule, cutting the cost of weeding by about one-half.

Mr. Kahout reported a shortage of labor in Idaho, less chemical usage, but relatively good success in cultivation programs. Their results from burning were mixed, with better success on Canada thistle than several other weeds.

Mr. Morris reported that there was increasing awareness that weeds were causing considerable damage, with more readiness to support weed programs with tax money. Canada thistle was not considered nearly as serious in Montana as whitetop, leafy spurge, and knapweed, because Canada thistle could be commercially controlled with cultivation at a reasonable price. Montana had had good results from the searing program, especially on willows in many of the ditch banks.

Mr. Schweis, Nevada, reported much greater attention and support for weed programs than ever before. There was increasing interest in using flooding as a control method for perennial noxious weeds. Where that was not feasible, cultivation was being widely practiced.

Lin Harris, Oregon, reported that 39 weed leaflets were available. Twenty-two counties were making direct appropriations for weed control programs, and several others were drawing some funds from other budgets. More attention was being paid by the Highway Commission to controlling weeds along the highways. In 1941, over 600 weed control demonstrations were established, primarily by county agents. Yellow starthistle was being treated satisfactorily with a combination of diesel oil and water.

Mr. Hutchings, Utah, reported that land was being returned to the owner much earlier than in the past because of close supervision, better knowledge of control measures, better equipment, and additional available moisture. Cultivation was done almost entirely by rubber-tired tractors, about twice each month, generally with duck-foot cultivators set 4-5 inches deep. The general attitude of the farm people had changed much in the previous two years. Instead of soliciting the land owners, weed control districts usually had a waiting list. Utah also had a severe labor shortage because of the war.

Mr. Gaines, Washington, reported that whitetop could be eliminated in two seasons by cultivation. Cultivation combined with competitive cropping systems reduced the weed considerably in one year. Chemicals for whitetop had not been successful. Some flooding for perennial weed control had been tested. Russian knapweed could be killed in 2-1/2 months and 97 percent of the whitetop when flooded for 98 days during the summer. Flooding improved the subsequent crops, particularly on saline or alkaline ground.

The Wyoming report was submitted by B.

Thomas Snipes and read by Walter Ball. This consisted largely of statistics on their weed control program; acreages, costs, numbers of farmers participating, etc.

George Hyslop, Oregon, indicated that vegetable seeds contaminated with noxious weed seeds were being introduced into the state and criticized the lack of regulatory action in preventing it. He mentioned specifically a considerable amount of wild garlic brought in from the Mid-West in orchardgrass seed.

R.B. Balcom, U.S. Bureau of Reclamation, gave a paper on weed control on Bureau of Reclamation projects, and Richard Raynor, California, reported on recent developments in weed research. Raynor mentioned promising results from sodium pentachlorophenate. He also reported in some detail on the hoary cress project, weeds in guayule nurseries, weed control in legumes and grass crops, and a number of other projects.

Lin Harris, Oregon, gave a paper on selective sprays as a means of weed control, primarily consisting of results with Sinox. He reported that Sinox had been valuable on grain and grass crops, flax, and peas. Richard Raynor reported on toxicity of Sinox to sheep. He reported several incidences of toxicity to people, but indicated that cattle and sheep avoided vegetation recently sprayed with Sinox, if untreated vegetation also was available. In field tests, sheep confined to areas, all of which had been sprayed with Sinox, suffered no lasting effects.

Dr. Robbins read a paper prepared by R.S. Rosenfels, Nevada, on progress for control of whitetop. Lawrence Jenkins, Oregon, presented a paper on the importance of the

extension service in organized weed control.

A shortage of sodium chlorate prompted a wire from the War Production Board asking for figures on the irreducible quantity of chlorate required to maintain primary weed projects in the western states. A survey of the group was taken and an additional sentence that borate would not adequately substitute for chlorate was added. The group discussed at some length weed surveys, seed laws and regulatory matters, educational efforts, and the increasing problem of transportation to the annual meetings.

H.L. Spence, Jr.

Of the small group of men who were instrumental in initiating the Western Weed Control Conference in 1938, H.L. "Harry" Spence, Jr. was a prime "mover and shaker." He gave a key speech at the 1936 meeting of the Western Plant Quarantine Board, calling for a special section devoted to weed problems. He was present at the preliminary meetings leading up to the first official Conference, and he chaired the first WWCC meeting in Denver in 1938. At that meeting, he was elected President for that year and for 1939 as well. If we could name a single "Father of WWCC," based upon the old Proceedings, it would be H.L. Spence.

Harry Spence was hired as Idaho Assistant Extension Agronomist in July, 1929, in Boise. In February, 1932, he was made Extension Agronomist and State Seed Commissioner. In July, 1942, he was named Assistant Director of Extension. He left the University of Idaho and joined Mesa Seed Company's Mesa Orchards as manager in December 1943. He held this position until 1946. He then accepted a position with FAO and worked in Afghanistan and Indonesia. He passed away on June 25, 1969.

J.I. Griner

J.I. Griner was an active participant in the early years of the Society. He was the official representative from the state of Washington at the initial meeting in 1938 and served as Vice President of WWCC in 1940.

Mr. Griner first appears in the records of the Archives Division of the State of Washington as Supervisor of the Horticulture Division of the Washington Department of Agriculture in the 1924-26 biennial report. He held that position until June, 1941. He likely was a political appointee who was replaced by incoming Republican Governor Langlie in 1941. In a 1927 report of the meeting of the Washington State Horticulture

Association, he appears as Secretary-Treasurer of that organization. In 1938, the year of the first WWCC meeting, Mr. Griner was Supervisor of the Division of Horticulture. The Horticulture Division handled a number of different areas of agriculture, including weed control.

Arnold Appleby



Walter S. Ball
Fellow, 1968

Walter S. Ball's first exposure with weeds was when he was a very young boy. His family left Aspen, Colorado, where he was born on March 17, 1898, and homesteaded in the Southeast part of Colorado, several miles north of the town of Manzanola. While growing up on this 160-acre farm, he became very familiar with hoeing and cultivating to control weeds.

He attended Colorado A & M (now Colorado State University) where he participated in football, baseball, and basketball. He was a member of the Sigma Chi Fraternity. His college schooling was interrupted for five years after his freshman year, for he was needed at home to run the farm. He said that during this period when he and his brother "Buster" (W. E. Ball) operated the farm, it was the only time it made a profit. Walt returned to Colorado A & M and obtained his B.S. degree in forestry in 1927 and a M.S. in 1929 in Botany under Dr. W.W. Robbins. This is where his real beginning in weed control began. Walt and "Doc" Robbins became close friends and following Robbins' move to UC Davis, Walt received a position offer from J.C. Jacobson, Jr., Chief, Division of Plant Industry, California Department of Agriculture and came to California in 1929 to begin a weed control program for the state. Walt and "Doc" Robbins continued to work together and traveled most of the roads throughout California making weed surveys and meeting with ranchers and farmers discussing weed control problems. In

1941, Walt co-authored with Robbins and Margaret K. Bellue, "Weeds of California." This very popular book was the most important weed reference guide for California for decades.

Walter became the Chief of the former Bureau of Rodent and Weed Control and Seed Inspection, Division of Plant Industry, California Department of Agriculture. He was instrumental in organizing the California Weed Conference and served as its first and second president (1949 & 1950). He also served as president of the Western Weed Control Conference. He was an organizer of the Weed Science Society of America and served as Western representative of this society for many years. Walt was also very involved in the California seed industry, serving as Secretary of the Seed Council for 15 years and as President, California Crop Improvement, for 10 years. Following his retirement in 1962, he served as Business Manager-Treasurer of the California Weed conference for seven years.

Walt was very proud to have been a part of the pioneering of weed control and to have had colleagues such as: "Doc" Robbins, Alden Crafts, Bill Harvey, Murray Pryor, Dick Raynor, Vernon Cheadle, Oliver Leonard, Bryant Washburn, and many, many others that he included as his friends in California, the West, and the United States.

Walter Ball passed away on June 7, 1975, at the age of 77. He will be remembered as a person who liked and enjoyed people, a leader, an organizer, and someone who liked to get the job done without a lot of "red tape."

Robert R. Ball



George R. Hyslop

George R. Hyslop was one of a small group of men who got the Western Weed Control Conference started. He was present at the 1937 meeting in Tacoma at which plans apparently were made for the 1938 meeting, the first in our Society. He was Chairman of the first Objective and By-Laws Committee, under which the new Conference was established and operated. He became the second President of the Conference in 1939. He was, indeed, one of the true founding fathers of WSWS.

George Hyslop came to Oregon in 1908 and became the first Department Head of the Farm Crops Department, a position he held until his death in 1943. He was also head of the Division of Plant Industries at Oregon State College.

Because I did not have the pleasure of knowing George Hyslop personally, I quote extensively from a tribute published in the 1943 Agronomy Journal, written by Harry Schoth.

He promoted and saw in actuality, in conjunction with fellow workers, the perfecting of grain certification and grading on a national basis, field and garden seed production development in Oregon from the class of a few hundred dollar business a year to one of several million a year; successfully championed bulb and fiber flax growing in Oregon; and was a firm advocate and believer, by using of the right types of forage plants and proper management practices, the

dryland ranges and logged off lands could be developed to the increased benefits of livestock production.

He would stop in the middle of a field and say, "Why is this part of the field better?" The search might lead back through several previous owners. He tried the patience of fellow teachers by his insistence upon stopping, no matter how inopportune the time, to investigate some flower in a faraway field or some peculiar appearance of the grass by the roadside. But this discovery proved to be the foundation upon which many agricultural discoveries were based, and it continually challenged the work of others and himself--seeking out the errors and demanding proof.

We have lost a strong, unflinching friend upon whom to lean, and we can no longer hear his hearty laugh; or enjoy with him an odd, whimsical use of a word; or chuckle with him over some of the human reactions of the people all about.

I have discussed George Hyslop with Virgil Freed, who knew him personally, and Virgil agrees that George Hyslop was a very special person. Of importance in this book, he clearly was a founding father of our Society.

Arnold Appleby

SIXTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

Salt Lake City, Utah

May 25-26, 1944

President -- Earl Hutchings

Vice President -- Mr. Gaines

Secretary-Treasurer -- W.S. Ball

WWCC did not meet in 1943, presumably because of wartime travel restrictions.

Tracy Welling, Chairman of the Utah State Board of Agriculture, welcomed the group. Mr. Ball made a few remarks about Professor Hyslop, who had died since the last conference. For the first time, those in attendance were listed in the proceedings; there were 45 names listed.

As usual, representatives from the various states reported on weed activities and status for the year. Several representatives mentioned a shortage of labor and of some chemicals, particularly chlorates, because of the war.

W.S. Ball, California, reported on an increasing usage of borax for soil sterilization. Sinox was plentiful and had been used extensively in grain, flax, onions, and garlic. Spraying onions cost \$8.00-10.00 per acre, whereas, hand-weeding cost \$80.00-100.00 per acre. Experimental work continued on Ammate and tests looked encouraging. He emphasized that good farming and good cultural practices remain crucial for satisfactory weed control programs, and indicated that summer-fallowing followed by a winter crop can eradicate or control such weeds as hoary cress. He reported an interesting new project begun on biological control of Klamathweed by insects.

Bruce Thornton, Colorado, indicated that the war had interrupted the weed program seriously in Colorado, but indicated that some progress was being made in the state. Spraying bindweed plots in the fall with acid arsenical resulted in an increase of 156 percent in the yield of barley planted the following spring. However, he expressed concern about the toxicity of this material.

Mr. Kuhns, Idaho, reported that a state association for noxious weed control had been organized. He reported a continuing problem with weed-infested grains imported from Canada and from other states. In the previous summer, a shipment arrived with an average of 80 bindweed seeds per pound of wheat. He indicated that Mr. Seely, Bureau of Weed Investigations, was doing excellent research in Idaho.

Mr. Morris, Montana, indicated that the most promising flaming treatment for perennial weeds was searing twice, first in full bloom, with a second treatment from the middle to the last of August, and an application of chlorate at 2-3 pounds (presumably per square rod) in September or October. He did not indicate which species this treatment controlled.

Mr. Burge, Nevada, gave an extensive report on a new poisonous plant (*Halogeton glomeratus*) in the state. He called for control efforts by all agencies in the area, but indicated that control measures had not been developed.

Lin Harris, Oregon, indicated that control efforts on bindweed near Pendleton had been so successful that the County Court had returned two different fields to the tax rolls. Previously, those fields had been taken off the rolls because of the heavy infestation of the weed. In the beginning of the experiments in 1939, one field had an average wheat yield from 10-15 bushels per acre, whereas, during 1943, the majority of the treated plots yielded 50-60 bushels per acres. He reported on control efforts against *Ceanothus*; a spreading poisonous weed, tansy ragwort; St. Johnswort; and larkspur, an increasing weed in eastern Oregon. Sinox-ammonium sulfate continued to be of great benefit as a selective spray in several crops.

Mr. Hobson, Utah, reported about 500,000 pounds of sodium chlorate were used in 1943, the first for several years. He expressed concern because of its fire hazard and indicated that in 1944, Atlacide would replace sodium chlorate.

Mr. Gaines, Washington, submitted his report by mail, indicating that a full-time state weed specialist would likely be employed within a short time. He indicated some death of livestock from chlorate in open ranches. W.A. Harvey reported that the experimental work on leased land near Toppenish would be moved to the irrigation branch experiment station at Prosser. He indicated that cultivation with duck-foot blades at 3-week intervals had eradicated whitetop in two seasons. Russian knapweed could be

eradicated with about two months of continuous or intermittent flooding, but whitetop required almost three months.

Mr. Harston, Wyoming, indicated concern with the rapid spread of weeds, particularly in irrigated lands infested as a result of poor control on surrounding rangeland. Most methods of weed control were too expensive for the low-value rangeland, and as a consequence, weeds continued to increase.

Information was requested from the chemical company representatives on possible supply of chemicals. Mr. Sime, Chipman Chemical Company, indicated that the supply of chlorates was limited entirely to WPB allocations, and the supply likely would be limited for some time. They were supplying Atlacide as an alternative. (Note: My pesticide index indicates that Atlacide is sodium chlorate, but all of the discussions in the proceedings indicated that sodium chlorate and Atlacide were two different things in 1944. I have been unable to document the difference in chemical ingredients.) Several representatives indicated concern at the lack of chlorate supply. Other representatives indicated that the supply problem with other chemicals was less severe. Medbury, Pacific Coast Borax, announced a new product called Borascu, which would be less expensive than borax.

L.H. Mitchell, U.S. Bureau of Reclamation, gave an extensive illustrated lecture on control of "land" weeds.

Dr. R.J. Evans, Utah, listed a number of experiments carried out in his state, comparing chemical methods with tillage and cropping.

R.N. Raynor, California, gave a paper on "Petroleum Oils as Selective Sprays." He described the use of stove oil on carrots, asparagus seedlings, and onions. He described the work of A.S. Crafts on the activation of dinitro compounds, supporting the hypothesis that activation produces undissociated molecules of the parent compounds, and that these molecules were more toxic than the ions. He discussed research on permeability of soils to movement of CS_2 vapors. He discussed control of hoary cress, and described experiments with general-contact herbicides.

W.L. Hendrix, President of the Idaho Noxious Weed Control Association, described the formation of the Association, its purpose, and its procedures in the control of noxious weeds.

T.F. Yost, Kansas, sent a wire from Denver indicating that illness had forced him to return home. However, he had submitted a report, "Six Year Progress Summary" of the Kansas bindweed program, which was read by the secretary. He reported that an important change had been the conversion from 10 to 15 small duck-foot sweeps to 3 to 5 wide sweeps, each equipped with a rolling coulter. This allows equipment to operate through surface trash, thus greatly reducing soil erosion. He reported the establishment in 1941 of a weed experimental station, staffed by a full-time research man. He reported on excellent research conducted by F.L. Timmons, Bureau of Plant Industries in Hays.

Mr. Harris chaired an open forum discussion on general weed problems covering a wide range of topics.

L.E. Harris was elected President, L.M.

Burge, Vice President, and W.S. Ball, Secretary-Treasurer. A note in the Proceedings indicated that Lin Harris resigned in July because he had become affiliated with the Chipman Chemical Company. Apparently, members from private industry were not considered suitable to be officers. In 1960, 22 years after the Conference was established, Dick Fosse, Amchem, was the first industry representative to serve as President.



Robert B. Balcom

Fellow, 1968

Robert Balcom, known as Big Bob to his Wild Western Weed Warrior colleagues, began his career in plant management with the Bureau of Reclamation on the North Platte Irrigation project in Nebraska in 1934. He transferred to the Denver office in 1940 and to the Washington, D.C. office in 1945, where he served as Chief Agronomist for the Bureau of Reclamation until his retirement in 1969.

Bob was a strong advocate of organizing weed workers into working groups and participated in the first Western Weed Control Conference in Denver in 1938. He was a regular participant in most of the early meetings of this conference and in 1968 he was one of the first five members elected as Honorary Member (later designated Fellow).

Bob was more than familiar with the necessity of scything, chaining, hand-cutting, and mowing aquatic and ditchbank weeds to keep water flowing in the thousands of miles of irrigation channels his agency was responsible for operating. With the advent of 2,4-D, he saw the possibility of advancing this new chemical technology into control measures that would be more effective and

economical than anything he had known. In the 1940's, the Bureau of Reclamation did not have research capability in plant science, but Bob did not let this deter him. He was instrumental in getting the Agricultural Research Service of USDA involved in aquatic weed research and in initiating a joint USBR-USDA cooperative research project. He was an active participant in the advisory committee for the cooperative project until his retirement.

Bob continued to live in the Washington, D.C. area after retirement and his last known address was in Alexandria, Virginia.

Dick Comes

SEVENTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

Boise, Idaho
June 6-7, 1945

President -- L.E. Harris (resigned in 1944)
Vice President -- L.M. Burge
Secretary-Treasurer -- W.S. Ball

Several items of interest occurred in 1945. Virgil Freed, future Fellow and Honorary Member of WSWS, was the new representative from Oregon. W.A. Harvey, also future Fellow, transferred from Washington to the University of California at Davis. Clarence Seely moved from the Plant Industries station at Genesee, Idaho to the Agronomy Department in Moscow. The hormone weed killer, 2,4-D, was announced in 1945, an event that would have an enormous influence on the future of weed control. From 1945, more and more attention would be devoted at WWCC meetings on factors influencing 2,4-D and less on the older materials such as sodium chlorate.

The meeting was called to order by Chairman Burge. Mr. Henderson introduced the first speaker, Governor Gossett of Idaho. Walter Ball gave an extensive report on the first meeting of the North Central Weed Control Conference. He praised the meeting, the interest, and the information presented, and predicted great success for that organization. However, he expressed a personal opinion, oft repeated by many members of WSWS in later years, that he preferred more time be given to general discussion.

Alden Crafts gave a paper on "Herbicidal Properties of Oils." Mr. White, U.S.

Indian Service in Utah, indicated that there were severe weed problems on Indian lands and that the agency had difficulty in arousing interest in their control by the Indian farmers. He pledged cooperation with the states and counties, and asked for help in dealing with weed problems.

R.B. Balcom, Bureau of Reclamation, Washington, D.C. {one of the first group of WSWS Honorary Members (Fellows)}, gave a report on "Control of Water Weeds in Irrigation Systems." He discussed mechanical, drying, and chemical control methods.

J.R. Douglas, Idaho, reported on "Beet Leaf-Hopper and Its Relation to Halogeton." He indicated that halogeton can serve as a host to the beet leaf-hopper and discussed the ramifications involving the spread of curlytop virus. Burge, Nevada, in a discussion following Douglas' report, said that halogeton has become a huge problem in Nevada and cannot be handled without federal help. Evidence was accumulating that the plant was killing cattle and sheep. A special committee was appointed to work on a resolution to get federal aid for halogeton control in rangelands.

Thomas VanMeter, Idaho, gave a report on "Noxious Weed Control on National Forests," indicating that St. Johnswort is

one of the severe weed problems. In the discussion following his talk, Ball, Crafts, and Robbins reported informally on results obtained on that weed in California.

C.I. Seely, Idaho, gave an extensive report on his research on 2,4-D. The original formulation was in carbowax. He indicated that the cost of 2,4-D was initially attractive, but had risen since that time. Control of some weeds, such as dandelion and some biennials, was very good, but only vertical roots, not lateral roots, were controlled in creeping perennials. Results were poor from applications at low temperatures.

Bill Harvey, California, discussed "Soil Effects of 2,4-D." He had tested the effect of soil residues of 2,4-D on a number of crops and expressed considerable concern that 2,4-D would act as a soil sterilant, at least temporarily. Concern was expressed by Mr. Seely and Mr. Robbins that 2,4-D was having a detrimental effect on soil bacteria. Alden Crafts said that information from both Zimmerman and Mitchell indicated that 2,4-D was quite short-lived in the east, but persistence would be longer in California because when the soils are warm, they are also dry. When they are moist, they are cold. Harvey reported results on a number of perennial weeds, indicating that field bindweed seemed to be one of the more susceptible species. Hoary cress was much more difficult to control and results on Russian knapweed were variable. He stressed the need for thorough leaf coverage on plants that tended to be less susceptible.

There followed considerable discussion by representatives from the various states on the results from 2,4-D research. A number of speakers suggested that

recommendations for 2,4-D usage be cautious, pending further investigation. New dry salts and liquids were more easily handled than the old carbowax formulation and optimism was expressed that the formulations would continue to improve.

Reports from various state representatives were presented, most of them involving preliminary experiments with 2,4-D. Nearly all expressed the opinion that work was proceeding cautiously and it was too early to draw definite conclusions. Remarks by Chet Otis, Oregon, may have had some influence on future meetings of WWCC. He praised the contributions of the commercial representatives and expressed the opinion that they were not being adequately utilized in the Conference. He said that relationships with industry representatives were excellent in Oregon, and hoped that that could be true throughout the west.

One of the comments from Mr. Gaines, Washington, was the rueful acknowledgment of the efficient work of the California Chamber of Commerce, resulting in the loss of the Washington weed specialist (Bill Harvey).

The committee on program and place of meeting recommended that the Conference meet earlier in the year. Considerable discussion followed, almost entirely supportive, and the group voted to hold mid-winter meetings.

EIGHTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

Reno, Nevada
February 26-27, 1946

President -- B.E. Kuhns
Vice President -- Bruce Thornton
Secretary-Treasurer -- W.S. Ball

The Western Weed Control Conference continued to evolve in several ways. By popular demand, the meeting time shifted from mid-spring to February. A Research Committee, under the chairmanship of W.A. Harvey, was established and this was considered to be a significant step. President Kuhns said, "The work of the Research Committee is what the work of the Conference will be built around for the next few years." Lambert Erickson moved from Wyoming to the Agronomy Department in Moscow. R.N. Raynor left the University of California and moved to Dow Chemical Company in California.

During the first day, President Kuhns announced a "stag" dinner that evening. This was in spite of the fact that there were at least three female attendees at the meeting. I doubt that an official "stag" dinner would be acceptable in the 1990's.

The conference continued to grow. The total attendance, as indicated by roll call, was 163.

A considerable amount of research effort on 2,4-D had begun in 1945. The Conference was very much concerned with coordinating research among the various states so that knowledge of this new, exciting material could be maximized. This likely was the driving force behind the establishment of the Research

Committee. This committee was given the task of setting up uniform testing protocols in the west, similar to efforts established by the North Central Conference. An enormous volume of sensational publicity in the popular press had been released about 2,4-D; some proved to be relatively accurate, some did not.

Much of the 1946 conference was devoted to a discussion of results from 2,4-D. Most of the research workers were cautious and avoided making many positive predictions on the eventual use of 2,4-D. There was general agreement that it was performing very well for many lawn weeds and on a wide range of annual weeds in grass crops. Results were quite mixed on the deep-rooted perennials. Several research workers indicated that translocation had been noted downward to about 16 inches, but that lateral movement was limited.

Virgil Freed gave an extensive discussion of the chemistry and the formulations of 2,4-D and related chemicals. There had been much variability in the way people expressed rates tested. Some were using parts per million in solution without discussing the total volume, others talked about pints, pounds, etc. The group agreed that, henceforth, all rates should be expressed in pounds of acid per acre.

Besides the extensive portion of the Conference meeting taken up by 2,4-D discussion, other weed control items were also discussed. Lin Harris, Chipman Chemical Company, discussed spraying equipment. A great deal of the spraying was being done by modified orchard sprayers at high volumes and high pressure. Bill Harvey indicated in the discussion that carrot spraying with oil was commonly done at 400 psi and that 100 psi should be sufficient for other spray applications. Representatives from companies indicated that they needed ideas and information from the research workers and they could design appropriate equipment.

Evans, Utah, announced that they had been battling an apparently new strain of bermudagrass, which "is the worst thing you have ever seen." He measured 60 tons of green weeds per acre, 90% of which were root stocks. These samples were dried in the laboratory, reweighed one year later, and amounted to 16.3 tons of dry weed per acre. He expressed doubt that any chemical could handle the monster.

Mr. Young, Apco Corp., discussed their machine designed to kill vegetation by electric current. He expressed great optimism that this method would prove to be cheaper and more effective than most other methods of eliminating weeds.

A panel discussion, led by A.S. Crafts, was conducted on selective and contact herbicides. Considerable discussion centered around Sinox and led into discussions again on 2,4-D. Some discussion was directed, with some optimism, toward 2,4-D applied as a dust. Virgil Freed cautioned that this would create a drift problem that would eliminate 2,4-D usage in many areas. Other

observations in the free-flowing discussion included comments that good control of field bindweed was obtained in strawberries with 2,4-D. Raynor, Dow, announced a new product called Dow Contact Herbicide, which was the parent phenol of Sinox. This had promise in such things as dormant alfalfa and desiccation of potato tops.

A panel on poisonous plants was led by Mr. Fleming, Nevada.

W.A. Harvey presented the report of the Research Committee relative to the use of 2,4-D. It recommended rates in various cropping situations for testing, recommended that manufacturers include the pounds of acid per gallon (which was not commonly done then), and listed weeds as susceptible, intermediate, and resistant to 2,4-D.

In response to a question, Virgil Freed, the 1947 program chairman, indicated that the program would, "Do a little bit less 2,4-Ding and maybe a little more hoeing." He indicated that there would be some discussion about extending the meeting to 2-1/2 days.

NINTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

**Portland, Oregon
February 6-7, 1947**

President -- H.E. Morris
Vice President -- V.H. Freed
Secretary-Treasurer -- W.S. Ball

Jesse Hodgson was a new agronomist with the Bureau of Plant Industries in Boise.

In the reports from the various states, most of the representatives discussed in some detail the results from 1946 treatments with 2,4-D. A large number of research plots were established, questionnaires were sent to growers and county personnel, etc. I will mention a few observations of particular note, but in general, results from 2,4-D were mixed, some weeds were much more sensitive than others, reasons for failures were attributed to a variety of divergent causes, and everybody predicted a large increase in following years in the use of 2,4-D.

C.E. Allen, Wyoming, indicated that much of the weed activity in Wyoming involved obtaining equipment and spraying 2,4-D.

W.C. McMinimee, Washington, announced a new weed control district including the Grand Coulee Dam. He mentioned an increasing interest in weed control by the federal, state, and county governments, railroads, and farm groups, and commented that more extensive and intensive research programs were being carried out by federal agencies, the state, college, and experiment station on the new herbicides.

George L. Hobson, Utah, had compiled an

extensive report on a questionnaire that had been submitted to the various counties. Most of it dealt with results from 1946 applications of 2,4-D. Results in general were favorable, but mixed. He indicated that over 1 million gallons of 2,4-D, from 12 different manufacturers, were used in Utah in 1946. This seems like a very large amount, considering that he also reported that 3,000 acres of cropland had been treated (this sounds low; many states were reporting 10 times that). There could have been a considerable amount sprayed on rangeland and non-cropland, but I have doubts about the 1 million gallon figure.

D.J. Leubbe, Montana, reported difficulties in obtaining spray equipment and experienced personnel. One of the reports from Montana summarized results of a thesis by Jesse Hodgson, a future president and Fellow of WSWS, using 2,4-D for lawn weed control.

W.G. Nibler, Oregon, reported that weed control programs were slowly resuming activities following a considerable hiatus during the war. He reported that approximately 10,000 acres of grain and grass crops were treated in 1946, but he anticipated that at least 100,000 acres would be treated in 1947.

Bruce J. Thornton, Colorado, reported generally favorable results from 2,4-D,

although considerably poorer than the extravagant early claims for the material. He reported on Dr. Jess L. Fults' physiological research with 2,4-D. He summarized 2,4-D results thus, "The use of 2,4-D should be viewed as a control rather than an eradication measure in dealing with most weeds." This statement has proved to be true with most herbicides in subsequent years.

Lee Burge, Nevada, reported an increase in interest in weed control and discussed extensive observations on 2,4-D results in 1946. Morningglory and several other weeds were controlled well with 2,4-D in grain, but results on white top and knapweed were not as satisfactory.

Walter Ball, California, discussed preliminary observations on the electrovator for perennial weeds. He reported that in some cases, four applications on Russian knapweed gave encouraging results; in other cases, 6-7 applications were needed. The cost is \$10.00 per treatment, making it more expensive than many of the chemical methods. Research was continuing.

V.A. Cox, Idaho, complimented the research men, Mr. Seely and Mr. Erickson, and indicated that 16 of the 44 counties in Idaho had full-time county weed supervisors.

Walter Ball made a few brief statements about the North Central Weed Control Conference and introduced Noel S. Hanson, University of Nebraska, to discuss that Conference.

President Morris commented that the Conference was still operating under a set of rules adopted at Denver and that it was time to draw up a more formal Constitution and Bylaws. This was done and the

Constitution and Bylaws were read and adopted at the end of the meeting. I could see no major change from the 1937 version except for minor wording.

E.O. Essig, California, gave a paper on "Insects in Relation to Weed Control," H.R. Offord, USDA, spoke on "The Control of Weed Hosts of Plant Diseases," Robert B. Balcom, Bureau of Reclamation, spoke on "Weed Problems and Control Program of the Bureau of Reclamation," Cecil Graham, U.S. Bureau of Reclamation, spoke on the weed control program in that agency, and L.W. Keppart, USDA, announced that R.S. Rosenfels would be stationed in Denver to work in cooperation with W.T. Moran of the Bureau of Reclamation.

Cecil Tap, Canada Department of Agriculture, British Columbia, discussed weeds as they affect the seed industry, Walter Ball read a paper by W.W. Robbins on "Weed Control in the Farm Program."

A roundtable discussion on the respective merits of chemical and cultural control, involved D.D. Hill, Oregon, L.E. Harris, Oregon, C.I. Seely, Idaho, and Dick Raynor, Dow Chemical in California.

Virgil Freed, Oregon, presented a paper on "Soil Fumigants," which was followed by a lively question-and-answer session.

Chet Otis, Oregon, chaired a panel on weed control equipment. Panel members were F.E. Price, Oregon State College, William Harvey, California, and R.N. Raynor, Dow Chemical in California. Each of the panel members made statements about equipment and there was a spirited discussion among the group. There was a considerable amount of

discussion of 2,4-D dust, with only an occasional warning about the drift hazard.

Asked about spray markers, Harvey mentioned Titanox B30, but others had not had satisfactory results with that material.

A.G. Norman, Camp Detrick, Maryland, gave a paper on "Synthetic Growth Regulators as Herbicides." He emphasized that these new herbicides should be used as an adjunct, not a replacement, for good cultural methods.

R.W. Allard, California, gave a paper on "Effect of Certain Growth Regulating Compounds Upon Grasses." He discussed a new compound, later named IPC or propham. He indicated that IPC was nearly missed in the screening program at Camp Detrick because it had little effect on corn seeds germinating in dilute solutions in petri dishes, the standard screening technique. However, in the field, it was quite effective against a wide range of grasses.

W.A. Harvey, California, gave the report of the Research Committee, consisting largely of recommendations for the use of 2,4-D and a list of susceptible and resistant weed species. There was an open discussion period on 2,4-D, chaired by Lin Harris. One of the recurring comments in that discussion emphasized that good soil moisture is beneficial in the control of perennial weeds with 2,4-D.



Alden S. Crafts
Fellow, 1968

Alden Crafts was born in Ft. Collins on June 25, 1897. His family moved to California early on and Alden graduated from an Oakland High School in 1916. He enrolled at UC Berkeley that fall but left college after one year and worked at the Kearney Field Station. In 1918 he and two brothers purchased a farm in Potter Valley near Ukiah, California, and he farmed there until 1925.

He returned to college at UC Davis in 1925 but transferred to UC Berkeley in 1926. He and Alice Hardisty were married June 25, 1926, on his 29th birthday. At Berkeley he worked on the mechanism of action of the acid arsenical herbicides and proved that arsenic moved from the leaves into the roots. This resulted in his first publication, "The Application of Physiological Methods to Weed Control," published in 1927.

Alden graduated from UC Berkeley cum laude in December 1927, and started graduate school at UC Berkeley in the spring of 1928, obtaining his Ph.D. in 1930. On July 1, 1931, Crafts became Assistant Botanist at UC Davis with the title Weed Control Scientist--the first person in the U.S. to have a weed control title; starting salary was \$3,000 per year.

With his colleague Richard Raynor, Crafts did pioneering studies on the uptake of chemicals that

eventually revolutionized weed control; results were published in 1935. In 1942, Robbins, Crafts, and Raynor's book, Weed Control was published--the first college level textbook on weed control. After the third edition in 1962, when he was senior author, he replaced it in 1975 with Modern Weed Control.

Starting in 1944, Crafts did pioneer work with 2,4-D, and in 1952 his studies with labeled compounds started in earnest. To avoid the artifact of xylem movement, he developed autoradiographic methods using freeze-drying of plants.

He was president of WSSA from 1958-60, and in 1964 was named one of the society's first Fellows. He was named a Fellow of the Western Society of Weed Science in 1968. He did more than any other individual to transform weed control into Weed Science.

Crafts authored 177 publications, including 10 books, and had a large number of distinguished graduate students. After 33 years of teaching and research, he retired in 1964 and became an avid international traveler. He died on February 9, 1990, at age 92.

Larry W. Mitich



F. Leonard Timmons
Fellow, 1968

Tim, as he was known to nearly everyone, was one of the first four full-time federal weed scientists in the United States. In 1935 he established the first USDA-State cooperative weed research project in the United States at Hays, Kansas. This was known as the bindweed control project and many of the control techniques and concepts developed by Tim on that project are still in use. Tim was transferred to Logan, Utah, in 1948 and became the regional coordinator for ARS weed research in the eleven western states. He was a versatile and pioneering-type person and while at Logan, he began the first federal research on control of aquatic and ditchbank weeds. In 1954, he was transferred to Laramie, Wyoming, where he served as group leader and investigations leader (1960) for all ARS research workers in the United States who were involved with weeds in aquatic and noncrop areas.

As Western Regional Coordinator, Tim traveled all over the western United States each year to visit state and federal weed research projects as well as the weed programs of several federal land management agencies. To keep weed research workers and land managers informed of the latest in weed research and control technology, he issued 19

newsletters from Logan and Laramie between 1949 and 1954. When the Weeds Journal (now Weed Science) became available, it filled the need perceived by Tim to keep others informed of the latest in weed science and he discontinued the newsletter. The popularity of his newsletter is indicated by his mailing list to 500 weed workers in 35 states, 5 Canadian provinces, and 15 other countries.

In the early 1940's, the War Department was concerned about the availability of enough kapok to make life jackets for the armed forces. Tim was selected to make a survey of milkweed infestations, estimate possible yields, and determine if it would be feasible to use milkweed floss as a substitute for kapok. In the early 1950's, he was assigned to evaluate and make recommendations concerning mechanical and cultural control of Kans grass (*Saccharum spontaneum*) in India.

Tim was a pioneer and leader of modern weed science. He was one of the first five individuals named as Honorary Member (now Fellow) in both the Weed Science Society of America (1964) and in the Western Society of Weed Science (1968). He was also named a Fellow in the American Society of Agronomy in 1961.

Tim and his wife, Bessie, moved to Tucson, Arizona, after retirement in 1970 where they continue to reside.

Dick Comes

TENTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

Sacramento, California
February 2-4, 1948

President -- V.H. Freed
Vice-President -- Bruce Thornton
Secretary-Treasurer -- W.S. Ball

The 1948 meeting was the first 2-1/2-day meeting of WWCC. Several new attendees were noted. Fred Arle was listed as being located at State College, Mississippi. Vic Bruns was a new research worker at Prosser, Washington, Dale Bohmont was added to the Experiment Station staff to work full-time on weed control research at Laramie, Del Tingey was located at Logan, and Rex Warren was at Corvallis. These gentlemen all became important members of WWCC and WSWS. Considerable discussion continued on 2,4-D, but other aspects of weed control were included more extensively than in 1946 and 1947. Numerous persons warned that in spite of the exciting results from 2,4-D, it should not create a trend toward replacing good farming with chemical control alone.

C.B. Hutchison, Dean of Agriculture at Davis, California, gave an interesting and quite knowledgeable keynote speech. He obviously had done his homework on weeds and their control, and he pledged that the University of California would continue extensive work in weed control.

Major addresses were given by (a) A.A. Brock, California Department of Agriculture on "Regulatory Aspects of Weed Control," (b) W.W. Robbins, California, on "History and Development of Weed Control," (c) Robert Balcom, U.S. Bureau of Reclamation, Washington, D.C., on

"The Bureau of Reclamation's Part in Control of Weeds on Irrigation Projects," (d) W.T. Moran, BLM, Colorado, on "BLM Laboratories," and (e) J.K. Holloway, USDA, on "Biological Control of Klamathweed Progress Report." Holloway reported that a significant amount of control was becoming evident from the 1944 insect introductions, but more time was needed to evaluate whether this program would be successful.

The entire program of the morning of February 3, was held at the Davis University Airport for demonstrations of different types of aerial application equipment. The afternoon was spent on campus at the Ag Engineering Building. There were some 700-900 persons present to see demonstrations and discuss various weed spraying and dusting equipment. Spending an entire day on application equipment illustrates the consuming need and interest in developing better methods for applying the burgeoning supply of herbicides.

A.G. Perkins, Safety Supervisor of the California Public Utilities Commission, spoke briefly on weed control on railroads and offered the following personal comments about weed control. He described his boyhood on a farm with a number of crops and remembered that it was his duty to eliminate a large number of weeds with the hoe. "While I would be hoeing corn or

beans, or whatever, it was near the track, freight trains on the upgrade would pass at a slow rate of speed and I just couldn't resist knocking off for a few minutes and grabbing the freight, which a boy of my caliber at that time could do, and ride down a half a mile or so to the old swimming hole, where I'd join my friends in a bath, but here's where the dusting commenced. When I got back to the farm, my father usually would be around there somewhere and would have inspected by that time the rows and the weeds that hadn't been cut and he would go to the nearby bank of the creek and procure a rather mature willow and that, gentlemen, is where the weed control by dusting actually began. It had the effect of eliminating a lot of weeds for a brief period after that, I assure you." I insert this quotation in our history, because I believe many of the older members of our group can relate to that experience very well and, indeed, it does reflect back on the history of weed control in general.

As usual, reports from the individual states were given by the official state representatives. Some of them were quite extensive and I will not summarize each one. Many reported that because of increasing familiarity with 2,4-D, results were often very good and resulted in significant, sometimes dramatic, yield increases in crops.

Hodgson, Idaho, indicated that, "The excessive cost of repeated electrovation treatments and the poor results generally achieved, indicate that electrovation is not a practical means of weed control in this area." Some of the new herbicides under test in various states were calcium cyanide, potassium cyanate, naphtha oils (perhaps not new, but increasing in importance), and TCA (the NH_4 salt, not the Na salt).

Almost every state reported that work was being initiated on the more basic physiological effects of herbicides, mostly 2,4-D. Much information was available in 1948 on timing, temperature effects, translocation, and especially moisture in relation to perennial weed control. Many of the conclusions reported at the 1948 meeting have essentially remained unchanged. Almost all representatives mentioned a continuing increase in research being conducted, persons employed by the university, interest on the part of the farmers, and regulatory efforts, and more interest on the part of state and federal agencies cooperating in controlling weeds.

An extensive report was given by C.J. Willard on "Report of the North Central Weed Control Conference." He defended technological, as opposed to "scientific," meetings and publications. Both are needed, but the questions on how to actually go to the field and control weeds is of great importance and should not be dismissed as unscientific. He mentioned that other sectional weed control conferences were becoming successful and that the next job was to develop national means for sharing information. As many members of this society know, C.J. Willard went on to become a leader in the formation of WSSA and of the Weed Science Journal.

K.S. Quisenberry, Bureau of Plant Industry, reported on "Weed Control Research in the Bureau of Plant Industry, Soils, and Agricultural Engineering," E.A. Walker, USDA, spoke on "Explanation of the Principal Features of the Federal Insecticide, Fungicide, and Rodenticide Act." This 1947 law replaced the Insecticide Act of 1910, called for stringent testing of all "economic poisons," including herbicides. It included strict

regulations on the label, spelling out requirements on toxicity, usage, storage, etc. We occasionally hear speakers or read articles claiming that presently used pesticides "have never been tested." Even though more recent legislation has increased the rigor of this testing, clearly the 1947 FIFRA demanded a great deal of information be submitted before registration could be granted.

Chet Otis, Oregon, made a few complimentary remarks about Walter S. Ball, read some letters received from friends around the country, and presented him with two pieces of leather luggage in appreciation for all of the work Mr. Ball had done since the inception of WWCC.

W.A. Harvey, California, chaired the Research Committee and gave the overall report.

Lambert Erickson reported for the committee on plot technique, the first time this topic had been presented at the conference, to my knowledge. Dr. van Overbeek gave a learned discussion on the action and translocation of hormones in plants, and F.E. Hance, Hawaiian Sugar Planters Association, discussed problems and methods of weed control in the Hawaiian Islands. In his introduction of Hance, Bill Harvey indicated that the Hawaiian Islands belong with the western states, perhaps the first time that had been mentioned in the WWCC. The Research Section then went into an open discussion forum with a rather broad participation.

H.E. Morris gave the report of the Recommendations Committee, who had compiled a brief list of general recommendations on several herbicides. He indicated that each state should produce publications including recommendations

that are more accurate on a local level.



Delmar Tingey
Fellow, 1968

I first met Delmar Tingey in 1946 when I asked him for a part-time job in the Agronomy Department at Utah State University. The reputation and character of the family was not unknown to me as I had worked for three of his five brothers before the war. They were all hard workers, hard drivers, and very intelligent and all with a command of very colorful language that at times was a bit salty. So I was not too surprised when Del told me by way of instruction, "If I'm not giving you Hell, you are doing a good job." He never disappointed me.

Del's assignment at the University was research and development of wheat breeding and weed control. He also taught general farm crops, weed control, and biometry. He was somewhat of a pioneer in the use of statistics for setting up, analyzing, and reporting research.

Before the time of 2,4-D, Del's research established that persistent, aggressive perennial weeds could be controlled by a combination of crop competition, rotation, and cultivation. He also published an article on the effect of plant population and

irrigation on the rubber content of guayule (*Parthenium argentatum*). He was one of the first to prove that this crop could be established by direct field seeding.

Del worked with the USDA in developing a new variety of dwarf bunt-resistant wheat called Relief that saved the wheat industry in Utah and Southern Idaho. An improved variety with this resistance bears his name.

I remember and honor Del as one who could not only talk good research, but outwork any of his younger workers in getting field work done. He could also back up what he said with sound research. He was one of a kind, a man of high principles and an asset to his university, community, and to the Western Weed Conference.

J. Wayne Whitworth

ELEVENTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

Bozeman, Montana

February 2-4, 1949

President -- B.J. Thornton

Vice President -- V.A. Cox

Secretary-Treasurer -- W.S. Ball

A noteworthy event in 1949 was the transfer of F.L. Timmons. He had attended the Conference in previous years from his position in Kansas, and in June, 1948, he was transferred to Logan, Utah. He was later in the first group of Honorary Members (Fellows) named in 1968. Fred Arle had joined the Bureau of Plant Industries at Phoenix.

In the list of attendees, several were listed from various states outside of the west. There were attendees from Canada, Indiana, Iowa, Kansas, Maryland, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Texas, and Washington, D.C.

As usual, reports from the representatives of the individual states were presented, many of those several pages long. I will not summarize each report, but rather try to give an impression of progress and events occurring in the west. Many of the representatives mentioned that the availability of spray equipment was increasing rapidly, and the demand was still heavy. The use of 2,4-D was continuing to increase at a phenomenal rate, but several representatives mentioned that the initial sensationalism of this "magic" new tool was leveling off and that 2,4-D was being much more realistically considered as a valuable tool in weed control programs. There seemed to be some agreement that there was less cultivation than in previous

years, and more 2,4-D. This perhaps resulted in less total weed eradication, but more economical use of farmland.

Virgil Freed, Oregon, mentioned an agreement with the Atomic Energy Commission to use radioisotopes for the study of herbicidal mode of action. Several other states mentioned an increasing amount of physiological research on the more basic aspects of herbicides.

A survey revealed that six western schools were offering weed control courses, with a total enrollment of about 200.

Drift problems from 2,4-D were beginning to be discussed. The differences between esters and amines in this respect were being recognized. Walter Ball cited several examples of extensive off-target damage to cotton from 2,4-D. Dusting by airplane was already prohibited in many areas.

Klamathweed control by the chrysolina beetle was definitely expanding and was particularly successful in California. Other states were initiating programs.

One of the new herbicides, IPC, was moving from the experimental stage into commercial use, and was proving to be quite valuable, especially in Oregon clover fields for grass control.

Further research on the electrovator was being discontinued in several states because of high cost and poor performance. One representative stated that hearing the negative reports on the machine saved him a great deal of resources by not having to initiate studies of his own. Negative results are fully as important as positive ones, he said.

T.K. Pavlychenko, a well-known weed ecologist from Saskatchewan, reported on the North Central Weed Control Conference and proposed the term, "herbology" as a name for weed science. I believe that later attempts by WSSA to adopt a name for the weed science discipline considered herbology, but as of 1992 no such name has been accepted in this country.

Following the format previously established, there were a number of panel discussions and open discussions along with more formal papers by selected speakers. Included were: "Weed Control Project R.M.A." (I believe this means Regional Marketing Act), by A.S. Curry; panel discussion by the Research Committee, chaired by Lambert Erickson; panel discussion on Education and Publicity Committee, chaired by W.W. Robbins; "Purpose of the Department of Interior Weed Control Committee" by Robert Balcom, USDA; "Future Needs in Weed Control Research" by L.W. Keppart, USDA; and "Airplane Application of Herbicides" by F.L. Timmons. A list of 36 research personnel of the Western Weed Control Conference was included in the Proceedings. Fourteen research papers had been submitted, abstracted by the Research Committee, and the abstracts published in the Proceedings.

The Research Section was busy in 1949.

They had divided the Committee and studied areas of interest in the Conference. This included such things as new chemicals, absorption of herbicides, translocation, and action of herbicides. Work being done in the western states on these subjects was reviewed in brief form. The Committee published a report on nomenclature, definition of terms, and properties of herbicides.

A committee had been established on coordination of weed research in the Western Weed Control Conference. A questionnaire had been distributed in December and the results were presented. Despite considerable diversity of opinion on many subjects, a high percentage approved a plan of assembling abstract reports of weed investigations each year and making them available to research personnel. There was less agreement about making the abstracts available to all persons in attendance at the Conference annual meeting.

A study committee on the Western Weed Control Conference Organization, chaired by Chet Otis, presented a long series of recommendations that would eventually have major impacts on the Conference. It included suggestions for organization of committees and a detailed format for the annual meeting. Otis stated that, "It seems to your committee that regional weed organizations, such as the Western Weed Control Conference, have become large and unwieldy." This statement is a bit ironic, because the Western has always been the smallest of the regional conferences and is probably the least unwieldy.

A number of constitutional changes and amendments were proposed and adopted. An interesting change, not widely known, was that the name of the Conference was

officially changed to the Western Weed Conference (dropping the word `Control`).

There were the usual reports from the working committees and a number of resolutions were adopted.



Lambert C. Erickson
Fellow, 1969

Lambert Erickson was one of the most faithful members of the Western Weed Control Conference. During his 30 years from his initial employment at the University of Idaho until his retirement, I can recall his missing only three meetings of the Conference. These three were certainly excused absences since they were (a) first when he was completing his doctorate at the University of Minnesota, (b) second when he was a Fulbright lecturer in Europe, and (c) third while he was on sabbatical leave in Australia.

To those who knew him well, the fact that he did not have an absence due to illness was really remarkable. Lambert had rheumatoid arthritis for at least half of his professional career and I have seen him take as much as 8 aspirin in a single dose and repeat this again the same day. He bought aspirin in 1000-tablet jars. He frequently would massage his hands as much as 5 minutes so that he could shave. No one ever heard him complain and his attendance at the meetings was what one expected of him.

Lambert was made an Honorary Member of the Society, in the years before the creation of the position of Fellow of the Society, in recognition of his contributions to the Society and to the area of weed science. Dr. Erickson was an excellent systematic botanist and was a great help to me in that field. Only if he was not able to identify a specimen, which was seldom, would he refer the problem to a professional taxonomist.

Dr. Erickson was an expert on Canada thistle (creeping thistle, pasture thistle, etc.) and especially on its distribution and growth. He studied the plant throughout the United States and in Europe. He arrived at an interesting conclusion as a result of these studies that I do not recall him ever publishing, and that was that the 49th parallel of North latitude was about the optimum for the growth of Canada thistle. This was attributed primarily to day length.

Dr. Erickson had one interesting association in the Conference. This was with Dr. Tom Muzik, professor of weed science at Washington State University. These two frequently traveled together and were frequently seen together at the Conference meetings. Tom was the largest member of the Conference and Lambert was nearly the smallest, so it was inevitable that they should be known as the Mutt and Jeff of the Conference. Lambert was a friend to all members of the Society but his and Tom's relationship was rather special.

Lambert always maintained that he was the first full-time state weed worker in the country. He was quite proud of this until one day Alden Crafts disputed it saying that he was the first full-time state weed man. I think Lambert had considered that Dr. Crafts in his earlier years was a plant physiologist in the field of botany. Since Alden both taught and conducted research in weed control and co-authored a text, he could hardly have been a full-time weed research worker. Lambert conducted only research for the first 6 or 7 years at Idaho, so he no doubt was the first full-time state weed research worker. He was, however, willing to concede that he was the second full-time state weed worker.

Dr. Erickson was a popular major professor for graduate students, many of whom have done extremely well in the weed science field, both in the United States and abroad. He was also a popular undergraduate teacher and it is interesting to note that he scheduled all of his formal classes for the fall semester so that he would be free to attend the meetings of the Conference without interfering with his teaching.

Lambert C. Erickson was truly a dedicated weed scientist.

Clarence Seely

TWELFTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

Denver, Colorado
January 30-February 1, 1950

President -- E.W. Whitman
Vice President -- W.W. Robbins
Secretary-Treasurer -- W.S. Ball

Several changes were noticeable in 1950. The Conference attendance grew from 244 in 1949 to 329 in 1950. The Proceedings increased from 61 pages to 140 pages. Reports from the individual state representatives were continued, but these were supplemented with many formal papers on a wide range of topics. Henceforth, even listing the titles of all of the papers will be unwieldy, and only a few will be mentioned to illustrate the wide range of interests and noteworthy progress in the discipline.

The membership voted to initiate biennial instead of annual meetings, discontinue the state reports, and change the name back to the Western Weed Control Conference. Thus, the name Western Weed Conference was short-lived. The Executive Committee agreed that they would meet annually.

A report was presented on an organizational meeting involving representatives from each of the four regional weed conferences and the Bureau of Plant Industries, Soils, and Ag Engineering, USDA, at Kansas City, Missouri, on September 15, 1949. The purpose of the meeting was to consider the possibility of creating a national weed organization.

In contrast to the meetings in the late 1940's, discussions of 2,4-D did not dominate the 1950 Conference. Papers

included discussions on application, control of aquatic weeds, herbicide physiology, weed control in such crops as potatoes and beans, weed control instruction, brush control, and many others. Abstracts covering a wide range of topics were presented in the Research Section.

Clearly, the Conference was becoming more sophisticated. Along with many excellent discussions on practical research and usage in the field, there were terms such as dielectric constant, phloem transport, movement through the cuticle, herbicide persistence in soils, droplet sizes in microns, etc.



Jesse M. Hodgson
Fellow, 1969

(From the 1979 Proceedings)

Jesse Hodgson began his career in weed control research with the U.S. Department of Agriculture early in 1947. He was in charge of the cooperative research program with the Idaho Agricultural Experiment Station, the U.S. Bureau of Reclamation, and the Ada County Weed Control Department at Meridian, west of Boise. Emphasis of his early research was on the control of weeds in irrigation canals and of whitetop and perennial smartweed on irrigated land.

Jesse immediately became active in the Western Weed Control Conference and quickly established himself as a thorough investigator in weed control affairs. After five years at Meridian, Mr. Hodgson was transferred to Bozeman, Montana, in 1953 to develop a cooperative research program for the USDA, USBR, and the Montana Agricultural Experiment Station. At Bozeman, Jesse's program emphasized control of aquatic and ditchbank weeds in irrigation canals and the control of Canada thistle in irrigated crops. In addition to his extensive research program, Jesse completed the requirements for his Ph.D. degree from Montana State University. He also took time to help his son build a brick home for the family as he had done previously at Meridian. Dr. Hodgson's thorough and excellent publications on the life history and control of Canada thistle caused him to be generally recognized as "Mr. Canada Thistle" throughout the USA

and Canada.

Jesse was a leader in the WWCC and a prolific contributor to the Research Progress Reports. He was President of the WWCC in 1965. His presidential address that year gave an outstanding summary analysis of the WWCC after 27 years. Jesse was largely responsible for writing the Constitution of WWCC. Dr. Hodgson was elected an Honorary Member of the Conference (Fellow) in 1969 and later received the Presidential Award of Merit from WWSWS.

Jesse Hodgson always found time from his busy professional schedule, church, and civic activities to spend time with his family and be a pal to his sons. One evening late in 1974, after Jesse returned home from a basketball workout with his sons, he had a fatal heart attack, which ended his fruitful and victorious life.

THIRTEENTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

Reno, Nevada
February 5-7, 1952

President -- W.W. Robbins
Vice President -- C.I. Seely
Secretary-Treasurer -- W.S. Ball

Two items of note occurred prior to the 1952 meeting affecting the future of WSWS members. The Research Committee, under the leadership of F.L. Timmons and V.F. Bruns, developed and printed the first Research Progress Report, which was distributed to all members of the Conference. Thus began a long-standing procedure in WSWS that continues to this day.

In October 1951, the publication, "Weeds" appeared. Temporary editor was Dr. R.D. Sweet of Cornell University. Representing the Western Weed Control Conference on the Editorial Board was W.A. Harvey.

Dick Fosse appeared on the membership list for the first time; he was with Monsanto in Dayton, Ohio. Oliver Leonard had joined the University of California, Davis.

The 1952 Conference consisted largely of technical papers. The depth and breadth of topics continued to increase. Titles of the papers included presentations on effect of pH on 2,4-D penetration and translocation, weed control in peas, biological control of Klamathweed, suppression of Ribes in forests, papers on aquatic weed control, papers on brush control, and IPC and chloro IPC as herbicides.

There was a wide-ranging "question box," chaired by Bill Harvey. This included discussions on control of Canada thistle,

whitetop, quackgrass, halogeton, dodder, and Russian knapweed. It also included halogeton toxicity to cattle and sheep; use of surfactants; toxicity of aromatic solvents to fish, livestock, and crop plants; grass control with IPC, etc.

The first Research Progress Report cost the Conference \$400.08. In the Business Meeting, a motion was made and seconded that the Constitution be changed to hold annual meetings. The motion lost. It was agreed that the next Conference should be held in either March or April.

At this point in its history, the Conference still had official state representatives. There was discussion on how they should be selected. The Constitution was changed to state, "Official state delegates shall be elected from among the voting membership of each state concerned, by the voting members of that particular state. The delegates shall be elected at each meeting of the Conference and shall serve the same term served by the elected Conference officers. Alternate delegates shall also be elected in the same manner."



Bruce Thornton
Fellow, 1970

(From the 1979 "Old-Timers" Session)

The first thing I would like to do is to add my words of appreciation for the great and inspirational services rendered this Society from its inception by Walter S. Ball, whose presence is missed so much today.

Weed control became one of my major interests, both research and Extension, in 1929, when "Walt" left Colorado to join the staff of the California Department of Agriculture, and continued until my retirement in 1962, which was followed by my putting out the third revision of the bulletin "Weeds of Colorado" (which, more recently, has been again revised by Bob Zimdahl), and also three seasons of field work in weed control in Weld County.

Actually, my first real concern was initiated many years earlier when we found Canada thistle growing on the family farm. We had managed to live with bindweed as far back as my memory serves me, but the thistle was something different.

Tim suggested including unusual experiences. Apparently only two impressed me sufficiently to be readily recalled. In one incident, an assistant who had been mixing sodium chlorate solutions in

buckets all morning decided to relax and have a smoke after lunch. The instant flame, substituted for the "smoke," resulted in instant action, for he got out of his clothes quicker than a Houdini, with little damage being done except to his clothes and to his pride.

On another occasion, a helper, just having filled the tank of the gasoline engine, located in the trunk of my car, was also greeted by instant flames when he pulled the starter rope. He also responded with alacrity, throwing the burning engine with attached pump and equipment into the hinterlands. Again, no serious damage, the anticipated explosion apparently being prevented by the tank being completely filled.

The zaniest development with which I came in contact (figuratively), and which created considerable interest in several states, was the "electrovator." In limited tests (demonstration) it was only partially effective in killing perennial weeds and gave little promise. However, one operator was reported to have been electrocuted and also a cow, the latter at considerable distance, contact being made via a wire fence. As early suspected, it proved to be primarily a promotional deal with little, if any, merit as "conducted."

Although, due to the snow storm, we missed the "Old Timers" section on Tuesday afternoon, we did enjoy the informal session that evening where we "Oldsters" had the opportunity of really getting together with Bill Harvey key-noting the occasion. Attending the various Sections recalled old times, but above all we appreciated the consideration and warm hospitality extended us by the officers and other members of the organization. We were glad we came.

FOURTEENTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

**Tucson, Arizona
March 22-24, 1954**

President -- C.I. Seely
Vice President -- Rex Warren
Secretary-Treasurer -- W.A. Harvey

Readers of this history will note that this is the first meeting at which W.S. Ball did not serve as Secretary-Treasurer. He had been among the founders of the organization, he almost always was selected to serve as the representative to meetings of the other regional conferences, and, in general, served as a constant foundation for the Conference. He was elected to serve as President for the 1955-56 term.

Several changes of note occurred between the 1952 and 1954 meetings. Examining the membership roll in the 1954 Proceedings reveals the appearance of the following future officers or Fellows in the Society: Boysie Day was at Riverside, California, J.W. Whitworth was on the staff at New Mexico State College in Las Cruces, W.R. Furtick was at Oregon State College, Corvallis, Louis Jensen was at Utah State Agricultural College in Logan, and Charlie Robocker (who became Secretary-Treasurer in 1956) was at Reno. Jesse Hodgson had moved from Idaho to Bozeman. These gentlemen all made important contributions to the Society in future years.

Technical papers were presented as in previous years on the same general topics. Of interest were two papers, one by Fred Arle, Arizona, and the other by L.E. Cowart, DuPont, on the new substituted urea herbicides.

The business at the 1954 meeting was routine. Warren Shaw, a future leader at the national level with ARS, Beltsville, presented a brief report on a national committee on chemical terminology. Although Dr. Shaw was not involved in the workings of our Society, he had a large influence over many years on many of our members and was named Honorary Member in 1984.

A resolution was approved to extend an invitation to the National Weed Control Conference, which had met for the first time in 1953, to meet in conjunction with the 16th Western Weed Control Conference.

The most recent version of the Constitution and Bylaws was printed. Individual membership dues in 1954 were \$3.00/year; sustaining memberships were \$50.00/year. The Conference was divided into two sections, the Research Section and the Education and Regulatory Section. All voting members were eligible for committee duty, but no person could hold membership on more than three committees, of which not more than one could be a major committee.



Virgil H. Freed
Fellow, 1971; Honorary Member, 1983

Introduction to Weed Control came through Professor George Hyslop, Head of the then Farm Crops Department (now Crop and Soil Science). "Prof Hyslop," as he was respectfully and affectionately called, was my mentor through my undergraduate years in the department. Since I had more than the usual number of courses in chemistry, when Prof needed someone to do some research on selective weed control in some speciality crops of interest at the time, he decided that I should be the lucky one. He was, no doubt, the most inspiring man I ever met and quickly became my ideal--a goal I regret to say that I have never achieved!

At that time, weed control was anything but the highly developed science that it is today. The array of methods available besides just a few chemicals, was principally mechanical control and competitive cropping. The chemicals included the soil sterilants such as chlorate, borates, and arsenicals and the few selective agents dinitro-o-cresol, light oils, sulfuric acid, and metal sulfates. Certain other inorganic salts were occasionally found useful in limited situations. However, 2,4-D and, shortly thereafter, propham were just in the offing.

As I reflect back, outstanding in my mind are some of the researchers in the field on whose work Weed Science was built. Prof Hyslop and Lin Harris--later to go with Chipman Chemical--were the first to find that ammonium sulfate added to the dinitro cresol (Sincox) enhanced its activity on broadleaf annual weeds. Then there were W.W. Robbins, A.S. Crafts,

Walter Ball, R.N. Raynor in California, all of whose contributions are recognized today. But in addition there were people such as Clarence Seely and Lambert Erickson in Idaho, Bruce Thornton of Colorado, and F.L. Timmons of Kansas (USDA) who left lasting contributions to the field.

I can't think of my own career in Weed Science without reflecting on the privilege of meeting and being stimulated by such men as L.W. Kephart, Professor G. Blackman of Oxford University, Dr. Wm. Templeman of ICI and discoverer of propham, and Dr. E.J. Kraus of the University of Chicago. In addition, there were the works of Annie Hurd-Karrer of the USDA, Professor Pavlychenko in Canada, and the early work of Professor Bolley in North Dakota, among others, that gave a vision of what could be achieved. I gladly acknowledge my debt to them as well as my colleagues of early times, C.E. Otis and Rex Warren. I must also mention the outstanding group working on growth regulators and other plant-killing agents at Camp (Fort) Detrick during WWII, among them Bill Ennis, G. Norman, and B. Weintraub. To meet and talk to these people was indeed an inspiration.

Weed control, or if you prefer Weed Science, was both most exciting and frustrating in those early days. To be sure, it still is, but then there was so much new to discover and learn. Also, one never was sure what marvellous and astounding new herbicide would come

out of someone's laboratory. In the late 1940's, we had little knowledge or understanding of what plants would be controlled with 2,4-D or protham nor the biochemical mode of action. Each field trial was watched almost with bated breath and great satisfaction when successful. When the use of 2,4-D helped to recapture many acres of wheat land from domination by small-leaved morning glory and fiddleneck, the gratification was great.

There were times of trepidation, however, such as when a Ladino clover seed grower learned that my trials with protham had given the then surprising result of controlling an annual grass in a perennial grass-seed crop (a result to be credited to blind good fortune more than knowing what the chemical would do). The grower had a serious problem of annual ryegrass that was devastating his clover seed yield. Upon learning that the protham controlled grass, at least in this preliminary trial, and apparently not injurious to broadleaf plants, he decided to try it on his clover. Not content to apply just a small plot, he elected to try it on the whole field. There were probably no more than a few hundred pounds of the chemical in the whole U.S. so using the phone, he managed to buy the bulk of the supply, which fortunately he applied at a time when it would be effective. Until that crop was harvested giving him one of the best seed yields in years, I spent a good deal of time thinking about what other line of work might be open to an ex-weed man!

Because of my chemistry background, I was fortunately given a joint appointment in the Farm Crops and Agricultural Chemistry Departments. This enabled me to pursue my interest in chemistry of herbicides and apply that information to field problems. A few years later I joined Agricultural Chemistry full time where environmental behavior and residues of herbicides and synthesis and testing new compounds were my principal research activities.

In 1961, the death of the then department head while on a mission to India, led to my appointment as head of the department. The chemistry of herbicides continued to be of interest, but service on National Academy of Science and Public Health Service and NIH committees pointed to the desirability of attempting to secure a grant to study the toxicology of pesticides. A large grant was awarded to OSU for this study, followed a few years later by a "Center" grant. The University appointed me as director of the Center in addition to serving as head of the department. While administrative duties occupied most of my time, I was very fortunate to have some colleagues

that were gracious enough to let me look over their shoulders at their work on chemistry of herbicides and pesticides in general. I am particularly indebted to Marvin Montgomery, Riz Haque, and Cary Chiou for this privilege. In addition, there was the stimulation of working with a number of fine graduate students who have now gone on to be well-known investigators in their own right.

The unique professional opportunities afforded me in herbicide chemistry and environmental health opened the opportunity to travel to a number of foreign countries to share some of this information, and also learn much myself. All of this has been a rewarding and rich experience. I would hope that the bright, young, and energetic weed scientists, who are doing such impressive things today, will have as much enjoyment and excitement in their careers as I have enjoyed.

Finally, I want to express gratitude to my very supportive and understanding wife, Anna May, and our children for their encouragement and help that allowed me this experience.



William A. Harvey
Fellow, 1971

William "Bill" Harvey was born February 9, 1914, near Jacksonville, Missouri; his mother died at the time of his birth. He graduated from Moberly High School, Moberly, Missouri, in 1931 and began his college career at Moberly Junior College that fall. He transferred to the University of Missouri in 1933 where he obtained an A.B. degree in 1935. He received an M.S. degree in plant physiology from Iowa State University in 1937.

While working on sodium chlorate as a graduate assistant, he became interested in weed science and worked in that field most of his professional career. His first job was as an instructor in the Botany Department at Iowa State University during 1937-38. This was followed by an appointment at Washington State University, 1938-42, where he worked full time on weed control. During the 1942-45 period, he established a branch station at Yakima Valley and continued working on weed control.

Bill became a faculty member of the University of California, Davis, in 1945. After a one-year stint with Monsanto Chemical Co. in St. Louis during 1949-1950, he returned to UC Davis as California's

first Extension weed control scientist, a position he held until 1971 when he became the first Extension environmentalist. He retired April 1, 1977.

Harvey was well-known for his research and teaching, and his authorship of more than 150 publications and thousands of lectures. In 1978 the California Legislature commended him for his "illustrious record of personal and professional achievements and dedicated service on behalf of agriculture and the state of California and the union."

In 1971 he was named a Fellow of the Weed Science Society of America and an Honorary Member (now called Fellow) of the WSSA. Harvey was on the program of the first WSSA meeting held in New York City in 1956. He helped organize the California Weed Conference in 1949 and served as its president during 1952-53. He was active in all three organizations for more than 40 years.

Bill died April 14, 1989, at age 75.

Larry W. Mitich

FIFTEENTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

Sacramento, California

February 15-17, 1956

President -- Walter S. Ball

Vice President -- W.A. Harvey

Secretary-Treasurer -- W.C. Robocker

The 1956 meetings were held in conjunction with the California Weed Conference. By a 3 to 2 vote, the Executive Committee voted to hold annual meetings of the WWCC and, if convenient, this meeting would be held in conjunction with a state weed control conference. However, in the Business Meeting, the membership voted against holding annual meetings.

Newcomers to the WWCC included K.C. Hamilton in Tucson, L.E. Warren, Dow Chemical in California, Jim McHenry in Davis, and Eugene Heikes in Bozeman.

A resolution was passed to request that the third meeting of the Weed Society of America be held in conjunction with the seventeenth Western Weed Control Conference in 1960. Indeed, the two societies did meet jointly in Denver in 1960.

The program consisted of a variety of papers, some of which appear to have been invitational papers. Examples include a paper on weed control in New Zealand, in which mention was made that dalapon was very promising and likely would replace TCA for many uses. There were papers on "The Farmer's View," "Cultivation and Special Mechanical Means," "Regulatory Phase of Weed Control in California," and "Our New Frontiers" (by Bill Harvey).

Other papers included a report on Geigy 444, an experimental compound, which eventually became known as simazine. Bob Beatty reported on Weedazol, which became known as amitrole. Joe Antonini reported on Vapam, and there was a paper on CDAA (Radox) and CDEC (eventually known as Vegedex). Radox was beginning the marketing phase, while CDEC was still an experimental compound.

H. Fred Arle

Fellow, 1972

Fred Arle was raised in rural Minnesota. He studied forestry at the University of Minnesota, graduating in the 1930's. Jobs were few so he joined the U.S. Navy and finished flight training prior to 1941. He spent much of World War II in twin-engine sea planes. The war was prolonged because when his plane located the Japanese fleet and radioed its position, the U.S. fleet never received the message. Fred was threatened with court martial when he returned to his base.

After the war, Fred joined the USDA in Mississippi. His stay in the South ended shortly after he and Oliver Leonard contaminated most of the cotton on the main research station in Mississippi with a new chemical, "2,4-D."

In 1948, Fred was transferred to Phoenix, Arizona, to research the control of weeds on and in irrigation systems. The methods of control in irrigation systems were limited so Fred started working in irrigated crops. Over the next 30 years, Fred made his greatest contribution to Weed Science. He developed systems of weed control in irrigated cotton and other crops.

To understand the vigor and enthusiasm Fred had for his work, you had to be with him in the field. Much of the citrus research was in Yuma 200 miles west. The early federal pickups were black with no air conditioning. July days were 115° - 118°. The trip was stops by Buckeye, Gila Bend, and Dateland for cold beer and then work all afternoon.

Fred Arle was very active in the Western Society of

Weed Science. He presented many papers, prepared numerous research reports, chaired some research sections, and closed up more than his share of industry hospitality suites at 2 or 3 a.m.

Fred played as hard as he worked. While hauling our boat to the ocean in Mexico, he tried to read the hockey scores in the Phoenix paper. On hearing several loud explosions, he looked in the mirror to see a car pursuing him. He returned to the federal inspection station to explain why he failed to stop at the station. Before he was allowed to proceed, the inspector informed Fred he must pay \$5.00. One dollar for each bullet fired at Fred.

When Fred's position was transferred from Arizona, he retired but continued his work with the University of Arizona. In 1978, I saw for the first time that Fred was slower working in the field. He died following heart surgery. One of the Wild Western Weed Warriors was gone, but all people that knew Fred had an example to shoot for.

K.C. Hamilton

SIXTEENTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

Spokane, Washington

March 18-20, 1958

President -- Henry Wolfe

Vice President -- Richard Fosse

Secretary-Treasurer -- W.R. Furtick

New members include Harold Alley at Laramie, Harold Kempen at Shafter, California, and Jean Dawson at Prosser, Washington.

The theme of the 16th conference was "Profits from Weed Control." Key speeches were given by Boysie Day on "Profits from Weed Control Research," E.P. (Dutch) Sylwester, Extension Weed Specialist at Iowa State, on "Profits from Weed Control in the Extension Field," and A.L. Norris, KimAir in Seattle on "Profits from Weed Control in the Regulatory Field." These speeches contain a number of specific data on dollar savings from weed control activities and could still serve as an excellent source of information for the status of weed control at that time. Dr. Day estimated that the use of 2,4-D in wheat alone accounted for a profit of approximately \$40,000,000 in the 11 western states annually. Dutch Sylwester mentioned that the number of farmers in Iowa was decreasing each year. This selection process would eventually result in better informed and more progressive farmers, leading to better acceptance of new technology. Norris discussed many regulatory aspects, specifically mentioning regulatory involvement in grape injury from 2,4-D drift. This reminds us that some of the problems of today were indeed problems more than 30 years ago.

The remainder of the meeting consisted of one day of formal papers and one day of panel discussions on: weed control in field crops, perennial weed control, weed control in rangeland, and brush control. Of particular note was a report from Bill Furtick on "A New Approach in Cereal Weed Control," reporting on the use of soil-applied preemergence herbicides, particularly diuron, in cereals. He also mentioned the possibility of using triazine herbicides for selective weed control in cereals. Neither atrazine nor simazine were registered for cereals until about 30 years later, when atrazine received registration for preemergence use in wheat in certain Northwest states.

Dave Chilcote, Oregon, reported on excellent control of Canada thistle from amitrole, much better than from 2,4-D. He also reported that amitrole could be used selectively for Canada thistle control in oats. This practice was never registered.

R.N. Raynor, California, discussed chemical fallowing in grain production, and specifically mentioned the combination of dalapon and 2,4-D.



Boysie E. Day
Fellow, 1972

Professor Boysie E. Day was born September 9, 1917 in Haile, Louisiana but grew up in Arizona. He earned a B.S. degree in Range Management in 1939, and an M.S. in Plant Physiology in 1940 from the University of Arizona at Tucson. In 1940 he was commissioned a second lieutenant in the cavalry and was posted to the Pacific Theater in General McArthur's army. He participated in the island hopping campaign through the Philippines, rising to the rank of Lieutenant Colonel. After the war he served in the U.S. Army Reserve with the rank of Colonel. He resigned the commission in 1960.

Boysie received his Ph.D. in Plant Physiology in June, 1950, from the University of California at Davis under the direction of Professor Alden S. Crafts. He then accepted a position as Junior Plant Physiologist at the University of California at Riverside. He became full Professor and served as Department Chairman of Horticultural Sciences in 1966, Associate Director of the Citrus Research Center and Agricultural Experiment Station in 1968, and Director in 1970. He moved to Berkeley in 1971 to become Statewide Director of the University of California Agricultural Experiment Station. He retired from University service in 1979.

Professor Day made major contributions to Weed Science while at Riverside. He and his colleagues pioneered the development of non-tillage as a viable agricultural practice. They demonstrated with long-range experiments in California subtropical

fruit orchards that no-cultivation sustained over many years had no negative effect on trees or fruit and had positive effects on production costs, soil tilth, and pest populations. This pioneer work has lead to widespread adoption of non-tillage methods in many crops throughout the world. In addition, Professor Day and his associates contributed significantly to the understanding of scientific bases for the use (and misuse) of herbicides.

Dr. Day was a charter member of WSSA and served as President in 1967. He variously served as Committee Member, Treasurer, Editor, and Vice-President (1959-60) of WSSWS.

Boysie Day was an excellent communicator, both written and spoken. He loved to tell stories and widely presented information concerning Weed Science and agriculture to farmers, scientists, and laymen.

Lowell Jordan

SEVENTEENTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

**Denver, Colorado
February 22-25, 1960**

President -- R.A. Fosse
Vice President -- W.R. Furtick
Secretary-Treasurer -- Eugene Heikes

The 1960 meeting of WWCC was held in conjunction with the Weed Society of America, and consequently WWCC had no technical program of its own. The Executive Board met and there was a business meeting of the Conference. Changing the Conference to an annual meeting rather than biennial was considered, but the decision was to continue on a biennial basis with the Research Section meeting in the odd years. The revised Constitution and Bylaws were discussed. One item in the revised Constitution was the progression of officers from Secretary-Treasurer through President. Bill Harvey moved that specific reference to progression of officers be omitted. Although it was agreed that a regular pattern for officer's succession was desirable, it was thought better to not be obligated to this pattern of succession. This motion was approved.

Names of future leaders in the Society that I had not seen on the membership rolls before included Dave Bayer at Davis, Bert Bohmont at Cheyenne, Richard Comes, Laramie, Lowell Jordan at UC Riverside, and Dwight Peabody, Mt. Vernon, Washington.

THE WILD WESTERN WEED WARRIORS

During the 1950's, there was a group known as WWWW, "Wild Western Weed Warriors," that met in conjunction with the Western Weed Control Conference. This group was comprised of USDA, ARS weed research personnel stationed in the Western United States and Bureau of Reclamation personnel who were responsible for weed control in and along irrigation water distribution systems. The WWWW meetings were usually held in the evenings or on the day following the WWCC meetings. The purpose of these meetings was to review research work in progress and to make plans for new research to be undertaken. The USDA personnel who regularly attended these sessions included Leonard (Tim) Timmons, Jesse Hodgson, Fred Arle, Herb Hull, Gene Cronin, Leonard Jansen, Vic Bruns, Orvid Lee, John Miller, Peter Frank, and Gene Oborn. Bureau of Reclamation personnel included Bob Balcom, Del Suggs, and Dean Boyle. Leonard Timmons was the self-appointed leader of the WWWW group and was given the nick-name of "Hairy Tim Timmons, the Bald Eagle."

During the 1950's, there were several different men installed as chief of the Crops Protection Research Branch in Washington, D.C. These men were from different sections of the country and were anxious to make a trip west to get acquainted with agriculture in the western states. Their first trips west were to attend the WWCC meeting and of course to meet with the WWWW.

"Hairy Tim Timmons, the Bald Eagle" took great delight in initiating these Easterners into the WWWW. Roy L. Lovvorn was the first to come west and was dubbed "The Tar Heel Flash" since he came from North Carolina. Marion Parker was next and was dubbed "Marion Stretch Parker, the Light Hevea Weight" since he had been involved in the effect of light upon the growth of Hevea, a

rubber-producing plant. Both of these men were presented with a western hat, revolvers (cap) and holsters, and a plaque denoting their membership in the WWWW. As a part of the initiation, the new inductees were given a hoe handle and told to take hold of the handle with both hands. They were then instructed to step over the handle, bring it behind their back and over their head and back to the starting position without letting go of the handle. Tim could do this and would demonstrate how it was to be done. The new Branch Chiefs were not as agile as Tim and were unable to follow his demonstration. Their attempts were futile and brought a lot of laughs from the group. It was a good way to "break the ice" and get the group acquainted with their new Chief. When Bill Ennis became Branch Chief, he felt such antics were childish and refused to participate in the initiation. Thus the WWWW as such came to an end.

W. Orvid Lee

EIGHTEENTH MEETING OF THE OF THE WESTERN WEED CONTROL CONFERENCE

Las Vegas, Nevada

March 20-22, 1962

President -- William R. Furtick

Vice President -- Eugene Heikes

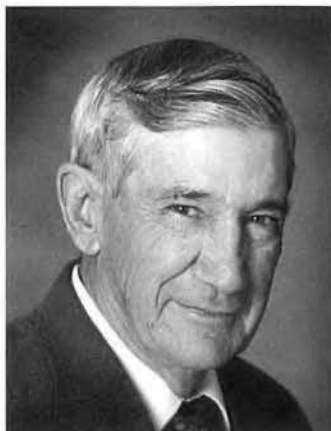
Secretary-Treasurer -- Edward J. Bowles

Ed Bowles assumed the job of Secretary-Treasurer for the Conference, a position he held until 1966. Three future Fellows joined the Society in 1962: Harry Agamalian, University of California, Arnold Appleby, Corvallis, and Ken Dunster, Bozeman. Gene Heikes had moved from Bozeman to Fort Collins.

Papers in 1962 covered a wide range of topics, but they were not the detailed research papers that became common in later years. Essentially the entire program was made up of general review papers by selected individuals and, as nearly as I can tell, not a single volunteer paper. Topics ranged from regulatory and extension matters to detailed behavior of herbicides to aquatics, woody plants, turf, and range. Some examples of the papers include "Government Registration Requirements" by J. Ray Barron, Cyanamid; "Crop Weed Ecology" by Dave Staniforth, Iowa State, and a symposium on the soil behavior of herbicides with papers by Virgil Freed, Jack Sheets, Alden Crafts, and W.B. Bollen. There were papers on principles of selective weed control by Bill Harvey; aquatic weed control by R.H. Hodgson, controlling woody plants by John Kirsch, range weed control by Harold Alley, and turf weed control by Norm Goetze.

Minutes of the Executive Committee Meetings and Business Meeting were not

included in the Proceedings during a period of years, so it is difficult to report on the workings of the Conference.



Harold P. Alley
Fellow, 1973

Harold Alley was born March 26, 1924, at Cokeville, Wyoming; his mother's maiden name (and Harold's middle name) was Pugmire. He spent his early boyhood on a homestead ranch on Rabbit Creek about 20 miles south of Cokeville.

Harold graduated from Cokeville High School in May 1942, and soon entered the military service, eventually joining the paratroops. He was discharged from the service in January 1946. Harold and Jeanne Dayton were married on June 22, 1946, and moved to Laramie where Harold enrolled in the University of Wyoming.

After graduating in 1949, he began work as a Vocational Agriculture Instructor and coach at LaGrange, Wyoming. Then he accepted a faculty position at the University of Wyoming and pursued an M.S. degree, which he obtained in 1955. Following this, Harold decided to obtain a Ph.D. He received an assistantship at the University of Nebraska and moved to Lincoln the summer of 1958. But because of an extended illness, he had to drop out of school. He returned to the University of Wyoming, where he worked for another 5 years until he had fully recovered.

He received an assistantship at Colorado State University and completed course work for his Ph.D. in 2 years and finished his research and dissertation while back on the job at the University of Wyoming. He directed the research of 36 graduate students and was responsible for research, teaching, and extension programs in Weed Science and Technology, which started in 1955.

He published over 500 articles and received many honors; of all the awards, none touched him more than the George Duke Humphrey Award as the outstanding faculty member of the University of Wyoming, which he received in 1979. In 1974, Harold received WSSA's Extension Worker Award for outstanding service in Weed Science. He was named a WSWS Fellow in 1973 and a WSSA Fellow in 1979. He held all offices in the WSWS, serving as president in 1970. He retired from the University in 1984, but continued working for about 4 years as a consultant with Dow Chemical. Harold died at age 67 in the University of Nebraska Medical Center at Omaha on July 25, 1991, after an extended illness.

Larry W. Mitich

NINETEENTH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

**Portland, Oregon
March 20-22, 1963**

President -- Eugene E. Heikes
Vice President -- Jesse M. Hodgson
Secretary (Acting) -- Keith Sime
Business Manager -- Edward J. Bowles

The Conference had been meeting during the even-numbered years since 1950, with the Research Section meeting in the odd-numbered years. The Weed Society of America also was meeting on the even-numbered years, so in 1963, WWCC changed their schedule to meet in the odd years.

LaMar Anderson at Logan appeared on the membership rolls.

The program, contrary to 1962, consisted largely of individual, detailed papers on specific research programs. There was one symposium on the deposit and entry of sprayed herbicides into foliage, including papers by Larry Foy, L.L. Jansen, Alden Crafts, and Tom Muzik.

As usual, the individual papers included a wide variety of topics, from aquatics to sugarbeets to turf to range.

For the first time, there was a segment devoted to industry for "New Herbicides and New Uses for Old Herbicides." Included were announcements on the new substituted uracils from DuPont, Betasan from Stauffer, monobor chlorate granular and Tritac-D from U.S. Borax, trifluralin and diphenamid from Elanco, and paraquat from Chevron.



K.C. Hamilton
Fellow, 1973

Being raised in Wisconsin and schooled at the University of Wisconsin did not prepare me for weed research in the irrigated southwest. After joining the University of Arizona in 1954 to conduct weed research in agronomic crops, I rapidly made almost every mistake a green college grad could imagine. Only with the guidance of Fred Arle and many other state and federal research and extension people was progress made in Arizona.

The 1950's and 1960's were exciting for Weed Science; new chemical companies with new chemical compounds every year. We integrated many herbicides into systems of weed control in cotton and most irrigated crops. A major problem was that many soil-applied herbicides persisted and could injure other crops 1, 2, or 3 years later.

During the 1970's and 1980's, much of our research was on the control of perennial weeds, such as Johnsongrass, Bermudagrass, nutsedges, and field bindweed. It was sad that it required three decades of research to convince me that no large infestation of an important perennial weed can be eradicated on Arizona cropland.

Teaching Weed Science was always part of my work and it became a major part of my job after 1975. The pleasure of talking with undergraduates before and after each lecture and advising graduate students extended my career.

Weed Science succeeded in Arizona because of the cooperation of many people including the federal,

industry, and state research, extension, and sales personnel. But much of the success of Weed Science was due to the farmers and ranchers. They watched our work, pointed out our errors, and accepted the good. At a field day, a farmer, Bill Scott, asked if a herbicide could be applied by a different method. Fred and I said it would not work. One year later, Bill invited us to his farm. That morning, he showed us 1000 acres of cotton treated successfully with his new method. Fred and I were very quiet at lunch with Bill. Then Bill showed us 200 acres of dying cotton also treated with his new method. Working with growers was the best part of our job. They were why we were there.

Mixed with research, teaching, and extension were writing reports, presenting papers, enduring endless committee meetings, and serving various offices in the Western Society of Weed Science and the Weed Science Society of America. Two of my best memories are from 1973 and 1979 when I became a Fellow in these societies. I remember because of my respect for the other weed scientists who were so named.

TWENTIETH MEETING OF THE WESTERN WEED CONTROL CONFERENCE

Albuquerque, New Mexico

March 17-19, 1965

President -- Jesse M. Hodgson

Vice President -- Louis A. Jensen

Secretary-Treasurer -- Stan Strew

Business Manager -- Edward J. Bowles

In his Presidential Address in 1965, Jesse Hodgson regretted the fact that the Proceedings had not included the minutes of the Business Meeting for the past few years. The Proceedings for 1965 did include the minutes of the Business Meeting and subsequent Proceedings did also. He no doubt felt the absence of the minutes more keenly than most members, because the title of his Presidential Address was "A Look at the Western Weed Control Conference After Twenty-Seven Years," and he drew heavily on the Proceedings for his material. President Hodgson included some data, not being reproduced in this book, that may serve as a reference source for persons wishing more detailed information.

Items having an influence on future meetings of WWSW included the appearance of Gary Lee at Laramie and Ed Schweizer at Fort Collins. The Conference voted to hold annual meetings starting in 1967. There was vigorous discussion at the Business Meeting concerning the advisability of meeting in Hawaii. There was a good deal of support, but concern was expressed that the costs would be too high, particularly for persons not located in the seaboard states. President Hodgson pointed out that the meeting time and place are established by the Executive Committee, which they would do at a later time.

(The Society did not meet in Hawaii until 1974.)

Eugene Heikes, Chairman of Project 8, Economic Studies, stated that there were no research papers submitted for Section 8 and no one had attended its meeting. He suggested that it be disbanded. His suggestion apparently was followed, because Section 8 was not mentioned in 1967.

Several new herbicides were introduced and research results were presented for the first time on compounds introduced somewhat earlier. Herbicides in their early stages in 1965 included ioxynil, Daxtron, picloram, bensulide (R-4461), terbacil (DP-732), dicamba, diclobenil, pyrazon, DCPA, and Tillam. Other compounds mentioned as looking promising failed to survive, including Tritac, Zytron, and Azak.



William R. Furtick

Fellow, 1974

I got involved in the WWCC as a graduate student. I had been taking the Weed Control course taught by Dr. Virgil Freed and had not had any involvement other than that in Weed Science. My thesis topic for my Ph.D. was not Weed Science. Shortly before the meeting of WWCC, I was called in by my major professor and asked if I would attend WWCC as the Oregon State University representative and learn all I could about weed control on the way, during the Conference, and on the way home, as they wanted me to teach the weed control course on my return. All this was because Dr. Freed had been hospitalized by a heart condition and would be out for several months. This was the way I got launched into both Weed Science and WWCC. I have been convinced ever since that most careers are determined more by accident than plan.

My first WWCC was also one of my first attendance at a professional society meeting. I remember well the people that stood out in my mind. Dr. F.L. Timmons, who was one of the real pushers keeping WWCC on the move, pulled me into all the planning activities as if I knew something about Weed Science. This was because Oregon State University, through Dr. Freed, was a major actor in Weed Science and I was their representative. As a result, I became so committed to various follow-up actions, I had to change my whole career plan.

I was particularly impressed with the dominant influence by the big names from California. Getting acquainted with them was both a pleasure and increased my respect further. The weed control course I would teach upon my return would be based on Alden Crafts' book, which I read again enroute. It was almost awe inspiring to not only meet Dr. Crafts, but participate with him in various informal sessions. The humor of Bill Harvey and Boysie Day could only fully be appreciated by being in informal meetings with them and watch their one upmanship.

One of the major impressions I gained from this first meeting was the professional and sincere contribution made by the representatives of the chemical industry. I will always remember the statesmanship of Bob Beatty. He exemplified the ultimate in industry contribution to the field and its societies. When I became involved in WSSA, he and many other industry notables gave Weed Science a professional relationship with industry not shared by other societies.

It was this shared respect for industry and their desire for a true partnership that ultimately resulted in the programs with industry that resulted in Oregon State University gaining national and international recognition in Weed Science. This recognition brought students from all over the world to study at Oregon State and with the close working relationships that developed with the global industry, many of them made their careers with industry.

It has been enormously satisfying to me to see so many former OSU students now in leadership roles in universities, government, and industry world wide. I am extremely grateful that the career launched with the unplanned attendance at WWCC made it possible for me to have contributed to the field of Weed Science and been a factor in the careers of so many that now are leaders in Weed Science.

TWENTY-FIRST MEETING OF THE WESTERN WEED CONTROL CONFERENCE

**Phoenix, Arizona
March 15-17, 1967**

President -- Louis A. Jensen
Vice President -- S.W. Strew
Secretary -- K.C. Hamilton
Treasurer-Business Manager -- J. LaMar Anderson

An important event in 1967 was the appointment of LaMar Anderson as the Business Manager-Treasurer, a position he held for many years. Bill Anliker in Vancouver, Washington, and Stan Heathman, Tucson, appeared on the membership rolls. Dick Comes had moved to Prosser since the previous meeting.

In the Business Meeting, a long, intense discussion was held on changing the name of the Conference. Powell Anderson moved to change the name to "Western Conference of Weed Science." According to the minutes, a "heated discussion" followed. The motion was tabled. F.L. Timmons moved to allow the membership to vote on four possible names:

1. Western Society of Weed Science.
2. Western Weed Science Conference.
3. Western Conference of Weed Science.
4. Western Weed Control Conference.

This was seconded and passed unanimously. A subsequent count of the ballots was as follows: Western Society of Weed Science - 90, the Western Weed Science Conference - 61, the Western Weed Control Conference - 23, the Western Conference of Weed Science - 21. Therefore, the new name, the Western Society of Weed Science, was placed in the revised Constitution and has remained

unchanged since that time.

The revised Constitution delineated the types of membership, the first time this had been done since 1954 when Sustaining Membership was one of the categories. In the revisions after 1954, the only thing said about membership was, "Any person interested in weeds and weed control shall be eligible for membership." In the 1967 revision, no mention of sustaining membership was made and this was not reinstated until 1991. During this period of time, there was considerable concern about the financial well-being of the Society. Ken Dunster headed up the Auditing Committee and studied financial procedures thoroughly. The committee suggested a number of changes. Subsequently, the net worth of the Society rose from \$2,046.99 in 1967 to \$117,605.76 in 1992.

Previous to 1967, the Nominations Committee proposed a slate of officers, generally one candidate per office. These were always approved unanimously by vote of those attending the Business Meeting. The minutes in 1967 are not clear and the method of election is not discussed. The officers were simply announced by the chairman of the

Nominations Committee. In 1968, the membership voted to elect officers by mail ballot.

The program in 1967 was still relatively simple. There were the normal invitational papers during the general session and the "what's really new in herbicides" announcements from industry. There were 20 volunteer papers on specific subjects, and there were no concurrent sessions. This compares with 76 volunteer papers in 1991. The increase in intensity of Society meetings might be considered a mixed blessing. More information is exchanged and more people are involved in the later years, but the earlier meetings were perhaps more relaxed, with more time for discussion and personal interchange.

1967 was not a year of major breakthroughs in research. A paper on Dacagin, a drift retardant, was presented. Bob Higgins reported on damage from misuse of picloram in Idaho.

TWENTY-SECOND MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**Boise, Idaho
March 19-21, 1968**

President -- S.W. Strew
President Elect -- K.C. Hamilton
Secretary -- Harold P. Alley
Treasurer-Business Manager -- J. LaMar Anderson

Future Fellows appearing on the membership list were Larry Burrill, Alex Ogg, and Bob Zimdahl, all at Corvallis, and Jack Evans at Logan.

A resolution was passed expressing appreciation to Robert Balcom, who was retiring at the end of 1968 from federal service. Balcom had first started attending the Conference in about 1942 and had been a steady contributor over many years.

1968 marked the first time that Honorary Members (later changed to Fellows) were named in the Society, although nothing is mentioned about that fact in the 1968 Proceedings. The first members selected were Robert Balcom, Walter Ball, Alden Crafts, F.L. Timmons, and Del Tingey.

Lambert Erickson moved that the Executive Committee be commended for their efforts if they would admit their errors. This passed unanimously. No details are given about what those errors might have been, but apparently the Executive Committee had made some decisions that were not approved by all of the members.

There were about 26 volunteer papers, a few papers in the General Session, and the normal industry panel. I could detect no dramatic breakthrough from the abstracts presented. Lambert Erickson presented a

thought-provoking discussion on, "Weeds Need New Definition." He suggested that, "a plant growing where it is not wanted" simply does not impress the listener with the huge magnitude of the weed problem. He stated, "It is obviously true that definitions, terms, and titles do create mental images and mental imagery is communication. Did Erik the Red have black hair?" After considering several definitions, he said, "Let's contemplate this definition: Weeds are plants that compete with man for possession of his natural resources." He suggested for further thought the term, "tareology" as the name for the weed science discipline. Its apparent equivalent in Greek would be Zizaniology. There is no evidence that these suggestions caused a fire storm of enthusiasm among the membership.



Oliver A. Leonard
Fellow, 1974

Oliver was a living example of the saying, "You can take the boy off the farm, but you can't take the farm out of the boy." After growing up on a farm in Idaho, he received his B.S. and M.S. degrees from Washington State College. He received his Ph.D. degree in plant physiology from Iowa State. After two years with Texas A & M University, he went to Mississippi where he worked on weeds of cotton for 11 years before coming west to the University of California, Botany Department in 1950 as an assistant botanist in the experiment station.

In the west, Oliver was an active researcher in basic and applied problems. His work in translocation helped develop methods for woody plant control on range and forest lands. A major accomplishment of his brush control research enabled the successful conversion of many acres of chaparral to productive rangeland in California. He was a charter member of the Save the Redwoods League. Because of his research and knowledge of herbicides, he was an outspoken critic of banning the use of woody plant herbicides 2,4,5-T and silvex with which he had gained so much experience. He also became involved in the underground problem of root control in sewer lines. He often wrote letters to editors to supply information on the half truths that had been printed. In one instance, he wrote that there was a profusion of "press pollution" from the misinformation printed.

In addition to the Western Society of Weed Science, he was also active in the American Botanical

Society, the American Society of Plant Physiologists, the American Society of Horticultural Science, the Society for Range Management, and the Weed Science Society of America.

As some of his students and technicians will remember, Oliver was totally immune to poison oak. He would often lead the way to his field research plots on poison oak through the woods, even crushing leaves in his hand to "pass on to others" in jest. His wife, Chris, learned the hard way to inquire of Oliver if he had been in the poison oak before touching his soiled clothes on laundry day.

Dr. Leonard retired from the University of California in June, 1974, to enjoy a well-earned change of pace with his wife on the acreage among the redwoods in Sonoma County. Oliver Leonard died June 24, 1975, at age 64.

Clyde Elmore

REPORT OF THE 1969 MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Las Vegas, Nevada

February 10, 1969

President -- K.C. Hamilton

President-Elect -- H.P. Alley

Secretary -- K.W. Dunster

Treasurer-Business Manager -- J.L. Anderson

The 1969 meeting of WSWWS was held in conjunction with WSSA and, therefore, had no program of its own. A short Business Meeting was held, consisting largely of committee reports.

A proposed amendment to the Constitution was presented. It was described as providing for the selection of Society officers by mail ballot, but the actual wording, although clarified, did not mention a mail ballot. It specified that officers would be selected from the Society Membership as shown on the latest registration list, which perhaps implies a mail ballot.

Lambert C. Erickson and Jesse M. Hodgson were selected as Honorary Members (Fellows). A new member was Clyde Elmore at Davis.



Richard A. Fosse

Fellow, 1975

My first WWCC was in Tucson, 1952. Amazingly, some of the people met then are still very good friends. Some, like Bill Harvey, Fred Arle, and Harold Alley, are now gone. But they were friends to the end.

Probably the part of the WWCC people I enjoyed most were the weed tours with their wonderful fellowship and great learning experiences. I recall so many it is hard to know which ones to mention. The Oregon tours were always a great joy with bindweed tours, ending in the High Wallowa Mountains with people like Bill Furtick, Dean Swan, and Arnold Appleby to desert tours in the southwest with people like Bill Harvey, Fred Arle, Boysie Day, and K.C. Hamilton. The summer seminars in Wyoming were also a great experience with people like Harold Alley, Al Gale, and Boss Hittle doing their best to teach me weed control during the day and poker in the evening.

The honor of knowing and working with the great weed scientists and teachers of the country and the world was a humbling experience. People like C.J. Willard, K.P. Bucholtz, and A.S. Crafts were truly inspiring.

My fellow workers in the industry also made it a joy to represent the WWCC. People like R.H. Beatty, Glenn Klingman, and Larry Southwick were great contributors to WWCC and weed control in general.

The privilege of serving the WWCC was a truly great one and I thank all my colleagues for giving me the chance to do so.

TWENTY-THIRD MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Sacramento, California

March 17-19, 1970

President -- H.P. Alley

President-Elect -- K.W. Dunster

Secretary -- A.P. Appleby

Treasurer-Business Manager -- J.L. Anderson

Lee Burge, Nevada, and Bruce Thornton, Colorado, were named as Honorary Members (Fellows). The Business Meeting was routine, with committee reports, the financial report, and eight resolutions.

In the general session, Boysie Day presented a paper, "2,4,5-T and Government Decisions." He discussed a recent Bionetics report that was critical of 2,4,5-T and led to adverse actions by Dr. Lee A. DuBridge, Science Advisor to the President. Day concluded that Dubridge's action was unwarranted on two accounts: (a) the research on which the Bionetics report was based was badly flawed, and (b) the dosages causing these effects bear no significant relationship with conceivable exposure. Based upon readily available information on 2,4,5-T residues in food and on toxicology data, Day concluded that if (a) 2,4,5-T is 100 times more active in man than in rodents, (b) 100 times more 2,4,5-T is present in food supplies than analyses indicated, and (c) 100 times more 2,4,5-T is used in a restricted area than is normally used, a 130-lb pregnant woman could still safely consume 170 tons of food daily (as far as 2,4,5-T is concerned).

W.R. Furtick reported on an international technical-aide program on weed control established at Oregon State University.

The group was called the International Plant Protection Center and had weed control specialists located in Colombia and El Salvador.

Volunteer papers on a wide variety of topics were presented. Some of the project committees consisted entirely of an informal discussion session, while others included brief, prepared presentations. Reactions to the different formats were mixed.



Clarence I. Seely
Fellow, 1975

One of the most controversial situations that confronted the Western Weed Control Conference (WWCC) in its earlier years dealt with the place of the commercial representatives in the organization. To fully understand why this might be the case requires remembering that the WWCC was the first regional weed control organization in the world and the early history of the organization.

The WWCC being the first such organization, there were no guidelines to assist in its formation. At the same time, all of the original members were public employees. The reason for the latter is not difficult to understand since the WWCC was the direct outgrowth of the Plant Quarantine Board, which was composed of one regulatory official from each of the eleven western states. Since the only interstate weed control activity in the early years was through seed legislation, it was only natural that the representatives would be from those in charge of the state seed laboratories. In some states these were in State Departments of Agriculture, but in others in State Experiment Stations or Extension Services.

With the inauguration of large state weed control programs under Work Progress Administration (WPA) funding in 1934 and 1935, the interest in this phase of the overall weed control program increased enormously and interstate cooperation in legislation, funding, and activity soon took up most of the time of the Plant Quarantine Board's meetings. As a result, a number of these people decided that a separate organization was needed. This was formed as the WWCC with an expanded membership including the people in research, extension, and

control. The original Plant Quarantine Board became the official state representatives. These were of course all public employees. This was of little concern since there were only a half dozen or so chemical companies involved in these large control programs. Since there were so few companies involved in rather large public purchases, they were viewed with some suspicion as to pricing, etc. This was sufficient that Congress appropriated a large sum of money (for these times) in 1935 to the U.S. Department of Agriculture to determine whether prices of sodium chlorate were reasonable. A pilot plant was built and several tons of sodium chlorate were produced to check on costs of manufacture. On the basis of this study, it was decided that the market price was not unreasonably high.

With many public employees interested in the organization as contrasted to few commercial people, the control of the organization remained with the State Representatives. This continued without question until the first meeting after the introduction of 2,4-D. At this meeting practically every chemical company anyone had ever heard of sent representatives to the meetings. This nearly reversed the original composition of the group and it seemed obvious that it could in another year to two. As a consequence, commercial representatives were restricted to associate or sustaining members without vote to avoid a possible commercial takeover of the organization.

The restriction on commercial membership remained for a number of years although there was always controversy about it. During these years the number of public employees increased along with the commercial and in a number of cases there were transfers from the public to commercial sectors such as Lin Harris, Chet Otis, Dick Raynor, and Ned Shorey. These, combined with the exemplary activity of the commercial people plus the organization of other regional conferences where the commercial members held equal rights with public members, led the president in 1952 (Seeley who succeeded to the Presidency upon the death of President Dr. Robbins) to recommend to the membership that the commercial representatives be eligible for the same rights and privileges as the public members. This was unanimously approved and during the following two years the Constitution and By-Laws were rewritten including this and some other changes. These were adopted at the 1954 meeting in Tucson. The organization operated under these provisions with only minor changes for many years.

TWENTY-FOURTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Denver, Colorado

March 16-18, 1971

President -- K.W. Dunster

President-Elect -- A.P. Appleby

Secretary -- D.E. Bayer

Treasurer-Business Manager -- J.L. Anderson

Virgil Freed, Oregon, and Bill Harvey, California, were elected as Honorary Members (Fellows).

In the General Session, WSSA President Dayton Klingman concluded there is a place for both regional and national organizations and called for continuing cooperation between the groups. A series of papers on the role of the university; agricultural experiment station and extension service; and industry in problem-solving were presented by A.R. Chamberlain, D.W. Bohmont, and S.N. Fertig, respectively. James Koehler reported on the status of the Weeds Today magazine. He stated that the magazine was in serious financial difficulties, but expressed optimism that it would survive. It did survive for several years, but it died in about 1986.

Symposiums on registration of herbicides and on sugarbeet weed control were held.

President Dunster announced that he had appointed a Publications Committee to assist the Society with its publications.

Bob Zimdahl, Chairman of the Local Arrangements Committee, praised his committee for their hard work for the 1971 meeting, but indicated that he was unhappy with the service provided by the hotel.



Arnold P. Appleby
Fellow, 1976

My career in weed science really started in the weed control course taught by Laurel Anderson at Kansas State. My move to the west was initiated as a graduate student of Laurel's when, on a field trip in Kansas, I met Dick Fosse of Amchem. He apparently told Bill Furtick to check on the kid at Manhattan, which Bill did. Two factors persuaded me to head for Oregon: (a) Oregon, according to Bill, was heaven on earth, and (b) I could make nearly twice as much money as in any other assistantship I could find. I would have been working with Orvid Lee on a USDA project, with Bill as my major professor. I was in contact with Warren Shaw in Beltsville weekly through the summer, while the Civil Service doctors and the USDA doctors argued whether they should hire a diabetic. The decision finally was no, so I taught math and biology for a year in a small Kansas high school.

In spite of the temporary difficulties, we consider all of this extremely fortuitous. We have loved living in Oregon, and I have really appreciated my colleagues in the western states. I suppose the single person that I enjoyed and admired most through the years was Boysie Day. Boysie was something special. He thought about things differently, he voiced his opinions differently, always with wit, and I had a huge respect for his opinions. I miss him greatly.

I have enjoyed the Western Society of Weed Science over the years. It has always been my favorite

society. I particularly reflect with nostalgia on the 1960's, when the Society meetings alternated with the Research Meetings. The Research Meetings were generally smaller and the order of the day was informal discussion. Even the general Society meetings had more discussion than is presently the case. When I was program chairman in 1971 and sent out the call for papers, I suggested that if persons needed to present a paper to get their expenses paid, by all means do so. Otherwise, tell us about your findings in a discussion setting and give the formal paper at WSSA. I guess I still feel that way, although I recognize there are good reasons to disagree.

One of the WSSS papers I particularly remember was by Ralph Whitesides in 1980 on Public Education. He explained the origin of the term "cold enough to freeze the balls off a brass monkey." It is an old Australian navy term about a brass platform near a cannon on which iron cannon balls were stacked. Under very cold temperatures, the brass would contract, causing the cannon balls to roll off. Ralph conceded that the term is often misunderstood by persons who do not understand all the facts.

WSSS has always been a great society because of the people involved, and somehow I know it always will be.

TWENTY-FIFTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**Salt Lake City, Utah
March 14-16, 1972**

President -- A.P. Appleby
President-Elect -- D.E. Bayer
Secretary -- D. Burgoyne (Larry Slater was elected
secretary, but passed away in 1971)
Treasurer-Business Manager -- J.L. Anderson

Fred Arle, Arizona, and Boysie Day, California, were selected as Honorary Members (Fellows). There was discussion from the floor on the organization of the seven projects within the Research Section. Suggestions for project title changes were to be forwarded through the Program Chairman for consideration by the Executive Committee.

Gary Lee, Chairman of the Ad Hoc Committee on Editorial Policy, announced new rules for papers submitted to the Research Progress Reports. Dave Bayer, retiring chairman of the Program Committee, announced the Executive Committee decision to hold the "What's New in Industry" session in abeyance for annual review before reinstatement.

The General Session included a paper by R.P. Upchurch, President of WSSA, on professional weed science societies in North America. Bill Harvey presented a paper on "Where Does Weed Control Fit in the Ecology Scene." There was a symposium on extension education and on classroom teaching. In the teaching symposium, K.C. Hamilton, in the classical Hamilton style, uttered an analogy that should go down in history. He said, "A good single weed course, like petting, succeeds and fails at the same time. It

introduces the student to the subject. He tries it and likes it. But he is not satisfied, knowing he has much more to learn."

Phil Upchurch reported on a new Monsanto herbicide (MON-0573), which later was named glyphosate.



J. LaMar Anderson
Fellow, 1977

J. LaMar Anderson worked summers as a teen-ager on the Rogers Bros. Seed Co. research farm where his father, Dr. Melvin E. Anderson, was Director of Research and a renowned pea and bean breeder. While working with his father, LaMar developed a wide interest in crop production and a love for wild flowers.

After graduating from Utah State University with a B.S. in Horticulture and serving two years as a field artillery officer with the U.S. Army in Korea, LaMar obtained a Ph.D. in Plant Pathology from the University of Wisconsin. Dr. Anderson returned to Utah State University as a pomologist in 1961 and made a career of teaching and research.

Dr. Anderson inherited a Weed Control in Horticultural Crops research project and learned to evaluate herbicides by trial and error. He continues to evaluate chemicals for weed control and as plant growth regulators in fruit crops. LaMar was soon teaching the basic weed science class at Utah State University and was awarded a USDA competitive grant to study the anatomical and cytological effects of herbicides. To further this work, he spent a sabbatical leave at the University of California, Riverside, studying electron microscopy.

As a member of a team of scientists at Utah State University, Dr. Anderson was instrumental in developing models that describe dormancy and spring

bud phenology of deciduous fruit trees. The models were adapted to describe vegetable and weed growth and their interaction. Dr. Anderson's research was most productive as an interdisciplinary team member. For 30 years, he represented Utah State University on western regional weed research and coordinating committees. He has conducted extensive studies on orchard floor management and effects of weeds and cover crops on fruit tree growth and development. Dr. Anderson was elected a Fellow of the Western Society of Weed Science in 1977 and The American Society for Horticultural Science in 1979.

LaMar is best remembered by WSSWS members in his office as Business Manager of the Society from 1965 through 1989. LaMar began managing the financial affairs of WSSWS when the net worth of the Society was less than \$400. He edited the Proceedings, published the Proceedings and Research Progress Report, maintained membership lists, filled standing orders for the Society's publications, and advised the executive committee on financial matters. The Society's assets had grown to nearly \$60,000, about three times the then-current annual expenditures, at the conclusion of LaMar's tenure of office. He was awarded the Society's Presidential Award of Merit and the distinguished Service Award for his service in behalf of the society. LaMar maintains his membership in WSSA and WSSWS and has served both societies on several committees. Though LaMar is quiet and unassuming by nature, his administrative and leadership skills have been recognized by several organizations. He has served as president of the Western Region of the American Society for Horticultural Science, the Utah State University Faculty Association, the Cache Valley Council of the Boy Scouts of America, and was elected Governor of the Utah-Idaho Kiwanis District.

Professor Anderson has taught floral design at Utah State University since 1972. He is recognized as an effective teacher and regularly receives high student evaluations. During recent years, LaMar has coached the university's flower judging teams and taken them to the intercollegiate judging and floral design competitions where they have won national honors.

TWENTY-SIXTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Spokane, Washington

March 13-15, 1973

President -- D.E. Bayer

President-Elect -- D.L. Burgoyne

Secretary -- G.A. Lee

Treasurer-Business-Manager -- J.L. Anderson

Honorary Members (Fellows) selected were Harold Alley and K.C. Hamilton. A resolution was adopted calling for regulatory agencies to standardize examination procedures so that pesticide advisors or consultants who complete the requirements for licensing in one state would be permitted to obtain a license in the neighboring state without repeating the examination.

Gary Lee reported that a bound report had been prepared consisting of contributions from 20 teachers of weed science in the west on techniques and ideas for presenting materials to students. The report was forwarded to the WSSA Education Committee as an input from WSSS.

Don Burgoyne announced that the 1974 WSSS meetings would be in Maui, Hawaii. A major reason given for selecting Maui was that it was a drier site, promising better weather than in Kauai (it rained more than 3" on Maui during the meetings in 1974.).

Among the General Session papers were "Regulations and Administrative Enforcement at the Federal Level" by Donald Moos, EPA, Seattle; "The Effect of the Federal Environmental Pesticide Control Act on State Pesticide Programs" by Errett Deck, Washington State Department of Agriculture, and, "Compliance with Pesticide Regulations and Food Production" by James Ammon, Agripac, Salem,

Oregon.

Interest in glyphosate was beginning to appear as demonstrated by four papers on that topic. These ranged from practical field experiments to effects on ultra-structure of the chloroplast.

Clarence Seely gave a paper on "Will 100% Control of Weeds in Crops Pay Off?", and concluded that the maximum net return from the control of wild oats in dry peas was at 98% control.

Steve Radosevich reported that the resistance of certain biotypes of groundsel to simazine was not due to differential metabolism. This was somewhat surprising, because at that time, all known mechanisms of crop resistance to triazines were one or more forms of increased metabolism. Radosevich's report was a factor in stimulating the search for the mechanism, and leading to a great deal of work over the next few years on basic photosynthetic processes and structures.

A new experimental herbicide, MO-DOWN, was announced. An experimental compound from Stauffer, R25788, was successful in reducing injury from EPTC and other thiocarbamates in corn.



Art H. Lange
Fellow, 1977

My first introduction to Western Weed Science was during a job screening herbicides for the Pineapple Research Institute of Hawaii in 1958. The challenge of keeping the few registered herbicides straight, along with the difficulty of trying to find something to control purple nutsedge (*Cyperus rotundus*), bitter melon (*Momordica charantia*), and flora's paint brush (*Emilia sonchifolia*), gave me a new respect for weed science.

Armed with many testing techniques learned from Dr. Don Gowing of the H.R.I. and Dr. Noel Hansen of the Hawaiian Sugar Planter Association, I accepted a job as weed control specialist with Cooperative Extension, University of California.

My second day on the job at U.C. Davis, I attended the 1962 California Weed Conference in Santa Barbara. There I was introduced to the many weed problems in California's many crops. My head was still spinning when I had my first meeting with Harold Kempen, Harry Agamalian, and Bill Fischer at lunch the first day of the conference. I'm sure my new colleagues were wondering what the U.C. administration were thinking, hiring a Hawaiian with only pineapple credentials and little else. However, these three weed scientists, along with Dr. Dave Bayer and the late Bill Harvey, helped acquaint me with the enormity of my new job. Over the years, their counsel and friendship turned out to be invaluable.

A Weed Control Specialist's job, like many in academia, is "open ended" and impossible to accomplish, but with plenty of room to contribute. For the many crops, there seemed to be very little state funds and not enough practical research directed at the most pressing problems. The answers for selecting weed control in California crops seemed to

lie primarily in the fields where the weeds were competing so effectively. This meant many plots on many crops in many locations, i.e., much travelling. With the novitiate of youth, I set out to do the impossible.

In 1965, my job was transferred to U.C. Riverside where I had the fortune to work with the late Dr. Boysie Day and the world authority on nutsedge control, Dr. Lowell Jordan. Here I was exposed to their outstanding weed control research. In addition, I was given the opportunity of participating in a sizable screening program headed by Dr. Ed Stillwell and later by Mike Lavalley. This program gave us an excellent opportunity to develop an insight into many botanical and chemical relationships. Some of the herbicides reached the market, many did not, but in the process we learned a lot about herbicide selectivity in crops.

After spending a sabbatical leave in a few parts of South America in the early 1970's, where I found many more opportunities for weed science to increase world food production, I returned to the center of the San Joaquin Valley, the Kearney Field Station. With the help of many chemical companies and grower groups, the remainder of my career in weed control was relatively productive. My travel distances were reduced and my technical assistance was greatly increased. Much of my progress was the result of many California Farm Advisors, Weed Specialists, and four excellent technicians; Jack Schlesselman, Les Nygren, Royce Goertzen, and Dana Edson.

We spent the next few years battling johnsongrass, bermudagrass, perennial bindweed, yellow and purple nutsedge, and the nightshades in horticultural crops.

Unfortunately, much of what we have learned has been discarded for the present, in favor of environmental concerns, while we continue to overlook the real problems of smog, saturated fat, and industrial pollution.

One can only look forward to the day when science and truth will prevail. If all the information developed on chemical and botanical relationships has not been lost, society can take off again and solve the production so necessary for the world's good health. Fortunately, we have recorded a portion of the progress in our national, regional, and state journals. It would be desirable if the rest of our unpublished work was filed in computers for the day when the majority and the media realize that scientific progress is the hope of mankind.

TWENTY-SEVENTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Kaanapali, Maui, Hawaii
March 12-14, 1974

President -- D.L. Burgoyne
President-Elect -- G.A. Lee
Secretary -- W.L. Anliker
Treasurer-Business Manager -- J.L. Anderson

W.R. Furtick and Oliver Leonard were selected as Fellows of the Society.

An ad hoc Constitutional Amendment Committee of A. Appleby, D. Burgoyne, and G. Lee recommended a number of amendments to the Constitution and Bylaws. This included a separate category of Honorary Members selected from outside the Society who have significantly contributed to the field of weed science. Previous Honorary Members would be listed as Fellows (formerly Honorary Members). The Committee for Nominations of Fellows and Honorary Members would consist of the three most immediate past-presidents of the Society, with the person serving the second year on the committee as chairman. No more than two Fellows may be selected each year. All amendments to the Constitution and Bylaws were passed unanimously. Further work by the ad hoc Editorial Committee Report was presented with recommendations for papers submitted to the Progress Report.

In the agronomic project, Lambert Erickson introduced and led a discussion on weed biotypes and their differences in herbicides tolerance. The group agreed that use of good management practices, including herbicide rotation, would help keep the problem to a minimum. The

problem of resistance to the triazines was becoming recognized, but other cases of herbicide resistance were rare.

In the aquatic and ditchbank weeds project, excellent control of submersed aquatic weeds from the herbivorous fish *Tilapia mossambica* was reported.

Lambert Erickson presented a paper, "Plant Protection--What is it?" and presented the University of Idaho curriculum in plant protection at the B.S. level.

Experimental herbicides mentioned in 1974 included Prowl, Avenge, Cobex, Krenite, and Surflan.



David E. Bayer
Fellow, 1978

I was born and reared in Oregon on a wheat farm east of Mt. Hood and received my B.S. degree from Oregon State University in 1951. Having enjoyed the experience of hoeing weeds, I accepted an opportunity to work for my M.S. degree in weed science with Dr. Virgil Freed at OSU. Upon completing my degree in 1953, I accepted a job with Oregon State University to conduct weed research in eastern Oregon headquartered at the Pendleton Branch Experiment Station. After approximately two years, I decided to return to school and work on my Ph.D. with Dr. K.P. Buchholtz at the University of Wisconsin.

After completing my degree in 1958, I started to work for the University of California as a Weed Specialist with statewide responsibilities shared with Bill Harvey. Then in September 1962, I joined the Department of Botany, UCD, to teach and conduct research on various aspects of weed science.

In the early stages of my career, I became very involved with the California Weed Conference (CWC) and ultimately served as president in 1981-82 and was elected as an Honorary Member in 1986. During this time, the conference grew from a little over 300 members to over 1,000 members today. While the CWC has been primarily a "user" or a "take home" type conference, I also enjoyed the Western Society of Weed Science (WSWS), which was much smaller and dealt more with research matters of a regional nature. I served as editor-compiler of the WSWS Research Progress

Reports; on most, if not all, major committees; as WSWS representative to the Weed Science Society of America (WSSA), and as President in 1972-73. In 1978 I was honored by being selected as Fellow. In addition to CWC and WSWS, I have participated in our national organization, WSSA, serving as Secretary in 1977-78. I have also served as a Member-at-Large on the WSSA Executive Council, 1972, Editorial Committee and Associate Editor for the journal *Weed Science* from 1971-76 and 1976-80, respectively, served on numerous committees and was selected for the "Outstanding Teacher Award" in 1979. I was honored in 1988 by being elected as a Fellow.

I have taught courses on all aspects of weed science, lectured to a variety of organizations and have served on many state advisory committees. While administration has been competing with my research and teaching in recent years, I still enjoy the meetings and reminiscing with many of my colleagues and especially my graduate students who represent nearly every aspect of weed science.



Kenneth W. Dunster
Fellow, 1978

Hand removal of cocklebur from corn and black locust from pastures and drainage ditches on hot summer days in northeast Kansas should reasonably provide sufficient motivation to seek better systems of vegetative management. I must confess, however, that weed control as a career or even as a science, was not a personal concept when I landed at UC Davis several years later in 1957. Immediate financial need created by a young growing family and luck, not strategic planning, were the primary factors responsible for my lifetime career in plant protection. Floyd Ashton in the Department of Ag Botany (Weed Control) had acquired some "soft" money for a technician in vegetable crops weed research. We did not grow many acres of cauliflower or lettuce in Kansas, but Floyd must have figured I would do most anything (which I did) to stay in school. He gave me my start.

The transitory nature of the university budget system and priority need, placed me on frequent "loan" to other Ag Botany staff members including Oliver Leonard, who loved to attack poison oak, and Larry Foy or Dave Bayer who were the "new kids" in the Department. W.A. (Bill) Harvey and W.B. (Jim) McHenry were usually available for advice (generally solicited) when I stumbled with lack of knowledge and inexperience. Alden Crafts kept all of us busy trying to prove (or disprove) his abundant theories. I soon discovered that Weed Science was more than plant physiology. Much of the experimental equipment desired was not readily available or affordable. Thanks to government surplus and excellent cooperation from Norm Akeson and Wes Yates in Ag Engineering, we were generally able to build what we could not

buy--and sometimes it worked the first time.

By the time graduation rolled around, Harry Agamalian had given me a "trial by fire" by virtue of spraying me with a concentrated dose of Randox CDAA in a Salinas Valley lettuce field. A learning experience, as it provided ample reason to later decline service as a flagman for an aerial application trial with the same material as scheduled by the UC Farm Advisor, Dan Ragsdale, in the Imperial Valley. Dave Bayer had checked out my diving skills in the process of retrieving the wheel assembly of our spray rig trailer (one of a kind borrowed from AmCy) from the bottom of an Imperial Valley irrigation canal. Lots of sparks on a Saturday night at 60 mph. Who would guess that Dave can weld, especially under stress on a hot Sunday in the Imperial Valley? He left the Extension Service soon after. The UC Davis experience provided a terrific opportunity to acquire diverse weed control knowledge and survival skills--by osmosis if by no other way.

R.A. Fosse was one of the most frequent visitors from industry (there were not many commercial reps) at the UC Davis campus. Rather remarkable considering he was responsible for Amchem R & D activities west of the Missouri River. Dick tried to cope with extensive geography through use of a private airplane to shuttle between two Oldsmobiles parked at opposite ends of the territory. His obvious need for another pair of legs coincided with my need for a real job and I joined Amchem Products, Inc. as a Field Development Rep in July, 1960. I soon discovered that R.H. Beatty, Director of R & D, could match Alden Crafts any day in asking questions I could not answer. My first experience with public concern regarding pesticide use and food safety was encountered the following Thanksgiving when my mother was throwing away cranberries supposedly contaminated with amitrole. As amitrole was a major component of the Amchem product line, I did not particularly like association with the analogy of pregnant prostitutes, Edsel cars, and cranberry growers--I knew they were all out of business.

With residence in Bozeman, Montana, the approximate center of my assigned territory, I began my weed science education in earnest. Equipped with a road atlas and label book (equally important), I roamed the Rocky Mountain states from the Mexico border to and including the prairie

provinces of Canada while my wife did an excellent job of raising the kids. What an interesting array of major professors: Heikes, Hodgson, Baker, and Krall in Montana; Alley, the Bohmont boys (Dale and Bert), Timmons and Comes in Wyoming; Fults and Thornton in Colorado; Tingey, Jensen, Anderson, Cronin, and Williams in Utah; Whitworth in New Mexico, and the Seely-Erickson duo in Idaho. I was probably tolerated as I served as a courier of rapidly emerging information between weed research outposts. I have always been thankful that Arizona was not included in the initial assignment, as I am not sure any "green kid" could have survived both H.P. Alley and K.C. Hamilton during the same indoctrination period. Imagine my relief when I escaped the "kid" category with the arrival of new blood including Jack Evans, Gary Lee, Ed Schweizer, and Bob Zimdahl. Thanks Guys!

I returned to California via a five-year Colorado transfer in 1971. My inability to place leafy spurge, Canada thistle, and Russian knapweed on the endangered species list had been adequately demonstrated. But I had learned a bunch about weed and brush control needs and management systems in cereal grains, alfalfa, sugarbeets, rangeland, and waterways in the process. Most importantly, I learned that Weed Scientists come in all sizes, shapes, and descriptions from a multitude of interest areas. The most characteristic common denominator is the observed ability to share diverse talents and information in a cooperative effort to solve weed problems of mutual interest and concern. The basic training received in this regard has served me well in the transitions and attendant changes in plant protection program priorities from Amchem to Union Carbide to Rhone Poulenc.

The Western Society of Weed Science has historically been, and remains by necessity and foresight, a unique assembly of people and programs servicing a very diverse region. I am very pleased to have had the opportunity to be a part of the successful evolution of this Society through frequent service on the Executive Board. Peer group selection as a Fellow in 1978 and most recently, Outstanding Weed Scientist, are awards probably not deserved but personally considered to be highlights of a very exciting and rewarding career.

Continued WSWs program diversity and flexibility will be required to effectively accommodate current

and projected Membership information needs as the emphasis continues to shift from what works to what can be registered or rendered acceptable to a concerned general public. I have complete confidence that the "new wave" of WSWs Weed Warriors will meet and exceed the challenges ahead. Good Luck!



Dale W. Bohmont
Honorary Member, 1978

How in the world did old Dale Bohmont get involved in weed control? I guess I would have to say that I started out on the ranch with a hoe and working on thistle and other things that I thought were nothing but a detriment. I had a continuing interest because of the word "L" for labor, hard work, little pay, sugarbeets, little pay, on down the line. So, after I got out of the Army, I went back to the University of Wyoming and was hired in small grains as an agronomist. I soon found that cutting grain with a hand sickle was about as bad as cutting weeds with a hoe and then, voila, Mitchell and Marth, in about 1946, found (2,4-dichlorophenoxy)acetic acid. What a wonderful idea it would be to spray something and watch it die a natural death. And so, although I was a small grains specialist, I took on also, in 1947-48, possibilities of weed control. A brand new approach to life, if you will. With my practical training on the end of a hoe and technical training at the University, I thought I was ready to do something. Little did I realize that things were not quite that simple. And so, in 1948, I rode with the Commissioner of Agriculture of Wyoming to Sacramento in March 1948, to my first Western

Weed Control Conference. That is a memorable occasion because we put chains on in the middle of Wyoming and drove all the way to Albany, California, across the entire states of Utah and Nevada with the chains on. Basically we followed busses because they had lights and we drove at night, so you could see where their taillights were and the snow was (first liar concept) 8 or 10 inches deep on the level, no wind, but you really needed chains. So, the wonderful experience of getting over to where the grass was growing green and it looked almost like, you can't believe, a surprising pleasant valley called Davis, California. We did meet in Sacramento. Upon this comes some important ideas, because the weed conference at that time was really drawn together by regulators and commissioners of agriculture. Research might have been a big word called "R", but no one paid much attention and not much was going on, frankly, in terms of new research efforts. It is true that there were all kinds of soil sterilants and boron and diesel oil for carrots and arsenicals and things like this, and so the seed business, the seed specialists from the various states often came along, but it was really a commissioner of agriculture regulatory meeting. Research was a very minor, if not a backseat activity. The people who I first recall in the weed conference, by the way, were Walter Ball from California, old Alden S. Crafts, for gosh sakes. They had a weed specialist in Extension from California who brought down the house all the time with his jokes, and I can't recall his name (Note: Bill Harvey). Virgil Freed, of course, from Oregon, and then the Bobbsy Twins, Erickson and Seely. Also, Lowell Rasmussen from Washington. They are the ones that you mainly remember, I think, as we look about the history of the weed control program.

Note: Additional comments by Dale Bohmont are in the Appendix.

TWENTY-EIGHTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Phoenix, Arizona
March 18-20, 1975

President -- G.A. Lee
President-Elect -- W.L. Anliker
Secretary -- J.O. Evans
Treasurer-Business Manager -- J.L. Anderson

New Fellows selected were R.A. Fosse, California, and C.I. Seely, Idaho.

The ad hoc Constitutional Amendment Committee offered recommendations for additional revisions to those offered in 1974. The WSSA representative would serve a 3-year term. Procedures in case of a tie vote for election to an office were clarified. The winner would be determined by a coin flip at the Executive Committee Meeting. The format was clearly established that essentially all standing committees would consist of three persons serving 3-year terms on a revolving basis and that the person serving in the second year would serve as chairman. All recommendations were approved, item by item, unanimously.

The Public Relations Committee of D.L. Bohmont, D.L. Burgoyne, and I. Shelton submitted a number of recommendations for consideration. One recommendation was particularly interesting and is reproduced here verbatim: "It is critical that we get information into non-agriculture-oriented news media. Examples might be Playboy Magazine, with titles such as 'What the Well-Informed He-Man Should Know About Pesticides' or 'A Stud Manages His Environment'. Another could be Ladies Home Journal with,

'Good Family Health Through Proper Pesticide Use' or 'Are They Trying to Starve Your Family Through Banning of Pesticides?'. Other magazines might include Harpers and Saturday Evening Post." I regret that I have not noticed such articles in the popular press.

As expected, there was considerable discussion about glyphosate in various of the project meetings. This included discussions on timing, rates, effectiveness on various species, and dissipation in irrigation water. There also was considerable discussion on the extent and mechanisms of herbicide resistance. Tom Muzik suggested that perhaps the particular strains of weeds could be called "chemotypes."

Experimental compounds appearing on the scene included Dowco 233 (triclopyr) and ethofumesate.

A paper was presented on the release and dispersal of *Rhinocyllus conicus*, a weevil for biocontrol of musk thistle in Montana.



Louis A. Jensen
Fellow, 1979

Louis A. (Lou) Jensen is an Idaho farm boy who never lost a respect for the land or a love for the people who tilled it. Following graduation from Utah State University with a degree in agronomy, Lou worked as a farm supervisor for the Farmers Home Administration until entering the military service during World War II and was honorably discharged from the infantry as a Sergeant.

Mr. Jensen began his career with the Utah State Extension Service as a County Agent in rural Utah in 1946 and became Extension Agronomist in 1953. Lou continued graduate studies at Colorado State and Utah State Universities and received his M.S. from USU in 1960. Lou originated the "Weeders Digest" newsletter in June, 1969. He published the newsletter 4 to 6 times a year until January, 1980. The Weeders Digest was "designed primarily for Extension Agents, Agricultural Inspectors, County Weed Supervisors, and other members of county weed committees, Vo-Ag teachers, commercial spray operators, and others." It contained timely information to help readers "keep abreast of the many new things in weed control, especially as they apply to Utah conditions." The newsletter has been continued by the two succeeding Extension weed specialists at USU, and is still considered a valuable tool for sharing timely information.

Lou was energetic; he never walked down the hall, he ran. His son, a track star in high school and the university, had an in-house role model in Lou. Lou established weed control demonstration plots in every county of the state, working out of his garage and personal car. He was known for his long-term chemical weed control studies, especially on noxious

perennial species as field bindweed, Russian knapweed, quackgrass, and whitetop. Lou's job title was listed "Extension Agronomist" on his first 10 newsletters; in August, 1971 he changed it to "Extension Agronomist (Weeds)," which may reflect an official change in his university title and surely his interest.

Lou was the key figure in the introduction of *Rhinocyllus conicus* weevil for biological control of musk thistle in Utah. His first release was in Provo Canyon, June 17, 1975. Other than an unsuccessful release of another weevil to control puncturevine in Box Elder and Washington Counties a number of years earlier, this was the first release of an insect to control weeds in Utah. Lou later made many other releases of musk thistle weevil, and should be regarded as the pioneer of biological weed control in Utah.

Each winter Lou held numerous day-long weed control seminars called "District Weed Conferences" for every county in Utah. People from 2 or 3 counties met at central locations to learn the latest information on weeds and weed control for their area. In a typical year, 1973, Lou presented these seminars to 608 people in 12 locations throughout the state.

Lou wrote the first "Handbook for County Weed Committees in Utah." It was a detailed description of how a county weed control program should be organized and conducted. It served as the official training document to help new weed committee members and weed supervisors learn their duties and is still being used in a slightly revised form.

Lou was a key organizer and participant (as early as 1954) in the annual Utah Weed Control Conference, a 2-day educational conference sponsored by the Utah State Weed Committee. The conference and organization eventually (1983) evolved into the Utah Weed Control Association.

Lou was heavily involved with the Western Society of Weed Science, attending regularly, and serving as President of the Society in 1965-67. He was elected a Fellow of WSWs in 1979.

J. LaMar Anderson

TWENTY-NINTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Portland, Oregon

March 16-18, 1976

President -- W.L. Anliker

President-Elect -- C.L. Elmore

Secretary -- R.D. Comes

Treasurer-Business Manager -- J.L. Anderson

Dick Beeler was selected as Honorary Member and Arnold Appleby, Oregon, as Fellow.

Future Fellows appearing on the membership rolls for the first time included Bart Brinkman, Salem, Don Thill, Pullman, and Harvey Tripple, St. Louis. Gary Lee had transferred from Laramie to Moscow.

A proposal that Project 2 (Herbaceous Weeds on Range and Forest) and Project 3 (Undesirable Woody Plants) be combined was discussed. Such a change would require approval by the membership as a Constitutional revision.

One of the resolutions encouraged periodic review of policies and procedures of the WSSA Editorial Committee to ensure that publication of papers dealing with applied aspects of weed science be encouraged.

In his Presidential Address, Bill Anliker fretted mildly about the lack of growth of the Society. He said, "We, in the Western, seem to be able to put on a good conference by having fewer people work harder and are the only Conference that attempts to handle the Society's affairs with one Business Meeting and one Executive Committee meeting each year." He also said that "the Western serves the largest area with the fewest weed scientists

per square inch. Our region has the greatest variety of commercial crops grown under the widest range of cultural and climatic conditions." President Anliker observed that the other regional conferences have a higher percentage of formal papers, whereas the Western Society is characterized by much more informal discussion and freer exchange of ideas. It has been my observation that this comment has become slightly less accurate in more recent years.

In 1976, reports of the project meetings suggested that informal discussions were the primary format for several of the projects, while in others, most of the time was taken with prepared speeches.

A new herbicide, diclofop-methyl, was discussed in relation to grass control in sugarbeets and wheat. Other new materials included ethalfluralin and bifenox.



Gary A. Lee
Fellow, 1979
Honorary Member, 1989

How did a Nebraska cowboy get involved in weed science? I knew that I didn't want to feed cows through the long, cold winters of the high Nebraska plains, but the biggest factor was blind luck and economics. I became interested in graduate school when approached by a professor of plant pathology (heaven forbid), but no assistantship was available. To be paid to go to school seemed an intriguing reversal. It so happened that an assistantship was available in weed science under Harold P. Alley and thus, the beginning of a life-long adventure. I must say the education received from Harold P. Alley was more rigorous than the degrees earned from the University of Wyoming.

Weed science has afforded me the opportunity to work with some of the most dedicated and caring people in agriculture. There has always been more problems to solve than people to do the work, so there seems to be a natural tendency for close cooperation, camaraderie, and sharing. The "team" approach to weed science quickly became a part of my working philosophy after joining the faculty at the University of Wyoming in 1965. Although Dr. Alley, Dr. Alvin F. Gale, and I had different areas of responsibility, we worked together on rangeland, row crops, waste areas, and urban problems. Since Harold Alley didn't believe in wasting daylight, we would often play 18 holes of golf before breakfast, evaluate several sets of row crop plots by lunch, establish a series of noxious or range weed plots in the afternoon, and drive to another part of the state after dinner. Needless to say the 10 years at Wyoming passed quickly and in 1975, I accepted a weed science position at the University of Idaho. I have been equally fortunate to work with and know early pioneers of the discipline located at the

University of Idaho, i.e., Clarence I. Seely, Lambert C. Erickson, and Robert Higgins.

My first association with the Western Society of Weed Science (WSWS) was at the Albuquerque meetings in 1965. I was an inexperienced graduate student and when Lou Jensen, Program Chairman of the meeting, rescheduled my paper to the general session, I nearly went home. Ken Dunster and Harold Alley stayed up most of the night coaching and encouraging me. Without question, I was more completely prepared for that presentation than any I have given since that time.

The WSWS has provided an opportunity for friendships, education, and leadership. Above all, the WSWS has been the professional meeting for county agricultural agents, weed district supervisors, regulatory personnel, private industry representatives, and academicians. I know of no other organization where such a diverse group has joined together for a common purpose. The active pursuit of professional and social interchange has resulted in a plethora of good memories and good friends. Getting to the WSWS meetings by car in a spring blizzard has often been as exciting as the meetings themselves.

I have had the good fortune to serve WSWS in nearly all offices over the years. After stumbling blindly through a year in an office, I found that I had a pretty good idea of what should be done. However, the responsibilities of the office were completed just when I could comfortably do the job. Out of frustration, I recorded the activities and duties for each office as I perceived them to be. I gave copies of my WSWS operation manual to the executive committee in 1975. I am surprised to find after countless revisions, the manual is still used as a guideline by WSWS officers.

During my tenure as a weed scientist, there has been an exciting change in the way we control weeds. The most significant change has been the amount of herbicide needed and the precise selectivity achieved. When I started in the business, it was common to apply 100 to 300 lb/a of soil sterilants and use 4 to 10 lb/a of "selective" herbicides. Compared with the highly active crop protectant material of today, which requires a fraction of an ounce per acre, there have been tremendous strides made during the past three decades. As we develop integrated weed control systems, however, there seems to be a rediscovery of farming practices commonly utilized in the 30's, 40's, and 50's. We are realizing that "the more things change, the more they stay the same".

THIRTIETH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Sacramento, California

March 15-17, 1977

President -- C.L. Elmore

President-Elect -- L.S. Jordan

Secretary -- R.J. Burr

Treasurer-Business Manager -- J.L. Anderson

Art Lange and LaMar Anderson were selected as Fellows in the Society.

The Site Selection Committee recommended Hawaii as the preferred site for the 1980 WSWs meetings. However, the majority of WSWs members in attendance rejected the recommendation, fearing that attendance would be too limited. Preference was established as Salt Lake City.

Following recommendations made in 1976, Project 2 (Herbaceous Weeds on Range and Forest) and Project 3 (Undesirable Woody Plants) met jointly.

In the General Session, Glenn Klingman gave a paper on "Pesticide Industry's Relationship with Universities in the Future." He called for continued cooperation between the universities, the USDA, EPA, and industry to develop weed control programs.

Les Saunders, California, discussed discovery of *Hydrilla* in a lake near Marysville, California. Dick Comes discussed the rapid spread of Eurasian milfoil in British Columbia, causing concern about spread into the Columbia and Snake River systems of the Northwest. Comes also discussed the possibility of controlling reed canarygrass in seedling creeping red fescue on ditchbanks with

glyphosate, but tolerance was lost when the fescue plants became established.

There was a wild oat symposium, moderated by Gary Lee. It included papers by John Nalewaja, Clarence Seely, Bob Zimdahl, Jack Evans, Dean Swan, and Arnold Appleby. Jack Evans and R.S. McAllister showed interesting evidence that the twisted awn of the wild oat plant contributes to preharvest shattering of the wild oat seed.

There were several papers dealing with a number of aspects of glyphosate action, including environmental effects, degradation in fruit, and mechanism of action.

There were three well-received "perspective" papers by visitors. These included, "Proper Perspectives of Pesticide Toxicology" by Alice Ottoboni, "Proper Perspectives of Weed Science in Agriculture and Public Affairs" by Dick Beeler, and "Proper Perspectives of the EPA Role in Weed Science" by Ellery Knake.

New herbicides mentioned included Dowco 290 (clopyralid), tebuthiuron, and uses of metribuzin in established alfalfa and wheat.



William L. Anliker
Fellow, 1980

My interest in weed control developed in the mid-50's when completing an undergraduate degree in Agronomy at WSU. The realization that I might soon have to go to work upon graduation, if the military didn't get me first, prompted some interest in graduate school.

Lowell Rassmussen whetted my interest in weed control along with the development of several exciting new groups of herbicide chemistry.

Upon completion of an M.S. degree, Tom Muzik got me interested in tropical agriculture and I took a job with Firestone in Liberia on a rubber plantation. After seven years as plant physiologist and Research Department Manager, the natives were restless and so was I. A culture shock of significant proportions occurred when we left the jungles of West Africa for the concrete jungle of Manhattan, where I became New Products Development Manager for Diamond Alkali International.

After two years of international travel, there was the opportunity to move to the west coast with CIBA in 1966 as their Research and Development rep for the 13 western states.

My association with the Western Society of Weed Science and my real education in western agriculture began at that time.

I extolled the virtues of the "orans" (Patoran, Cotoran, Maloran, Tenoran, and Preforan) to the weed science community and anyone else who would listen. I received a mild admonishment from

my boss when he heard that I had referred to one of our new herbicides as "Alsoran."

Many weed scientists assisted in my education and degradation over the years and most notable were Harry Agamalian, Hal Kempen, Hammond Ford, Arnold Appleby, Larry Burrill, Don Rydrych, Lyle Nagle, and Dwight Peabody.

The Western Society of Weed Science has been my favorite, with its informal discussion format. The years when I served as Program Chairman and President were most rewarding. That's when I learned that the WSWs meeting was always going to be successful in spite of the President's efforts to screw it up.

I have retired in the spring of '92 after 27 years with CIBA-GEIGY on the same day I joined the company--April Fool's Day.

Many of my fondest memories are of the Western Society of Weed Science and its members.

THIRTY-FIRST MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Sparks, Nevada
March 14-16, 1978

President -- L.S. Jordan
President-Elect -- R.D. Comes
Secretary -- A.H. Lange
Treasurer-Business Manager -- J.L. Anderson

Ken Dunster and Dave Bayer were selected as Fellows. Dale Bohmont was named Honorary Member.

The Site Selection Committee had reviewed the WSSS meeting sites from 1970-1980 and found that meetings were held in the Pacific Region six times and the Mountain area five times. The Committee recommended San Diego for the 1981 meetings. They commented that a meeting site in New Mexico, Montana, Colorado, or Wyoming had been considered with little or no enthusiasm.

Gary Lee presented the WSSA report and indicated that WSSA would provide financial support for the next four issues of *Weeds Today*, at which time the status of the magazine would be reevaluated.

Attempts in 1976 and 1977 to merge Projects 2 and 3 apparently had failed, the two projects again met separately in 1978.

A feature of the general session was a paper by LeRoy Holm on "Some Characteristics of Weed Problems in Two Worlds." He presented a great deal of interesting information about the world's primary and secondary weeds, their characteristics, classification, and life cycles. He mentioned that mainland United States has 78% of the primary weeds

of the world and 66% of the secondary weeds. Dr. Holm also discussed at some length the attitudes and philosophies of accepting new technologies, both in the U.S. and in developing countries. It is a particularly eloquent discussion, and I can recommend to weed scientists everywhere that they read the paper in the 1978 WSSS Proceedings.

There were three panel discussions: "What Herbicide Users Can Do on Special Problems," "Vegetation Management in Forests," and "The Case for Preventative Weed Management: But How?"

There was a symposium on "Techniques to Manipulate Herbicidal Activity," including papers on controlled-release herbicides, microbial inhibitors, chemical safeners for herbicides, carbon protectants, plug-planting, and new methods for applying EPTC.

A new experimental herbicide, fluridone, was announced for broad-spectrum weed control in cotton. Two papers mentioned new potential weed problems, *Cuprina* in Idaho and *Nardus stricta* in Oregon.



P. Eugene Heikes
Fellow, 1981

They say that reminiscing and thinking about the past is a sign of old age and probably that is so, but still it is not all bad. Maybe some of our past experiences are interesting to others and it is through other peoples' experiences that a lot of knowledge is gathered.

I was raised on a farm and cattle ranch west of Great Falls, Montana. I first became weed conscious when we started having field bindweed in our fields. I suppose it started with contaminated grain seed. At that time, there was little that could be done to control bindweed. We cultivated for two years, but with the equipment available then and the lack of power, cultivation was not very effective. We used some sodium chlorate but usually the bindweed was the first to come back after the soil cleaned up. We spread the sodium chlorate by hand or with a shovel; I don't imagine the application rate was very accurate and would not be approved by the EPA. Since then, bindweed has increased and become much more of a problem in that area.

My first job after graduation from Montana State University at Bozeman was Associate County Agent on the Milk River Irrigation Project in Northern Montana. It was a cooperative position between the Bureau of Reclamation and the Montana Extension Service.

The Milk River Irrigation Project is sort of like a shoe-string; it is about 150 miles long and two to three miles wide. It extends down the Milk River

Valley, the old channel of the Missouri. The valley is very flat. The ditches were built with horse power in the early 1900's. Many of the ditches were just two dikes built with the ditch between. Soil for the dikes was borrowed immediately adjacent to the dike. This left low ground that filled with water, also cattails and willows. The ditch banks (dikes) were narrow and being covered with willows, there was an enormous amount of seepage. The willows were so thick that beavers would build dams across the ditches. There were no roads on the ditch banks; many of the ditches would go unseen for years. Water was turned in one end and hoped it came out the other end. It was not a very efficient irrigation system.

One of my assignments as an Associate County Agent was to work up a spraying program to get rid of the willows, so that equipment could be gotten in to rebuild the ditch banks. We sprayed over 150 miles of ditch banks with a helicopter. We used 2,4-D and 2,4,5-T. I don't think we had one complaint about drift or crop damage. They "dozed" off the dead willow canes in the winter when the ground was frozen. Since then they have widened the ditch banks and built roads. It is a different irrigation system now than what it was.

I became Extension Weed Specialist for the Montana Extension Service in 1955. Bob Warden had been Weed Specialist before me, but there was a four or five year period between when he left and I started. Bob went with Dow Chemical Co. With the time elapsed between Bob and me, I had to pretty much start a new program.

Montana has its share of perennial weeds. At that time it was mostly Canada thistle, field bindweed, Russian knapweed, and leafy spurge. The biennial knapweeds were not considered a problem at that time; they should have been. Some of the counties had weed districts and we formed districts in quite a few more counties. Montana did not have a state weed law then; we tried to get one passed by the State Legislature several times, but failed. Some of the county districts were good and others not so good. So much depended on leadership, which was usually the County Agent. If the County Agent was not weed-minded there was usually not much done. I worked with the County Agents; I tried to keep them informed on new developments and keep their interests up on weed control programs. I formed the Montana Weed Control Association, which I think did some good. I also held numerous Extension meetings,

like is done in all states, with farmers and other groups.

I joined the Western and National weed control association when I became weed specialist. One of the first meetings I attended was in Sacramento. Three of us drove there in a car. The meeting adjourned about noon. We started back over Donner Pass. It started snowing a short distance out of Sacramento and got worse as we went up the hill. We finally got behind a snowplow and followed it or other snowplows to Reno. We got to Reno about midnight.

Talking about bad weather and the Western Association meetings, some may still remember the one and only meeting held in Bozeman. It was during Bob Warden's time. It snowed and stormed so bad that most of the group got snowed in and had to stay for several days after the meeting. It has not been held there since.

I remember being surprised when I was approached by Rex Warren (Ore.) and Bill Harvey (Calif.) and asked if I would consent to being nominated for Secretary/Treasurer for the Western Association. They said it would probably mean going on through to President. At that time there was not a Business Manager; the Secretary/Treasurer handled the books and put out the Proceedings and Research Reports. At that time the Conference met as a whole every other year and the Research Section the in-between years.

I was President in 1963. That year the Association met in Portland. I was not familiar with the royal accommodations given by some of the hotels to the Presidents. With the confusion and all the rest with getting everything together for the meeting, I forgot to make my hotel reservation until sort of late. I was afraid they might not have a room; it was in the Sheraton Hotel. When I checked in, the bell-hop showed me to the suite that I was to have for the meeting. It was bigger than the house we lived in. It had three bedrooms, five beds, a large sitting room, two bathrooms. I understood that Eisenhower had stayed there sometime before that. I tried to keep the beds filled up with graduate students.

We moved to Fort Collins in 1961 and I started as Extension Weed Specialist, September 1 of that year. There was not an Extension weed program here before that, so I had a free hand. The legislature had just passed legislation for the formation of county weed districts, much like Montana. I enjoyed setting up a

weed program for Colorado. I worked with the County Agents and Weed District people; here I seemed to work more with industry people than I did in Montana. I think we had a pretty good program in the state. I retired in 1984.

Looking back on it all, it was fun. The great people that I met and worked with made it fun. I think if everybody could enjoy their work and their lives as much as I did, it would be a great world. Retirement has been fun too.

THIRTY-SECOND MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Boise, Idaho
March 20-22, 1979

President -- R.D. Comes
President-Elect -- L.C. Burrill
Secretary -- R.L. Zimdahl
Treasurer-Business Manager -- J.L. Anderson

Fellows selected in 1979 were Louis Jensen and Gary Lee.

Finance Committees had been working for several years with an objective of maintaining a balance equal to one year's expenses. This was essentially achieved in 1979.

WSSA would continue to support Weeds Today financially in an attempt to keep the magazine alive.

Lowell Jordan was the first CAST representative from WSWS and gave a report on that organization.

There were some difficulties encountered in accepting camera-ready copy for the Research Progress Report, but, with close attention to editorial rules, this method should increase flexibility and reduce costs.

In reports from the Projects, several weeds were mentioned as spreading rapidly. These included Dyers woad, poppy, goatsrue, leafy spurge, skeletonweed, diffuse and spotted knapweed, and star-thistle. Discussion of application methods included ropewick application and herbigation.

A straw vote was taken on the question of whether or not WSWS should continue to

prepare annual resolutions. The consensus of the group was that resolutions should be prepared. This question had been asked in 1941, H.L. Spence commenting that "I am a disbeliever" in regard to resolutions. Indeed, no resolutions were proposed in 1942 but resumed thereafter.

Changes in the Constitution and Bylaws were proposed. One involved the addition of the representative to CAST in the Constitution. A motion to accept that provision was tabled. Two changes that were approved were (a) allows the presentation of the Presidential Award of Merit at the discretion of the President, and (b) a provision that Fellows, upon retirement, shall receive publications of the Society and complimentary registration and luncheon privileges at all Society meetings that they attend.

In his Presidential Address, Dick Comes proposed the idea of getting graduate students more involved by a graduate student paper competition, a proposal that was later put into practice.

Of special interest in the program was a section on "Old Timers." A total of 26 men who had been involved in the early days of the Society were given a spot on the program to reminisce about their weed control days. Many of the presentations

were made in person, some of them were presented by others. Because the information presented is germane to the objectives of this book, those presentations are reproduced in the Appendix.

There was a series of papers on integrated pest management by Carl Huffaker, Errett Deck, and Robert Norris. A paper by P.W. Leino and Bob Callihan discussed a portable computer data gathering and processing system.

THIRTY-THIRD MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Salt Lake City, Utah
March 18-20, 1980

President -- L.C. Burrill
President-Elect -- L.E. Warren
Secretary -- Alex Ogg, Jr.
Treasurer-Business Manager -- J.L. Anderson

Bill Anliker was selected as Fellow of the Society in 1980.

The revision in the Constitution concerning the CAST representative, proposed in 1979 and tabled, had been revised and was submitted to the membership for approval. It was approved unanimously.

In the Presidential Address, Larry Burrill expressed gratification, but also concern, about the increase in number of formal papers presented at Society meetings. It is one way to convey research information to others, but concurrent sessions and reduction in discussion time also detracts from that objective. WSWs has been known as the "discussing" Society, and is in some danger of losing that quality. He encouraged persons to present one good paper, rather three or four.

John Nalewaja gave an extensive report on "Energy Returns from Weed Control," including information on petroleum input into herbicide manufacture, power requirements of electrical discharge systems, wick herbicide applications, tillage, hand-hoeing, etc.

Wendell Mullison discussed, "Public Concerns about 2,4,5-T," and pointed out the large number of flaws in the Alsea study. He listed many of the concerns

about 2,4,5-T, including cancer incidence, dioxin toxicity, genetic concerns, et al. He quoted comments of Texas Agricultural Authorities, "The chemical has been used in Texas for 29 years. In this span of years, approximately 50 million acres have been treated, with many areas of land receiving three to five applications. To date there has not been a single lawsuit because of attributed health damage to man or animal. There have been lawsuits on damage to vegetation outside of the target area. Percentage of calf, lamb, and kid crop is up in Texas. There are less deformities in newborn animals than in the history of the livestock industry. The cause of practically all deformities has been traced to plants that historically cause deformities to fetuses."

Volunteer papers included two papers on the new herbicide chlorsulfuron and a paper by Bill Donald, "Jointed Goatgrass-A New Problem in Colorado Wheat."



**J. Wayne Whitworth
Fellow, 1981**

As a student at Utah State Agricultural College in 1946, I first learned about the organization that later became known as the WWS. Del Tingey had employed me to work for him, and to listen to his salty comments about weed control and about the Western conference. Del, like most all of the early workers, was plain spoken and had a broad background in many disciplines. Management methods were much in favor in those day with less emphasis on single-shot solutions with new herbicides. The records of the organization will show that in succeeding years more and more emphasis was placed on herbicides. Now we have come full circle, and are back to a realization that herbicides are only effective tools when used as one factor in a good management scheme. Unfortunately, very few of these old-time, broadly trained and experienced weed specialists are still alive to witness this return to sound principles.

Many of the early workers and organizers of the Western Society that I knew--Walter Ball, Jess Fultz, Bill Harvey, Alden Crafts, Lambert Erickson, Clarence Seeley, F.L. Timmons, and Del Tingey--were not narrow specialists like many in weed science today. They had broad experience in many fields--agronomy, horticulture, biometry, plant breeding, chemistry, botany, range management, and other disciplines.

With Bill Harvey there was always humor and philosophy given and exchanged. At one meeting we were in a discussion of why the farmers and ranchers were so dumb as not to accept our recommendations. Bill said in effect, "The other

day a rancher and I were on a hill looking over some of his problems while I recommended what he should do, then he got in his Cadillac and drove off and I got into my little Chevy and drove off." Then one time in Boise when we were honoring Bill and other old-timers sitting on the stage and Bill slowly slid backwards out of sight. Everyone rushed up just knowing it was a heart attack. Bill had leaned back on his chair and the two hind legs slid in between the sheets of plywood and dumped him slowly backwards. When asked if he was OK, Bill said that was what they asked when they caught him and when he said yes, they dropped him the rest of the way to the floor.

The objectives of the Western Society, unlike some of the other regional societies, were not to see how big we could grow or how much cash reserve we could accumulate as a society, but to exchange information, ideas, and to build friendships. The meetings were always conducted in a frank and honest manner with no holds barred as to what could be said, and still no feelings were permanently damaged--even when Harold Alley spoke with great feeling and colorful adjectives. What a great fraternity it was in those days.

THE POWER OF PERSONAL INFLUENCE

The only responsibility that a man cannot evade in his life is the one he thinks of least, his personal influence. A man's conscious influence is woefully small. But his unconscious influence, the silent, subtle radiations of his personality, the effect of his words and acts, the trifles he never considers is tremendous. Every man has an atmosphere which is affecting every other. So silent and unconsciously is this influence working that many men forget that it exists. Into the hand of every man is given marvelous power for good or for evil, the silent, unconscious unseen influence of his life. This is simply the constant radiation of what a man really is, not what he pretends to be. Every man, by his mere living, can radiate sympathy, happiness, hope, or any of a hundred qualities. There are men whose presence seems to radiate sunshine, cheer, optimism. With them you feel calm and rested and restored in a moment to a new and stronger faith in humanity.

---William George Jordan

THIRTY-FOURTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

San Diego, California

March 17-19, 1981

President -- L.E. Warren

President-Elect -- Alex Ogg, Jr.

Secretary -- Don Thill

Treasurer-Business Manager -- J.L. Anderson

Fellows selected in 1981 were Gene Heikes and Wayne Whitworth.

Discussion was held on the advantages and disadvantages of Sustaining Memberships, but no formal action was taken. Reports from the Projects indicated a great deal of vigorous discussion on a wide variety of topics. Rope-wick application was mentioned several times. A status report was given on Dowco 290 (clopyralid) and Garlon, a relatively new herbicide from Dow. Electronic spray monitoring was discussed.

In the General Session, invited speakers were W.C. Shaw, "Integrated Weed Management Systems Technology for the Future," Al Young, "Use of Herbicides in South Vietnam, 1961-1971," and Bob Papendick, "Overview of USDA Study on Organic Farming."

There was a symposium on microbial manipulation of herbicide persistence and three papers on public perception. These included, "Pesticides--The Public Image" by R.L. Zimdahl and P.K. Martin, "Public Concerns About 2,4-D" by Wendell Mullison, and "Pesticides and Controversy: What Can We Do?", by R.D. Gibson, W.W. Draper, and J.C. Street.

The volunteer papers covered a wide range

of topics, as usual. Earth-shaking technological breakthroughs were difficult to find in 1981. There continued to be a series of papers on glyphosate and an increasing number of papers on the sulfonylureas. DPX 5648 (sulfometuron) was introduced as well as BAS 9052 (sethoxydim).



Bert L. Bohmont

Fellow, 1982

Hay fever caused me to hate weeds early in life. As a boy on the farm near Wheatland, Wyoming, I remember many a time when I would be mowing hay and the dust from dry cheatgrass would cause me to have to shut down and go to the house because I couldn't breathe. Fortunately, I seemed to outgrow the condition but I never lost my dislike for weeds. I remember so well in 1947 when my father brought home the first batch of 2,4-D and this 'ol kid thought he could throw away that damned hoe forever.

The University of Wyoming was beginning to get into the weed control (weed science) picture and under the encouragement of my cousin, Dale Bohmont, I decided to get a degree in Agronomy, even though I had earlier thought that I wanted to get as far from the farm as I could. After getting my M.S. Degree, I went to work for the Wyoming Department of Agriculture.

My first meeting with the Society was in February 1960 in Denver when Dick Fosse was President. I was then the State Agronomist for the Wyoming Department of Agriculture in Cheyenne. I super-

vised the Weed and Pest Control Districts and also the Highway weed control program. I used to pride myself in the fact that you could drive almost any mile of highway in Wyoming and never see a noxious weed in the highway right-of-way. I recall that it was in the early 60's when John Gibson of Dow Chemical Company came around and asked me to try some Tordon on noxious weeds along the highways. I also remember that I was treated to lunch while we discussed the possibilities!

I came to Colorado State University in January 1965 to take on the newly created position of Pesticide Coordinator. My assignment was 100% Extension, so I did not have a research appointment. In my early years at CSU it was difficult for me to drive throughout Colorado because almost any road right-of-way was heavily infested with one or more noxious weeds. To see bindweed hanging from the fence lines and Canada thistle going to seed was more than I could bear at times. I eventually got used to it, even though Gene Heikes and I tried a number of times to get some state action to clean up the noxious weeds along the highways.

My duties have been many and varied and did not allow for much weed science work, so I very much enjoyed keeping in touch with weed science through the Society. I also appreciated the opportunity to know and learn from such stalwarts as Boysie Day, Bill Harvey, Alden Crafts, Lambert Erickson, Jess Fults, and many others as well as later scientists such as K.C. Hamilton, Dave Bayer, Art Lange, Louis Jensen, Wayne Whitworth, and, of course, Harold Alley, who was my major professor for my Ph.D. I also treasure my friendship with those still presently practicing weed science and those who have retired recently.

Although I did serve as chairman of several Extension committees, I did not seek to go through the "chairs of office" as I was not doing active research and felt that this should be one of the prerequisites for office. I contented myself as acting as the Society photographer for many years and

chairman of the Public Relations committee. I was fortunate to have photographed most of the above mentioned gentlemen at one time or another and deposited the photos with LaMar Anderson for safe keeping with the other records. Because of this dedicated work, the Society honored me with the WSWs Fellow Award in 1982. This was one of the highlights of my years in WSWs.

Three years after coming to CSU, I started the newsletter Pesticide Pipeline. I am proud to note that I have published it for almost 26 years and never missed putting out a monthly issue. It is presently going to 26 other states and 9 foreign countries as well as many people in Colorado. In 1981, I wrote and published The New Pesticide User's Guide, which was well-received and has since been revised and renamed The Standard Pesticide User's Guide. It is the reading assignment for the correspondence course "Pesticide Management" that I have taught for 10 years through the Division of Continuing Education at CSU. Since I do not have a research or resident instruction appointment, it has been a way for me to teach and keep in touch with students. I also teach three other correspondence courses, bringing the total of students taught over the years to something over 400.

As I approach retirement in a few more months, I can look back on many fond memories of camaraderie during the annual meetings and reflect on the advances I have observed in weed science since those early days when we were just beginning to learn about and use the many new herbicides that were coming on the scene. We have come a long way!



Lowell S. Jordan
Fellow, 1982

My first exposure to weed control was when I grew up on a ranch in Eastern Oregon. Weeds were the worst problem for reducing the hay and grain production, while insects, mosquitos, bedbugs, and flies, provided the highest level of human discomfort. I have no desire to go back to those good old "organic" days. My first exposure to Weed Science was at Oregon State, where I was fortunate to have Dr. Virgil Freed as my mentor. I also took courses from and with Bill Furtick. These two men, in their own ways, started the Weed Science kingdom at Oregon State University, which was built up by the able leadership of people like Arnold Appleby and Larry Burrill. I obtained a B.S. degree from Oregon State in 1954.

In 1957, I received a Ph.D. degree from the University of Minnesota under the guidance of Ray Dunham while working with herbicides in corn, soybeans, and flax. I was Assistant Professor at Southern Illinois University, 1957-59, where I learned much from Fred Slife, Earl Spurrier, and numerous company representatives and farmers.

In 1959, I moved to the University of California, Riverside, to work with a giant of Weed Sciences, Boysie Day. Alden Crafts, Bill Harvey, and Oliver Leonard were already established pioneers in Weed Sciences at UC Davis. They have been followed by a host of outstanding individuals in the UC system who have helped make my career very rewarding.

I succeeded in becoming Professor of Horticultural Sciences and Plant Physiologist and Chairman of the Pest Management Program. The latter was a broadening experience that made me realize that

weed management does not exist in a vacuum, but interacts with all aspects of agriculture.

I have served on several Weed Science Society of America (WSSA) committees. The most educational experience was as Associate Editor of Weed Science. My greatest joy was receiving the WSSA teaching award, since the task does not come easy.

I believe WSWs is the foremost science conference I belong to. Its discussion-style project format is the best of any of the Weed Science societies. Being elected Fellow and President of WSWs were rewards I never expected. Such unexpected honors from one's peers make professional life rewarding.

As WSWs representative to CAST, I became fascinated with the complexity of the agricultural and food industry. As President of CAST, I became fully aware of the politics involved with the complex. The experience has made me much more aware of the delicate balance between plenty and scarcity and how it can be tipped positively by good science and rational thinking and negatively by junk science and unsupportable special interest group chicanery.

If I had my life to live over, I would repeat the Weed Science part. The discipline has so many great people. The close cooperation between university, government, and industry representatives is a model to be emulated by other groups.



Robert P. Upchurch
Honorary Member, 1982

In the spring of 1942 the Agronomy Department of North Carolina State College invited students of Hugh Morson High School in Raleigh, North Carolina, to apply for part-time work. R.P. Upchurch responded at age 14 and has since been in professional agricultural work. At North Carolina State, he fell under the mentorship of Roy Lee Lovvorn who was then in forage crops, but who was later to head the USDA weed section at Beltsville. In the 1946-1947 era, Upchurch got his first taste of weed science by helping Warren C. Shaw execute his M.S. thesis taken under Lovvorn. The herbicides tested were primitive. Before leaving for doctoral work at UC-Davis, Upchurch traveled to Beltsville in December 1950 to confer with Lovvorn about career options. Shaw had joined Lovvorn at Beltsville by that time. At Davis, Upchurch worked on a forage problem under Peterson and Hagan but had Alden Crafts as subject matter advisor for the Ph.D. program in Plant Physiology. In the midst of graduate study, Lovvorn offered Upchurch a job on mesquite control and Crafts gave his blessing. This offer was declined. In late 1952, positions were offered to Upchurch in environmental horticulture at UC-Davis, in halogeton control research at Logan,

Utah, by Lovvorn, and in weed science at North Carolina State. The latter was accepted and this marked the formal entry of Upchurch into the weed field. In the two months prior to reporting to North Carolina, intensive interactions were had at Davis with Bill Harvey, Alden Crafts, Herb Currier, and others about the field of weed control. Harvey introduced Upchurch to the Western Weed Control Conference and to weed problems in California. Before leaving Davis, Upchurch had settled upon a research agenda involving herbicide behavior in soils. This was modeled in part on the earlier work of Crafts. From 1953 to 1975, Upchurch played out his professional life in weed science for thirteen years at North Carolina State and for ten years at Monsanto Co. in St. Louis. During this period he was increasingly active in WSSA, becoming President in 1972. Occasionally, meetings of the Western Society of Weed Science were attended during the decades of the 60's and 70's. There was a great deal of interaction with WSSS officers and members by phone and letters during this period. In those years, as now, the WSSS meetings were known for their informality and for the dynamic and effective interaction of participants. From 1975 onward, Upchurch has held administrative posts in agriculture at the University of Arizona. During the early years of this tour, regular interaction was had with the Arizona weed team of K.C. Hamilton, Stan Heathman, and the late Fred Arle. At the 1982 meeting of WSSS, Upchurch was made an Honorary Member of the Society, a distinction which he continues to treasure. The plaque has a prominent place in his office at home, among other mementos, which define an active life in professional agriculture, spanning fifty years and still on-going.

THIRTY-FIFTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Denver, Colorado

March 9-11, 1982

President -- A.G. Ogg, Jr.

President-Elect -- J.W. Whitworth

Secretary -- R.H. Callihan

Treasurer-Business Manager -- J.L. Anderson

Fellows selected in 1982 were Bert Bohmont and Lowell Jordan. Phil Upchurch was selected as Honorary Member.

One of the resolutions approved was to call on USDA to devote a Yearbook of Agriculture to weeds and their control. The question of suitability of summer WSWs meetings was raised. A straw vote indicated heavy preference for not shifting the meeting time to summer.

A proposal had been received from the Western Aquatic Plant Management Society that they affiliate with WSWs. President Ogg appointed Neil Humberg and Dick Comes to work with him on developing recommendations to pass through the WSWs and WAPMS Boards of Directors.

As usual, reports from the Project meetings indicated a great deal of open discussion on a wide variety of topics. Included were discussions of the white amur for aquatic weed control, IR-4 projects, and SULV (Special Ultra Low Volume) formulations of 2,4-D.

In his Presidential Address, Alex Ogg raised the possibility of initiating graduate student contest papers at WSWs meetings, similar to those at the North Central and the Southern Societies. This idea also had

been raised by President Comes in 1979.

There were two symposiums held. One was on "Weed Control Applied Research and Who Will Do it in the Future." Speakers were R.P. Upchurch, Gary Lee, Ken Dunster, and Jim Parochetti.

The other symposium was, "How to Train Graduate Students for A Future Career in Weed Science." Speakers were Arnold Appleby, K.C. Hamilton, and Joe Dorr.

Volunteer papers were presented on a wide variety of topics. These papers were not unimportant nor uninteresting; indeed they added to our knowledge base of weeds and their control. But there were no major breakthroughs evident in the 1982 Proceedings.

A new herbicide, PP009 (fluazifop) for grass control in broadleaf crops was introduced.



Richard (Dick) Comes

Fellow, 1983

The only experience I had with weeds up through the time I received my B.S. degree was at the end of a hoe handle. I fully intended to be a high school vocational agriculture teacher, but after student teaching I decided to go to graduate school. A couple of my friends who were graduate students of Harold Alley were enthused about their research project and this influenced me to seek an assistantship in Harold's program. We worked hard, played hard, and really developed a closeness and spirit of teamwork in this program. I have never been sorry that I chose Weed Science as my profession.

I have experienced and enjoyed this same type of camaraderie and cooperation within the WWS. I always looked forward to our open and frank discussions at the project meetings, but most of all I enjoyed renewing the personal relationships that were developed with many members over the years.

One of these relationships began to develop soon after I began working for ARS at Laramie, Wyoming. Amchem had a product that was promising for control of submersed weeds when applied to soil in greenhouse studies. This was the first herbicide we had evaluated that had these properties, so we were anxious to get it out in field

trials. Ken Dunster, a young Amchem R & D specialist located at Bozeman, Montana, met me at Riverton in late October to help put out the plots. We took off for a canal on the Midvale Irrigation Project the next morning and began mixing herbicide solutions, etc. When we pulled the trigger on the backpack sprayer, the solution suddenly froze when it entered the aluminum boom. We pondered how we were going to overcome this problem and finally decided the best solution was to heat the water. We built a big sagebrush fire and placed a 10-gallon cream can full of water on it. After about 15 or 20 minutes, the cream can suddenly emptied and put out our fire. We were astonished! We didn't know the bottom of cream cans were soldered to the sidewalls (we had melted the solder out of the can). This ruined our day, but was the beginning of a relationship that has lasted more than 3 decades.



Clyde L. Elmore
Fellow, 1983

My career started as an agronomist (1963) in the Cooperative Extension Service in Sutter County, California. I had completed B.S. and M.S. degrees in Agronomy at Oklahoma State University. I came to California to work on a doctorate and worked in the laboratory with Floyd Ashton, UC Davis. To get me started in weed control, however, required Art Lange, my mentor, Bill Harvey, weed specialist, and Dave Bayer in the experiment station. I also had the opportunity to work with the likes of Harry Agamalian, Harold Kempen, and Bill Fischer, all farm advisors in California.

The Western Society of Weed Science has always been an interesting group. It is made up of a rather small number of people, but a very friendly, lively, and involved group. I found that shortly after I became involved in the Society, I was asked to run for office, never thinking that I might be elected as president-elect. Many helpful members assisted me in getting through the year of program chairman and on to president. There was always a job to be done and many people available to help. There never was a shortage of offers to help. With the program of presented papers and research sections, there is a mix that involves everyone. Weed scientists from other conferences have come to the Western to enjoy our Society meetings. It is one of the best conferences each year.

I have been involved in the Weed Science Society

of America, the American Society of Horticultural Science, and the International Weed Science Society. I also have been fortunate to travel extensively overseas and involve myself in weed science wherever I traveled.

Being honored as a "Fellow" in the Western Society of Weed Science has been special to me. The association with all the academics and industry representatives always makes the conference memorable.

I have remained at Davis working on weed management in turfgrass and ornamentals with lesser time spent on tree fruit, nuts, and grapes.



Larry C. Burrill
Fellow, 1984

In a career filled with meetings and conferences at the state, regional, national, and international level, the Western Society of Weed Science was and is the best. I don't remember when I first attended a WSWs conference, but it must have been about 1968. It was so long ago that Harold Alley, Dick Comes, and Ken Dunster were still demonstrating their ability to drink coffee and play cards all night, and participate with enthusiasm in the meeting all day. Serving as Program Chairman was probably the most satisfying activity I had with WSWs. This happened to be the year that we had the "Old Timers" session. It was great fun, although I can't take credit for the idea or the organization. It is amazing to me that all of a sudden I am close to the old-timer category too. A lot of outstanding people have been active in the WSWs and it has been a privilege to be associated with them. The best part of the WSWs and the part that sets it above other society meetings is the discussion sections. This is the most interesting and the best way to exchange information. We have used the concept for years in

international and domestic training programs. WSWs leaders should try hard to strengthen the commitment to the discussion format.

THIRTY-SIXTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Las Vegas, Nevada

March 8-10, 1983

President -- Wayne Whitworth

President-Elect -- Gary Massey

Secretary -- Bart Brinkman

Treasurer-Business Manager -- LaMar Anderson

Fellows selected in 1983 were Dick Comes and Clyde Elmore. Virgil Freed was selected as Honorary Member.

The first graduate student paper competition was held, with 13 participants. The top three place winners were D.L. Zamora, Stott Howard, and K.G. Beck, all of whom later became important members of the Western Society.

A revised version of the Constitution and Bylaws was approved unanimously. The revisions were not delineated.

WSSA representative, Clyde Elmore, reported that 238 manuscripts were received in 1982 for Weed Science, with a 21% rejection rate. This compares to a 42% rejection rate in 1988. Fewer papers were published in 1988, and some concern was expressed that Weed Technology might be interfering. However, 239 papers were received in 1988 and there seemed to be no discussion that perhaps the high rejection rate may have contributed to the lower number of papers published.

Alex Ogg presented a proposed policy agreement between the WSWs and the Western Chapter of the Aquatic Plant Management Society. The APMS would propose to meet following and at the same location as WSWs whenever possible. Each society would have their own Local

Arrangements Committees and meetings would be separate. Financial arrangements for the two meetings would remain separate. Each society would announce the other society's meeting in their newsletters. APMS meetings likely would begin on Thursday afternoon following adjournment of the WSWs meetings.

Invitational papers in the General Session included, "The Contribution of the University to Weed Science" by Martin Massengale, Chancellor of the University of Nebraska, "Have We Won the War and Lost the Battle?", by Gerald W. Thomas, President of New Mexico State University, and, "Agromedical Practices for Pesticide Management in Third-World Countries" by Virgil Freed, a Fellow and recently elected Honorary Member.

Two panel discussions were held, one on "Graduate Preparation for Industry" and the other on "Education of the Concerned Public."

There were 70 volunteer papers covering a wide range of topics. Included was discussion of soil solarization for weed control. A flurry of new candidate herbicides were introduced, including Dowco 453 (haloxyfop), HOE 33171 (fenoxaprop), PPG 1013, AC222,293 (Assert imazamethabenz), HOE 39866 (glufosinate), and PPG 844.



L.E. (Jack) Warren
Fellow, 1985

I recall those good old days with a lot of nostalgia. I'm sure no one could find a more harmonious group with a singular effort to learn as much as possible for their own good and also to benefit science and agriculture. Of course, we had some good times, too. It was very satisfying to work with university, federal, and other industry scientists and producer organizations to develop basic and usable data on herbicides provided by companies. We learned how these products acted to control weeds, their fate in soil, water, target crops, and the environment. It was a very productive arrangement.

While I was finishing my education in agriculture at U.C. Davis in 1946-49, I was exposed to the scientists in California who helped start the Western Weed Conference--Walt Ball, Bill Harvey, Alden Crafts, and Doc Robbins. I recall Robbins relating his difficulty in getting a graduate student to count the weed seeds in goat droppings. He wanted to prove that weeds could be spread that way by animals. As you know, he did the dirty work and proved his theory.

After a few years in field research with Dow, I got

into Field Research and Development and had the opportunity to meet many others who helped start the Society--Clarence Seely, Lambert Erickson, Ben Roche, Virgil Freed, Harold Alley, Boysie Day, and many others.

My experience in the Western Society of Weed Science was most rewarding and pleasant. We participated in a rapidly developing weed science aided by new herbicide discoveries. The early days of the phenoxies, dinitros ("old yaller"), chlorates, benzoics, amitrole, etc., were followed by more active compounds like the ureas, triazines, dalapon, paraquat, picloram, dicamba, Treflan, bromoxynil, and many others. These were followed by still more active compounds like Glean and associates, clopyralid, triclopyr, glyphosate, Poast, Fusilade, Goal, and many others. I recall a speculation by Boysie Day, after glyphosate emerged, that this would probably be the end of new herbicides because they must have made all the new ones possible. Unfortunately, some of the old standbys that were cheap and effective have been phased out by inordinate persecution from anti groups, government reregistration requirements, or misguided safety testing. We also suffered an enormous increase in government regulations and licensing; some of this was warranted, but much overdone. Agriculture will survive--we have to eat and buy clothes, but the cost will be higher than needed.

I can't think of any anecdotes or unusual events, but I suppose the other Jack Warren will be relieved to not have our messages mixed up at conferences any more. I did appreciate the confidence you had in electing me to the presidency and later to the Fellow award.

I miss seeing the many friends I used to meet through the year and at the annual conferences. By means of this letter, I greet you all and wish you the best.



Dwight V. Peabody
Fellow, 1986

How I got into Weed Science--I was pushed (or fell) into it; it was not a logical, well thought out, rational choice. I thought I was going to be a plant breeder. I was accepted and enrolled in a graduate program at Washington State College, but after half the first semester was over, I realized that (1) this really wasn't my bag, (2) if I were to land a job in the field of plant genetics, a Masters degree wasn't going to cut it (a Ph.D. was a necessity), and (3) my G.I. bill funding would expire way before I got within shouting distance of a Ph.D. degree. So I elected to quit school. To shorten this story, Lowell Rasmussen talked me into accepting a research assistantship under him in "Weed Control." The following semester and we were off to the races. (Incidentally, don't forget Lowell Rasmussen in the history of WSW; he was a true scientist, a great educator, and a hell of a guy.) One of my major achievements in Weed Science was graduating from WSC with a Masters degree in 3 semesters and one summer session. It took most people a minimum of 5 semesters and 2 summer sessions. The main reason I got out so quickly was that they needed a cheap, naive, easy-going, semi-trained person to fill an under-funded job in "weed control" at the branch experimental station in Mount Vernon, Washington. At the time, this was

exactly the job I wanted, so for the next one third of a century, that was where I was employed--discovering undying, scientific truths.

I was once advising a certain governmental agency on "methods and materials" for non-crop land weed control. They had a 500-gallon tank full of a highly concentrated spray mix of 2,4,5-T. This was in the early 60's so we were really messing around with one of the major ingredients of Agent Orange in its dioxin-contaminated state. After spraying about 5 minutes, something plugged-up; we thoroughly checked all components of the system and ascertained that the outlet at the bottom of the tank was where the stoppage was. Since it was a long way back to the shop and we had a very expensive load of a potent herbicide in the tank, the foreman of the spray crew cleared the plugged outlet himself by stripping down to his skivies, lowering himself through the hatch of the almost full tank, diving to the bottom, and removing the obstruction at the outlet. If I remember correctly, he did it in three dives. As of 4 years ago, he was still alive and well. No, I don't remember what plugged the outlet--probably condoms. Now there is a kinky place for sex--at the bottom of a 500-gallon spray tank.

On another occasion (and I wasn't on site this time), this same spray crew was spraying roadsides and over my repeated and strenuous objections were applying their 2,4-D/2,4,5-T mix at approximately 400 p.s.i. with a hand-held "orchard gun" at the end of a 50-ft. hose, walking behind the spray truck. (Remember, this was several years ago). Sure enough, something broke or disconnected; a solid stream of spray went over a guy's house, much of it ending up in a mini-orchard of espaliered apple and pear trees that this guy was carefully nurturing as a hobby. This "guy" was a county commissioner. Nuff said.

Sorry I didn't include anything directly related to WSW, but these stories are so obscene you couldn't include them in this book anyway.



Robert L. Zimdahl

Fellow, 1985

My first memory of the Western Society is an article written, at least in part, by Virgil Freed. I think Marvin Montgomery was a co-author. If my memory serves me well, I think the article was published about 1962 and dealt with the behavior of herbicides in soil. I later cited the article in my doctoral dissertation prepared while at Oregon State. What struck me about the article was the quality of the information presented and the level of analysis and insight that I had not found in articles in proceedings of the other regional societies. Over the years I have continued to be impressed with the quality of the work that has appeared in the proceedings of the Western Society. Occasionally we find a real gem. Our colleagues in the west have often gone beyond reporting of what happened or how something was done to an analysis to why their work or a particular approach to our science is important.

From its inception, our society has been organized differently and has not been a series of 15-minute papers. The project meetings have emphasized discussion and encouraged thought during the

meeting. It is a unique approach among the regional societies and is perhaps one of those things that has led to more thoughtful publications.

In the introduction to his book, "Mystic Chords of Memory," Michael Kammen quotes Ralph Ellison. "That which we remember is, more often than not, that which we would have liked to have been, or that which we hope to be." His point is that the history we construct from our memory is often not real. It's an idealized version of what actually happened based on what we hoped to have happened. I find that when I think about the Western Society my memories include so many good people, good times, and good ideas that these may hamper my ability to construct what really happened. The Western Society is where I gave my first formal paper and I think it is where I was first asked to give a paper. It has been a special meeting with special people for many years.

THIRTY-SEVENTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Spokane, Washington

March 13-15, 1984

President -- G.D. Massey

President-Elect -- Stan Heathman

Secretary -- H.D. Tripple

Treasurer-Business Manager -- J.L. Anderson

Larry Burrill was selected as Fellow and Warren Shaw as Honorary Member in 1984.

Assets of the Society totaled \$30,821.00 versus \$12,800.00 in 1982. \$30,000.00 represents almost two years' expenditures, so the financial health of the Society continued to improve.

WSSA representative, Clyde Elmore, reported that the new series of Reviews of Weed Science is underway. Weeds Today magazine is still hanging on through financial support from WSSA.

The Site Selection Committee discussed the pros and cons of a future meeting in Hawaii. A hand vote of members attending the Business Meeting was 95 for Hawaii for a future meetings site, and 43 against.

Bob Zimdahl reported that 21 students participated in the Student Paper Contest. Dan Devlin, Washington State University, was the winner.

General Session invitation papers included, "The New Weed Science--A View of the Twenty-First Century" by Warren Shaw, "Resistance to Herbicides--Always a Moving Target" by Boysie Day, and a panel discussion on "Threshold Levels for

Weed Control--Do We Need Them?" by Jean Dawson and Robert Norris. The panel speakers agreed that threshold levels for weeds are complex. Long-term thresholds, although difficult to estimate, are necessary for meaningful weed management.

There were a large number of volunteer papers covering a wide range of topics.

Two new experimental herbicides, SD 95481 (cinmethylin) and DPX Y6202 (Assure quizalofop) were introduced.



Alex G. Ogg, Jr.
Fellow, 1987

As I remember back over my life and career, I believe I was destined to be a weed scientist. Some of my earliest recollections of my childhood are hoeing weeds in the farm yard with my sister. This was our penalty for fighting or any of the other various offenses at which we got caught. The neighbors would drive by and holler "Have you Ogg kids been fighting again?" The only thing I could do was grit my teeth and chop them damn weeds. Also, there were always weeds in our sizeable garden that needed hoeing, a seemingly endless task that robbed me of many fine summer hours that I could have been swimming, throwing rocks, riding my bike, and other important things that boys do. Yeah, I developed a dislike for weeds early in my life.

As I grew older, I graduated from the hoe to the tractor and harrow or cultivator. Dad raised corn, dry beans, and sugarbeets and each of these had to be harrowed or cultivated several times each year.

One of my more enjoyable childhood memories of fighting weeds was watching my grandfather cultivate his sweet corn patch with a one-horse cultivator, and marveling at the skill at which Queeny, the giant Percheron, placed her feet without stepping on the corn; killing weeds was never easier.

In 1949, my father bought a farm near Emblem, Wyoming. Unknown to my father, the land in some fields was infested heavily with wild morningglory, which I was later to learn was field bindweed. Although my dad had struggled with wild morningglory before, he had never tackled an

infestation that covered whole fields. Clearly, I remember the day Dad returned from town with a glass jug full of smelly brown liquid (2,4-D) that supposedly would kill wild morningglory just by mixing it with water and spraying the plants. This was my first introduction to chemical weed control. The results were amazing. Also, I remember in 1953, when the fieldman for Holly Sugar Co. convinced my father to apply IPC to kill wild oats selectively in our sugarbeets. Dad treated about one-half of the field and the results were astounding; clean rows of sugarbeets with very few wild oats where the IPC had been applied. It seems there may be an easier way to kill weeds than endlessly hoeing and cultivating.

I feel like I grew up with weed science and that I have experienced the transition from manual labor to modern weed control technology.

At the urging of Ray Lowe, my vocational agricultural instructor, and Percy Kirk, Wyoming State FFA Advisor, I decided to attend college at the University of Wyoming in Laramie. I really didn't know in which specific discipline I might major, but it would be in agriculture. After a year of part-time work in the Plant Science Department greenhouse, Dr. Dale Bohmont, Department Head, introduced me to Dick Comes and F.L. Timmons, ARS scientists who were looking for someone to assist them in the conduct of aquatic and ditchbank weed control experiments. This was my first introduction to modern agricultural research. Within two weeks after working mainly under Dick Comes' guidance, I decided that weed control research was where my future lay.

It wasn't long before I was up to my neck in aquatic weeds, literally. I will never forget my experiences staking plots in shallow lakes infested with aquatic weeds. Long 2 by 2's were used for plot stakes and a person had to half swim and half wallow their way through the tangled mass of weeds to set the stakes. Boy, was that hard and time-consuming work. Dick Comes was an old Navy man and he decided that these tasks could be done more efficiently from the surface of the water than in the water. First, we attempted to stake-out plots from the "rolling deck" of our 14-foot boat, with one person rowing and the second trying to hold a measuring tape and a 10-foot 2 by 2 and hollering directions to the oarsman. Needless to say, our plot lines were pretty crooked and that just wouldn't do for a good weed scientist like Dick Comes. One

day Dick saw an advertisement for "water shoes" and instantly, he saw the solution to our problem. One person would man the anchored boat at one plot corner while the second person who wore the water shoes would hold the tape and set the plot stakes in straight rows. The water shoes were made out of styrofoam and were about 6 feet long, 6-inches thick, and 10-inches wide. They slipped on your feet much like a pair of water skis. They had a flap on the bottom of the "shoe," so that as you shuffled your legs back and forth, you were propelled across the water. Dick ordered a pair and soon our water shoes arrived. We could hardly wait to try our "Jesus shoes" as we called them. Not being too sure what to expect, we donned our swim suits and prepared for our maiden voyage. We selected a level area along the lake where the bank was a few inches about the water and where the water was 3 or 4 feet deep. Dick, being the generous sort he is (and also because he was the boss), volunteered me to be first. I eagerly accepted the challenge. The water shoes felt comfortable as I slipped them on and I shuffled excitedly from the bank onto the water. One shoe went left and one went right and I, caught in the middle, did a rather ungraceful twist and went head first into the lake. As I came up sputtering, Dick was rolling around the bank laughing his head off. Undaunted and trying to salvage some pride, I repeated my performance about five more times with similar results. Well, I was enough of a scientist to know that after six replications and similar results, a conclusion could be drawn: Those damn shoes weren't worth having; besides by now, Dick was holding his sides, laughing so hard he was crying and too weak to sit up. So, I suggested he try them if he thought it was so much fun. Being older and wiser than I and profiting from my miserable attempts to master the Jesus shoes, Dick was sure he had the technique figured out. As he explained to me, "All you have to do is keep your legs straight and your knees together as you shuffle along." Dick slipped the water shoes on and strolled confidently onto the lake. One shoe went left and one went right and Dick did an awkward pivot headfirst into the lake. I laughed so hard I thought I would die. Well, to bring this story to a close, we did manage to finally master the Jesus shoes and they worked just the way Dick had originally envisioned. I became skilled enough that after removing my boots and socks, I just rolled up my pants legs, slipped on the Jesus shoes, and headed out onto the lake. The one problem with the water shoes we never solved was how to back up. Therefore, we learned quickly never to straddle

a tall plot stake with the wind at your back.

My experiences in aquatic weed control and working with Dick Comes, F.L. "Tim" Timmons, and later with Vic Bruns and Al Kelley, are some of my fondest memories. Certainly, my associations with these weed scientists helped shape who I am.

I could not reminisce about my experiences in Weed Science without recalling a story or two involving Harold Alley, Extension Weed Specialist and Professor of Weed Science at the University of Wyoming. It was during my sophomore year at the University of Wyoming that I became acquainted with Harold. Harold always stressed two things, you worked hard and you played hard. Harold was coach of the crops judging team and he encouraged myself, my cousin Tom Ogg, and Ross Richardson to be the crops judging team representing the University of Wyoming at the national contest in Kansas City. Shortly after our arrival in Kansas City and while we were still in the hotel lobby, Harold pulled the three of us aside and said "You country boys had better keep an eye out and watch out for people who bump into you; they may be pickpockets." Well, it was just a few minutes later that I noticed a man as he entered the hotel. He glanced at Harold, turned his head and walked directly toward Harold. My first thought was "this guy is a pickpocket and he is behaving just as Harold had warned." The man bumped into Harold and Harold jumped back and hollered "Watch where you are going." I had cocked my fist and had an aim on the man's right ear; I figured to put him down. At that instant, Harold realized what was about to happen and jumped between us and luckily for me, the punch was never thrown. The man was the coach of the crops judging team from Texas Tech and he and Harold were old friends. I took a lot of ribbing about the incident, but Harold never doubted my loyalty.

Harold Alley was known far and wide as a man who liked a good bet, especially if he won. He delighted in setting up new graduate students by making a sure thing bet with them and taking their \$5 bucks. Phil Brimhall and Bill Marks were graduate students who worked for Harold in the summer. One day, I saw Phil and Bill driving slowly along the highway in the state pickup. They were counting the number of stripes in a mile of highway. But this story has an earlier beginning. There is a 100-mile stretch of highway in central Wyoming between Medicine Bow and Casper that has lots of cattleguards, 26 used to be the exact

number. During this first trip over the road, Harold commented casually to Phil and Bill about there being a lot of cattleguards in the road. With sly encouragement, Harold worked the discussion into a \$5 bet on the total number, with Harold "guessing" there were 26. On the return trip, the cattleguards were counted and Phil and Bill knew they were "had" when there were exactly 26. Well, they in turn set Harold up on the number of stripes in a mile of highway, and of course Harold knew he was "had" when the number turned out to be exactly what Phil and Bill had guessed.

After I graduated from the University of Wyoming, I attended graduate school at Oregon State University and received my Masters degree in Farm Crops (Weed Science) under the direction of Dr. Arnold Appleby. Arnold was completely different from Harold Alley, except he also believed in hard work and doing your best. Arnold enjoyed having fun but in a manner that was quite different from Harold. One of Arnold's fun places to go, if he happened to be in San Francisco, was the Red Garter. Now before you get ahead of me, the Red Garter was a beer-drinking establishment that specialized in a Dixieland band and sing-along music. While attending a symposium on the mode of action of herbicides in San Francisco, Arnold encouraged myself and Horace Skipper to accompany him to a night of festivities at the Red Garter. Being financially frugal and also being relatively poor, we decided that each of us would take \$10 and when the money was gone, we would return to our hotel. That way we would not be tempted to stay too long or lose too much if we were robbed. So, away we went and the Red Garter was everything Arnold had promised. We were having a whale of a good time, drinking beer and practicing our fine baritone voices. Only one problem occurred, we either underestimated the price of beer or we underestimated our capacities, because about 10:30 p.m. when the party was really rolling, we ran out of money and, of course, beer. We were really kicking ourselves for being so tight and feeling sorry for ourselves that we were going to have to leave the party. If you believe that weed scientists don't stick together and don't help each other in a time of need, then you won't believe what happened next. At the moment we were just getting up to leave the Red Garter, in walked Bill Anliker of Ciba-Geigy. What a wonderful small world we live in. Quickly, we convinced Bill there were no other available tables in the room and that he had better grab the extra chair at our table. And so it came to pass, we had a long and enjoyable

evening and we closed-out the Red Garter somewhere around 2 a.m. Thank you, Bill! Weed scientists in the West do look out for each other and we do stick together.

Time and space do not permit me to tell a lot of other good stories involving other western weed scientists. However, I feel very fortunate to have known most of the individuals involved with the Western Society of Weed Science. I feel that I can call each and every one a friend.

THIRTY-EIGHTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Phoenix, Arizona
March 12-14, 1985

President -- Stanley Heathman
President-Elect -- Harvey Tripple
Secretary -- Lloyd Haderlie
Treasurer-Business Manager -- J.L. Anderson

L.E. "Jack" Warren was selected as Fellow in 1985.

The graduate student paper contest was won by Jesse Richardson. Alex Ogg had relocated from Prosser to Pullman.

The financial condition of the Society was excellent, with approximately 1.6 years operating budget in reserve. The Finance Committee recommended that awards to graduate students be increased, financial aide to graduate students be continued, and aide to graduate students for the 1989 trip to Hawaii be considered.

In the Presidential Address, Stan Heathman condemned the largely uninformed charges of anti-pesticide people, but indicated that we will not win in a fight with them through the press. He urged the Society to meet and reason with pesticide detractors.

Other presentations in the General Session were, "Allelopathy: An Important Method of Plant Interference," by Alan Putnam, "Bounty Programs--An Effective Weed Education Tool" by C.A. Lacey et al., "Working Together--Does it Really Work?" by Barbra Mullin, "Biotechnology, What is the Big Deal?" by Norton Addy, and "A Toxicological and Environmental Review of Picloram" by Wendell

Mullison.

There were fifty-nine volunteer papers presented on a wide range of topics. A poster session was initiated with seven papers.

Experimental herbicides introduced included AC 252,925, PP 1013, and SMY 1500 (Tycor).



Jean H. Dawson
Fellow, 1987

I was born 14 April 1933 on a small farm near Stacy, Minnesota. I received my B.S. in Agronomy from the University of Minnesota in 1955, and then went to the University of California (Davis), where I got my M.S. in 1957.

At Davis, Weed Science was in the Botany Department. My department was Agronomy, and my main interest was forage crops. In my last semester, I took a course in Weeds and Their Control from Alden Crafts. This course made me decide that Weed Science was where I wanted to make my career.

In 1957, few students were graduating in Weed Science, so Weed Science jobs were being filled by graduates from other departments. USDA-ARS hired me to fill a Weed Science position at Washington State University's Irrigation Experiment Station (later Irrigated Agriculture Research and Extension Center) at Prosser, Washington. Both ARS and I wanted me to get my Ph.D., so I took the job at Prosser with the understanding that arrangements would be made for me to work out my Ph.D. on the job.

In 1958-59 I was on leave for 10 months to take courses at Oregon State University, with Bill Furtick as my major professor. I returned to Prosser, conducted the research for my thesis on the job, and received my Ph.D. in Weed Science from the Crop Science Department at Oregon State in 1961. I continued to work with ARS until I retired in 1990. My duty station was always Prosser, but I spent 4 months on temporary assignment on the Nation Program Staff at ARS headquarters in Beltsville,

Maryland, in 1984, and was on loan to the Food and Agriculture Organization of the U.N. to work for short periods in Argentina.

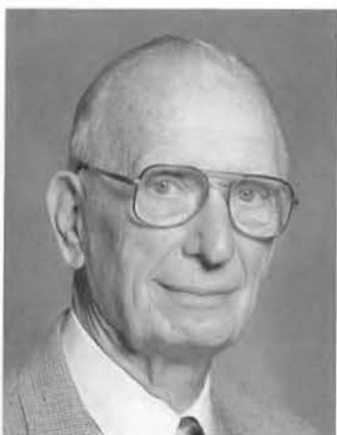
Three men who influenced me the most professionally were 1) Alden Crafts, whose course made me want to pursue a career in Weed Science, 2) Vic Bruns, ARS Weed Scientist at Prosser, whose scientific integrity was an excellent example, and 3) Warren Shaw, for many years my immediate supervisor, and the person I consider my mentor.

My research concerned weeds and their control in irrigated field crops. I conducted applied research to develop integrated weed management systems in crops and basic research to explain the nature of the weed problem and the mode of action of the control methods.

Significant developments and discoveries from my research include: a) Discovery that EPTC enters emerging shoots rather than roots to kill barnyardgrass; b) Development of integrated weed management systems for sugarbeets; c) Development of dodder control programs for alfalfa grown for seed production; d) Elucidation of the nature of weed interference in sugarbeets and field beans; e) Discovery that weeds could be controlled selectively in newly seeded alfalfa by applying EPTC directly to the seed before sowing; f) Selective post-attachment control of dodder in alfalfa with glyphosate; g) Demonstration that chlorpropham applied to the soil surface as a granular formulation kills dodder seedlings by vapor contact above ground rather than in the soil.

I was active in WSSA affairs, and missed only one annual meeting throughout my career. I served as western editor of *Weeds Today*, as editor of the WSSA Newsletter, as associate editor of *Weed Science*, and as author of the Helpful Hints for Technical Writing feature in *Weed Technology*. I was president of WSSA in 1987-88.

Someone once asked me where I felt my professional loyalty was directed. I always maintained a strong loyalty to my employer, ARS. However, my greatest loyalty was to the discipline of Weed Science, followed closely by loyalty to the professional weed science societies (WSSA and WWS). I am proud to be a Weed Scientist, and am very glad to have had the privilege of conducting research on weeds and their control in the West.



Norman B. Akesson
Honorary Member, 1987

I have had a very enjoyable and professionally rewarding job as an agricultural engineer, working on weed control in California agriculture. I came to the University at Davis in the spring of 1947, and my first field trip was with Alden Crafts to the Lodi area where grape growers were claiming damage from phenoxy-type herbicides. Interestingly enough, 2,4-D and related phenoxy herbicides continue to be problem materials, still widely used for their excellent control of many broadleaf weeds, but also widely condemned for their potential for causing damage to many susceptible crops, most prominent in California being grapes and cotton.

I can't say that my early experiences growing up on a small-grains farm in the Red River Valley of North Dakota, or later on as an assistant chicken farmer in my stepfather's enterprise near Vancouver, Washington, prepared me in any way for a career in weed control work. I do recall that my first salary was earned by "rogueing" wild mustard from wheat fields at the going rate of 5¢/100 stems of mustard, and I also was getting 5¢ per tomato can full of potato bugs a little later in the season. I think I preferred mustard picking, but the conditions of my employment were such that this sort of decision making was not my prerogative.

Walking the wheat and potato fields must have been great character builders, but I don't recall much of this except for (1) my mother's complaint about the numbers of pairs of sneakers I wore out, and (2) how fast my hard-earned "nickel a bunch" money disappeared on maple nut ice cream cones and "male" Hershey candy bars.

In 1936, I enrolled at North Dakota Agricultural College at Fargo, in Agricultural Engineering. My primary interests were in Electrical Engineering, but viewing the prospects for jobs, plus my interests in agriculture prompted me to try this relatively new curriculum. I quickly encountered an educational system that had still to accept a mixed curriculum between different colleges, such as Agriculture and Engineering. So, I completed a degree in agriculture with a major in Agricultural Engineering, but continued my schooling at the University of Idaho with an M.S. degree in Agricultural Engineering in 1942, from the College of Engineering. Now the war effort dominated the employment scene and I was recruited by Leonard B. Loeb, a physicist at the University of California, Berkeley, to enter a Navy magnetic mine and torpedo training course. This I did and went to work for the Navy on a project aimed at improving arming devices to activate mines and torpedoes based on the size and characteristic sounds produced by specific ships of military and commercial design.

The close of the war brought me back again to the realities of job hunting and I applied for a job with the Agricultural Engineering Department at UC Davis, went to Davis from Seattle where I had been stationed with the Navy, and much to my delight I was offered a position with the title of Lecturer and Agricultural Engineer in the Experiment Station effective May 1, 1947.

These were heady days in weed control work. W.W. Robbins was then Chair of the Botany Department under which weed control work was being developed. The phenoxy herbicides were fast becoming a dominant factor in selective weed control, but damage from these highly useful materials to non-target crops, such as cotton and grapes in California, was threatening their use.

The problem of 2,4-D and grapes became the great debate of the early 1950's; namely--Can the Northern San Joaquin grape growers survive the onslaught of increasing 2,4-D use by the grain growers of the San Joaquin/Sacramento delta? One of the most vocal of the grape growers supporters was Austin Mahoney, Agricultural Commissioner of Stanislaus County. No hearing on 2,4-D was complete without Mr. Mahoney and a delegation of 15 to 20 grape growers who by dint of sheer numbers could dominate any meeting or official

hearing (of which there were many) being held for the purpose of trying to reach some type of agreement between these two grower groups that might permit continued use of 2,4-D, but not at the expense of the damages now being inflicted on the grapes. Thus, my first job as a weed control engineer was to try to develop means for applying materials such as 2,4-D with a minimum loss of these materials during and following application, thus reducing damage potential to non-target crops.

No one could believe that 2,4-D applied in the San Joaquin-Sacramento delta area could travel the 10-20 miles to the grapes in Stanislaus County and cause the obvious symptoms and damages now taking place. But air transport on the strong north winds of the Delta appeared to be the only possible source of the 2,4-D and so there were enacted by the California Department of Agriculture, the first regulations on the so-called hazardous herbicides. These regulations specified large-drop-producing atomizers, use only of low-volatile 2,4-D, or amine forms and probably the most significant regulation, limiting the application of 2,4-D to the dormant period of the grapes. But efforts to prove that the 2,4-D was moving in the air were fruitless, probably because of inadequate means for analysis in these pre-gas chromatography days. But, I remember one of the attempts by the grape growers that was both innovative and also a very logical technique. I saw this device, which consisted of an air bubbler train installed in an old refrigerator, sitting a few feet to the south of the Sacramento-Stanislaus County line. A nearby electric irrigation pump supplied the power and the little vacuum pump inside the refrigerator busily pumped the supposedly 2,4-D-laden air through a liquid bubbler, which was to extract the 2,4-D from the air and permit analysis and identification of the quantity of this material in the air coming from Sacramento County. I don't recall that any 2,4-D was ever identified with this device. With the enactment of regulations on application, the 2,4-D problem on the grapes was reduced to an occasional incident. Some of these were tracked back to a nearby golf course or a public park, but the primary reduction of drift problems appeared to have been made through regulation of the large-area applications to grain fields to the north of the grapes.

The rapid expansion of weed control in California and elsewhere led to the organization of several weed groups that continue today. I recall the organizational meeting of the California Weed

Conference in Sacramento in 1949, at which time I placed Dr. Alden Crafts' name in nomination for first President of this group. I don't recall the other officers, but later I was to serve as Treasurer, 1951-52, and still later, President in 1965-66. I was also a founding member of the National Weed Society, later to be given the more dignified name of Weed Science Society of America. The Western Weed Control Conference came in to being around 1948 and like the National group, its name was changed to the more prestigious Western Society of Weed Science. In 1968-70, I served on the Editorial Board of the WSSA and, in 1987, the WSSS, with a kindly assist from Jack Warren, elected me an Honorary Member.

I retired from the University in 1984, but have continued an active career as a consultant on safe pesticide application. I have conducted and assisted with several field studies for new or re-registration of herbicides and am continuing a 10-year monitoring study of propanil application to a designated rice area in Colusa County. This area of about 22,000 acres, was identified by the California Department of Food and Agriculture as an area of rice where propanil may be applied, but under very specific application conditions of equipment, weather, and total spray area permitted per day. To me it illustrates how careful application of highly effective herbicides can be made on specific tolerant crops without damaging sensitive crops in nearby areas.

Weed control work enlists the services of many different professions, including engineers. I have thoroughly enjoyed working with other professionals, biologists, physiologists, chemists, and toxicologists, all directing their efforts towards a common goal of reducing crop damage due to weeds. It has been a very exciting time during which tremendous developments took place in the use of synthetic chemicals for weed control. I have had the opportunity of sharing in the development and hope my minor contribution have, in some way, aided in developing Weed Science into the professional service it is today.

THIRTY-NINTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

San Diego, California
March 18-20, 1986

President -- Harvey Tripple
President-Elect -- John Evans
Secretary -- Sheldon Blank
Treasurer-Business Manager -- J.L. Anderson

Dwight Peabody and Bob Zimdahl were selected as Fellows of the Society in 1986. The graduate student paper contest was won by Gwen Fleming, Washington State University.

Minor changes in the Constitution were approved. They largely were refinement of wording on terms of office, etc. Membership of the Fellows and Honorary Members Committee was changed from the three most immediate past-presidents of the Society to three Fellows of the Society.

The financial assets of the Society continued to improve to approximately 2.5 times annual expenditures.

Alex Ogg, WSSA representative, reported that the Weeds Today magazine was in its final death throes and a new journal, "Weed Technology" was being established.

Jack Evans reported that the Poster Section was a success. There were 14 papers, compared to seven in 1985.

A large number of topics were discussed in the Project meetings, including the use of grazing as a weed control tool, a comparison of the new grass-killers (Fusilade, Poast, Assure, etc.), and unresolved weed problems. Ironically, one of the unresolved weed problems was field bindweed

in all crops. This weed was the primary reason for the establishment of four USDA experiment stations in 1936, so fifty years of all of our best efforts had failed to bring this beast under control.

The General Session included presentations, "Agrichemical Anomie: Why it Won't Go Away" by Len Richardson, "Registration Requirements for New Pesticides" by T.F. Armstrong, et al., "Aerial Drift Control and Swath Pattern Analysis" by Jim Greil, and "In the Beginning" by Lambert Erickson. I would particularly recommend that WSSW members re-read Lambert Erickson's paper in the 1986 Proceedings. It gives a great deal of history of agriculture in general, and weed control specifically, with 22 references. One of the quotes from Lambert's paper was, "As a consequence of the great farm depression, President Franklin D. Roosevelt asked the U.S. Chamber of Commerce to determine the single greatest loss in American agriculture. Their studied reply was, 'Weeds'. One of the results was the field bindweed research appropriation of 1935, which placed L.M. Stahler at Lamberton, Minnesota, F.L. Timmons at Hayes, Kansas, A.L. Bakke at Ames, Iowa, and C.I. Seeley at Moscow, Idaho (actually Genesee, Idaho)."

President Tripple managed to collect himself and give an excellent Presidential Address after being temporarily struck dumb by some gremlin who had swiped his notes for his speech from the podium.

The "What's New from Industry" section was, without fanfare, reinstated. There were 79 volunteer papers presented. One of these was particularly unique, discussing the use of "exciplex" chemistry for the development of new herbicides. I still don't know what that means.

Herbicides being developed included metsulfuron, CGA 131036 (Amber), DPX F 5384 (Londax), AC263499 (Pursuit), BAS 514H, fluoroxypr, and BAS 517H.



Harvey D. Tripple
Fellow, 1988

In the late sixties, at the urging of my father, I became interested in weed control. On an irrigated farm in western Nebraska, I spent many hours using a hoe to remove weeds from corn, dry bean, sugar beet, and potato fields. At that time, all I really wanted to do was to exchange the hoe for the seat on the tractor. However, it seems that the boss reserved the right to do the cultivating with the tractor.

Following a few years in college and the U.S. Navy, I really became interested in chemical weed control while working for Pioneer Mill Co., a sugar cane plantation on the island of Maui, Hawaii. In 1963, we were using atrazine (4 lb ai/A), ametryne (4 lb ai/A), or diuron (4 lb ai/A) as preemergence applications. These applications lasted about 30 days and then had to be followed with postemergence hand knapsack application of an oil-water contact emulsion made with pentachlorophenol, Osamul-95, aromatic oil, and sodium trichloroacetate. We were very pleased to replace this messy, smelly mixture with paraquat in the late sixties.

There were no effective methods for controlling johnsongrass. Most herbicides provided only burndown or two to three weeks suppression. I spent many days evaluating every herbicide available at rates up to 50 lb ai/A trying to control johnsongrass. After all that work, it is understandable why I became so excited in September 1971 when I evaluated my first glyphosate experiment on johnsongrass in southern Ohio. Roundup was

always my "no brainier" herbicide. All you needed to do was to see one experiment to know it was going to be a commercial success.

My favorite story that every future Western Society of Weed Science President needs to hear:

While walking to the meeting room prior to giving my presidential address to the WSWs in San Diego in 1986, I ran into Donn Thill who asked for my copy of my speech. I assured him that my only copy was staying in my suit pocket and proceeded to the meeting room where I left my copy on the podium, took a seat, and waited for Jack Evans to make the introductions. Following my introduction, I went to the podium to make my speech. However, my copy of the speech was not there. After making a few remarks about what a good joke it was, I asked for the person responsible to return my copy. The audience laughed and waited for the punch line. I found Thill in the audience and he denied responsibility. By that time my shirt was soaking wet and I proceeded to give my speech based upon memory. About halfway through, Jack Evans walked up and gave me my copy. He had inadvertently picked up my copy with his papers from the podium.

My advice to all future presidents: Always keep an extra copy of your speech in your hand.



E. Stanley Heathman
Fellow, 1988

When I graduated from Kansas State in 1950 with a B.S. in Animal Science, weed control was not a class option. After spending ten years as a farmer, earning a lot of work and not much money, I decided to "improve" myself and took a job as County Agent in Yuma, Arizona, in 1960. New developments in herbicides made weed control a new frontier for everyone in agriculture production. The University of Arizona did not have an Extension Weed Specialist and only one Weed Scientist, K.C. Hamilton. K.C. was working very closely with Fred Arle, a USDA weed scientist stationed at the Cotton Research Center in Phoenix. New herbicides were coming through the pipeline rapidly and growers were trying to use them before anyone knew very much about them. No one in the Arizona Extension Service had any training or knowledge of herbicides and most of us realized that these phytotoxic chemicals could not only control weeds but might injure crops.

But as someone said, you either get out in front or get out of the way; therefore, Weed Science became my major interest. Training in Animal Science may not be the best background for a budding Weed Science career, but my ten years of farming did help a little. K.C. and Fred did their best to help me along the way. They had a very dynamic, solid, and practical program that laid down the parameters for successful weed control programs in Arizona.

When a Weed Specialist job was created in Arizona, Dean Swan took it for a year and then left for Washington. I was allowed to take over the job

in 1966 and K.C. said he would try to give me some formal training. This proved to be more difficult than he thought; therefore, in 1969 I spent a one-year sabbatical with Harold Alley and Gary Lee in Wyoming and earned, and I do mean earned, a M.S. in Plant Science. It took two years in Arizona to thaw out.

The Western Society of Weed Science gave me far more than I was ever able to repay. Those who participate in the WSWs discover that there are many others out there who share their problems and can often help find solutions. It is the place for a free exchange of ideas. I will always be grateful for the opportunity the WSWs gave me to meet and work with this wonderful group of people.



Logan A. Norris
Honorary Member, 1988

It continues to be my real pleasure to be associated with the field of weed science, weed scientists, and the Western Society of Weed Science. These have provided 30 years of fulfillment and reward, and I am grateful for the opportunity to be involved.

My entrance to this field was by an unusual track. My education was first as a professional forester, but in the later part of my undergraduate career at Oregon State University, I was hooked on science and changed my goal from forest ranger to scientist. Needing money to live, I took a part-time job in forestry research where it was my enormous good fortune to be assigned as a helper to Dr. Mike Newton, one of the paragons of the weed sciences in forestry and other "non-crop" land settings. Mike taught me so much about field research, especially that involving herbicides and plant competition.

My good fortune continued when Mike lined me up with another paragon, Dr. Virgil Freed in the OSU Agricultural Chemistry Department, to study the physiology of herbicide selectivity in woody plants. Virgil taught me about the conduct of science in the laboratory, and introduced me to the Western Society of Weed Science (Western Weed Control Conference in those days). I delivered (in quaking boots) my first ever scientific paper to the WWCC in Albuquerque in 1965 (have you forgotten that unmemorable paper? - I never will - "The translocation of phenoxy herbicides in woody plants," what else?).

My career took a major turn just before Rachel Carson published Silent Spring. Virgil and Mike authored a research proposal (kindly including me) to the National Institutes of Health to study the "toxic hazards of chemical brush control." Within weeks, Silent Spring was published, and our proposal could do no wrong. It spoke precisely to the concerns she raised, and the award provided funding for research on the movement, persistence, and fate of herbicides in forest environments.

This was an odd time. I was earning the Ph.D. degree in plant physiology (synthetic control of gene expression in the regulation of plant growth), but my OSU employment was to work on herbicides in the environment (especially water contamination from aerial spraying). Plant physiology was interesting and I did get the degree, but the future was most clear in the environmental chemistry research, which became the basis of my research career for the next 25 years.

The Western Society of Weed Science was extraordinarily important to me during this time. I published more than 20 Research Progress Reports and presented many papers and talks there - all of which were precursors to the refereed journal papers, which are the bread and butter of science reporting. But by far the most important was the opportunity WWS provided for discussions with colleagues - such senior people as Alden Crafts, Oliver Leonard, John Kirsch, Bob Schieferstein, John Hylin, and especially Jack Warren, and many other equally important contemporaries from whom I learned so much.

This society performed for me a great service by helping me get ready to work at the national and international level. In part because of the education, experience, and contacts it provided, I was able to be successful in science and in research administration in USDA Forest Service Research, and more recently as Head of the Department of Forest Science at Oregon State, where once again I am a close colleague of my first mentor, Mike Newton.

Weed science has provided a sometimes frustrating, but always satisfying career. The strength of this discipline comes from its people, and it is with deep humility (and appreciation) that I am an Honorary Member of this Society.

FORTIETH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Boise, Idaho
March 10-12, 1987

President -- J.O. Evans
President-Elect -- Larry Mitich
Secretary -- Paul Ogg
Treasurer-Business Manager -- J.L. Anderson

Fellows selected for 1987 were Alex Ogg and Jean Dawson. The Honorary Member was Norman B. Akesson.

Co-winners of the graduate student paper contest were E.R. Gallandt, Montana, and D.W. Johnson, Wyoming.

A minor change to the Constitution added an Awards Committee as a standing committee.

In the Project reports, extensive discussion was held on a wide variety of topics, as expected. In Project 1, total non-structural carbohydrates (TNC) were discussed in perennial weeds in relationship to translocation of herbicides and regrowth. One group discussed third-party labels, IR-4 procedures, and SLN registration. Genetic engineering in relation to weed control and the Kansas 2,4-D-cancer study were discussed.

In the General Session, President Evans pointed out that this was the 50th year for WSWS.

Other papers in the General Session included "Future Impact of Pending GLP Regulations on Weed Scientists Conducting Field Research" by Carol N. Somody, "Public Issues in Pesticide Use Programs" by James Witt, and "Scientists and the

Media: Closing the Communication Gap" by Ron Kolb.

Volunteer papers included a discussion of teaching weed I.D. by the Montana group, and a survey of common and troublesome weeds in the 12 western states by Mitich and Kyser. Old and Callahan reported on *Venenata dubia*, an expanding weed problem. Experimental herbicides discussed included DPX-R9674 (Harmony Extra), FMC 57020 (Command clomazone), RE45601, and DPX-L5300 (Express).



John O. Evans
Fellow, 1989

Like most people, I didn't realize the impact that weeds have on agriculture and the general public until well along in my professional training. My undergraduate training in the 1950's in agronomy with a teaching certificate at the University of Wyoming was preparing me for what I thought was to be a lifetime of teaching high school vocational agriculture. Undoubtedly, it would have been a challenging and rewarding experience had I followed my original plans, but Harold Alley taught a weeds course which was probably the most stimulating class that I remember and perhaps it unknowingly influenced subsequent career choices. My high school teaching was postponed while I completed a mandatory two-year military assignment and upon returning from the Army, I pursued an M.S. degree at Utah State to advance my teaching credential.

I worked with Wade Dewey, my major professor in Logan, and received plant breeding training from one of the true giants in that discipline. Dr. Dewey and I fought weeds in our wheat plots and often mentioned the marvelous opportunities for someone trained in weeds because so much needed to be done and a scientist could select employment among numerous

agencies in unlimited locations. Then I pursued Ph.D. work in Weed Science at the University of Minnesota and initiated a wonderful experience of membership in national and regional weed science societies. I have particularly enjoyed an active participation with the Western Society of Weed Science and consider its members among my closest friends. My first WSWs meeting was in 1968 and I was immensely impressed with the open discussion format used by WSWs at that time. The lively exchanges among "seasoned weed scientists" such as Jesse Hodgson, Bill Harvey, A.S. Crafts, Jack Warren, Ken Dunster, and many others, hastened my greeny's understanding of real-world weed problems and how much I needed to learn about controlling them.

WSWS participation has always been special to me, but serving as the Society's president in 1986-87 was the highlight of my Weed Science career. If I can claim any glory in weed science circles, most of the credit must go to a cadre of outstanding graduate students and good technicians, for their contributions really helped. I miss seeing some of my pioneer friends at WSWs meetings now, but I have met dozens of young weed scientists and the Society certainly has a very bright future.



W.B. "Jim" McHenry
Fellow, 1989

In reviewing the comments of other WSWs scientists, I note that many careers were perceived to have been initiated at the end of a hoe. And so it was with me as cemetery handyman--with a hoe--in Lassen County, California, in 1946. My supervisor's name, incidentally, was Lester Coffin. Such humble beginnings!

My interest in weed science was greatly accelerated while at Oregon State University in an agronomy class (taught by Dr. D.D. Hill) when Dr. Virgil H. Freed presented a guest lecture on weed control. The phenoxies were relatively new then and the future was exciting. Also during this period of undergraduate training (1948-49), I had the good fortune to meet and visit with Dr. E.J. Kraus; he was working with domesticated chrysanthemums at the OSU greenhouses. Kraus had previously been head of the Botany Department at the University of Chicago where he worked with growth regulators. It was Kraus who was credited with the idea (1941) that regulators like 2,4-D might function as economic herbicides at increased dosage rates.

After Oregon State University, I joined the University of California Cooperative Extension where I worked with Farm Advisor John V. Lenz for two years (1953-55) in Humboldt and Del Norte Counties. This work experience included herbicide field work. By this point, I guess I was destined to focus on weeds as a career. In 1955, I transferred to the Davis campus to head up a new statewide non-crop and aquatic weed control program in

Cooperative Extension. Bill Harvey and Alden Crafts were my mentors.

I attended my first Western Weed Control Conference in 1956 in Sacramento. This was the 15th WWCC and was held jointly with the California Weed Conference. The WWCC President was Walter S. Ball, Boysie E. Day was Research Section Chair.

It seems that I served as Chair of Project 6--Aquatic and Ditchbank Weeds three different times. As my Cooperative Extension project shifted, I chaired Project 2--Herbaceous Range Weeds and Project 3--Undesirable Woody Plants. Later I served on and chaired the Resolutions Committee.

The Western Conference (later renamed a society, which in my view was a misplaced selection of terms) was always the most fruitful to my program. It was also, for me, the most enjoyable to attend as well. The informal atmosphere of the research sections and the giving people made it a winner. It is, after all, the people that make for a successful organization.

FORTY-FIRST MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**Fresno, California
March 7-9, 1988**

President -- Larry Mitich
President-Elect -- Donald Thill
Secretary -- Gaylen Schroeder
Treasurer-Business Manager -- J. LaMar Anderson

Logan Norris was selected as Honorary Member and Stan Heathman and Harvey Tripple as Fellows in 1988. First place in the Graduate Student Paper Contest was awarded to P. Dotray, Washington State.

The financial report indicated that WSWS had about 2-1/2 years operating funds on reserve, but the trend was toward having less income than expenditures. The Finance Committee recommended that the Executive Committee explore ways to increase revenue.

Chairman of the Awards Committee, Paul Ogg, reported the establishment of the Outstanding Weed Scientist Award for public and private sectors in 1987, but no nominations had been received for 1988.

Reports from the Project meetings indicated discussions on the relationship between plant anatomy and translocation of herbicides, third-party registrations, groundwater, herbicide resistance, and a number of other topics.

In the Presidential Address, Larry Mitich indicated that, "The biggest impact on agriculture in the 21st century can be summarized in one word: biotechnology." Other papers in the general session included "Perennial Weed Research" by Don Wyse, University of Minnesota;

"Groundwater Contamination by Organic Chemicals" by Doug Mackay, UCLA; and "EPA's National Pesticide Survey: An Overview" by G.F. Kotas, EPA, Washington.

There was a groundwater symposium including G.F. Kotas, Doug Mackay, and A.G. Barnett. There were 78 volunteer papers, including 17 poster papers. MON-15100 (Dimension) was introduced for turf weed control.



Harry Agamalian
Fellow, 1990

My call to Weed Control (later Weed Science) began as a junior at U.C. Davis. I had Drs. W.W. Robbins and Alden Crafts as teachers. I was fortunate to be in the last class that Dr. Robbins taught at Davis in 1951. Their teaching methods were much different. Robbins was the easy going type lecture with lots of philosophy--which a wide-eyed student off the farm really enjoyed. To liven up the class, Dr. Robbins brought in guest lecturers such as Bill Harvey and Walter S. Ball. These two gentlemen were such humorous individuals that I deduced that "weed control" would be a good, exciting new field of endeavor for me.

I later took the advanced course offered by Dr. Crafts. He was one of those professors who wrote herbicide formulas with the right hand and erased with his left hand, so one had to have a "hot" pencil to take notes in those lecture classes!

After joining the Agricultural Extension Service in 1955, I was assigned to explore the area of Weed Control and be a source of information on the new discipline. Major emphasis was with broadleaf weed control in cereals (2,4-D), amino triazole for non-crops, and the introduction of selective vegetable herbicides such as CDEC (Vegadex), and CIPC (chlorpropham).

By the early sixties, the University granted me a sabbatical leave to pursue graduate studies at the University of Arizona. There I came under the guidance of K.C. Hamilton. This was probably one

of the best happenings for me, not only from the professional training, but absorbing some good philosophy from K.C.

The 60's and 70's were exciting years as I returned to the Salinas Valley as a weed scientist able to specialize in the discipline. Looking back, I believe the contributions of industry and public weed control specialists made significant contributions to reducing manual weed control in vegetable production. The development of these selective herbicides and their rapid adoption by farmers was a most gratifying achievement for this Extension worker.

As these comments are directed to the WSWs history, I must relate my personal enjoyment of having 31 years of association with the Conference. The opportunity of serving the Society in several capacities, and using its forum for paper presentations, has been most rewarding. To be honored as "Fellow" in the Western Society of Weed Science was perhaps the highlight of recognition by my peers. I shall always cherish this as a most memorable event of my career.



Bart A. Brinkman
Fellow, 1990

My initiation into Weed Science began as an undergraduate student at Utah State University. I was pursuing civil engineering and needed a few electives. As I recall, I decided on a biology course which I thoroughly enjoyed. I then looked into the Plant Science Department and thus began my trail into Weed Science.

During my senior year I began to wonder what I was qualified for. I had taken all those wonderful courses but I couldn't get a handle on what occupation I was prepared for; in fact, I was scared to death because I didn't think I was qualified for anything. I remember talking to Dr. John Evans, who taught a Weed Science course, about a future in Weed Science. He suggested I go to graduate school and I began to write various universities around the country to see if any assistantship positions were available. South Dakota State University located in Brookings, South Dakota, offered me a Fellowship, so off I went in the spring of 1971 to pursue a career in Weed Science.

We arrived on April 1 and were faced with finding suitable and affordable housing. There was only one choice available and that was the condemned barracks the university was scheduling to tear down. The price was right at \$29.00 a month for a furnished two-bedroom apartment and that included all the utilities. Of course, our living room couch had no cushions but who needed them. Once we found living quarters, it then became evident that money was our next concern. Our savings

consisted of \$200.00 and funds from the GI Bill and the Fellowship wouldn't become available for at least another three months. We were sure that Debbie would find a job very soon; with all that optimism in mind we went shopping and spent our last few dollars on a used color TV. It was an instant hit with our fellow student neighbors and all of us had a good time watching color TV with popcorn and beer on our couch without cushions.

The following day Debbie and I went job hunting. We parked our new car at a 3M plant; as Deb got out of the car the wind caught the door which sprung and dented it badly. So I opened my door to rescue her and yes, the same thing happened to me. I was hoping I had not made a poor choice and was not the fool for that April. Those were some of my early experiences in my quest to be a Weed Scientist.

In reflection over the past 20 years since I've been in this profession, I can't imagine making a better choice. Working primarily in the Pacific Northwest has been exciting. I've had the opportunity to work with a great group of individuals from farmers, university personnel, to other industry reps. My involvement in the Western Society of Weed Science has been enjoyable and fulfilling. I just hope that I can continue working as I have in the past because I can't imagine a better way of life.



Earl Spurrier
Honorary Member, 1990

First, I wish to congratulate the Western Society of Weed Science for putting together a history of the Society. The story of Weed Science must be told and the role of the Western Society must be recorded as having made critical and substantial contributions to that story.

My first association with the science of weed control goes back many years when I was a student at the University of Maryland. Professor Conrad Liden of the Agronomy Department had received his first samples of 2,4-D and had begun his first experimentation with this "wonder" chemical for weed control in corn and in wheat. Further, Dr. Al Kuhn, Head of the Agronomy Department, was deeply interested in chickweed control in alfalfa. The chemicals CIPC, IPC, and a few others showed some promise of selectively removing chickweed. We harvested hundreds of small plots, dried the samples, separated chickweed from alfalfa by hand, and calculated the percentage of control until we, as graduate students, thought surely there must be some other form of work we could do. This was the beginning.

But my first serious approach to weed control came as an opportunity, while a graduate student at the University of Illinois, when Dr. Fred Slife asked if I would be interested in being the first Weed Control Extension specialist for the State of Illinois. I accepted the challenge with his tutoring and I was "hooked."

From there I joined Monsanto at St. Louis, Missouri, and then had the wonderful opportunity

to meet with the finest people in the world--my colleagues in the field of weed science.

My first real close association with the Western Society began in 1973. I was transferred by Monsanto to our Santa Clara, California, district office, with California, Utah, Nevada, and Arizona as my territory. During those times, several new and marvelous products were now on the market and the science of weed control was the major thrust for many academic and industry researchers. I became deeply involved because chemical weed control and the biological exploration of weed systems, in our opinion, was the science of the future and clearly was responsible for some of the greatest contributions to the nation's ability to become the envy of the world in food, feed, and fiber production.

But those days were not without frustrations, failures, and successes. The ladies and gentlemen involved in those efforts were truly pioneers. We all were learning and adapting new technology long before we knew that there were some limitations and even before we recognized the unlimited opportunities that lay before us. We also had fun. It was truly an inspiration to be able to report that our new coded product or our newly introduced trade-named compound had made new breakthroughs--that we could now report 85 percent or better control of field bindweed or Canada thistle or bermudagrass or wild oats. We were able to show yield increases in wheat, lentils, or cotton of 15 percent or more.

Some of the industry's newer products lingered in the soil for a longer period of time than were expected. They didn't stop working when we wanted them to. There were cases when our researchers had to go back to the drawing board. We would have reports within the industry where there would be crop damage. Needless to say, there were some unhappy growers--but we were all learning the limitation of our new technology. We also became much better versed in the language of liability and in dealing with the legal profession and, even today, we are still learning from those past experiences as newer products are being researched and field tested. History is a good teacher.

After my short stay on the West Coast, I had the privilege of being transferred to Washington, D.C.

to serve my company in legislative and regulatory matters. I became more actively involved in developing legislation and regulation to help, as best we could, make chemical weed control and Weed Science a better understood agricultural practice. There were elements in the environmental movement that were attempting to eliminate all chemicals from agriculture and such efforts would have been devastating to our agricultural technology and to the science that we all had worked so long to develop.

Each year, representatives from the Western Society of Weed Science would join their colleagues from the Weed Science Society of America and other regional weed science societies in Washington D.C. They brought a coordinated approach, informing Federal regulatory and legislative personnel of the importance and the necessity of Weed Science and why such research and science are justifiable investments in agricultural technology. They brought data to prove that herbicides and weed control technology contributed greatly to our standard of living, the contribution to a positive trade balance, the role of agricultural chemistry in the U.S. exports, and how the science was some of the most sophisticated technology ever researched and developed.

The Washington efforts by these representatives placed Weed Science and its regional, state, and national societies as a dependable, honest, and correct source of information that could be and, in fact, was used by numerous federal agencies in debates defending the use of agricultural chemicals and weed science technology as a science that should be supported by Federal funding.

So much has been done over the years and there is still so much to be done as we approach the new frontiers of Weed Science. Let us not forget the contributions of those pioneers who have departed us, for they gave us the future. And we must provide a future for those who will carry forward our work.

Thank you for the opportunity to provide a small insight into the history of the Western Society of Weed Science.



Larry W. Mitich
Fellow, 1991

My involvement with weed science began in March 1954 when I made the decision to obtain an M.S. degree in that discipline. The following March, I completed the degree; Dr. Dale Bohmont was my advisor. After a 4-1/2 year stint in Afghanistan, I returned to the states and obtained a Ph.D. in January 1963, also in weed science. Within a week, I was on the job as Extension Agronomist at North Dakota State University, Fargo. After 17-1/2 years in the Peace Garden State, I moved west, and began work as Extension Weed Scientist at the University of California, Davis.

After being an active member of the North Central Weed Science Society for a long time, I found the Western Society of Weed Science to be a nice change. The WSWS is about one-third the size of the NCWSS, and I soon became acquainted with almost everyone in the Society that I had not previously known through the NCWSS or the WSSA. And I soon became involved in the WSWS. These are the major positions I held in the Society: Education and Regulatory Section Chairman, 1983-1985; Board of Directors, 1983-1984, 1986-1988; President-elect, 1986; Vice President, 1986-1987; Program chairman, 1987; President, 1987-1988; and Immediate Past

President, 1988-1989. I also represented the WSWS at the Second Annual Washington Meeting of the WSSA in 1987. I was named a WSWS Fellow in 1991.

I have been active in the WSSA and served as President 1990-1991; I was named a Fellow in 1983. Other major contributions: Served as an Associate Editor of Weed Technology and continue to contribute my feature "Intriguing World of Weeds," begun in Weeds Today (36 parts have been completed to date). Received the Extension Worker Award in 1978, was editor of Weeds Today, June 1982 - December 1985, and editor of the WSSA Newsletter, 1979-1982.

So many changes have occurred in the realm of weed science since I entered its ranks 29 years ago. Surely the highlights have been attending the annual meetings. What a wonderful way to get updated on recent developments, renew friendships, make new friends, and see major cities throughout the U.S.

FORTY-SECOND MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**Honolulu, Hawaii
March 14-16, 1989**

President -- Donald Thill
President-Elect -- Sheldon Blank
Secretary -- Peter Fay
Treasurer-Business Manager -- J. LaMar Anderson

Fellows selected in 1989 were Jack Evans and Jim McHenry. Gary Lee was selected as Honorary Member.

The first Outstanding Weed Scientist Award went to Jean Dawson. There were no nominees for the Award in the Private Sector. There were seven graduate student papers; Blake Willis, Utah State, was the graduate student winner.

Wanda Graves has been named as the new Treasurer-Business Manager for the Society.

A minor change in the Constitution involved changing three ad hoc committees, Necrology, Poster, and Student Paper, to Standing Committees.

There were presentations and good discussion in the project meetings, as usual. Topics included allelopathy; modeling as a management tool; herbicide resistance; purple loosestrife, a rapidly expanding weed problem; and many others.

In his Presidential Address, Donn Thill mentioned that there had been 46 papers in 1974 versus 118 (including 20 poster papers) in 1989. He paid tribute to J. LaMar Anderson for his contributions as Treasurer-Business Manager for 24 years.

He discussed the increasing difficulty in obtaining funds for production-oriented weed control research.

Other papers in the General Session included "The Role of Weed Scientists in Low-Input/Sustainable Agriculture" by J. Patrick Madden, USDA; "Management of Herbicides to Avoid, Delay, and Control Resistant Weeds--A Concept Whose Time has Come" by Homer LaBaron; and "A Kaleidoscopic View of Crop Herbicide Resistance" by John Goss, et al., DuPont.

The volunteer papers included a distinct trend toward more discussion of herbicide resistance. There also was a paper on downy brome control with bacteria and on remote sensing to map weed spread. DPX-9360 (Accent) was introduced for grass control in corn.



Edward E. Schweizer
Fellow, 1991

My first real experience with weeds was at the age of 14 -- hoeing patches of Canada thistle in oats and annual weeds in soybeans in Illinois. Weeds in corn were controlled primarily by check planting and cross cultivation. I hadn't even heard of 2,4-D nor had the farmers who hired me. Some 10 years later (1956), I enrolled in Dr. Fred Slife's undergraduate weed control course and learned that 2,4-D had been synthesized and applied for broadleaf weed control in 1945. Many years later, Dr. Warren Shaw told me that the first scientists to apply 2,4-D in the United States were at Beltsville. They used 2,4-D to control dandelions on the lawns at Beltsville.

In 1957, I accepted a Fellowship from the University of Illinois to pursue a Master's degree in Agronomy. My thesis dealt with forage crop production. I was excited about this area until I attended my first Agronomy Field Day in Urbana that summer. I don't recall how many farmers came that day, but it was quite obvious that most of them were interested in chemical weed control and not forage crop production. After the field day's activities were over, I knew that I wanted to become a weed scientist. And that's what I've been doing the past 35 years!

We weed scientists can be very proud of our many

significant accomplishments since the introduction of 2,4-D nearly 50 years ago. But our work is still not done. Herbicides will continue to play a major role in weed science, but we'll need to focus more on alternative methods to control weeds in the future and devote more time and resources to weed biology, developing weed/crop models, and new herbicide application technology. This becomes more apparent each year as we read reports about the contamination of surface water and groundwater with some herbicides.

Our students will need to be trained more in computer technology, geostatistics, application technology, remote sensing, and economics. Some of them will have to use geographic information systems (GIS) and global positioning systems (GPS) to design computerized systems so we can apply spatially variable herbicide treatments "on-the-fly," and only where weeds exceed the economic thresholds in crops. Others will have to concentrate on how can we do a better job of controlling weeds with alternative methods. In my reading, I feel that many farmers are way ahead of us when it comes to managing weeds with less herbicides or even without herbicides.

A few months ago I read an article in THE NEW FARM, a magazine of regenerative agriculture. The article dealt with an innovative farmer who was building a new corn planter that dropped corn seeds in hills, just like the corn planter that the farmers were using in Illinois when I first started hoeing weeds at the age of 14. BUT, instead of using a spool of wire to trigger the planter to drop corn seed in hills, this farmer was using an electronic device. AND, instead of cross cultivation, which leads to soil erosion on hilly fields, he was planning on building a cultivator that would remove weeds between the hills and within the row. A number of farmers are interested today in controlling weeds with alternative methods and, some even in planting corn in hills again, the old proverb thus seems appropriate "WHAT GOES AROUND, COMES AROUND." Weed science will be even a greater challenge in the 21st Century for all of us.

FORTY-THIRD MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**Sparks, Nevada
March 13-15, 1990**

President -- Sheldon Blank
President Elect -- Peter K. Fay
Secretary -- Doug Ryerson
Treasurer-Business Manager -- Wanda Graves

Harry Agamalian and Bart Brinkman were selected as Fellows in 1990. Earl Spurrier was named Honorary Member and Arnold Appleby received the Outstanding Weed Scientist Award for the Public Sector.

There were six papers in the graduate student contest; the winner was Emanuel Pomela, Utah State University. There 59 volunteer papers, including 18 poster papers, compared to 118 volunteer papers in 1989.

Tom Whitson reported that progress on "Weeds of the West" was proceeding well. The publication would be available early in 1991. He suggested that WSWS stands to make a substantial profit from this publication.

Past-President Donn Thill introduced the subject of instituting Sustaining Membership to WSWS. Under current operating procedures, WSWS has had almost no liquid assets available before the annual meeting each year. A more stable financial base is sought. A straw vote of the membership gave the following results: 1. Increase individual dues/institute sustaining membership--73. 2. Increase individual dues only--59. 3. Sustaining Members only--0. The matter was referred to the Executive Committee. Ironically, Sustaining Membership was one of the categories

of membership for many years, beginning in the first year of the Society in 1938.

General Session papers included, "Collecting and Recycling Pesticide Containers" by Earl Spurrier, "LISA: Where Do Weed Scientists Fit in?" by Phil Westra, "Food Safety: Perceptions, Reality, and Science" by Carl Winter, and "The Sandoz Commitment to Biologically Derived Pesticides" by Dan Hess.

In Project 4, Weeds in Horticultural Crops, the primary topic was, "Proper Use of Statistical Analysis in Weed Science," moderated by F. Jackson Hills. There was considerable interest shown in sulfonyl-urea-resistant weeds.



Donald C. Thill
Fellow, 1992

I became interested in weed science somewhat indirectly. I was employed full-time by the USDA-ARS while working on my M.S. degree in crop physiology at Washington State University. Funding ran out for my position when I had about one year left on my M.S. I was presented with a choice by ARS--to transfer to Dr. Roland Schirman's weed science project as a technician or hit the soup line. Married with one child made the decision easy--I transferred to Roland's project in 1974. It wasn't long and I knew I had found my niche. Weed science was fun and exciting. Roland's project was 50% rangeland weed control and 50% weed control in no-till wheat production systems. We screened lots of herbicides, built and broke no-till drills, and fought range fires (when a burn treatment would escape). I also was taking more graduate courses, which sometimes would interfere with field work. I wanted to earn a Ph.D. in weed science and Roland agreed but he did not want the inconvenience of me disrupting the work day with class. He suggested I go to Oregon State University and study under a professor named Appleby. I had heard a lot about this Appleby character--he had quite a reputation for training graduate students in weed science. I must admit that the first time I met Arnold I didn't think he looked old enough to be so famous. Our meeting took place in March 1976 in Portland, Oregon, at my first ever WSWS meeting. I believe I have missed only two WSWS meetings since 1976.

I have had the opportunity and privilege to serve the WSWS on committees and as a member of the Executive Committee. It is a great organization

where people interested in weed science can share ideas in both a formal and informal setting. One very memorable moment occurred during the General Session of the 1986 meeting in San Diego, California. Early that morning I observed a very nervous President Harvey Tripple. I jokingly mentioned that I was going to take his presidential address. We laughed and parted ways. When Harvey stepped up to the podium, he could not find his papers. He immediately searched the audience until he found me. "Thill, where is my speech!" I didn't have it nor did I know where it was. Harvey persisted. It turns out that Harvey had placed his speech on the podium before the opening announcements. The Program Chairman, Jack Evans, had accidentally picked up Harvey's papers with his papers. Jack sat innocently in the front row with the address in hand as Harvey proceeded with his address as best he could. About five minutes into the address, Jack discovered he had Harvey's papers and handed them to him. When it was my turn to give a presidential address in 1989, Harvey reminded me on several occasions that I should keep a close hand on my presentation.

I continued working for ARS until February, 1979. I worked as a biochemical field specialist for PPG Industries in the Pacific Northwest for one and one-half years. I have been at the University of Idaho since 1980. I enjoy working with graduate students, conducting research focused at solving weed control problems for Idaho's small grain producers, and teaching courses in weed science.

FORTY-FOURTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Seattle, Washington

March 12-14, 1991

President -- Peter K. Fay

President-Elect -- Paul J. Ogg

Secretary -- Steve Dewey

Treasurer-Business Manager -- Wanda Graves

Larry Mitich and Ed Schweizer were selected as WSWs Fellows in 1991. Harvey Tripple was named the Outstanding Weed Scientist--Private Sector, and Steve Miller was named the Outstanding Weed Scientist--Public Sector. Mostapha Haidar, Colorado State, won the Graduate Student Paper contest.

Tom Whitson announced that the "Weeds of the West" book were selling well and approximately \$30,000 profit to WSWs was anticipated from the first printing. Wanda Graves announced that the current balance for the Society stands at

\$81,622.00, up from \$58,228.00 in 1990. Most of the increase came from the "Weeds of the West." Donn Thill reported that a proposal to institute WSWs Sustaining Membership was voted on by the members. The proposal passed by a majority of 82%. There are currently 14 Sustaining Members since the new category was instituted.

The Projects have been realigned as follows:

The Old Alignment

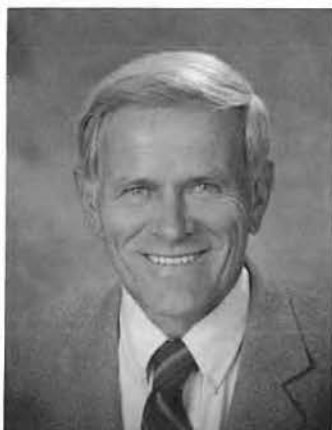
The New Alignment

Project I.	Perennial Herbaceous Weeds	Weeds of Range and Forest
Project II.	Herbaceous Weeds of Range and Forest	Weeds of Horticultural Crops
Project III.	Undesirable Weeds and Woody Plants	Weeds of Agronomic Crops
Project IV.	Weeds in Horticultural Crops	Extension, Education, and Regulatory
Project V.	Weeds in Agronomic Crops	Weeds of Aquatic, Industrial, and Noncrop Areas
Project VI.	Aquatic, Ditchbank, and Noncrop Weeds	Basic Sciences: Ecology, Biology, Physiology, Genetics, and Chemistry
Project VII.	Chemical and Physiological Studies	Alternative Methods of Weed Management

In his Presidential Address, Pete Fay emphasized that weed scientists must be prepared to adjust their mindset to approach new problems in different ways than in the past. A reduction in dependence on herbicides is inevitable and we must develop practical alternative methods. This will involve more cooperative work with other disciplines, such as ag engineering. He indicated that herbicide-tolerant crops do not represent long-term solutions to weed problems, but only "hasty measures to temporarily capture market share and likely will accelerate weed resistance."

General Session papers included "Biotechnology--Unique Opportunities and Challenges for Weed Science" by Alvin Young, "Spray Drift: Causes and Procedures to Reduce Off-Target Movement" by Loren Bode, and "The Big Green Initiative--Public Perception Becomes Political Reality" by Henry Voss.

There were several volunteer papers dealing with characteristics of herbicide-resistant weeds, primarily the sulfonylureas and the ACCase inhibitors, and also a symposium on herbicide resistance. There was a symposium on molecular biology in weed science and early results from the project at Washington State on brome control with soil bacteria.



Harold M. Kempen
Fellow, 1992

Of all the weed science meetings that I have participated in, the Western has always been my favorite! That is because of usable knowledge acquisition in the fast-moving '60s, but also because of the characters in attendance.

March, 1958 was my first exposure. Having graduated from the University of Wisconsin with an Agronomy degree but with a zest for weeds engendered, in part, by Dr. Ken Buchholtz, I arrived at UCD for a Ph.D. plant phiz program in September, 1957. After a semester, I opted for a more pragmatic approach to weeds. I replaced Jim Wilkerson as a UC colleague to Dr. John Miller at the USDA Cotton Research Station in Shafter, California, in January, 1958.

John was scheduled to speak at the Western on weeds research in cotton that March but USDA travel requests required specific, bureaucratic preplanning. This prevented his attendance and I was induced, using UC travel flexibility, to make the presentation. No matter that I hadn't seen an irrigated field prior to this appointment, and a cotton field only once, that in Oklahoma at 50 mph while protecting the USA from Korea in my 1951-1953 war years. (I was a fresh

lieutenant and had to learn how to assemble an atomic artillery projectile.)

Needless to say, I asked John a lot of questions while being forced to write it. At the Western, my talk seemed well received by fellow cotton researchers except by one person from Arizona. A Dr. K.C. Hamilton provided a thorough hallway critique. I learned quickly from Dave Bayer, Larry Foy, Stan Heathman, Fred Arle, and industry leaders such as Dick Fosse, Joe Antognini, Bill Anliker, and others that K.C. was "tough" on new research and sales staff in the area. But he was a UW alumnae too and I found that if I agreed with him that he was the (or thee!) innovator in western cotton weed research, he was easy to get along with.

Later years brought me to know many of the northwestern professionals, all communicative and helpful in providing insights and ideas about this newly evolving science. Zest was high in the '60s and '70s because problems were solved for growers in one to three years. If a product worked, it was registered and utilized, resulting in reduced production costs. (Treflan was cleared on about 50 crops in three years, under the guidance of Elanco's Dr. Don Ford. Now with Good Laboratory Practices, one is registered in 10 years--except for sovereign California.)

Occasionally, crop injury occurred. Kern County, to which I was assigned in 1963 as a weed management advisor, was a leader in this area. Prometryn was the new herbicide registered in 1963 and tried on two 4-row strips in the August planting. It was used on over 1,000 acres of potatoes the following spring, even though our weed specialists felt that potatoes were so competitive that they needed no protection from weeds other than tillage. At \$2,500 per acre, it was a costly introduction, since attorneys found it worthwhile to be involved. About 20 years after the fact, I was visiting with Dr. Boysie Day while travelling with him to Humboldt State to give a talk, and he told me that Dr. Lowell Jordan and staff had shown that serious injury had occurred at

UC-Riverside. They had notified Geigy officials but were advised that nationwide sales would proceed.

A few years after that and other litigation in Kern County, California Farmer published an article about Kern County's penchant for lawsuits over herbicides. That article spawned others and cemented our County's reputation as a litigious group (though suits are now commonplace throughout America, and in the hundreds of millions rather than millions per episode). If enough money is in the balance, lawyers will pursue such problems. It was a lesson about having one's reputation besmirched. Now Representative John Dingell does it all the time to top managers in the military, in universities, and NIH.

The beginning of turmoil in the use of herbicides was the Agent Orange debacle following the Viet Nam War. Since 2,4,5-T was a useful brush and tree killer, the Western featured a series of presentations on aspects of it and its toxicology. OSU's Mike Newton, Dow's Jack Warren, and Dr. Boysie Day were key players, as I recall now, and despite all the education and dedicated effort, it was the first of many herbicides to be lost to end users. I remember Boysie saying that from the millions of forest and pastureland treated with 2,4,5-T, only 2 ounces of dioxin would be distributed; would that be a problem? (NO, I said to myself.) Later we lost use of some advocates of these safe technologies, because of in-house political pressures on academic freedom. The University of California Division of **Agriculture and Natural Resources** recently published a 25-page document with the provocative title, "Beyond Pesticides."

As we went from the trauma of DDT to T to Alar, we realized that "those guys" were pretty effective in creating false perceptions. Meryl Streep and other Screen Actor's Guild types seemed more in charge, with their media "streeping," than we in science and technology. Yet despite it all, thanks to people like Boysie, who researched the first chemical no-till programs in citrus, we have been able to use inexpensive herbicides like diuron, simazine, and bromacil to safely protect citrus from thirsty, competitive, frost-enhancing weeds to this day. (Or

have we? Now these three herbicides cause over 75% of the non-point California "detects" in groundwater under Tulare County citrus. My recent review, however, shows that the maximum of the levels found, at 0.1-15 ppb, are less than 1/3 of the very conservative MCL [Maximum Contaminant Level] or HAL [Health Advisory for Lifetime exposure] set by the California Department of Health Services or USEPA respectively. Yet, will they join DDT and T and Alar?)

Perhaps too heavy for a history, but as several have repeated, "If we don't learn from history, we will be forced to repeat our past mistakes."

A lighter side I recall, was K.C. Hamilton, who presented a slide show on how to do research. He did this well by pointing out some researchers' techniques that did not qualify. One scientist from California (usually we took hits from K.C.), a Dr. Art Lange, was noted for his 5 X 5 foot plots. But for long-term persistence trials that are disced with 20' discs, K.C. pointed out, that is a no, no! Nor should one view plots from a lawn chair with beer in one of Stan Heathman's hands, and binoculars in the other. Further, one shouldn't present all data on one slide, even though the WSWs audience is bright and may be speed-readers. Nor be kind to one company's products just because they took you on a houseboat fishing trip to Lake Powell. Of course, if the latrine overflowed on the boat while U. Az staff were sleeping, that might be a different matter.

Another genial presenter was Bill Harvey. At the end of his talks, one wondered what one had learned but one really enjoyed it. At the start of the ecology movement, his word picture humorously depicted people being happy with their neighbors until a change occurred, from fish moving down stream to deposits from other "movements" going by. I gathered he was talking about the "other guys."

Historically, weed science enabled least-cost weed management, in my view, and the Western provided a pragmatic mix of these two facets of "economic plant

ecology" (we must get ahead of the entomologists in the alphabet, so we can get more funding). Only in the past year have I noted a change in this philosophy. "Throwing in" with the new environmental movement is scientifically fraudulent and will be weed science's undoing if left in place. Sucking up groundwater funds to enable graduate student support does not seem ethical to me. It is wrong not to do what is right!

In California, the greatest joy was to beat a colleague with a new "breakthrough." With 280 crops, there was ample opportunity for that. I remember Harry Agamalian showing that trifluralin and CIPC were mitotic poisons that stopped field bindweed emergence. At the USDA station, John Miller and I had shown the same result with "spray blade" application on annuals in cotton. Soon dozens of growers of trees and cotton were utilizing this "chemical tarp" technology. Bill Fischer advanced the weed management technology in orchards and vines with numerous trials under numerous irrigation systems, showing vast differences. I led the charge with bromoxynil in onions and garlic, later in efficacious combinations with oxyfluorfen, as well as phenmedipham on beets and pendimethalin preemergence instead of preplant incorporated for garlic and onions.

Dr. Lange was one who never gave up on old products. Metham was a "Failed Fungicide," according to Dr. Al Paukis of UCR, but Art found spray blading, drenching, and chemigation enabled control of weeds and/or other biotic pests. Now it is a standard in California vegetables.

We were the central California core protectors of our grower's \$13 billion investment in crops. Many had their shoulder to the wheel, so it's difficult to cipher who did what, since industry reps were like global extension specialists to us, leading on such innovations as soil-incorporation (Joe Antognini, Stauffer), chemigation (Paul Carey, Stauffer), surfactants (Stan Strew) and others.

I am glad that I am retired. In 30 years, we have removed a lot of arduous toil in crop production and permitted more food on less acreage with better quality and greater availability for our nation. I would hope that that can continue, but to do so means sticking to our (Western) guns. There is some downside to everything, but the cancer researchers, the groundwater scientists (mostly non-agriculturists), the air-pollution experts, and medical community: all show that herbicides are not an unacceptable problem.

Other Honorary Members (taken from the Proceedings)

Dick Beeler – 1976 (deceased)

Dick Beeler, a native of Kansas City, Missouri, received his degree in journalism from the University of Texas. He is a member of Sigma Delta Chi honorary journalism fraternity, and has served as an officer and director in several journalism and publishing associations.

After he was released from the Army in 1945 he moved to San Francisco, and in 1948 he became the owner and publisher of Animal Nutrition and Health. In 1958 he founded Agrichemical Age. He sold both national technical magazines to the California Farm Organization in 1973. He is currently editor of both magazines and managing editor of California Farmer.

Warren C. Shaw – 1984 (deceased)

Dr. Shaw received his B.S. and M.S. from North Carolina State University and his Ph.D. from Ohio State University. Warren began his career as a weed scientist with the Agricultural Research Service, USDA, in 1950 and was instrumental in the development of selective chemical weed control with 2,4-D in wheat, oats, and barley. Through his leadership, the Federal Noxious Weed Act was developed and passed in 1974. Dr. Shaw is currently National Program Leader for Weed Science and Agricultural Chemicals Technology in USDA-ARS. He has been very skillful in recognizing and documenting the needs and justifying the increases in manpower and funding for Federal weed science. Under his guidance, ARS weed science programs have increased dramatically. He has been a leader in the concept of integrated weed management, and in 1981 presented the keynote address "Integrated Weed Management Systems Technology for the Future" at the annual conference of the Western Society of Weed Science. Dr. Shaw has had a direct impact on USDA-ARS weed research and has influenced weed research at the State level and in agricultural chemical companies. Dr. Shaw's enthusiasm for weed science is one of his strongest attributes. Weed science is fortunate to have a leader with his capabilities.

Bruce Ames – 1992

It is with great pride that the members of the Western Society of Weed Science have selected as their 1992 Honorary Member, Dr. Bruce Ames. Dr. Ames has made numerous contributions throughout his career that have had positive impacts upon human health and agriculture. He was born in New York City and completed his B.S. degree in biology at Cornell University and his Ph.D. in chemistry and genetics at the California Institute of Technology. For a little more than a decade in the early years of his professional life, he served as biochemist at the National Institute Health. He spent one year in the laboratories of F.H.C. Crick and F. Jacob in Cambridge and Paris.

In 1968, he became Professor of Biochemistry and Molecular Biology at the University of California Berkeley where he is presently affiliated. In 1979 he became Director, National Institute of Environmental Health Science Center in Berkeley, a position he currently holds. Dr. Ames was formerly on the Board of Directors of the National Cancer Institute (National Cancer Advisory Board). He was a recipient of the most prestigious award for cancer research, the General Motors Cancer Research Foundation Prize (1983), and of the highest award in environmental achievement, the Tyler Prize (1985). He has been elected to the Royal Swedish Academy of Sciences and the Japan Cancer Association. His 300 scientific publications have resulted in his being the 23rd most-cited scientist (in all fields)(1973-1984).

Professor Ames has been the international leader in the field of mutagenesis and genetic toxicology for over 20 years. His work has had a major impact on, and changed the direction of, basic and applied research on mutation, cancer, and aging. The development of Ames' mutagenicity test as a practical tool for the detection of potential carcinogens has led to its use in over 3000 laboratories and in all of the major drug and chemical companies, where it has had a major influence in weeding out mutagenic chemicals while it is cheap to do so and before they are introduced in commerce.

FORTY-FIFTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

Salt Lake City, Utah

March 10-12, 1992

President -- Paul Ogg

President-Elect -- Steve Miller

Secretary -- Jack Schlesselman

Treasurer-Business Manager -- Wanda Graves

WSWS Fellows selected in 1992 were Donald Thill and Harold Kempen. Ken Dunster received the Outstanding Weed Scientist Award in the Private Sector and Alex Ogg received that award for the Public Sector. Bruce Ames was named Honorary Member.

There were 15 graduate student papers presented. Because of the general high quality and the difficulties in evaluating diverse subject matter, they were divided into (a) basic, and (b) agronomy. Jean Doty, Washington State University, won the agronomy award and K. Sivakumaran, Montana State University, won the basic award.

Assets of the Society now total \$117,605.00. Tom Whitson announced that the net profit from the "Weeds of the West" book totaled \$41,793.00 for the first printing. A second printing is underway. The total WSWS investment in this project was \$121.00.

An important change in the Society was the addition of three new states--North Dakota, Kansas, and Nebraska. Persons had been attending from those states since the Society began in 1938, but those states were not officially part of the Western Region. This brings the total of states in

WSWS to 16, including Hawaii and Alaska.

Joan Lish reported 15 Sustaining Memberships for 1992. These members have contributed \$4,800.00 to the Society.

General Session presentations included "Water Quality: Solving the Right Problems" by Richard Fawcett, "Progress, Challenges, and Perceptions of Weed Science" by Gary Lee, and "Pesticide Safety and Toxicology" by Bruce Ames.

In his Presidential Address, President Ogg encouraged the membership not to forget the old methods of weed control, including crop rotation, cultural methods, and livestock management. We cannot rely completely on chemical methods of control. His words were only slightly different than those uttered by the first president of the Society, H.L. Spence, in 1938.

In my view, no meeting of WSWS in recent years has better followed the advice of President Ogg than in 1992. Of the 86 volunteer papers and numerous Project presentations and symposiums, there were, as usual, many having to do with chemical control, including a number on the important topic of herbicide resistance.

However, there were discussions on the use of lasers for weed control; selective control by harrowing; weed control by soil bacteria; computer programs for weed management systems; DNA sequencing; studies on weed seeds, including effect of light on germination; several presentations on the use of grazing animals; inter-planting; and specific transcript UP-regulated in cheat.

There was a symposium on minor crop registrations. MON12000 and MON13200 were introduced.

CLOSING REMARKS

I had not intended to write a "Conclusions" section to this history, but Bob Zimdahl told me to do so and, of course, I always do what I am told. I do not anticipate that everyone will completely, or even partially, agree with my conclusions, but even the act of disagreeing will require some individual thought and that in itself might be valuable.

One sharp impression I have gained in reviewing our history is that many of the problems and thought processes have not changed since 1938. Field bindweed was a major problem then as it is now. New weeds were appearing and spreading rapidly, and the same is true today. There was some excellent work on the biology of some of the weeds, especially bindweed, but the early members realized that our understanding of weed biology was wanting, as is still the case. H.L. Spence, first president, emphasized that we should not depend too heavily on chemicals, but add them to our toolbox and continue using all the good farming practices available. Indeed, the comment was made in 1949 that the introduction of 2,4-D may have resulted in less weed eradication than under cultivation, but, of course, that was offset by greater use of the land for crop production.

Industry representatives were always involved, but not until 1960 was Dick Fosse installed as the first President from industry. Indeed, Lin Harris would have been president in 1945, but he resigned because he took a job with industry, apparently feeling that this disqualified him to serve as an officer. No one would disagree that members from industry have been a crucial and beneficial component of our membership. (Note: Clarence Seely

has done an excellent job of discussing this aspect elsewhere in this book.)

Members of WSWs have played a major role, along with other weed scientists around the world, in developing new weed control tools. We now have a much more extensive arsenal than in 1938. Much of this has involved developing new herbicides, and these have been highly beneficial to growers and other clientele. But nearly everyone recognizes that chemicals cannot do the job alone. At the 1992 meeting, a significant portion of the program consisted of non-chemical methods. Much more attention is being directed toward an integrated variety of methods.

An intangible, but real, benefit of WSWs has been the sharing of viewpoints and information used in the teaching programs in the west. Sessions devoted strictly to a discussion of teaching methods have been infrequent, but I have found that personal acquaintanceships with our weed science leaders, their attitudes and objectives, has helped immeasurably in my teaching.

On one hand, the history of WSWs can be viewed as a long series of successes. The level of weed control technology in 1992 is far beyond that in 1938. Yet, we cannot forget that weeds such as field bindweed, leafy spurge, Russian knapweed, and whitetop are still major problems. New species appear each year. We still encounter fields with enormous numbers of weeds. Has WSWs been worth the effort? Clearly it has, but many challenges still remain. I am confident that members of WSWs will continue to rise to those challenges.

From the 1979 Proceedings

"OLD TIMERS" SECTION

Retired workers who were instrumental in establishing weed science in the western United States were invited to attend a "reminiscing" session at the Boise, Idaho meetings. Dr. F.L. Timmons chaired the section and was largely responsible for obtaining the following reports. Summaries of deceased workers' activities were prepared and presented by the spokesmen indicated.

H. FRED ARLE

1913-1978

(Spokesman: K.C. Hamilton)

Fred Arle was a member of the western Society of Weed Science from 1948 to 1978. Fred attended every meeting from 1954 to 1978. During this time he was author or co-author of 115 papers in the Research Progress Report. In 1972, Fred was elected an Honorary Member of this Society.

In 1946, Fred joined the Bureau of Plant Industry (later the Agricultural Research Service) of the U.S. Department of Agriculture working in weed research in Mississippi. On April 10, 1948, he was transferred to Phoenix, Arizona, to work on control of weeds in irrigation systems. His early research developed aromatic solvents for the control of submerged weeds and petroleum oils for the control of weeds on ditchbanks.

Fred's greatest contribution to Arizona and world agriculture was the development of modern weed control programs in cotton. Working with the University of Arizona, he developed "layby" herbicide techniques for late-season weed control, then preplant applications for early-season control, and finally herbicide combinations for season-long control of annual weeds. In his research and the extension of his ideas,

Fred showed a rare ability to work with farmers and with industry, extension, and research personnel. Fred conducted weed research in all of the crops grown in Arizona, including alfalfa, barley, corn, safflower, sorghum, sugarbeets, wheat, lettuce, melons, potatoes, and citrus. He adapted many agricultural herbicides for use in urban areas.

The example Fred Arle set in his work and life, his honesty, his energy, his imagination gives us a goal to try to equal. H. Fred Arle died in Phoenix, Arizona on April 7, 1978.

ROBERT B. BALCOM

Greetings to all WSWsers in general and to the "Old Timers" in particular. It would be great to see all of you again, but I will be with you in spirit. To say in a few lines all one feels about his chosen profession covering a period of 35 years is a tougher assignment than working up a program for ditchbank and waterweed control. Because the challenge and the need are so great, the control of undesirable plants is a very satisfying endeavor, as all of us realize. I have never been sorry. I started in plant control in 1934 with the Bureau of Reclamation on the North Platte Irrigation Project in Nebraska. In 1940 I

was transferred to the Bureau's Denver office, and in 1945 to the Washington, D.C. office where I retired in 1969.

Back in those early days, weed control was quite different than now. Chlorates were about the only chemicals used. Shoot cutting, or using blades to cut the roots of perennial weeds under ground every two weeks or so was quite popular. Men wore hip boots to cut water weeds with scythes in irrigation canals, or the weeds were dragged out with heavy chains attached to a tractor on each bank. As chemicals began to show more promise, several county, state, and government agencies, and the chemical companies, realized the need for more precise and extensive experiments and for the exchange of the information being obtained. This led to the formation of weed committees composed of workers of these organizations. The success of these groups showed the desirability of organizing regional areas with similar common weed problems. This resulted in the formation of the Western Weed Control Conference, now the Western Society of Weed Science. After the other regions organized, the several regional societies formed the Weed Society of America, which became the Weed Science Society of America in 1968. I had the pleasure of attending the first Western Weed Control Conference, which was held in Denver on June 16-17, 1938. I mention these things to show some of the changes and progress I have seen.

But Tim asked for a statement, not a book; I can see him now getting out his shears. I do wish I could have been with you in person to say hello to all of you. I have always been proud to be a member of the WSWS of which, on March 18, 1968, I was elected to Honorary Membership. Good luck and best wishes to all of you,

especially those with whom I have worked closely.

W. DEAN BOYLE

Regional Agronomist
Bureau of Reclamation
Boise, Idaho
Retired May 31, 1971

We appreciate the thoughtfulness of the officers of the Western Society of Weed Science in providing a place in this conference for us "old timers." We appreciate also the work and organizational efforts of our good friend and associate, F.L. Timmons, for organizing this "old timers" session.

It has been suggested that we summarize our accomplishments and contributions to the Society and the Bureau or Agency for whom we worked. First, I wish to express my appreciation to the Western Society of Weed Science for its assistance to me and the Bureau of Reclamation. Information and direction received from this society and from so many of its members provided the stimuli, information, and direction that were essential in carrying out the weed and other agricultural programs associated with irrigation districts, canal companies, and the Bureau of Reclamation in the Northwest.

I served WSWS on several occasions as Chairman of the section on aquatic weeds. I was given the privilege of presenting several papers depicting improved practices in the eradication and control of weeds in irrigation systems.

I find it most difficult to list what I consider the most important accomplishments during the period in which I was

responsible for the Bureau of Reclamation weed program over the Northwest. I enjoyed my work and really loved and respected every man with whom I worked.

The greatest satisfaction came from organizing all the irrigation districts and canal companies in the Pacific Northwestern states into an association for the purpose of sharing and disseminating information and improved practices in the control and eradication of weeds in and on irrigated systems. Foremost among the improved practices adopted was the control of aquatic weeds with chemicals, replacing mechanical methods and saving millions of dollars and tremendous quantities of water or improved quality.

With the help of Jesse Hodgson of the Agricultural Research Service, I applied the first barrel of xylene to a canal for aquatic control. Purchase of 5,000 gallons of xylene for the Vale and Black Canyon Irrigation Districts was the beginning of the pool purchasing program which was eventually expanded to the purchase of 800,000 gallons per year by 60 irrigation districts and canal companies in the Northwest.

I applied the first barrel of acrolein for the control of aquatic weeds. Through the cooperative efforts of men like Jesse Hodgson, Vic Bruns, Tom Bartley, F.L. Timmons, Delbert Suggs, Floyd Oliver, and many others, this practice is universally used for aquatic weed control.

For 12 consecutive years I was privileged to organize and teach the weed section of the Reclamation workshop at Denver, Colorado, for personnel from all irrigation districts and canal companies in the United States. On two occasions I was called by Utah State University to participate in their

annual Irrigation Operators Workshop in which I taught "Weed control and eradication on and in irrigation systems." Several times I served the WSWS as chairman of the Aquatic Weed Section. Numerous papers were given on subjects relating to aquatic weed control. I have enjoyed and appreciate each of you. Your assistance and counsel has always been appreciated.

VICTOR F. BRUNS
1947-1975

(Spokesman: Richard D. Comes)

Vic Bruns began his career in Weed Science at the Kansas Experiment Station, Fort Hays, in 1941, as an assistant to F.L. Timmons. Upon completion of college in 1944, he accepted the position of Superintendent of the State Bindweed Experimental Farm at Canton, Kansas. In 1947 he moved to Prosser, Washington, where he was in charge of a cooperative research program with the U.S. Department of Agriculture, Washington State College, and the U.S. Bureau of Reclamation. Vic Bruns was one of the first four men assigned by the U.S. Department of Agriculture to conduct research on the control of aquatic and ditchbank weeds in the West.

Vic developed, or helped develop, many of the practices that are currently used to control aquatic vegetation in irrigation systems. His classic studies on the response of crops to herbicides in irrigation water are cited widely. In 1972 he received the U.S. Department of Agriculture's Superior Service Award for his research on this subject. He was meticulous and thorough in his work and was an excellent writer.

Vic became active in the Western Weed Control Conference immediately upon his arrival in the West. However, because numerous severe health problems limited his ability to travel, he was unable to accept major responsibilities in the Conference. Vic was a charter member of the Weed Science Society of America and the Washington State Weed Conference. He served as President of the Washington State Weed Conference in 1968, was elected an Honorary Member in 1974, and received the first "Weed Warrior of the Year" award from that association.

Vic retired from the U.S. Department of Agriculture on August 30, 1975. Thirty days later he lost his third and final battle with cancer.

LEE M. BURGE

Lee M. Burge is a native of California, where he graduated from Fresno High School. He is a graduate of the University of Nevada, College of Agriculture, where he majored in animal husbandry and biological sciences.

An employee of the Nevada State Department of Agriculture since 1929, he was, in 1957, named Director of the Division of Plant Industry. On January 1, 1961, he was named Director of the Department of Agriculture.

One of Lee's first assignments with the department was a complete survey of the state to learn what noxious weeds had gained a firm footing. At this time, one of the principle noxious weeds was puncture vine and fuel oil was found to be the best control. He was also active in the *Halogeton* program in the state and published several pamphlets and articles on its

control.

Mr. Burge is a former Vice President of the Agriculture Committee of the Regional Council of State Governments, former member of the Executive Board of the National Association of State Departments of Agriculture, past President of the Western Association of State Departments of Agriculture, past President of the Western Weed Control Conference in 1945, is on the Board of Governors of the National Agricultural Hall of Fame, and is an Honorary Member of the Western Society of Weed Science. He has long been active in numerous other regional and national agricultural work.

Mr Burge retired from the department in 1971.

VERL A. COX 1887-1963

(Spokesman: Lambert C. Erickson)

Verl was raised in Texas, a state known for its size. Verl was known for his large ideas. The family moved to Caldwell in the depression 30's and Verl went to work with the Canyon County Weed Control Unit. This was in the era when weed control meant soil sterilization. Thousands of gallons of carbon bisulfide and hundreds of tons of the chlorates and borax were applied annually in the state.

Verl's heart condition dictated that he reduce his physical activity. He was then hired as the weed control supervisor for Ada County in 1940 and remained there until his retirement in 1958. He was an organizer of the pool whereby the counties purchased the soil sterilants. He was present and helped organize the Idaho

Noxious Weed Association in 1944 and he was its president in 1954. It was during these 18 years that he became known as the Dean of Weed Control in Idaho.

Verl had trained himself to be observant, to take advantage of every successful result, to learn by trial and error, in not only using the new chemical, but how to apply it under the prevailing environmental conditions. Verl knew that people were the main contributors to the weed problem and he therefore devoted great effort to human persuasion.

Verl was a leader of men! The records verify his contributions at innumerable meetings, always concerned with improving the environment of the community, be it weeds, water, schools, space, places, or people.

LAMBERT C. ERICKSON

Do you know him? In recent years I have changed my ways in introducing a speaker from the common "you all know Mr. X," to actually unveiling the speaker's background to the audience. It may tell you more than the speech.

As for me, I was born in 1910 and raised on a farm in the sub-marginal semi-swamps of northern Minnesota. Nine years in a one-room grade school, then to the Northwest School of Agriculture, one year and three years to the Central School of Agriculture in St. Paul. The schools of agriculture were designed to send trained boys and girls back to the farm as rural leaders. Perhaps above all, they were taught citizenship.

Then to the U.S. Steel Works, then barberry eradication work, then a dairy

farm, student seed analyst, Federal Land Bank, then weed laboratory teaching assistant. These jobs were interspersed in eight years devoted to getting a B.S. degree. The struggle for survival was common in the depression years. But there was one thing different for me. It was working for a genius pioneer in weed science. A.H. Larson, a walking encyclopedia, who quit his Ph.D. effort because, "If that damn fool can get it, I don't want it."

I then got my B.S., married Hazel Marie Markuson, and moved to Wyoming as State Seed Analyst and seed advisor to the county pest inspectors. Then I moved with my wife, a two-year-old son, and 2,4-D to Idaho in 1945. I think I was the first full-time weed control researcher in the United States hired by a university (Alden Crafts says he was first!). Let me not encroach on the four horsemen, Timmons of Kansas, Seely of Idaho, Stahler of Minnesota and Bakke of Iowa, who were the first full-time weed research scientists employed by the USDA.

But things were different then--2,4-D came as a white powder. It was dissolved in carbowax 1500 which, diluted in water stayed in solution. And alcohol came as a water simulated liquid.

Today 2,4-D comes as a liquid and alcohol as a powder.

I need not tell you about me in my intervening years from 1945 to 1975 because that's how and when we met. My career years were your career years. The WWCC and the WSWS were an indispensable part of all our lives. *Those were the years my friends and colleagues*, a common bond which has no end. Two major highlights in my life were with Jesse

Hodgson, getting the Honorary Membership from this society, and last summer when the International Farmhouse gave me their highest award--Master Builder of Men. We should remember that we belong to the world's largest fraternity--the Land Grant College system!

R.J. EVANS

(Spokesman: Louis A. Jensen)

Dr. R.J. Evans was born in Lehi, Utah, in 1881. He graduated from Brigham Young University at Provo in 1907 and earned another Bachelors of Science degree at Utah State University in Logan, Utah, two years later. He received his Ph.D. at Cornell University in 1912.

He operated a farm for a time and later was director of the Utah Extension Service. He was head of the Agronomy Department at Utah State University for 16 years. During this time he became very concerned about weeds and attended some meetings of the Western Society of Weed Science. While at Utah State University he encouraged state appropriations for state and county weed control programs, especially clean cultivation for creeping perennial noxious weeds such as whitetop, field bindweed, Canada thistle, and Russian knapweed. He retired from U.S.U. in 1947, doing some farming and pursued church, civic, and other interests until his death in 1967 at the age of 86.

JESS FULTS

I was first introduced to the Western Weed Control Conference at Reno, Nevada, in 1946. I attended 22 regional and national meetings between then and my retirement

from Colorado State University in 1974. During that time I published 60 papers or abstracts in the Proceedings and Research Progress Reports alone, with co-workers or 15 graduate students.

While attending WSWS meetings I have particularly vivid memories of the Sacramento Girl's Choir in 1948, recent vegetation near Tucson and Phoenix, Arizona, flowers and tropical vegetation of Hawaii and southern California, and excellent food and music at Reno and Las Vegas!

Last May, I married Amy Arnold, a long time nurse, and acquired a whole new second family of two stepsons, two stepdaughters, and now a new step-grandson. These complement my own family of three sons, a daughter and nine grandchildren. When we get together we really have a ball.

I do a limited amount of consultant work and answer a world of questions about gardens, grass, trees and ornamental plants. We have lots of company and visits from ex-students and friends, which we enjoy a great deal.

Although I am retired from the Botany and Plant Pathology Department, I am still very active and not retired from plant research. My special interests are in breeding and marketing seed, seedlings, and plants of columbine (*Aquilegia*). I still have a large introduction garden on the University-owned Bay Farm where I have about 20 species of *Aquilegia* from all over the world, plus about 30 inbred lines of Colorado columbine (*A. caerulea*). Here on my own land, I am producing strictly blue-white columbine in a polycross of most of my inbred blue-white

lines. I expect to sell seed, seedlings, and plants in bloom, both wholesale and retail.

I also spend much time in my apple orchard (20 trees) and in general gardening.

CECIL GRAHAM

Cecil went to work for the Bureau of Reclamation, Region 2, at Sacramento, California, in June of 1946 after almost 4 years of military service. His assignments were numerous, challenging, and interesting as he established the first weed and pest control program for the Bureau in Region 2.

His work involved the organization of Bureau personnel in operation, maintenance, and construction, together with water user organizations, in planning and conducting weed, rodent, and pest control programs on and in irrigation systems. He served Region 2 in establishing research programs with the University of California at Davis, and the California Department of Agriculture in search of solutions to problems in controlling weeds, insects, and plant diseases on reclamation projects in Region 2. Supervision of similar programs were also among his responsibilities as head of the Lands Branch of the Columbia Basin Project, Washington.

Cecil represented the Bureau of Reclamation in establishing cooperative weed control research projects at the University of California, Agricultural Research Service, and at the California Department of Water Resources.

Cecil was instrumental in organizing and conducting the annual weed control workshop for Bureau operations and

maintenance personnel, for the Department of Water Resources, and for the water user organizations.

Another accomplishment was the development of research programs with the University of California at Davis in the study of anti-transpirants for the control of water loss from Salt Cedar.

His work also led to a research program at the University of California at Davis to find a substitute for mercury compounds used in control of fungus diseases in grain being grown by water users.

GEORGE HARSTON

(Spokesman: Dale W. Bohmont)

George Harston was active in weed control programs and associated with the Western Weed Control Conference from the late 1930's until the early 1950's. He was a native of Wyoming, the family farm being near Cowley. He was the State Entomologist for Wyoming, and his responsibilities included weed control. George Harston had a keen interest in the control of perennial weeds; before World War II he investigated methods that included burners, borax, and various sterilants. He later used 2,4-D in seeking control of field bindweed. Mr. Harston was Acting Commissioner of Agriculture for Wyoming in the late 1940's and early 1950's. He was a key person in the development of a noxious weed law for the state. A dedicated and enthused worker, he considered the sale of weed-contaminated crop seed to be intolerable. George Harston was a crusader for weed control.

GEORGE HOBSON

(Spokesman: L.A. Jensen)

Mr. Hobson was headquartered in the State Capitol Building in Salt Lake City. He began supervising the state weed program at a time when there were very few herbicides available. Under his direction, cooperative programs were established between the State Department of Agriculture, Utah State Agricultural College, and the various counties. They consisted of three different types of control measures, to control creeping perennial weeds such as whitetop, field bindweed, Canada thistle, and Russian knapweed. One method used was, where whole fields were infested, to lay the field out from cropping for a period of 2 to 3 years. During that time "clean cultivation" was practiced, which consisted of going over the field every two weeks all during the growing season with a "duck foot" cultivator. This controlled the weeds by preventing photosynthesis and depleting the energy stored in the creeping rootstocks. A second method was to dig out small patches of noxious weeds by hand with shovels, while a third method consisted of treating small infestations with so called "soil sterilants" such as atlacide and carbon bisulfide. Much of this was done with WPA labor during the great depression of the 1930's. Mr. Hobson attended meetings of the Western Weed Control Conference during the 40's at the time when 2,4-D was being introduced and used rather extensively in state and county weed programs.

JESSE M. HODGSON

(Spokesman: F.L. Timmons)

Jesse Hodgson began his career in weed control research with the U.S. Department

of Agriculture early in 1947. He was in charge of the cooperative research program with the Idaho Agricultural Experiment Station, the U.S. Bureau of Reclamation, and the Ada County Weed Control Department at Meridian, west of Boise. Emphasis of his early research was on the control of weeds in irrigation canals and of white top and perennial smartweed on irrigated land.

Jesse immediately became active in the Western Weed Control Conference and quickly established himself as a thorough investigator in weed control affairs. After five years at Meridian, Mr. Hodgson was transferred to Bozeman, Montana in 1953 to develop a cooperative research program for the USDA, USBR, and the Montana Agricultural Experiment Station. At Bozeman, Jesse's program emphasized control of aquatic and ditchbank weeds in irrigation canals and the control of Canada thistle in irrigated crops. In addition to his extensive research program, Jesse completed the requirements for his Ph.D. degree from Montana State University. He also took time to help his son build a brick home for the family as he had done previously at Meridian. Dr. Hodgson's thorough and excellent publications on the life history and control of Canada thistle caused him to be generally recognized as "Mr. Canada Thistle" throughout the USA and Canada.

Jesse was a leader in the WWCC and a prolific contributor to the Research Progress Reports. He was President of the WWCC in 1965. His presidential address that year gave an outstanding summary analysis of the WWCC after 27 years. Jesse was largely responsible for writing the Constitution of WWCC. Dr. Hodgson was elected an Honorary Member of the

Conference in 1969 and later received the Presidential Award of Merit from WSWs.

Jesse Hodgson always found time from his busy professional schedule, church and civic activities to spend time with his family and be a pal to his sons. One evening late in 1974, after Jesse returned home from a basketball workout with his sons, he had a fatal heart attack, which ended his fruitful and victorious life.

HERBERT M. HULL

I recall with great fondness attending many of the WWCC/WSWS meetings since the early 50's, along with the often associated technical committee meetings for regional projects W-11, W-52, W-77, and W-108. Much of the research under these projects is now accomplished with the aid of models, but we managed somehow to get along pretty well in those days even without modeling. One of my early trips to Boise I especially remember. To fly there from Tucson then required four different airlines. On about the third leg we ran into some of the roughest turbulence I had ever experienced, including many hours as an old Air Force pilot. About two-thirds of the passengers had become violently airsick. I began to feel a bit woozy myself, but remember thinking "what's to worry--pilots *never* get airsick." However, I now know differently. At the last moment I was forced to grab for the carton provided for such problems, only to find that it was upside down--but alas, it was already too late. K.C. Hamilton was sitting next to me as I recall; hopefully he has forgiven me.

In the WSWs I served as project chairman for chemical and physiological studies in 1956 and '57, as vice chairman and later

chairman of the research committee from 1960 to '63, and a chairman of the woody plants section during 1968-69. In the WSSA I was chairman and vice chairman of the monographs and annual reviews committee from 1962-69, and have especially enjoyed my continuous association on the editorial board for the *Herbicide Handbook*, the first edition of which was created in 1967, and which is now in its fourth edition. I have also been the Arizona representative for WSSA for the past 15 years.

I have not really retired, but have just shifted gears. I am still a Collaborator with the USDA and have maintained my faculty appointment as Professor of Watershed Management at the University of Arizona. I have however, changed my line of work from weed science to marine algae. This is an area in which my wife and I have had an interest for many years--in fact we both took an excellent course on the subject this spring semester at the U. of A., under Prof. Bob Hoshaw. There are other advantages to algae also. For example, one doesn't have to file an EIS before examining the intricate skeleton of a marine diatom under the electron microscope. All of this, however, does not mean that I have lost interest in weeds, absorption and translocation, and cuticle ultrastructure, nor in the many good friends I have made over the years in WSWs. I will hope to see you again, especially when our meetings are held down here in sunny Arizona.

EARL HUTCHINGS

(Spokesman: L.A. Jensen)

Earl Hutchings supervised the inspection work in Utah for over 30 years, during

which time the quality of crop seed was improved and landowners were encouraged to control weeds. Several inspectors under his direction were instrumental in getting county weed control programs operating.

Earl attended many of the first meetings of the Western Weed Control Conference and served as its President in 1944 when the Conference met in Salt Lake City. He retired from state employment in 1967 and died just two years ago.

WILFORD LEO JENSEN

(Spokesman: L.C. Erickson)

Wilford was born at Preston, Idaho, August 22, 1887, married in 1912 and moved to the vicinity of Rexburg with his family in 1916. He was wholly involved in community organizations, church, REA, school board, SCS district organization, and in many, instances he was the pioneer.

He was the first County Weed Supervisor appointed in the State--in Madison County, 1936. Thereby, he pioneered in clean cultivation, sodium chlorate, borax, calcium chlorate, carbon bisulfide, 2,4-D, and the vast number of chemicals that followed. He remained County Weed Supervisor until his death, about 40 years, probably the longest tenure as a County Weed Supervisor in this state.

Wilford was a natural organizer. He never met a stranger! His record in the community and state was a series of successes. To this organization it can be said, he brought the weed problem from a state of chaos to a state of control in Madison County.

BUHFORD KUHNS

Buhford was born in Missouri in 1896. He farmed in Twin Falls from 1916-1922. He completed his work at the University of Idaho in 1924 and started teaching Vocational Agriculture at Gooding. He then served as County Agent in Minidoka, Gem, and Canyon Counties during the time from 1926 to 1944. In 1944 he was appointed Extension Agronomist and State Seed Commissioner. In about 1947 he left this position and took a position with the U.S. Bureau of Reclamation in Euphrata, Washington.

He, along with Dean Boyle, did some short term foreign assignments in Ghana. Buhford was actively involved with Idaho weed control efforts and attended the Western Weed Control Conference in 1944-1946. He served as President in 1946. He now resides in Wenatchee, Washington.

GEORGE G. SCHWEIS

(Spokesman: Lee M. Burge)

George G. Schweis was appointed July 1, 1927, by the Nevada State Board of Stock Commissioners. His first duties were in the field of insect pest and plant disease work. George was made Director of the newly created Division of Plant Industry in 1929. Noxious weed control work was authorized by the Legislature in 1929.

The 1932-34 Department Biennial Report reports that efforts were being made by the Western Plant Quarantine Board to have the federal government, through its Bureau of Plant Industry, do some real basic research in this particular field. Mr. Schweis was very active in drafting a weed

control project to secure help from the WPA in control of noxious weeds in Nevada.

The first annual conference of WWCC was held in Denver, Colorado, in June of 1938 as an offshoot of the Western Plant Quarantine Board. Mr. Schweis attended the first five meetings of WWCC and was President in 1941. George Schweis died January 7, 1957.

CLARENCE I. SEELY

Clarence Seely's professional career started in 1934 when he became superintendent of the Dry land Branch Experiment Station at Lind, Washington. Two years later he joined the USDA on the bindweed research project at Genesee, Idaho, as an Assistant and later Associate Agronomist. He continued in this position until he joined the University of Idaho Agricultural Experiment Station at Moscow as Agronomist in 1947. He joined the teaching staff at the University as Professor and Agronomist in 1955 where he worked until he retired July 1, 1976. During this period he also held Extension and administrative positions at various times. Although weed research was his major activity, he had time to give over 2000 talks at Extension type meetings and serve on numerous committees and answer innumerable telephone calls, letters, etc., on weed control questions. In between times he taught over 700 students weed control, crop ecology, statistics, research methods, and properties and factions of herbicides.

Among his major contributions in weed research were the following: (1) working out the behavior of carbohydrate root reserves in creeping perennial weeds and correlating this with applications of weed

control measures, (2) the discovery that low volumes of spray solutions down to a gallon per acre, of 2,4-D could be as effective as the formerly used 80 to 160 gallons per acre, (3) proving that the application of dry 2,4-D to susceptible plants was effective also had a material bearing on later usage of herbicides, (4) the principles and use of soil incorporation so widely used today were worked out in getting protham to kill wild oats under dry land conditions; (5) demonstrating that over 60 strains of wild oats varying in seed dormancy, growth characteristics, and chemical tolerance existed in the native wild oat population. Similar studies have since shown the same situation exists with many species of weeds and herbicides. (6) The discovery that diuron could be used as an early post emergent broad-leaved weed killer in winter wheat and the large increases in yield that could be obtained from its use triggered the search for other materials that could be used similarly both in the U.S. and abroad. And (7) the development of wild oat control in peas and lentils with diallate and triallate.

Clarence has been associated with the Western Society of Weed Science since he first presented a paper on root reserves in creeping perennial weeds to the 1939 meetings of WWCC in Seattle. Since that time he has served on many committees such as resolutions, nominating, and terminology. He served as vice president of the Society for one year and succeeded to the presidency upon the death of Dr. W.W. Robbins. He was then elected President and served for two years. It was during his presidency that commercial representatives were given full membership. He represented the WWCC on the Board of the Association of Regional Weed Control Conferences and on the Executive

Committee of WSSA. He was elected a Fellow of WSSA in 1975.

Clarence has served as a consultant on crop production problems and crop losses to many firms for a number of years. He also spent six months in Australia and New Zealand studying and lecturing on weed control. Since his retirement in 1976 he has devoted considerable time to travel and consulting.

H.L. SPENCE, JR.

(Spokesman: R.E. Higgins)

Harry Spence was Idaho Extension Agronomist and State Seed Commissioner from 1933-1942 and Extension Agronomist and Assistant Extension Director from 1942-43. He joined Mesa Seed Company's Mesa Orchards as manager in December 1943. He held this position until 1946. He then accepted a position with FAO and worked in Afghanistan and Indonesia. His date of retirement is not known, but he passed away on June 25, 1969. His wife Helen now resides in Walnut Creek, California.

Harry was actively involved with the education and technical aspects of the WPA weed control program. Harry was chairman of the first two meetings of WWCC in 1938 and 1939. He was a key promoter for the organization of the conference. He also attended the 1940 and 1942 meetings.

BRUCE THORNTON

The first thing I would like to do is to add my words of appreciation for the great and inspirational services rendered this Society

from its inception by Walter S. Ball, whose presence is missed so much today.

Weed control became one of my major interests, both research and Extension, in 1929, when "Walt" left Colorado to join the staff of the California Department of Agriculture, and continued until my retirement in 1962, which was followed by my putting out the third revision of the bulletin "Weeds of Colorado" (which, more recently, has been again revised by Bob Zimdahl), and also three seasons of field work in weed control in Weld County.

Actually, my first real concern was initiated many years earlier when we found Canada thistle growing on the family farm. We had managed to live with bindweed as far back as my memory serves me, but the thistle was something different.

Tim suggested including unusual experiences. Apparently only two impressed me sufficiently to be readily recalled. In one incident, an assistant who had been mixing sodium chlorate solutions in buckets all morning decided to relax and have a smoke after lunch. The instant flame, substituted for the "smoke," resulted in instant action, for he got out of his clothes quicker than a Houdini, with little damage being done except to his clothes and to his pride.

On another occasion, a helper, just having filled the tank of the gasoline engine, located in the trunk of my car, was also greeted by instant flames when he pulled the starter rope. He also responded with alacrity, throwing the burning engine with attached pump and equipment into the hinterlands. Again, no serious damage, the anticipated explosion apparently being prevented by the tank being completely filled.

The zaniest development with which I came in contact (figuratively), and which created considerable interest in several states, was the "electrovator." In limited tests (demonstration) it was only partially effective in killing perennial weeds and gave little promise. However, one operator was reported to have been electrocuted and also a cow, the latter at considerable distance, contact being made via a wire fence. As early suspected, it proved to be primarily a promotional deal with little, if any, merit as "conducted."

Although, due to the snow storm, we missed the "Old Timers" section on Tuesday afternoon, we did enjoy the informal session that evening where we "Oldsters" had the opportunity of really getting together with Bill Harvey key-noting the occasion. Attending the various Sections recalled old times, but above all we appreciated the consideration and warm hospitality extended us by the officers and other members of the organization. We were glad we came.

F. LEONARD TIMMONS

When Mr. Timmons attended his first meeting of the WWCC in 1946, he was almost an old timer in weed control. In 1935, he established the first USDA-state weed research project in the United States located at Hays, Kansas. After 13 years on that project, he was transferred to Logan, Utah, as Regional Coordinator of weed control research programs in the eleven Western States in cooperation with the U.S. Bureau of Reclamation and six state agricultural experiment stations.

While in Kansas, he had helped organize the NCWCC in 1944 and was Chairman of

the Research Committee during 1944-47. In 1951 he became Chairman of the WWCC Research Committee. That year 14 regional research projects were initiated on various phases of weed control. Summarized reports from 68 investigators on 14 project committees were published in our first WWCC Research Progress Report in 1952.

Two of the first five members to be elected to Honorary Membership in the Weed Society of America from the six regional weed conferences in the United State and Canada were from the WWCC. They were Alden S. Crafts and F. Leonard Timmons.

Probably Dr. Timmon's best known contribution in the WWCC were his 19 Newsletters issued from Logan, Utah, and Laramie, Wyoming, in 1949-54. As Regional Coordinator, he made two or three tours each year of the cooperative research projects in Arizona, Idaho, Montana, Nevada, and Washington. During those trips, he also toured weed control projects by the U.S. Bureau of Reclamation, the U.S. Bureau of Land Management, and the U.S. Forest Service and also saw weed problems, research, and control at other state experiment stations in the region. His first mimeographed newsletter was issued in June, 1949, to a list of 50 federal, state, and commercial weed workers, with whom he has traveled and conferred. The newsletters summarized weed problems, research results, and new control developments, and listed recent regional and national publications on weeds. Because of frequent visitors and other contacts from other states in the USA and other countries, the requests for his Newsletter increased rapidly. By 1954, the mailing list for his Newsletters had increased to more than 500 weed workers

in 35 states in the USA, five Canadian Provinces, and 15 other countries representing every continent. The Western weed workers and weed problems were receiving almost world wide publicity.

Finally, in 1955, Dr. Timmons was able to "let loose of the tiger's tail" after the WEEDS Journal and other national and regional publications began to fill the needs for publication by and communication between weed workers. His 19 Newsletters, now bound in three volumes, will be deposited at the WSSA Archives and Library, Ames, Iowa, or at a similar WSSS Library if one is established.

Dr. Timmons was among the first five members to be elected as Honorary Members in the WWCC in 1968. He considers his most distinctive contribution to Weed Science to be his article, "A History of Weed Control in the United States and Canada," published in Weed Science in March, 1970, before his retirement July 31, 1970.

DELMAR C. TINGEY

Del Tingey was born in Brigham City, Utah, in 1897. He earned his B.S. and M.S. degrees in Agronomy at Utah State Agricultural College, now known as Utah State University. Upon graduation he joined the staff in the agronomy department at that school and served there for 43 years, except for three short periods. During most of his time at the University he had three assignments--1/3 wheat breeding, 1/3 weed control research, and 1/3 teaching. In wheat breeding, he developed and released four new winter wheat varieties resistant to smut, which has been a serious problem in Utah. His major courses taught regularly for many years

were: Weeds, Plant Breeding, Grain Crops, and Biometry, which was the forerunner to statistics. In weed research, he emphasized control of creeping perennial weeds through a combination of cultural practices and herbicides.

Del was an active member of the Western Weed Conference (now Western Society of Weed Science) for many years, attending the meetings regularly and contributing to the Research Progress Report and the Proceedings.

He enjoyed sports of all kinds, especially fishing and hunting. As a side line and hobby, he managed a 160-acre farm 20 miles west of Logan for 16 years. On his farm, which was heavily infested with noxious weeds, he used practical methods of controlling them until it was essentially weed free.

Del retired 12 years ago and still lives in Logan, Utah, with his wife Mable. Ill health has greatly hampered his activities and enjoyment of life in recent years.

RAY WHITING

Ray Whiting was employed as a District Agricultural Inspector with headquarters at Ogden, Utah, for over 25 years, where he did inspection work and assisted in carrying out the provisions of the seed and weed laws. In addition to his regulatory work, he also served as county weed supervisor for Weber county.

He had the responsibility of supervising and helping to operate the county weed program. Whenever possible, he attended the WWCC meetings to help keep up-to-date on new chemicals. During the 1940's and 50's, quite a few new herbicides were

released. Ray started to use them and built up quite an extensive spray program with 2,4-D and other compounds to control noxious weeds in Weber County.

Ray retired from the Utah Department of Agriculture in 1972 and is enjoying himself operating a small fruit farm in his home town of Springville, Utah.

GEORGE WORNHAM

(Spokesman: L.C. Erickson)

George was born July 22, 1900, in Beaver, Utah. He was raised in Southern Utah, attended school at Utah State University in Logah, Utah. He worked at the University Experiment Station at Logan for a few years and then went to Fillmore, Utah, where he was County Agent for Willard County. He served in that capacity for 12 years. Of all the phases of agriculture in which he was involved, weed control became the most challenging when the miracle 2,4-D was announced in December 1944. Because of the new challenge, he went to work for the American Chemical Paint Company (Amchem) in 1946. He was in charge of sales and promotions in Idaho, Utah, Colorado, Wyoming, and Montana. He set out numerous demonstration plots, especially in the upper Snake River Valley and then throughout the intermountain area, as he introduced the new herbicide. George always made two sets of field notes, one for the field and one for the office. He learned that from once losing his only notes, his field notes.

He was active in the Idaho noxious weed organization and promoted weed control at all levels: private, public, commercial, scientific, county, and state. He operated out of Idaho Falls, Idaho. He passed away March 14, 1964.

ALDEN S. CRAFTS

Dr. Crafts was born June 24, 1897 in Fort Collins, Colorado; son of Henry Alonza and Elizabeth Dunscomb (Bleakley) Crafts. His formal higher education and professional career has been at the University of California. He received the B.S. degree in 1927 and Ph.D. degree in 1930. He was appointed an Assistant Botanist in the Botany Department at Davis in 1931, advanced through the normal ranks to Botanist and Professor of Botany in 1946, and became Professor Emeritus in 1964. He has received honors from the scientific community including an honorary degree from the University of California at Davis (LL.D.) and a degree from St. John's College, Oxford University (M.A.) as well as a National Research Council Fellowship, a Fulbright Fellowship, and two Guggenheim Fellowships. He was given the Charles Reid Barnes Award by the American Society of Plant Physiologists. He has been presented with Fellow or Honorary Member status in the Weed Science Society of America, American Association for the Advancement of Science, Western Society of Weed Science, Zoological-botanical Society of Vienna, and the California Weed Conference. He was a Delegate to the International Botanical Congress in Paris, France, in 1954; Delegate and Vice-Chairman of the Golden Research conference on Biochemistry in Agriculture in 1955, and Visiting Professor at the Puerto Rico Agricultural Experiment Station in 1947-48. He has served in an administrative capacity for several scientific societies, including President of the Weed Science Society of America, President of the American Society of Plant

Physiologists and Chairman of their Western Section, and President of the California Weed Conference. He was also Acting Chairman (1959-60) and Chairman (1960-63) of the Botany Department of the University of California at Davis. He is a member of Phi Beta Kappa, Sigma Xi, Phi Sigma, and Gamma Alpha.

After graduating from high school in 1916, Dr. Crafts registered in the College of Agriculture at the University of California at Berkeley; but after his freshman year he said, "I was pretty well fed up on schools--I wanted some practical experience in agriculture." During the several years of practical experience, he developed an "appreciation" for weeds. He tested a recommendation for a foliar spray of a dilute solution of sodium arsenite for field bindweed control--it worked. The roots were killed to some depth in the soil--it was translocated; thus, back to college to study botany, chemistry, chemical weed control, and how things move in plants. In 1927, the same year he obtained his B.S. degree, Dr. Crafts published his first scientific paper on the translocation of arsenic in plants (*Plant Physiol.* 2:503-506) with P.B. Kennedy.

He has developed an outstanding international reputation as research scientist in plant physiology and weed science. His primary life-long research interest is the mechanism of translocation in plants, especially the translocation of those materials that move in the phloem. He is a world authority on this subject. He pioneered the research on the now common technique of using radioactive compounds in conjunction with autoradiography to examine their translocation in plants. He has written over 100 original papers on his research investigations that have been published in major scientific journals, as

well as several review papers and numerous popular articles. His great capacity for writing has resulted in the publication of ten books on weed control, mode of action of herbicides, water relation of plants, and phloem transport in plants, often co-authored with a colleague.

Dr. Crafts has been an inspirational teacher of farmers, college students, emerging scientists, as well as established scholars. Many of his students have become leaders in California agriculture, while other have developed outstanding reputations in the world scientific community through their original scientific research. Although he was always available for consultation with graduate students on their research problems, he made them think for themselves and perhaps stumble here and there before succeeding to instill independent self-confidence rather than leading them all the way by the hand. He has befriended many a student by allowing them to live in his home.

Although Dr. Crafts retired from the University of California System at the mandatory age of 67, he has continued to play an active role as a scientist. He has written three books, participated in state, national, and international scientific meetings, acted as a consultant, served as an expert witness, and inspired his colleagues. He is currently working on a history of the Western Society of Weed Science.

OLIVER ANDREW LEONARD 1911-1975

Oliver Andrew Leonard was born in Pullman, Washington on January 5, 1911. His childhood was enriched by the time spent on the family homestead in Idaho among

the fir, pine, and cedar trees. His love of plants, exceeded only by his love for family and mankind, shaped the course of his personal and professional careers. Oliver was never to be far removed from the plant community, which provided both the arena for his research and that unique peace of mind that comes from close association with the wonders of nature.

Dr. Leonard received his B.S. and M.S. degrees from Washington State College in 1933 and 1935, respectively. His interest in additional education in plant physiology took him to Iowa State College, where he obtained the Ph.D. degree in 1937. During this period he became a student of translocation in plants, a topic he continued to research throughout his career. Upon leaving Iowa State, he was appointed an instructor at Texas A & M College from 1937 to 1939, and a plant physiologist at the Mississippi Agricultural Experiment Station from 1939 to 1950. While in Mississippi he not only continued his research on translocation but expanded his interest to weed control. These two areas of research were complementary, since most effective herbicides of that time were translocated in higher plants and their phytotoxic symptomology indicate the pattern of translocation. In 1950, Oliver joined the Botany Department at the University of California at Davis to conduct research on the control of woody plants on rangeland and continue his translocation research. Dr. Leonard was a pioneer in the discipline of weed science. He was one of the first scientists to investigate the use of herbicides for weed control in cotton and to use radioactive herbicides to study translocation in plants. His contributions toward the development of methods for the conversion of chaparral to productive rangeland are particularly noteworthy. In addition, he worked on

weed control in vineyards and control of roots in sewers. In all these investigations, he had that rare down-to-earth ability of blending basic and applied research into a program that improved the lifestyle of mankind and also made noteworthy scientific contributions. He was a balancing force in the controversy concerning the environmental implications of the use of pesticides in agriculture.

Dr. Leonard wrote more than seventy papers on his research findings, which were published in scientific journals. He also prepared numerous popular articles for use by the general public. He was a member of several professional societies, including the American Botanical Society, the American Society of Plant Physiologists, the American Society of Horticultural Science, the California Weed conference, Sigma Xi, the Society for Range Management, the Western Society of Weed Science, and the Weed Science Society of America. He served on numerous committees in several of these societies and was secretary, vice president, and president of the California Weed Conference. He was a charter member of the Save the Redwoods League.

In addition to the receipt of three National Science Foundation grants for research on translocation in plants and numerous other grants to support his weed science research, his scientific accomplishments are attested to by the many honors that were bestowed upon him, including: Fulbright Fellowship; National Institute of Health Fellowship; United Nations Food and Agricultural Organization consultant visiting Zambia on forestry and Kenya on range physiology; German Senior Scientist Fellowship; and Fellow of the Western Society of Weed Science.

Dr. Leonard retired from the University of California in June, 1974 to enjoy life on his acreage among the redwood, fir, and bay trees in Sonoma County.

WILFRED W. ROBBINS

Dr. Wilfred W. Robbins was born on May 11, 1884, in Mendon, Ohio. He was the son of a midwestern farmer and grew up on a farm, an experience which he valued highly throughout his life.

Dr. Robbins was an undergraduate at the University of Colorado, where he received his A.B. degree in 1907. He continued his studies and was awarded the Master's degree in 1909. From 1908 until 1919, he was successively instructor of biology, instructor in botany and forestry, assistant professor of botany and botanist in the Experiment Station; and professor of botany and botanist in the Experiment Station at Fort Collins, Colorado. During these years, he developed and published his well-known book *The Botany of Crop Plants*, the first edition of which appeared in 1917. During these years, he conceived and developed new and revolutionary ideas on classroom teaching. He nurtured the philosophy that botany and agriculture are disciplines with many common interests that could be interrelated in a common curriculum. Dr. Robbins went to Chicago for his Ph.D. training; he received his degree in 1917.

Dr. Robbins moved to Davis, California, in 1922, where he spent 29 years as chairman of the botany division of the College of Agriculture. There, in collaboration with Professor Richard M. Homan, early years in Colorado, and in 1930 he was able to initiate a program of weed research in California that has been a

he wrote the famous *Textbook of General Botany*, a book which dominated the field of elementary botany teaching for over three decades. In the preface of this book, which appeared in 1924, Homan and Robbins express the conviction that both general students and agricultural students should profit more from a broad survey of the field, related wherever possible to agricultural practices and problems, and by the use of economic plants for illustrative material, than from highly specialized courses aimed at specialized aspects of botany. The strength of this belief is shown by the immense popularity of their book, the fact that it went through a whole series of revisions, and that most of the texts that have appeared since have adopted, at least in part, this same conviction.

Dr. Robbins was an enthusiastic and inspiring teacher in the classroom, on the lecture platform, and through his publications; and in his teaching he brought purpose into the lives of generations of students. He believed in botany as a science and as a discipline, and he believed in agriculture as a way of life. He believed in work and he believed in play; and he had the happy talent of being able to see and inject play into his own work and into the work of others, and so, while teaching with vigor, he was able to lighten the labor of the classroom to a point where learning became a pleasure. Scores of his students look back with nostalgia on their work in his classes; his spirit lives long in their memories.

Dr. Robbins developed an interest in weeds and poisonous plants during his

foundation for this important and growing field. He established the first classroom instruction in weed control as a scientific

discipline, and as senior author of the first two editions of *Weed Control* was responsible for the introduction of this subject into many college curricula. By means of Extension lectures and correspondence, he spread his enthusiasm and interest throughout the western states. He was interested in and instrumental in the formation of the Western Weed Control Conference, established in 1938.

In 1948, Dr. Robbins traveled extensively in South America, lecturing under the auspices of the Office of Foreign Agricultural Relations of the United States Department of Agriculture, giving over eighty lectures and conferences. In recognition of his contribution to South American agriculture, the University of Montevideo made him an honorary professor.

During the last years on the campus at Davis, Dr. Robbins served on many committees concerned with the welfare of students. In collaboration with Professor T.E. Weier, he wrote a new modern textbook of botany. And he took a major part in the second revision of *Weed Control*. Probably no other single person has had a greater influence in the establishment of weed control as a science and as a discipline than has Dr. Wilfred W. Robbins. His personality and leadership are ever fresh in the memories of those who worked with him in this worthy endeavor.

**Western Society of Weed Science
Meeting Dates, Sites, and Officers
1938-1992**

No.	Date	Site	President	Vice President	Secretary/ Treasurer	Business Manager- Treasurer
1	1938, June 16-17	Denver, CO	H.L. Spence, Jr.	C.L. Corkins	W.S. Ball	
2	1939, June 9-10	Berkeley, CA	H.L. Spence, Jr.	C.L. Corkins	W.S. Ball	
3	1940, June 21-22	Seattle, WA	G.R. Hyslop	J.I. Griner	W.S. Ball	
4	1941, June 27-28	Salt Lake City, UT	C.L. Corkins	G.G. Schweis	W.S. Ball	
5	1942, June 26-27	Salem, OR	W.W. Robbins	E. Hutchings	W.S. Ball	
6	1944, June 25-26	Salt Lake City, UT	E. Hutchings	C.D. Gaines	W.S. Ball	
7	1945, June 6-7	Boise, ID	L. Burge	L.E. Harris	W.S. Ball	
8	1946, February 26-27	Reno, NV	B.E. Kuhns	B.J. Thornton	W.S. Ball	
9	1947, February 6-7	Portland OR	H.E. Morris	V.H. Freed	W.S. Ball	
10	1948, February 2-4	Sacramento, CA	V.H. Freed	B.J. Thornton	W.S. Ball	
11	1949, February 2-4	Bozeman, MT	B.J. Thornton	V.A. Cox	W.S. Ball	
12	1950, February 1-3	Denver, CO	E.W. Whitman	W.W. Robbins	W.S. Ball	
13	1952, February 5-7	Reno, NV	W.W. Robbins	C.I. Seely	W.S. Ball	
14	1954, March 22-24	Tucson, AZ	C.I. Seely	R. Warren	W.A. Harvey	
15 ^a	1956, February 15-16	Sacramento, CA	W.S. Ball	W.A. Harvey	W.C. Robocker	
16	1958, March 18-19	Spokane, WA	H. Wolfe	R.A. Fosse	W.R. Furtick	
17 ^b	1960, February 22-25	Denver, CO	R.A. Fosse	W.R. Furtick	E.E. Heikes	
18	1962, March 20-22	Las Vegas, NV	W.R. Furtick	E.E. Heikes	E.J. Bowles	
19	1963, February 6-7	Portland, OR	E.E. Heikes	J.M. Hodgson	K. Sime ^c	
20	1965, March 17-19	Albuquerque, NM	J.M. Hodgson	L.A. Jensen	S.W. Strew	
21	1967, March 15-17	Phoenix, AZ	L. Jensen	S. Strew	K. Hamilton	L. Anderson
22	1968, March 19-21	Boise, ID	S. Strew	K. Hamilton	H. Alley	L. Anderson
^b	1969, February 10	Las Vegas, NV	K. Hamilton	H. Alley	K. Dunster	L. Anderson
23	1970, March 17-19	Sacramento, CA	H. Alley	K. Dunster	A. Appleby	L. Anderson
24	1971, March 16-18	Denver, CO	K. Dunster	A. Appleby	D. Bayer	L. Anderson
25	1972, March 14-16	Salt Lake City, UT	A. Appleby	D. Bayer	D. Burgoyne	L. Anderson
26	1973, March 13-15	Spokane, WA	D. Bayer	D. Burgoyne	G. Lee	L. Anderson
27	1974, March 12-14	Kaanapali	D. Burgoyne	G. Lee	W. Anliker	L. Anderson
28	1975, March 18-20	Phoenix, AZ	G. Lee	W. Anliker	J. Evans	L. Anderson

29	1976, March 16-18	Portland, OR	W. Anliker	C. Elmore	R. Comes	L. Anderson
30	1977, March 15-17	Sacramento, CA	C. Elmore	L. Jordan	R. Burr	L. Anderson
31	1978, March 14-16	Sparks, NV	L. Jordan	R. Comes	A. Lange	L. Anderson
32	1979, March 20-22	Boise, ID	R. Comes	L. Burrill	R. Zimdahl	L. Anderson
33	1980, March 18-20	Salt Lake City, UT	L. Burrill	L. Warren	A. Ogg	L. Anderson
34	1981, March 17-19	San Diego, CA	L. Warren	A. Ogg	D. Thill	L. Anderson
35	1982, March 9-11	Denver, CO	A. Ogg	W. Whitworth	R. Callihan	L. Anderson
36	1983, March 8-10	Las Vegas, NV	W. Whitworth	G. Massey	B. Brinkman	L. Anderson
37	1984, March 13-15	Spokane, WA	G. Massey	S. Heathman	H. Tripple	L. Anderson
38	1985, March 12-14	Phoenix, AZ	S. Heathman	H. Tripple	L. Haderlie	L. Anderson
39	1986, March 18-20	San Diego, CA	H. Tripple	J. Evans	S. Blank	L. Anderson
40	1987, March 18-20	Boise, ID	J. Evans	L. Mitich	P. Ogg	L. Anderson
41	1988, March 7-9	Fresno, CA	L. Mitich	D. Thill	G. Schroeder	L. Anderson
42	1989, March 14-16	Honolulu, HI	D. Thill	S. Blank	P. Fay	L. Anderson
43	1990, March 13-15	Sparks, NV	S. Blank	P. Fay	D. Ryerson	W. Graves
44	1991, March 12-14	Seattle, WA	P. Fay	P.Ogg	S. Dewey	W. Graves
45	1992, March 10-12	Salt Lake City, UT	P.Ogg	S. Miller	J. Schlesselman	W. Graves

^aJoint meeting with California Weed Control Conference

^bJoint meeting with Weed Science Society of America

^cIn 1965, Jesse Hodgson listed A. Stark as Secretary/Treasurer for 1963. The 1963 Proceedings lists Keith Sime.

Additional comments from Dale Bohmont

Now after the meeting in 1948, it was pretty obvious that things were moving pretty rapidly. Even though commercial people, such as Borox and others were there, they were not in any significant numbers and they certainly didn't entertain the weed science people, if you call them that, the agronomists that were there from the universities, which were mighty sparse, if there were any at all. And so, the weed control system began about, as I see it, about 45 or 46 years ago. I assure you that the information that was exchanged was most vital. You remember we used carbowax, which is 2,4-D in a wax base. You heated that, you put it in warm water and sprayed it quickly before it hardened back up. That's how you got 2,4-D on the plants initially. That was before the ester and the amine formulations. So, from that rather crude and rudimentary process, we moved into building spray rigs and doing all the other details that science requires. I might say that another point that would be of importance would be the fact that really, the Western Weed Control Conference patterned after the North Central Weed Control Conference. They were well-organized in a research-oriented function. They had considerable money, they had considerable support, and they had a number of subcommittees. And upon those subcommittees I think the western weed group figured out ways to get things more closely identified among themselves. And so, I would suggest, and I did go to many North Central Weed Control Conferences, because there you got much of the first-hand information that you could not really pick in books, because they weren't written yet. And it was all new and questioned and not everybody agreed with everyone else, discussions were lively, and so you picked the information up at North Central and then followed that up, if you will, the next month or so to go to the Western Weed Conference somewhere.

Now, how did the Western Weed Conference get enough money for their research people to participate? That becomes another important clue,

because the regional research funding beginning in 1946, became the key value in getting all western weed scientists, one from each state, to go to the Western Weed Conference. We established a number, W-11 identified the weed control project, every state had a representative, and we would meet just prior to or just after the other weed conference, so all of a sudden we had ourselves a weed research section. And you could count the people around the table in the late 1940's, early 1950's. Those who attended the research meetings were mainly those who were coming in on regional research funds. There were exceptions, but I am saying the general source. You've got to remember many of the western states really didn't have a lot of money and they didn't have a weed control specialist at all. They would have gotten someone captured, put them in and identified them as an agronomist in charge of weed control, gave them a little bit of research money, and he was on his way.

Well, following those values, I would say to you that probably the \$10,000 that the W-11 first received was really a windfall as far as weed control in the western United States is concerned, the research programs.

In terms of getting to and from the meetings. I mentioned to you that we came in with chains all across the western states, stormy and so on. After all, trains are a little more significant, such as the Portland one goes, and we often took the train to the various meetings because they would hold them wisely on the Pacific coast or somewhere where it was convenient, and the train would get you most of the places. You could say, "Well, why didn't you fly the old DC3's?" And its true that you could. Many of the western colleges are not located in the center of good air transportation. The old DC3 had to have virtually line of sight. They would call up and if the air was clear at the next landing spot, such as from Laramie, Wyoming to Salt Lake, we would take off. On the other hand, if they didn't have clearance all the way, and they flew about 10,000 or 12,000 feet, by the way, so you know you really were not a pioneer, but I

assure you that the certainty of getting to the meetings was much better with the train than with an airplane. Speaking of the trains, I think it was kind of fun. The people started getting on the train as you went through the various states going out to California, and Harold Alley would be the key poker player of the whole bunch. He would be required, or everyone was required, to cover up the table in the club car with a handkerchief as you went across Utah, because after all, you could not gamble in Utah. And so the train would whistle along with a handkerchief over the table that had a few chips and the cards. I think they have changed a little now, but I assure you that all of the GI's on the train got an education from those such of us who had been in the military before. You've got to remember in the 1950's we still had the Korean War and military everywhere, so it was quite a lively activity on the train, and the weed control guys were in the middle of it in terms of trying to pay for their per diem between one place to another.

The activities moved along, and I have no way of being able to tell you the significance of the Constitution and when it was changed to a science concept and so on, but I would say to you that supposedly it did bring a level of weed research into a better category. You must remember that most of the states that had weed problems also had weed control districts and the guys who talked to the districts, of course, were those of us in the university who thought we knew something about how to control weeds. And as a result of that, it was quite common for the regulatory guys, after we got through with the Western Weed Conference, to then expect the state people to hold a separate meeting for a state conference. There was a conference in Oregon, or a conference in Washington, or wherever. At that time you would bring the best news that you had gathered and the recommendations forward from these Western Weed Conferences or the conferences you went to. a good way by the way of exchanging material rapidly, not worrying about a peer review and all the other stuff that you have to go through now,

and still got some very good ideas out; at the same time you were still able in those type of meetings to develop good cooperators, because the big thing that we were working on in much of the western states were perennial weeds, and they still are I suppose. And you would find without difficulty county agents and weed control districts eager to work with you on any new materials you would come up with.

This brings up another idea. Early on, the materials that you got from chemical companies, and I would include Dow, and I suppose DuPont, and just on down the line, Sherwin Williams, etc., would provide you with a little bit of material that they had tested to some extent, but very little information about it. And so you would go out sort of shooting from the hip, being quite careful. But at that time, you must remember, we didn't worry too much about whether or not they were caustic, whether or not you should or shouldn't breathe it. For example, one time old Harold Alley and I were returning from a testing program with sugarbeets. We had grants from the big sugar companies, so we could get out materials early almost before others could find them. You would put those in the back of your closed in vehicle and all of a sudden your eyes would water, you would open the windows and they would water even more because you would be exposing a temperature change, and so early on, the exposure to chemicals that had a little information, but not a lot, left a lot to be desired. We tried things as carefully as we could, but we didn't wear protective clothing, we didn't wear masks, and we were sort of on the frontier, if you will, of materials testing. The chemical companies were very careful too, they didn't want to overdo, but they didn't know about the compound, and they were eager to find out what you had found out for them. So it was a partnership to some extent. But it was quite different than it is today concerning the testing of new materials and, of course, you have to also realize that after we had the hormone-type of compounds, or whatever you would call them, the physiologic materials would act within the plants, all kinds of things were coming out. We thought

we had the Holy Grail in the 2,4-D compounds and 2,4-T and all those other numbered units. Coming to find out that wasn't the total answer, but it was a good start. So, everybody thought that we were bloody geniuses when we came in and set up a testing program (they had field days), when in fact we were really copying much of what we had found from the Western Weed Control Conference recommendations. They were an important part of a information transfer of knowledge without going through a peer review system of publication.

I might add some thoughts concerning the impact of federal weed control funding. Really relates to not only improved information on the research side of weed control, but an organized, coordinated, shared effort, if you will, but more than that, graduate students as a future. Because of the funding of federal monies, we were able, in a little old state like Wyoming, to get grant monies from Dow Chemical, from DuPont, from Holly Sugar Company, from Great Western Sugar Company, and other companies, who would participate with you in their program by providing additional funds. Not the base funds, but additional. In those days, it was pretty tough to get grants of any significance. Small amounts of money went a long ways, and with that you could then hire graduate students. A captured labor, if you will, but because of the funding availability, I am sure that one of the big values that we were able to translate at the University of Wyoming, was the fact that we put out probably more graduate students in weed control per number of students that they had in the college, than anyplace else in the United States. Anytime you can put out 45 and 50 masters and doctors degree people in a 20-year period, or less than that in a little old school that probably didn't have more than 200 undergraduates in agriculture, tells you that there was a significant impact on the funding that was made available with the support of the federal research money. That's probably true in Oregon, probably true in other places, but the magnitude of numbers, the size of graduate programs versus those of large schools was nothing, I can understand. But I tell you for a little old

state, it made a world of differences in terms of where the emphasis was and, therefore, where the people would follow. We were able, and we did emphasize programs, because the next step, you see, would be the FFA programs, who would go ahead and with a little encouragement from graduate students, who again are captured, we would go ahead and collect weeds, press them, and give them to the various FFA chapters, who would have FFA contests in terms of weed identification, seed identification. All of this had precursor to it, and the precursor was how do you get the funding to do this? How do you get money to travel from one end of the state to another to collect weeds? We do that on a research program, then at 5 o'clock the graduate student is captured and he goes out and collects and presses weeds for the FFA contest. So there are many side issues that occurred as a result of the federal support and state support for weed research. And, too, it was brand new and different and you could go ahead and build enthusiasm with a new product. And with that you would find all kinds of enthusiasm with spill over. The university would hear about it, you put out good new releases, you put out some good publications, and then you started into another very important step, which was the basic part of research. Usually the programs had about one-third of their activities in basic knowledge and two-thirds in applied systems. Each state had their own way, but I would assure that as it grew, then with the western weed science group became some very basic research reports. And those again, would be a precursor to additional ones. So the applied research gave way over time because of the need for basic research and the enthusiasm of the scientists who were participating at that time from those who had been rather applied and had learned to do their programs on the end of a hoe rather than using a test tube as a beginning model, if you will. So, all of those things are side issues that you should think about as you look at the history of the Western Society of Weed Science.

All in all, I would say camaraderie, the enthusiasm, the support that you would find goes beyond what you normally believe. For example, one day I was

riding in an airplane, sitting next to a guy with his collar turned backwards, and he said, "What to you do?" (I didn't ask him what he did, I could see that), "Well," I said, "I'm in weed control." He said, "Is that right?" I said, "Yes, I am working in the research phase of this, Department of Agriculture." He said, "You know, I want to tell you, you belong to the biggest society in America." I said, "What do you mean?" He said, "I have never been to a campus that has agriculture that doesn't know people on other campuses that have agriculture." He said, "It's a big society that is broader than you realize." He wasn't necessarily referring only to weed control, but his point was that because we got together, we met quite often, we had national-type of regular organizations, and you'll have to remember that in the regional research program we had four regions, and each of those regions had subregions, and so what I'm speaking of, here this guy with his collar turned backwards could compare notes with me on various campuses where he had been, and knew people that I knew, because they were all in agriculture. So this was the biggest society that he saw in the country. And in all fairness, I think it's still that way. The camaraderie still exists, the common interests are there. It may not be quite the same now with all the basic science people who have never seen the end of a hoe, who don't have the first idea of what is applied versus what is theoretical, compared to getting money to do those things. Quite often the basic scientist really comes in because he knows everything about biochemistry, or about plant physiology, but doesn't know the first thing about what the Canadian thistle does and why it is such a big problem to the rancher. So there is a combination of talents, I am saying. And as I've said in more recent years to the weed control science meetings, I find this to be true. Young people have great enthusiasm for telling what they found, and so on, quite basic at times, but they often don't really have an applied bone in their body. Which there is nothing wrong with it except it tells you that agriculture itself has changed over the years.

Well, if you have listened this long and your

battery has not run down, let me give you a projection in the future, because I think it kind of fun to look where you've been in the past like the old Indian. The old Indian always looked around where he'd been, and when he was asked why he never got lost, he said, "I always look where I've been so I know where to go." And I think the same thing should exist with weed control.

There is an overkill activity now of the environmentalists. It will come back to more of a standard value, but as it stands today, everyone is fearful because of what they don't know, just like the dark, they're afraid of it. I think that over time we will find that there are compounds that really can be made within the plants, and you're familiar with the new technology there, that will go ahead and do the very same things that we've been doing by applying historically outside. So, I really think that genetics and biotechnology is just on a frontier, if you will, of new changes and ideas. It's important, I think, that at the same time we have to not ignore the rancher and farmer who still has to make a living and he still has a field with whitetop, or leafy spurge, or Canada thistle. While we're going to be looking for biological controls, I think that there will be a greater tolerance, if you will, of the type of materials that will be able to go in and kill plants through this biotechnology system. And they'll be found to be, quite frankly, not poisonous and not condemning, and not difficult to use.

Secondly, I think that you're going to find that the people who over time have been making such great noise, such as the warming of the climate, the greenhouse effect, which doesn't exist. The black hole which no one knows about. The various problems of the atmosphere. They're so narrow in their view, they've never been around the world to see what the rest of world does, the countries in this world will do to crud up the atmosphere compared to the little old United States, which can't even make a small pimple on the back, if you will. There is much fear presented because of lack of knowledge. And I would think that the next step then would be to be able to develop a better

understanding of what will work and what won't work as far as the environment is concerned. The fear system syndrome, if you will, has got to be changed. It probably will slowly. In the meantime, the requirement is to educate those, and the best way to do that, "if you can't beat them, join them." It seems to me that the commonest way of doing things is to get rid of fear, because is something of itself. So, I would think that the Society should become more active in drawing in environmentalists for a series of discussions. To discuss specifically. Let's undo the very things that they seem to think are so significant that they can't prove. Whether its a spotted owl, whether it old-line forests, the best way to go is across the table. And I would think that the Society has a responsibility to draw in those who are antagonists and protagonists and see if you can't get a better understanding of where we are and what we ought to do. Because many of the things that we're doing are not a problem to anyone other than to individuals who believe it is to themselves.

Of course, that boils down to what you end up calling leadership. Leadership is changing all the time. The agriculture colleges are changing dramatically. Some of them more completely than others, and much more frightening than others, because you don't really recognize the traditional agriculture college today anymore than you recognize a traditional weed control specialist today. They are changed, their philosophy has changed, their background and their knowledge has changed. I would think that there again is an opportunity for the Weed Science Society to get more involved in educating others. Others educators, if you will, on how and what and where. Its important to realize that they are trained in their own way just as a weed scientist is, but the chasm is broad and deep, and that can be taken care of again by an active responsibility of those who understand what's going on, by setting up meetings and clear the air. Set it up in such a way that there is a complete discussion of what's going on.

And lastly, let me say that the weed control science

groups, the weed society groups, if you will, the weed scientists, they're here to stay. Weeds were here before we got here, weeds will be here after we leave. So it tells me that of all the important things you can do throughout your life, you're not going to get yourself out of a job by being successful weed scientist. It's there, it's a respected activity, and I assure you that with adjustments that I am suggesting, whether you make them or not, they're going to occur. You should be part of it and lead it rather than being a follower.

With that in mind, let's quit being a philosopher and say, "This is old Dale Bohmont signing off."

**End of *The Western Society of
Weed Science 1938 - 1992*
by Dr. Arnold Appleby**

ISBN 1-882493-00-1

Meeting dates, Locations, Presidents, President-elects, Secretaries, Business Mangers, and Treasurers 1938 to 2021

Year	Dates	Site	President	President Elect	Secretary 1/	Business Manager/ Treasurer	Treasurer
1938	June 16-17	Denver, CO	H.L. Spence, Jr.	C.L. Corkins	W.S. Ball		
1939	June 9-10	Berkley, CA	H.L. Spence, Jr.	C.L. Corkins	W.S. Ball		
1940	June 21-22	Seattle, WA	G.R. Hyslop	J.J. Griner	W.S. Ball		
1941	June 27-28	Salt Lake City, UT	C.L. Corkins	G.G. Schweis	W.S. Ball		
1942	June 26-27	Salem, OR	W.W. Robbins	E. Hutchings	W.S. Ball		
1944	June 25-26	Salt Lake City, UT	E. Hutchings	C.D. Gaines	W.S. Ball		
1945	June 6-7	Boise, ID	L. Burge	L.E. Harris	W.S. Ball		
1946	February 26-27	Reno, NV	B.E. Kuhns	B.J. Thornton	W.S. Ball		
1947	February 6-7	Portland, OR	H.E. Morris	V.H. Freed	W.S. Ball		
1948	February 2-4	Sacramento, CA	V.H. Freed	B.J. Thornton	W.S. Ball		
1949	February 2-4	Bozeman, MT	B.J. Thornton	V.A. Cox	W.S. Ball		
1950	February 1-3	Denver, CO	E.W. Whitman	W.W. Robbins	W.S. Ball		
1952	February 5-7	Reno, NV	W.W. Robbins	C.I. Seely	W.S. Ball		
1954	March 22-24	Tucson, AZ	C.J. Seely	R. Warren	W.A. Harvey		
1956	February 15-16	Sacramento, CA	W.S. Ball	W.A. Harvey	W.C. Robocker		
1958	March 18-19	Spokane, WA	H. Wolfe	R.A. Fosse	W.R. Furtick		
1960	February 22-25	Denver, CO	R.A. Fosse	W.R. Furtick	E.E. Heikes		
1962	March 20-22	Las Vegas, NV	W.R. Furtick	E.E. Heikes	E.J. Bowles		
1963	February 6-7	Portland, OR	E.E. Heikes	J.M. Hodgson	K. Sime		
1965	March 17-19	Albuquerque, NM	J.M. Hodgson	L.A. Jensen	S.W. Strew		
1967	March 15-17	Phoenix, AZ	L. Jensen	S. Strew	K. Hamilton	L. Anderson	
1968	March 19-21	Boise, ID	S. Strew	K. Hamilton	H. Alley	L. Anderson	
1969	February 10	Las Vegas, NV	K. Hamilton	H. Alley	K. Dunster	L. Anderson	
1970	March 17-19	Sacramento, CA	H. Alley	K. Dunster	A. Appleby	L. Anderson	
1971	March 16-18	Denver, CO	K. Dunster	A. Appleby	D. Bayer	L. Anderson	
1972	March 14-16	Salt Lake City, UT	A. Appleby	D. Bayer	D. Burgoyne	L. Anderson	
1973	March 13-15	Spokane, WA	D. Bayer	D. Burgoyne	G. Lee	L. Anderson	
1974	March 12-14	Kaanapali, HI	D. Burgoyne	G. Lee	W. Anliker	L. Anderson	
1975	March 18-20	Phoenix, AZ	G. Lee	W. Anliker	J. Evans	L. Anderson	
1976	March 16-18	Portland, OR	W. Anliker	C. Elmore	R. Comes	L. Anderson	
1977	March 15-17	Sacramento, CA	C. Elmore	L. Jordan	R. Burr	L. Anderson	
1978	March 14-16	Sparks, NV	L. Jordan	R. Comes	A. Lange	L. Anderson	
1979	March 20-22	Boise, ID	R. Comes	L. Burrill	R. Zimdahl	L. Anderson	
1980	March 18-20	Salt Lake City, UT	L. Burrill	L. Warren	A. Ogg	L. Anderson	
1981	March 17-19	San Diego, CA	L. Warren	A. Ogg	D. Thill	L. Anderson	
1982	March 9-11	Denver, CO	A. Ogg	W. Whitworth	R. Callihan	L. Anderson	
1983	March 8-10	Las Vegas, NV	W. Whitworth	G. Massey	B. Brinkman	L. Anderson	
1984	March 13-15	Spokane, WA	G. Massey	S. Heathman	H. Tripple	L. Anderson	
1985	March 12-14	Phoenix, AZ	S. Heathman	H. Tripple	L. Haderlie	L. Anderson	
1986	March 18-20	San Diego, CA	H. Tripple	J. Evans	S. Blank	L. Anderson	
1987	March 18-20	Boise, ID	J. Evans	L. Mitich	P. Ogg	L. Anderson	
1988	March 7-9	Fresno, CA	L. Mitich	D. Thill	G. Schroeder	L. Anderson	
1989	March 14-16	Honolulu, HI	D. Thill	S. Blank	P. Fay	L. Anderson	
1990	March 13-15	Sparks, NV	S. Blank	P. Fay	D. Ryerson	W. Graves	
1991	March 12-14	Seattle, WA	P. Fay	P. Ogg	S. Dewey	W. Graves	
1992	March 10-12	Salt Lake City, UT	P. Ogg	S. Miller	J. Schlesselman	W. Graves	
1993	March 9-11	Tucson, AZ	S. Miller	D. Ryerson	J. Richardson	W. Graves	
1994	March 14-17	Coeur D'Alene, ID	D. Ryerson	T. Whitson	C. Eberlein	W. Graves	
1995	March 13-16	Sacramento, CA	T. Whitson	G. Foster	D. Morishita	W. Graves	
1996	March 11-14	Albuquerque, NM	G. Foster	C. Eberlein	B. Mullin	W. Graves	
1997	March 11-13	Portland, OR	C. Eberlein	B. Mullin	W. Belles	W. Graves	
1998	March 10-12	Waikoloa, HI	B. Mullin	R. Lym	N. Hageman	W. Graves	
1999	March 8-11	Colorado Springs, CO	R. Lym	J. Tichota	J. Schroeder	W. Graves	
2000	March 14-16	Tucson, AZ	J. Tichota	D. Morishita	J. Orr	W. Graves	
2001	March 12-15	Coeur D'Alene, ID	D. Morishita	B. Parker	M. Ferrell	W. Graves	
2002	March 12-14	Salt Lake City, UT	B. Parker	J. Schroeder	R. Zollinger	W. Graves	
2003	March 11-13	Kauai, HI	J. Schroeder	G. Cook	B. Stougaard	W. Graves	
2004	March 9-11	Colorado Springs, CO	G. Cook	P. Stahlman	P. Forster	W. Graves	
2005	March 8-10	Vancouver, B.C	P. Stahlman	P. Banks	V. Ulstad	W. Graves	
2006	March 14-16	Sparks, NV	P. Banks	K. Al-Khatib	V. Ulstad	W. Graves	
2007	March 13-15	Portland, OR	K. Al-Khatib	R. Crockett	P. Hutchinson	P. Banks	
2008	March 11-13	Garden Grove, CA	R. Crockett	D. Ball	P. Hutchinson	P. Banks	
2009	March 10-12	Albuquerque, NM	D. Ball	J. Richardson	Ian Burke	P. Banks	
2010	March 8-11	Waikoloa, HI	J. Richardson	J. DiTomaso	Ian Burke	P. Banks	
2011	March 7-10	Spokane, WA	J. DiTomaso	V. Peterson	R. Boydston	P. Banks	
2012	March 12-15	Reno, NV	V. Peterson	K. Umeda	R. Boydston	P. Banks	
2013	March 11-14	San Diego, CA	K. Umeda	R. Gast	A. Hulting	P. Banks	
2014	March 10-13	Colorado Springs, CO	R. Gast	D. Lyons	A. Hulting	P. Banks	
2015	March 9-12	Portland, OR	D. Lyons	J. Yenish	C. Rainbolt	P. Banks	
2016	March 7-10	Albuquerque, NM	J. Yenish	K. Howatt	C. Rainbolt	P. Banks	
2017	March 13-17	Coeur D'Alene, ID	K. Howatt	M. Anderson	D.C. Cummings	P. Banks	
2018	March 12-15	Garden Grove, CA	M. Anderson	A. Kniss	D.C. Cummings	T. Steinke	
2019	March 11-14	Denver, CO	A. Kniss	P. Clay	D. C. Cummings	E. Gustafson	
2020	March 2-5	Maui, HI	P. Clay	C. Ransom	D.C. Cummings	E. Gustafson	
2021	March 1-4	Virtual meeting	C. Ransom	S. McDonald	J. Madsen	E. Gustafson	P. Banks

1/ The Secretary also served as Treasurer until 1967 when a Business Manager was hired. The Business Manager then also served as Treasurer.

**1993 to 2021
Meeting Summaries
and Fellows**

FORTY-SIXTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**TUCSON, ARIZONA
March 9-11, 1993**

President - Steve Miller
President-Elect - Doug Ryerson
Secretary - Jesse Richardson
Treasurer-Business Manager - Wanda Graves

Paul Ogg and Peter Fay were chosen as Fellows of the Society in 1993. Ed Schweizer was chosen as the Outstanding Weed Scientist in the Public Sector while Sheldon Blank received the Outstanding Weed Scientist in the Private Sector Award.

The WSWs Proceedings were dedicated to “the father of 2,4-D”, and member of the society, Dr. Wendell Mullison. Dr. Mullison was recognized for his lifetime of outstanding contributions in the field of chemistry and in particular to his contributions to chemicals used for weed management. Dr. Mullison was employed by the Dow Chemical company for 32 years. He held early patents on phenoxy compounds such as low volatile ester herbicides including 2,4-D and 2,4,5-T as well as use patents for both compounds. He was a member of WSWs, the Weed Science Society of America where he was honored as a Fellow, and various other societies. Wendall was a well-liked gentleman, extremely professional, and a friend to all he met.

There were 302 members registered for the Tucson meeting including 31 graduate students. This was the first year of the WSWs Student Poster Contest, which complimented the Student Oral Paper competition (started in 1983). Six students participated in the poster contest and Abdel Mesbah from the University of Wyoming was the first ever winner.

Prior to the 1993 meeting six students had been selected to participate in the Student Education Enhancement Program. The selected students spent a few days either with a research weed scientist at a university other than their own or in the field with an industry weed scientist. The trip was designed to expand the student’s knowledge and experience in a different area of weed science than they were currently studying.

There was a special Herbicide Resistance symposium held during the 1993 meeting led by Charlotte Eberlein and Jerry Caulder. Twenty herbicide resistant weed species were reported in 1993. Resistant weeds were found in 16 of the 18-member states of the WSWs region and four Canadian Provinces. The main species of concern at the time were herbicide resistant Italian rye grass, wild oats, and kochia. At the same meeting the Discussion Section of Project 3, Agronomic Crops concerned the recommendations of reduced herbicide use-rates in crops for more cost-effective weed control. (Reduced herbicide rates was later cited as one reason for increased weed resistance).

The second printing of *Weeds of the West* occurred in 1992 with 12,500 copies printed. By the time of the annual meeting only 3,700 copies remained. The history book *Western Society of Weed Science 1938-1992* by Arnold Appleby was announced for sale during the business

meeting. Treasure-Business Manager Wanda Graves reported that orders for the book had been weak.

Student Paper Contest

1st Place - Marianne K. Pederson, New Mexico State University

2nd Place - Kris H. Johnson, University of Wyoming

3rd Place - John M. Squire, Utah State University

Student Poster Contest

1st Place - Abdel Mesbah, University of Wyoming

2nd Place - Yanglin Hou, New Mexico State University

Members that passed away in the previous year besides Wendall Mullison included Bruce Thornton and Paul Lauterbach.



1993 Western Society of Weed Science Board of Directors

Front row (L to R): Jesse Richardson, secretary; Doug Ryerson, President-elect; Steve Miller, President; Paul Ogg, Past President; Wanda Graves, Treasurer-Business Manager

Back row (L to R): Phil Westra, Member-at-Large; Rod Lym, WSSA Representative; Don Morishita, Education and Regulatory section chair; Charlotte Eberlein, Research section chair
Absent: Gary Lee, CAST representative

1993 FELLOWS

Paul J. Ogg

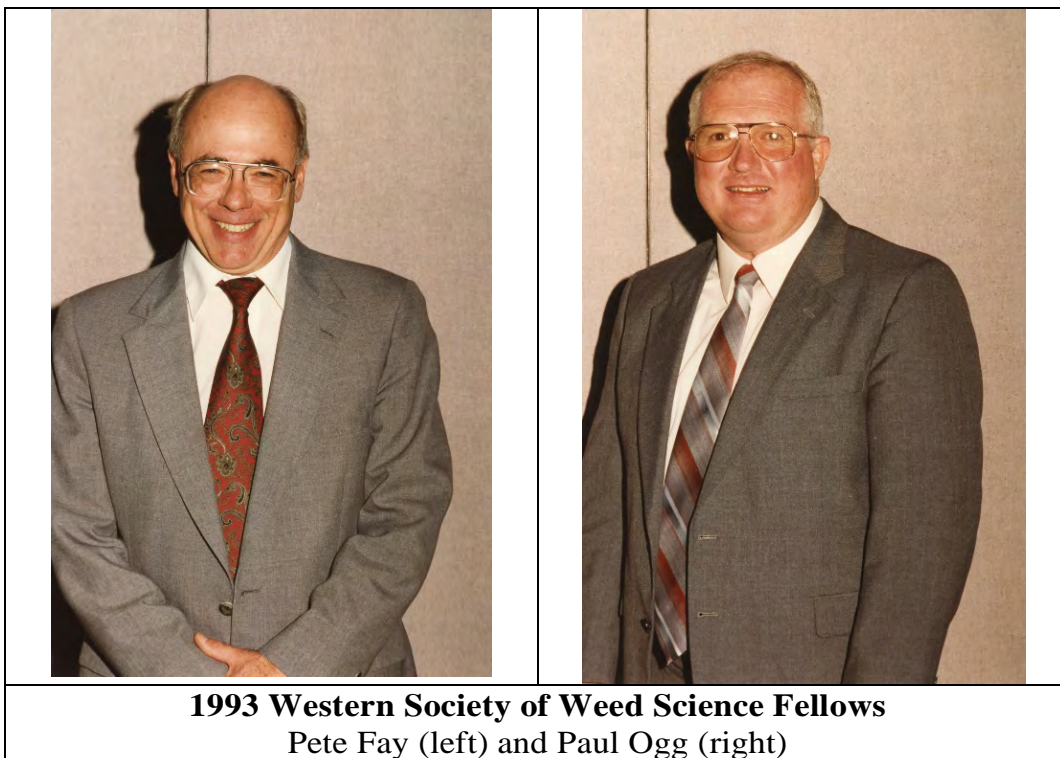
Paul Ogg, a resident of Longmont, Colorado, is a Senior Field Agriculturalist in Research and Development with American Cyanamid Company, serving Colorado, Wyoming, western Nebraska, and western Kansas. A native of Wyoming. Paul attended the University of Wyoming, receiving his B.S. and M.S. degrees in plant science (weed science). From 1970 - 1972, he worked on American Cyanamid Company's research farm in Fresno, California. In 1973 he was transferred to Monticello, Illinois, to serve as a research and development representative. He moved to Longmont, Colorado, in 1976 to assume the responsibilities of Regional Manager of Research and Development for some south central and western states. He was advanced to his present position in October 1985.

Paul has been active in the weed science societies and served the North Central Weed Science Society as chairman of several committees. He has had a long and productive career and supported the goals and activities of WSWs. He has served many assignments and committees, including chairman of the Site Selection and the Award committees, and chairman of the Education and Regulator Section, Secretary (198 - 1987), President-Elect, President (1991-1992), Past President, Nominations Committee and most recently, chairman of the Student Educational Enhancement Committee, an ad hoc committee. Paul was chairman of the Local Arrangements Committee for the Weed Science Society of America (WSSA) meeting held in Denver last month.

Peter (Pete) K. Fay

Peter Fay was born in New Jersey in 1941. Prior to starting his college career, he served in the U.S. Marine Corps infantry. He received a B.S. degree from the University of Maine in 1967, then spent two years working as a county agent in rice and vegetable production with the U.S. Peace Corps in the Philippines. He received his M.S. and PhD degrees in weed science from Cornell University. Pete was leader of the Wild Oat Pilot Project at North Dakota State University in Fargo from 1975 to 1978. Then he moved to Montana State University (MSU) where he taught for 15 years, conducting research on troublesome weeds in small grains, forages, and rangeland. He was the leader in developing and expanding the weed science curriculum at MSU. Currently he is Extension Weed Specialist at MSU.

Pete has trained 20 M.S. students and published more than 15 refereed journal articles. He has served the WSWs as President (1990-1991), Secretary, and Member-at-Large, Research Section chairman, and served on numerous committees in both the WSWs and Weed Science Society of America (WSSA). Presently he is a member of the WSSA Board of Directors. In addition, Pete chaired regional and state committees on noxious weeds, and served as president of the Montana Weed Control Association. He has received numerous awards including the Distinguished Teaching Award (4 years), Teacher of the Quarter Award, and Professor of the Month Award at Montana State University.



1993 Western Society of Weed Science Fellows
Pete Fay (left) and Paul Ogg (right)

FORTY-SEVENTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**COEUR D'ALENE, IDAHO
March 14-17, 1994**

President - Doug Ryerson
President-Elect - Tom Whitson
Secretary - Charlotte Eberlein
Treasurer-Business Manager - Wanda Graves

Gus Foster and Sheldon Blank became Fellows of the Society in 1994. Will Carpenter received the Honorary Member award. Larry Burrill was chosen as the Outstanding Weed Scientist in the Public Sector. No Outstanding Weed Scientist award in the Private Sector was given. There were 301 people registered for the meeting.

In his Presidential address Doug Ryerson pointed out that WWS had \$158,000 in cash reserves. A significant portion of this money came from sales of *Weeds of the West*, which was now in its third printing. There were 10,000 copies printed in September 1993 and only 3,050 books remained by the time of the annual meeting.

The WWS Wheel Wagon logo was introduced to the membership during the meeting. The logo was designed by a group consisting of Rod Lym, Steve Dewey, and Tom Whitson. Deb Tanner, a graphic designer with the North Dakota State University Extension Service drew the logo which first appeared on the cover of the 1993 WWS Proceedings.

The WWS Editorial committee was dissolved by the Executive committee during the summer board meeting. Steve Miller, WWS Research Progress Report editor, and Rod Lym, WWS Proceedings Editor were added to the Publications Committee.

The Agronomic Crops and Basic Sciences discussion sections were combined to consider potential and drawbacks of herbicide resistant crops. At the time there were 50 herbicide resistant crops noted. Glyphosate resistant crops were numerous, but bromoxynil resistant cotton and glufosinate resistant safflower were also discussed. Crops resistant to more than one herbicide or herbicide plus insecticide were predicated. At the time of this discussion, no genetically altered crops had been approved for registration, but several were close to receiving approval.

A Presidential Award of Merit was authorized in the WWS Constitution and Operating Guide but had never been awarded. President Doug Ryerson made the first ever award to Rod Lym during the noon awards banquet.

The student contest was divided into division winners in 1994.

Student Paper Contest

Division 1

1st Place - Wade Malchow, Montana State University

2nd Place - Dean Richards, Washington State University

Division 2

1st Place - Corey Colliver, Montana State University

2nd Place - Anthony Kern, Montana State University

Student Poster Contest

1st Place - Kris Johnson, University of Wyoming

Tom Whitson announced that the WSWs would hold a retiree's reception on Monday evening at the beginning of the annual WSWs meeting starting in 1995. Announced retirees in 1994 were Arnold Appleby, Larry Burrill, Larry Mitich, and Al Baber. These gentlemen were the first recipients of retiree golf balls adorned with the new WSWs logo.

Robert Morrison and James H. Duke passed away in the previous year. Mr. Duke had been accepted in a PhD program at Oregon State but died in an automobile accident prior to enrollment.



Western Society of Weed Science logo

designed by Rod Lym, Steve Dewey and Tom Whitson; drawn by Deb Tanner,
graphic designer at North Dakota State University



1994 Western Society of Weed Science Board of Directors

Front row (L to R): Charlotte Eberlein, secretary; Wanda Graves, Treasurer-Business Manager; Doug Ryerson, President; Tom Whitson, President-Elect; Bill Dyer, Research section chair

Back row (L to R): John Evans, CAST representative; Steve Miller, Past President; Rod Lym, WSSA Representative; Steve Dewey, Member-at-Large; Vanelle Peterson, Education and Regulatory section chair

1994 FELLOWS

Sheldon Blank

Dr. Sheldon Blank is a Senior Product Development Associate with Monsanto Agricultural Company. He has worked for Monsanto since 1975. Sheldon received a B.S. in agronomy from Washington State University in 1972. He received his M.S. and PhD in Agronomy from the University of Minnesota in 1974 and 1976, respectively.

Dr. Blank received the Monsanto Distinguished Development Award and the Monsanto Personal Performance Award, each twice. He is an Honorary Member of the Washington State Weed Association and received the WSWS Outstanding Weed Scientist Award in 1993.

Sheldon has been an active member of the WSWS since 1975. He has served as chair of the Finance Committee, Secretary, Chair of the Education and Regulatory Section, Program Chair, and President. Dr. Blank also is a member of the Weed Science Society of America, Washington State Weed Association, Oregon Society of Weed Science, and Idaho Weed Control Association.

The following are a few comments from letters supporting Dr. Blank's nomination as WSWS Fellow. "Sheldon's meritorious service to the Society and contributions to the discipline of Weed Science are unselfish and exemplary." "This award (the WSWS Outstanding Weed Scientist Award in 1993) recognized his contributions and expertise in reduced tillage weed management and advancements in field bindweed, cereal rye, Russian thistle, and downy brome management". "Dr. Blank has been a strong supporter of cooperative relations between industry and academia and his efforts have added greatly to the overall advancement of Weed Science and agriculture in the western U.S."

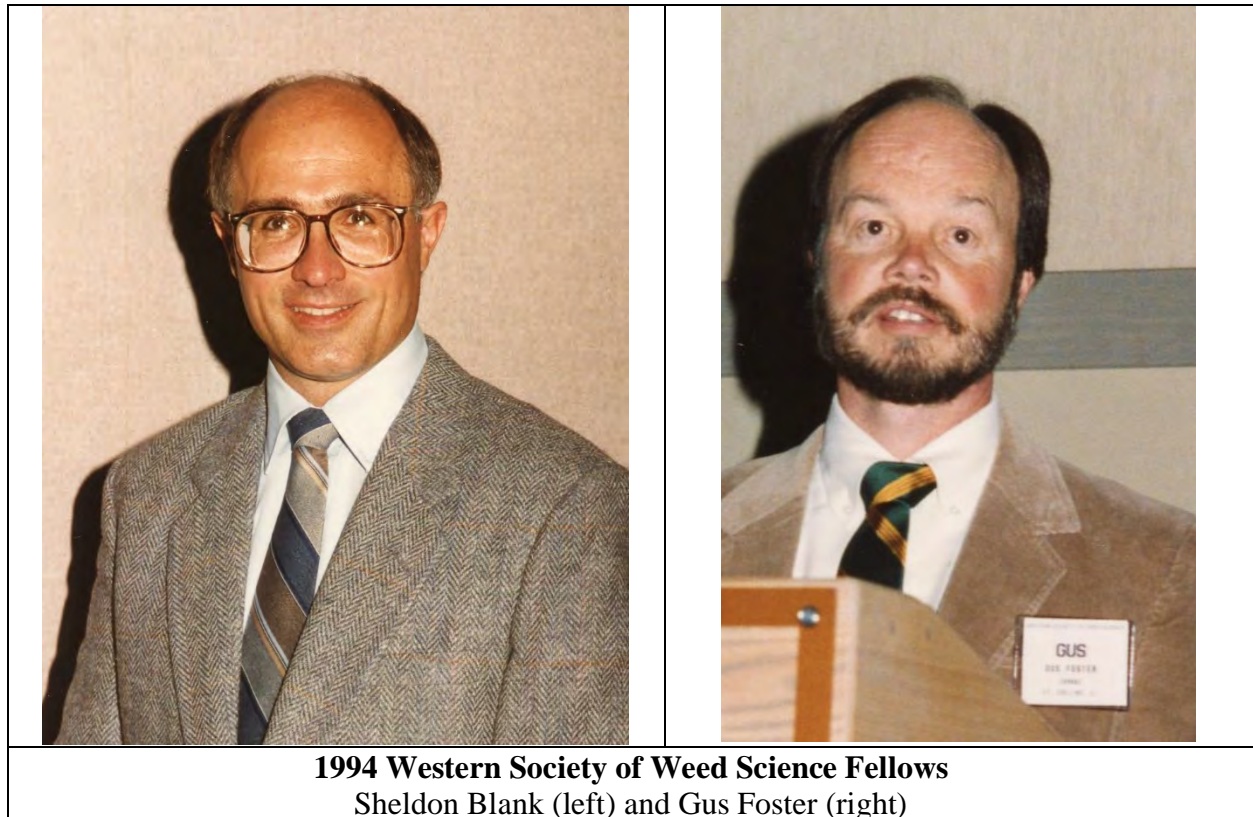
Gus Foster

Mr. Gus Foster is a Field Scientist - Product Development - with Sandoz Crop Protection Corporation. He has been employed by Sandoz since 1986. From 1978 until 1986, Gus was a Field Development Representative with Velsicol Chemical Corporation. Sandoz and Velsicol merged in 1986. Mr. Foster received a B.S. and M.S. in Agronomy from Colorado State University in 1972 and 1976, respectively. He served as an agronomist for Navajo Community College from 1976 to 1978.

Gus was a member of the 1989 Governor's task force to develop a report on the impact of jointed goatgrass on Colorado wheat production. In 1991, he served on the Colorado Legislative Committee which helped develop a new state-wide weed law. Foster is an active member of the Colorado-Wyoming task force group working on a plastic container recycling effort for agriculture. He helped establish the Colorado Weed Control Association which later became the Colorado Weed Management Association.

Gus has served the WSWS in many capacities: he chaired the Placement Committee, Perennial and Herbaceous Weeds Section, and Education and Regulatory Section; he has served on numerous other committees; and attended the WSWS annual meeting regularly. He was chair of the Weed Science Society of America (WSSA) Local Arrangements Committee in 1993 when the meeting was held in Denver.

One of the supporting letters for Mr. Foster says a lot about Gus. "Throughout his professional career he has been a supporter of the Western Society of Weed Science. He is known by many in the Rocky Mountain West as a congenial, cooperative man. Many will recognize him as a source of research ideas and careful thought about issues of weed control and weed management. He was an integrator of people and techniques before the word became popular."



FORTY-EIGHTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**SACRAMENTO, CALIFORNIA
March 13-16, 1995**

President - Tom Whitson
President-Elect - Gus Foster
Secretary - Don Morishita
Treasurer-Business Manager - Wanda Graves

Steve Miller and Jack Schlesselman were named Fellows of the Society in 1995. Jim Fornstrom of the University of Wyoming received the Honorary Member award. Larry Mitich was chosen as the Outstanding Weed Scientist in the Public Sector and Paul Ogg received the Outstanding Weed Scientist in the Private Sector award. A preconference tour of local Agriculture and Wineries was held prior to the meeting. The wine tour was especially well received by all who attended. Wanda Graves announced that the 1995 meeting had 304 people registered.

Past-President Doug Ryerson hosted the first ever WSWS New Members Welcome and Retiree Reception on Monday evening. Attendance was sparse the first year, but this event became very popular with the membership over time.

The General Session revolved around a theme of the Future of Weed Science. President Whitson felt the future weed scientist must not be so specialized as they are today and must be trained in both field and lab research as well as in various crops or wildlands and pasture. Other general session speakers addressed agricultural trends, pesticide safety, and the future of the land grant University system. Donn Thill of the University of Idaho led a special discussion section titled "Weed Science Discipline – Challenges and Issues for the Future". Unfortunately, no records were kept so comparison of what was predicted to what actually happened cannot be made.

The student educational enhancement program continued to expand with 11 students participating in 1995. *Weeds of the West* continued to be a best seller with over 46,000 copies sold with a retail sales value exceeding \$1 million dollars.

George Beck led the Intermountain Noxious Weed Advisory Council which developed several position papers sent to Congress in support of and to refine the Federal Noxious Weed Act. This group worked with several other organizations including The Nature Conservancy and the national Exotic Pest Plant Council to bring increased awareness of the threat invasive weeds were bringing to federal lands.

The student contest was divided into poster and oral paper winners in 1995.

Student Paper Contest

1st Place - B. Correiar, University of California, Davis

2nd Place - Patrick A. Miller, Colorado State University

3rd Place - Anthony J. Kern, Montana State University

Student Poster Contest

1st Place - Mark Waldrop, New Mexico State University

2nd Place - Troy M. Price, Utah State University

Ralph Althaus and Tom Wright passed away in the previous year.



1995 Western Society of Weed Science Board of Directors

Front row (L to R): Doug Ryerson, Past President; Rod Lym, WSSA representative 1994; Don Morshita, secretary; Tom Whitson, President

Back row (L to R): Rick Boydston, Research section chair; Gus Foster, President-Elect; Stott Howard, Education and Regulatory section chair

Absent: Wanda Graves, Treasurer-Business Manager; John Evans, CAST representative; Paul Ogg, WSSA representative 1995; Vanelle Peterson, Member-at-Large

1995 FELLOWS

Stephen (Steve) D. Miller

Dr. Stephen Miller is currently a professor of Weed Science at the University of Wyoming, Laramie. He received his B.S. degree from Colorado State University and his M.S. and PhD degrees from North Dakota State University. After receiving his PhD in 1973, Stephen was hired as a faculty member in the Department of Agronomy at North Dakota State University. In 1984 he moved to his current position at the University of Wyoming.

Dr. Miller is a very proficient and prolific author. He has authored four books, 46 refereed journal articles, 158 proceeding and abstracts, 443 research reports, 29 extension bulletins, and 41 miscellaneous reports.

Dr. Miller received the Outstanding Weed Scientist Award from the WSWs in 1991 and has held numerous positions within the WSWs including: Editor of the Research Progress Report (1987 to 1994), Research Chairman (1988), Member-at-Large (1990), President-Elect (1992), and President (1993). Stephen has served on six committees with the Weed Science Society of America (WSSA) and held a similar number with the North Central Weed Control Conference.

Dr. Miller has served as a major advisor for 43 undergraduate students. He has served as major advisor for thirteen master's and nine doctoral students. He is currently serving as major professor for four graduate students.

Dr. Miller's opinion is well respected by his peers, colleagues, agricultural producers, and industry representatives. His knowledge and expertise are sought after by weed science professionals. He constantly is striving for new and innovative ways to improve weed science and sound productive agriculture.

John T. (Jack) Schlesselman

Jack Schlesselman, a resident of Reedley, California is a Field Research and Development Representative with Rohm and Haas Company. Jack received his B.S. and M.S. degrees from California State University, Fresno, in 1971 and 1979, respectively.

Prior to employment with Rohm and Haas Company, Jack worked with the University of California Kearney Agricultural Experiment Station from 1972 to 1980 in weed science research. While employed with the University, under the direction of Dr. Art Lange, his main responsibilities included statewide field research with all aspects of herbicide screening in tree crops as well as row crops. During this time frame, Jack either authored or co-authored 85 publications in the area of weed science including co-authoring the textbook, *Principles of Weed Control in California*.

Jack's career with Rohm and Haas Company began in 1980 with heavy involvement in weed control projects involving Goal herbicide. His efforts in this area resulted in one of the first foods uses for Goal earning him the appropriate nickname of "Captain Onion". Since that initial registration, Jack's direct involvement with Goal herbicide has led to additional labeling in over 50 crops. Additional areas that have directly benefitted from Jack's tireless efforts include training new employees in weed control identification, serving as regional coordinator for many exploratory pesticide projects and presenting project summaries at company and professional meetings.

Jack has been very active in the WSWs and has contributed substantially to its accomplishments and success during the past two decades. He has served on many assignments and committees, including Secretary (1991 to 1992), and chairman of public relations (1986 to the present). One additional attribute that Jack brings to the WSWs as well as his company is his excellent skill in photography. Many of the excellent quality pictures that you see in WSWs publications as well as Rohm and Haas Company brochures and advertising are the result of Jack being on the "back end" of a camera. His innate ability and love for photography show in his professional work as well as his many backpacking trips across the Sierra Nevada mountains. Jack is a tireless worker and demands much of himself and stresses excellence in every activity that he is involved with, both in WSWs and in his employment with Rohm and Haas Company.



1995 Western Society of Weed Science Fellows and Honorary Member
(L to R) K. James Fornstrom (Honorary Member), Jack Schlesselman (Fellow), and
Steve Miller (Fellow)

FORTY-NINTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**ALBUQUERQUE, NEW MEXICO
March 11-14, 1996**

President - Gus Foster
President-Elect - Charlotte Eberlein
Secretary - Barb Mullin
Treasurer-Business Manager - Wanda Graves

Don Colbert and Bob Parker were named Fellows of the Society in 1996. Donn Thill was chosen as the Outstanding Weed Scientist in the Public Sector while Neil Hageman received the Outstanding Weed Scientist in the Private Sector award. There were no nominations for Honorary Member at this meeting. Wanda Graves announced that the attendance was up substantially for the Albuquerque meeting with 347 members attending including 30 graduate students and 12 spouses.

President Gus Foster gave one of the more memorable addresses as President. He began by stating that Program Chair Charlotte Eberlein had told him he needed to give the Presidential address, so he said he would and asked all to listen closely as he would not repeat himself. He then gave the street address of the White House. This type of humor was typical of Gus and well received by all. He promised to make his remarks short, but the talk he gave fills 5 pages in the 1996 WSWs Proceedings and is well worth reading.

The General Session revolved around a theme of noxious weeds on federal lands but also included a very entertaining economics talk by Dr. Lowell Catlett of New Mexico State University. Dr. Catlett predicted that the Dow Industrial Average would some day exceed 18,000 while at the time of his talk the Dow was around 5700. That sounded very wildly optimistic at the time, but the Dow average was nearly twice the 18,000 level in 2021.

Sales of *Weeds of the West* continued to exceed all expectations for sales and was reprinted for the 5th time in 1995 for a total of 70,000 copies in print. The WSWs co-sponsored a new reference publication entitled *Biological Control of Weeds of the West*. This publication was produced as a three-ring binder so information on weeds, pathogens, and insects could be easily updated with new pages replacing outdated information. There were 3,000 copies made in the initial printing. Initial sales of the new book were described as brisk.

In an early foray into cyberspace, an ad hoc committee was formed with members Joan Campbell, Tim Prather, and Dan Ball. They were given the charge to explore how WSWs could best use the resources available on the World Wide Web and the Internet. At the time, speakers for the WSWs annual meeting were still being notified of acceptance and time slot of their talks by postcard.

In 1996 there were two sections of student oral paper awards as well as the poster section.

Student Paper Contest

Applied Section

1st Place - Michael Wille, University of Idaho

2nd Place - Stephen Enloe, Colorado State University

3rd Place - Jessie Strobbe, Montana State University

Basic Section

1st Place - Dean Riechers, Washington State University

2nd Place - W. Mack Thompson, Colorado State University

3rd Place - Patrick Miller, Colorado State University

Student Poster Contest

1st Place - Justin Knight, New Mexico State University

2nd Place - Joyce Payne, New Mexico State University

3rd Place - Asuncion Rios-Torres, New Mexico State University

Chuck Stanger, Ed Schweizer, and Peter Fay announced their retirements during the year and were honored at the Retirees Reception.

William 'Ed' Albeke was the only reported member who passed away in the previous 12 months.



1996 Western Society of Weed Science Board of Directors

Front row (L to R): Tom Whitson, Past President; Wanda Graves, Treasurer-Business Manager; Barb Mullin, Secretary; John Evans, CAST representative

Back row (L to R): Gus Foster, President; Charlotte Eberlein, President-Elect; Jill Schroeder, Research section chair; Joan Campbell, Member-at-Large; Paul Ogg, WSSA representative

Absent: Kai Umeda, Education and Regulatory section chair

1996 FELLOWS

Donald (Don) R. Colbert

Donald Colbert is employed by American Cyanamid Co. in Lodi, CA as a research and development representative. He has completed 30 years in the weed science profession, beginning with his employment by Stauffer Chemical Company, Pennwalt, Oregon State University, and American Cyanamid Co.

During that period of time, he has stressed job satisfaction as his primary focus leading to numerous accomplishments. As a Cyanamid research representative, he has been instrumental in the registration of Pendulum (pendimethalin) on ornamentals and container plants with over forty different species on the label. His long-standing effort to push for the registration of Pursuit herbicide in alfalfa has paid off in this registration being granted last year. His personal relationships with colleagues in the public and private sector have provided the greatest stimulus in striving for excellence. These contacts have led to several cooperative projects that have provided answers to weed management systems. Truly a "team player" he has given and received from these types of successful efforts. Overcoming internal and external obstacles, his determination and colleague support provided the necessary ingredients for this to happen. Don has continued to maintain a strong link between industry and university. He is highly regarded by University of California farm advisors and specialists for his knowledge on weed science, his cooperation, and his integrity. He avoids the limelight, so he is not often noticed, however, he is the one behind the scenes making whatever happens a success.

Don has been active in several professional societies including the California Weed Control Conference and the Western Society of Weed Science. He has served on numerous WSWS committees and was Member-at-Large in 1991-92. He was instrumental in the revision and updating of the WSWS Operations Guide by including the new committees formed, updated the responsibilities of each office and committee in the organization.

Donald Colbert's career as a weed scientist has been illustrative of a person committed to the profession. His willingness to be of service to others and his professional integrity are his trademarks.

Robert (Bob) Parker

Robert Parker has served as an Extension Weed Specialist with Washington State University at Prosser since 1978 and has been an active member of the Western Society of Weed Science since 1967. Bob has served on numerous WSWS committees including the Executive Board, Finance, Placement, and local Arrangements, and chaired the Weeds in Horticultural Crops project, and Education and Regulatory Section. Bob co-authored Weeds of the West which has significantly improved public education in weed identification and has helped place the WSWS in good financial standing.

On the national level, Bob has served as local arrangements chairperson at the 1995 Weed Science Society of America (WSSA) meeting in Seattle and has served on numerous WSSA committees and activities including Awards Committee, Extension Committee, Program Committee, Teaching and Extension section chairperson, and Photo Contest subcommittee. Bob authored the outstanding paper in *Weed Science* in 1974.

Bob has served on the Board of Directors for the Washington State Weed Control Association as secretary from 1983 to the present and has served as Vice-President and Program Chairperson and President. He is the ex-officio Director of the Oregon Society of Weed Science (1985-present). Bob has been a major contributor to the annually updated Pacific Northwest Weed Control Handbook, which is one of the most comprehensive and useful weed control handbooks published. It is used by extension agents, commodity and dealer field personnel, growers, commercial applicators, and county and district weed supervisors in Oregon, Idaho, Washington, and other states. He has issued or assisted with extension publications covering more than 15 agricultural crops, plus lawn and home gardens. He has authored, co-authored, or contributed to over 200 publications in his career and averaged over 35 oral presentations a year.

Despite his active role in extension, Bob has conducted numerous research projects on weed control in alfalfa, cereals, hops, mint, and seed crops. In addition, he has conducted residue trials and efficacy data to support new herbicide registrations in minor crops. Bob has also conducted research on herbicide drift in central Washington helping to alleviate problems between cereal growers and nearby residents growing herbicide sensitive crops.

Dr. Parker, in both his public and private sector, has always put the customer first and given unsparingly of himself. Bob exemplifies what being a public servant is all about and has done an excellent job in transferring weed science technology to the clientele he serves.



1996 Western Society of Weed Science Fellows
Don Colbert (left) and Bob Parker (right)

FIFTIETH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**PORTLAND, OREGON
March 11-13, 1997**

President - Charlotte Eberlein
President-Elect - Barb Mullin
Secretary - Wayne Belles
Treasurer-Business Manager - Wanda Graves

Steve Dewey and Mike Newton were honored as Fellows of the Society in 1997. Dan Hess of Sandoz Agro was named as an Honorary Member. Jeff Tichota received the Outstanding Weed Scientist in the Private Sector award while Harry Agamalian was chosen as the Outstanding Weed Scientist in the Public Sector. Wanda Graves announced that there were 360 members attending the Portland meeting, the highest total in recent years.

The General Session revolved around a theme of the first 50 years of the WSWs and predictions of what to expect in the next half century. Charlotte Eberlein addressed "Who are we?" and "Where are we going?" in her opening address. She spoke of the future of site-specific weed control, the need for more multidisciplinary approaches to weed problems such as the Jointed Goatgrass and Leafy Spurge initiatives, and in order for the weed science discipline to grow WSWs needed to be more inclusive in accepting people with new and/or differing ideas on how to answer the age-old question of controlling weeds. The theme of what to expect next in weed science was continued by addresses from Larry Burrill, Professor Emeritus of Oregon State University and Dan Hess.

A one-hour panel discussion entitled "*In the Field with Herbicide Resistant Crops*" was led by Phil Westra. The main topics discussed were the future release of Roundup Ready soybean and canola resistant to glyphosate, glufosinate, and imidazolinone herbicides.

A symposium discussing development of new technologies in the field of weed science was held. Topics discussed ranged from photoelectronic detection of weeds to reduced herbicide use, and accurately mapping weed populations using various imaging technology.

The WSWs Constitution was changed to increase the number of standing committees from 15 to 18. The Legislative, Herbicide Resistant Weeds, and Student Educational Enhancement ad hoc committees were all elevated to permanent status.

The 1997 student contest held one division of posters and two oral contests.

Student Paper Contest

Basic Section

- 1st Place - Anthony Kern, Montana State University
- 2nd Place - Ramon Cinco-Castro, University of Arizona
- 3rd Place - Harwood Cranston, Colorado State University

Applied Section

1st Place - Patrick Miller, Colorado State University

2nd Place - Sandra Shinn, University of Idaho

3rd Place - Jeff Nelson, North Dakota State University

Student Poster Contest

1st Place - Andrea Sultana, New Mexico State University

2nd Place - Marie Campanella, New Mexico State University

3rd Place - Martina Murray, New Mexico State University

Members who retired in the previous year included Alex Ogg, Bob Callihan, and George Hittle.

Dr. Robert ‘Bob’ Lamoreaux was the only member reported to have passed away in the past year.

No photo of the Board of Directors was available.

1997 Western Society of Weed Science Board of Directors

President Charlotte Eberlein

President-elect Barb Mullin

Secretary Wayne Belles

Research section chair Rod Lym

Education and Regulatory section chair – Jack Schlesselman

WSSA representative Paul Ogg

Past President Gus Foster

Member-at-Large Jill Schroeder

CAST representative Jack Evans

Treasurer-Business Manager Wanda Graves

1997 FELLOWS

Steven (Steve) A. Dewey

Dr. Steven A. Dewey is presently the Extension Weed Specialist at Utah State University in Logan, Utah. Steve received his B.S. degree from Utah State University his M.S. in agronomy from Montana State University and his PhD in crop science from Oregon State University. In 1981, after completing his PhD, Steve assumed the position of Extension Weed Specialist and Associate Professor of Weed Science at the University of Idaho, Twin Falls. In 1985, Steve accepted his current position as Extension Weed Specialist at Utah State University.

At Utah State University, including his state weed extension responsibilities, Dr. Dewey teaches introductory plant science courses and guest lectures in other university courses. He has advised 7 graduate students and served on 21 graduate student committees. Steve participates actively in the WSWs. He has presented 22 papers at society meetings and contributed 37 Research Progress Reports. Steve willingly involves himself with the requests of the society having served and chaired numerous committees for the WSWs to include Student Paper Judging Committee, Publications Committee, Poster Session Committee, Resolutions Committee, and Necrology Committee. Steve served the WSWs as Local Arrangements Chair for the 1993 meeting and represented the membership on the Executive Committee as Secretary from 1990 to 1991 and Member-at-large from 1993 to 1994.

Steve's contributions are not just confined to the WSWs. Steve has contributed seven professional presentations at the Weed Science Society of America (WSSA) and served the WSSA on five key committees. Steve is an active member with the Utah Weed Control Association and was active with the Idaho Weed Control Association. He has authored 14 refereed journal manuscripts, 30 plus extension handbooks-extension bulletins, and numerous articles for associated trade journals and popular press.

Steve was very influential in raising the awareness of noxious and invasive weeds on public lands to a national level. Steve conceived, developed, and promoted the concept of combating noxious weeds in the same manner as fighting wildfires. Dr. Dewey was requested by the Department of Interior to testify at the U.S. Senate and House committee meetings in Washington, DC about the noxious weed problems on public lands.

One of the supporting letters for Steve says a lot about him. "With his knowledge, abilities and background, he could have left the university on many occasions for more money, but he sincerely wants to make Utah, and the intermountain area, an even greater place to live by improving agriculture and its aesthetic beauty."

Michael (Mike) Newton

Dr. Michael Newton is currently Professor of Forest Ecology in the College of Forestry at Oregon State University, Corvallis, Oregon. Mike received a B.S. in Animal and Dairy Husbandry in 1954 at the University of Vermont. After 2 years of military service in the U.S. Army, Mike completed a B.S. and M.S. in Forest Management, College of Forestry at Oregon State University, and his PhD in Plant Ecology in the Department of Botany also at Oregon State University.

Dr. Newton has developed a research and teaching career at Oregon State University with sabbaticals to the University of Tennessee and the University of Maine during his tenure at Oregon State University. Mike, during his 35-year career, has been involved in forest herbicide and weed research in every aspect. Mike has sponsored over 50 graduate students. Mike has been a positive influence on forest weed research not only in the Pacific Northwest but nationally in Maine, Vermont, Alaska, Virginia and internationally in Vietnam and New Zealand. Mike was on the research team that studied the effects of phenoxy herbicides in Vietnam.

Mike has had a long, positive, and active relationship with the WSWS attending and participating at annual meetings and serving as Research Section Chair. Mike's earliest publication is found in the 1962 Research Progress Reports from the then Western Weed Conference. He has presently contributed over 60 papers and research reports to the WSWS as well as numerous articles in refereed journals. Mike is also a Fellow in the Weed Science Society of America (WSSA).

Reflective of Mike are comments from his support letters to include: "It would be difficult to find an individual that has provided as much service to weed and herbicide research." "He is the consummate professional who is committed to his work." "Mike has had a career that has touched and influenced many people."



**1997 Western Society
of Weed Science
Fellows and Honorary
Member**

(L to R) Michael
Newton (Fellow),
Dan Hess (Honorary
Member), and
Steve Dewey (Fellow)

FIFTY-FIRST MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

WAIKOLOA, HAWAII

March 10 to 12, 1998

President - Barbra Mullin

President-Elect - Rod Lym

Secretary - Jill Schroeder

Treasurer-Business Manager - Wanda Graves

Doug Ryerson and Tom Whitson were selected Fellows of the Society and Don Colbert and Clyde Elmore were named Outstanding Weed Scientists in the Public and Private Sector, respectively. No Honorary Member was selected. The meeting attendance was 412 with 104 oral and 57 poster presentations.

Official dress for the meeting, as declared by President Barbra Mullin, was bright colors and no ties. In her Presidential address Mullin stressed the importance of networking at this meeting, serving on committees and considering becoming officer. Harold Coble, IPM Coordinator with USDA/CSREES, talked about the importance of diversified weed management as a key to IPM implementation in the General Session.

Several papers on jointed goatgrass biology, ecology and management were presented in the Agronomic and Basic Sciences Sections. Integrated weed management was the highlight in the Horticultural Section, while bioeconomic weed management was the most presented topic in the Teaching and Technology Section. Leafy spurge was the most talked about species in Wetlands and Wildlands and in the Range and Forest Section, knapweeds were the most talked about species.

The Student Paper Contest included poster presentations and two sections for the oral presentations.

Student Paper Contest

Section 1

1st Place - Carrie B. Benefield, University of California, Davis

2nd Place - Suzanne Sanders, University of Idaho

3rd Place - Jeff A. Nelson, North Dakota State University

Section 2

1st Place - Sandra L. Shinn, University of Idaho

2nd Place - Mark J. Renz, University of California, Davis

3rd Place - Martina W. Murray, New Mexico State University

Student Poster Contest

1st Place - Dawn Wyse-Pester, Colorado State University

2nd Place - W. Mack Thompson, Colorado State University

Chuck Stanger was the lone retiree recognized at the meeting.

The passing of two individuals, Virgil Freed and Louis Figerola, though not a WSSW member, were recognized at this meeting.



1998 Western Society of Weed Science Board of Directors

Front row (L to R): Rick Arnold, Education and Regulatory section chair; Charlotte Eberlein, Past President; Barb Mullin, President; Rod Lym, President-elect; Paul Ogg, WSSA representative 1997

Back row (L to R): Neal Hageman, secretary; Don Morishita, Research section chair; Shaffeck Ali, Member-at-Large; Wanda Graves, Treasurer-Business Manager; John Evans, CAST representative 1997

Absent: Donn Thill, WSSA representative; Steve Miller, CAST representative

1998 FELLOWS

Doug Ryerson

Dr. Doug Ryerson grew up in Bozeman, Montana and realized early in life that weeds were a serious problem when he worked as a summer laborer for Montana State University. Doug got his B.S. in Agricultural science from Montana State University and his M.S. and PhD in Crop Physiology from the University of Wisconsin, Madison. Dr. Ryerson worked 3 years as an area crop specialist for the University of Idaho before going to work as a Product Development Specialist for Monsanto.

Dr. Ryerson has served the Western Society of Weed Science in numerous capacities as Past President, President, President-Elect, Secretary, and twice served as chair of the Agronomic Crops Section. In addition, he has actively participated in the student educational enhancement program.

Dr. Ryerson's efforts during the past 17+ years have been directed toward developing new and expanding existing markets for crop protection chemicals in diversified irrigated and dryland agriculture in Idaho, Montana, and North Dakota. He is the recognized authority on triallate with the cereal growers and within Monsanto Company. He has been very instrumental in evaluating various alternative formulations and in screening various wheat varieties for tolerance/susceptibility to triallate. His work has been effective in neutralizing the wild oat resistance issue for this product in Montana and North Dakota. Dr. Ryerson's efforts and work have been instrumental in protecting the product base and increasing volume. Doug has been actively involved in bringing Land Master BW and Fallow Master to the cereal markets. He has been the driving force for minimum and no-till dryland wheat production in Montana through utilization of glyphosate products for weed control. Further, he has undertaken a significant leadership role in developing strategies for returning CRP land back to crop production.

Dr. Ryerson is an individual who is respected and admired as a weed scientist and as an individual by his peers, colleagues, and the scientific community. He brings sound technical skills and knowledge to the weed science profession. He constantly is striving for new and innovative ways to improve weed science and production agriculture. These traits earned him the Monsanto Distinguished Development Award; the highest recognition available within Monsanto.

Tom Whitson

Dr. Tom Whitson grew up on a farm/ranch operation in West Texas where he got his first exposure to weeds. Tom got his B.S. in Agricultural Education from Texas Tech, his M.S. in Plant and Animal Science from East Texas State and his PhD in Weed Science from the University of Wyoming. Dr. Whitson's work experience includes a farm chemical plant manager for Rowland Gordon Company in Plainview, Texas and American Cyanamid in

Kress, Texas; a science teacher for Spring Lake Earth Schools in Earth, Texas; a county extension agent and 4-H specialist for Kansas State University Extension Service; a county agricultural extension agent for the Wyoming Agricultural Extension Service; a county agent for the Texas Agricultural Extension Service; an extension specialist and research assistant for the Plant Science Department for the University of Wyoming; a research and extension crop and weed scientist for Oregon State University; and presently serves as extension weed specialist for the University of Wyoming Cooperative Extension Service.

Dr. Whitson has made numerous contributions to the Western Society of Weed Science serving as President, Past President, and twice served as Extension and Regulatory Chair and served as chair of the Publication Committee. Tom initiated the publication, *Weeds of the West*, serving as both editor and distributor. This publication has made over \$100,000 profit for the society with more than 60,000 copies sold worldwide.

Dr. Whitson has also made significant contributions to western agriculture. He has conducted research on over 30 problem weeds in western rangeland, introduced the concept of sagebrush thinning to wildlife managers for improved habitats; worked extensively with Federal Land Managers to develop noxious weed management programs and has been instrumental in developing special local needs registrations for several herbicides in the Pacific Northwest and Great Plains regions. In addition, Tom worked tirelessly with Washington, Oregon, and Idaho to develop the first Pacific Northwest Weed Control Handbook and most recently, with Montana and Utah to develop Weed Management Handbooks for agricultural and horticultural crops in this area.



1998 Western Society of Weed Science Fellows
Doug Ryerson (left) and Tom Whitson (right)

FIFTY-SECOND MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

COLORADO SPRINGS, COLORADO

March 8 to 11, 1999

President - Rod Lym

President-Elect - Jeff Tichota

Secretary - Jill Schroeder

Treasurer-Business Manager - Wanda Graves

John Orr and Charlotte Eberlein were honored as Fellows of the Society in 1999. Gus Foster and Phil Westra were named Outstanding Weed Scientists from the Public and Private Sectors, respectively. Celestine Duncan was given the Presidential Award of Merit by President Rod Lym. Total meeting attendance was 371 including 66 students. There were 94 oral and 51 poster presentations.

The Western Weed Coordinating committee, Western Branch of the American Society of Horticulture, and Jointed Goatgrass Committee held joint meetings with this WSWs meeting in Colorado Springs.

In the General Session, President Lym talked about the growth of the WSWs, including the addition of Alberta and Saskatchewan, the first two Canadian provinces to become a part of the WSWs and Oklahoma. He also talked about the success of *Weeds of the West* and other publications, and the beginning of the WSWs homepage on the internet.

Herbicide resistance issues, impacts and implications was discussed by Carol Mallory-Smith and risk assessment of genetically modified plant products and gene flow of transgenes from crops to wild relatives also were discussed by Thomas Nickson and Michael McKee of Monsanto Company.

The first symposium at a WSWs meeting was held to discuss the most recent findings on jointed goatgrass management in winter wheat.

Knapweeds were again the weed with the most frequently presented research/papers in the Range and Forest Project. A variety of herbicide and integrated weed management practices were presented in Horticultural Crops and MON 37500, glyphosate and glufosinate resistant sugar beet, and jointed goatgrass were the three most discussed topics in Agronomic Crops. In Teaching and Technology Transfer, Wetlands and Wildlands, and Basic Sciences, there was a wide range of topics presented with no emphasis on a particular issue or weed species.

The Society voted and approved a change in the WSWs Constitution and Operating Guide to include Alberta, Saskatchewan and Oklahoma as members of the WSWs.

Student Paper Contest winners were divided into two poster and two oral presentation sections.

Student Paper Contest

Section 1

1st Place - John R. Roberts, Oklahoma State University

2nd Place - Holli A. Murdoch, Utah State University

3rd Place - Ginger G. Light, Texas Tech University

Section 2

1st Place - Lynn Fandrich, Colorado State University

2nd Place - Matthew D. Schuster, Oregon State University

3rd Place - Martina W. Murray, New Mexico State University

Student Poster Contest

Section 1

1st Place - Dodi Kazarian, Colorado State University

2nd Place- Darrin L. Walenta, Oregon State University

3rd Place - Tehmina Sheikh, Texas Tech University

Section 2

1st Place - Michael W. Marshall, Kansas State University

2nd Place - Sandra L. Shinn, University of Idaho

3rd Place - Curtis R. Rainbolt, University of Idaho

There were no retirees reported in 1999.

The WSWs recognized the passing of Sam Stedman and Loal Vance.



1999 Western Society of Weed Science Board of Directors

Front row (L to R): Dan Ball, Education and Regulatory section chair; Carol Mallory-Smith, Research section chair; Barb Mullin, Past President; Jill Schroeder, secretary; Wanda Graves, Treasurer-Business Manager

Back row (L to R): Jeff Tichota, President-elect; Rod Lym, President; Steve Miller, CAST representative; Rick Arnold, Member-at-Large; Donn Thill, WSSA representative

NOTE: Yes, yes, this photo was not taken in Colorado Springs! Board photos are taken at the end of the previous year's meeting. So, this Board photo was taken in Hawaii in 1998 at the beginning of this Board's term.

1999 FELLOWS

Charlotte Eberlein

Dr. Charlotte Eberlein is a Professor of Weed Science in the College of Agriculture at the University of Idaho. Charlotte earned a B.S. in Agronomy in 1975 from Washington State University, M.S. in Crop Science in 1978 from Oregon State University, and a Ph.D. in Agronomy in 1981 from The University of Minnesota. She joined the faculty at North Dakota State University in 1981 as Assistant Professor and Extension Weed Specialist. In 1984, Charlotte accepted a position as Assistant Professor at the University of Minnesota and then moved to the University of Idaho in 1989 as Associate Professor of Weed Science. She was promoted to Professor in 1994 and is presently the District Director for Cooperative Extension at Twin Falls, Idaho.

Dr. Eberlein has amassed an impressive list of contributions to weed science as a discipline. She has taught undergraduate and graduate courses, directed graduate students, initiated, and maintained innovative research programs at the three institutions that she has served. Charlotte has published over 34 refereed journal articles and 4 book chapters: as well as 35 extension publications and 33 popular press articles. She is recognized nationally and internationally as an authority in herbicide resistance in plants. She has sought opportunities to work cooperatively with peers in weed science, plant breeding and plant pathology.

Charlotte Eberlein has provided effective leadership to the Weed Science Society of America (WSSA) by serving on 12 committees, serving as Secretary from 1994 and 1996, and recently was elected Vice President that will lead to being President in 2002. Charlotte was inducted as a Fellow Member of WSSA in 1998. She was active in the North Central Weed Control Conference from 1982 to 1988, serving on 6 different committees. However, the Western Society of Weed Science has benefited most from the leadership of this individual. Charlotte has served on 8 committees and held every elected office including President in 1996 to 1997.

A supporting letter states "Suffice it to say that she is one of the shining stars in Weed Science today. She is recognized as an outstanding leader at the regional, national, and international levels. Her superlative work in extension, field research, laboratory research, and professional service activities clearly demonstrates a degree of excellence that deserves recognition by her peers."

John E. Orr

Mr. John E. Orr is a Principal Field Biologist with Zeneca Agricultural Products. He completed a M.S. degree in Agronomy/Weed Science in 1970, at the University of Arkansas. John started his professional weed science career with Diamond Shamrock Corporation in 1969, moved to BASF Corporation in 1971, joined ICI Americas, Inc. in 1983, and has been in his present position since 1987. He works closely with university weed scientists in developing new crop protection products for both major and minor crops grown in the Pacific Northwest. He is dedicated to and supports programs important to regional agriculture.

John has been an active member of WSWs for 27 years. He has served as chairman of the site Selection committee and the Resolution committee. "John has not been an individual to watch from the sideline" as noted from a supporting letter. He has been "remarkably active in professional and political activities important to weed science and agriculture."

He has provided exceptional leadership within his state of residency, which spreads to surrounding states as well. John has served as president of the Idaho Weed Control Association, president of the Idaho Citizens for Food and Shelter, and serves on the Idaho State Department of Agriculture Noxious Weed Advisory Council and Food Producers of Idaho.



1999 Western Society of Weed Science Fellows
Charlotte Eberlein (left) and John Orr (right)

FIFTY-THIRD MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**TUCSON, ARIZONA
March 14 to 16, 2000**

President - Jeff Tichota
President-Elect - Don Morishita
Secretary - John Orr
Treasurer-Business Manager - Wanda Graves

Rod Lym and Frank Young were honored as Fellows by the Society. Outstanding Weed Scientists were Bart Brinkman and George Beck from the Private and Public Sectors, respectively. Gus Foster was given the Presidential Award of Merit. The meeting attendance was 385 with 88 oral and 54 poster presentations.

The Tucson meeting coincided with Major League Baseball's spring training season. Consequently, the hotel did not honor the room reservations for several attendees, which forced them to stay at other hotels. Also, this was the first year of accepting electronic submission of abstracts for publication in the Proceedings, although it was all done by email submission rather than web based.

President Jeff Tichota talked about changes taking place in agriculture and weed science and the challenges our Society faces in the future. He stated that he believed that "biotechnology can provide us with a spectacular future and leapfrog production to meet new environmental & world demands.... the race for Biotech is on; the major crops will have their gene sequences isolated and important sites will be identified in the next 3 to 5 years. When the genetic map is drawn; new or improved products will quickly follow." He encouraged students to look beyond Weed Science courses and add courses in plant breeding and genomics.

A general session presentation was provided by Jane Poynter, one of the members of Paragon Space Development, who occupied the Space Biosphere outside of Tucson, and her experience living in that facility for a year. The third General Session presentation was made by Thomas Hoban of North Carolina State University, who talked about public perceptions and understanding of agricultural biotechnology. He saw biotechnology as being at a crossroad in terms of public acceptance and that there needed to be a major commitment to public education.

Some of the last sulfonylurea and imidazolinone herbicides to be registered, sulfosulfuron and imazapic were presented in poster and oral presentations. Studies evaluating solarization, cover crops and metam sodium were reported in Weeds of Horticultural Crops as potential replacements to methyl bromide. Jointed goatgrass was the predominant weed species and flucarbazone and flufenacet were two non-registered herbicides presented in Weed of Agronomic Crops.

In the Education and Regulatory session Mick Qualls presented a talk on how a private researcher can use electronic devices to aid field research. This is one of, if not the first talk, on the use of this technology in the field.

At the General Business meeting, the Society voted and approved a change in the WSWs Constitution and Operating Guide to include the state of Texas as a member-state of the WSWs.

The Student Paper Contest had a poster section and three oral presentation sections.

Student Paper Contest

Section 1

1st Place - Federico Trucco, Colorado State University

2nd Place - Jennifer Drewitz, University of California, Davis

3rd Place - Dodi Kazarian, Colorado State University

Section 2

1st Place - Mark Renz, University of California, Davis

2nd Place - Curtis Rainbolt, University of Idaho

3rd Place - Eric Nelson, North Dakota State University

Section 3

1st Place - Kevin Kelley, Utah State University

2nd Place - Oleg Daugovich, University of Idaho

3rd Place - Michael Marshall, Kansas State University

Student Poster Contest

1st Place - Elme' Coetzer, Kansas State University

2nd Place - Lynn Fandrich, Colorado State University

3rd Place - Brian Olson, Kansas State University

Retirees at the 2000 meeting were Ted Warfield, Bill Miller, and Jack Warren.

The WSWs recognized the passing of several members including W. Eugene Arnold, Gary A. Lee, Leslie Sonder, Robert Higgins, and Charles Robocker.



2000 Western Society of Weed Science Board of Directors

Front row (L to R): Rod Lym, Past President; Wanda Graves, Treasurer-Business Manager; Don Morishita, President-Elect

Back row (L to R): Donn Thill, WSSA representative; Jesse Richardson, Research section chair; Jeff Tichota, President; John Orr, secretary

Absent: Gil Cook, Education and Regulatory section chair; Steve Miller, CAST representative; Phil Westra, Member-at-Large

2000 FELLOWS

Rodney (Rod) G. Lym

Rod Lym began his college career at the West Point Academy and completed his B.S. at the University of Wyoming. In 1979, he obtained a PhD from the University of Wyoming. Rod has spent his entire professional career at North Dakota State University in Fargo, ND, beginning as a Postdoctoral Research Associate (1979-1981) and then joining the faculty as Professor of Weed Science.

Dr. Lym has been an active member of the WWSWS beginning in 1979, spending 8 years on the Board of Directors. Rod has been deeply involved in various committee assignments including Chair-Project 1, Perennial Herbaceous Weeds (1983-84), Chair-Research Section 2, Weed Biology, Physiology, and Chemical Studies (1987), Finance Committee (1988& 1989). He was the WWSWS Representative to the Weed Science Society of America (WSSA) (1992-1995), and Chair of the Research Section in 1996. Dr. Lym was the President-elect and Program Chair in 1998 and was WWSWS President in 1999.

Dr. Lym has presented 19 papers at WWSWS meetings and has authored 68 papers published in the WWSWS Research Progress Reports. His writing skills are not limited to the WWSWS, since Rod has also written 34 papers in journals such as *Weed Science*, *Weed Technology*, and *Journal of Range Management*. Rod is also the senior author of 143 scientific papers/chapters in books and Extension publications, as well as non-WWSWS Proceedings and Research Reports. Undoubtedly the greatest service to the WWSWS has been Rod's serving as Editor of the WWSWS Proceedings from 1989 to 1997. He incorporated some innovations that streamlined the procedures for producing the proceedings while keeping the cost to a minimum.

For his exceptional contributions to the Western Society of Weed Science, Dr. Lym was the initial recipient of the Presidential Award of Merit in 1994. In 1998, Rod received the Society for Range Management Outstanding Achievement Award for eminently noteworthy contributions in advancing the science and art of range management.

Rod has also been very active in WSSA, where he was associate editor of the 6th edition of the *WSSA Herbicide Handbook* and was the Chair of the Research Section IV (1989). Dr. Lym has also served the North Central Weed Science Society as the new herbicide editor for the NCWSS Research Report (1984-1989).

Since 1985, Dr. Lym has been an advisor for the North Dakota Weed Control Association state noxious weed control program. Rod's research activities are almost synonymous with leafy spurge, and he was instrumental in publishing "*Leafy Spurge Control in the Great Plains*". Although Dr. Lym doesn't have an extension appointment, he fulfills that role related to rangeland, roadside, and untilled land weed control, including those areas of primary responsibility for county weed control officers. He helps lead several field days each year and makes presentations at several meetings aimed at practitioners. In many ways, Rod is acknowledged both locally and nationally as "Dr. Leafy Spurge".

Rod has become the epitome of a young weed scientist, rendering invaluable service to the profession while serving his clientele, university, and state, as well as the regional and national weed science societies with distinction and honor.

Frank L. Young

Dr. Frank Young is a Research Agronomist with the USDA - Agricultural Research Service in Pullman, Washington. He received his B.S. in Wildlife Biology from South Dakota State University. Frank obtained both his Master's and PhD from the University of Minnesota, majoring in Agronomy, with an emphasis on Weed Science.

Dr. Young has been very active in the WSWS since 1982 and has presented 6 papers. He was elected and served as Chair of the Research Section, as well as serving as Editor of the WSWS Research Progress Reports in 1991. One of Frank's most significant contributions to the WSWS has been his service on the Student Educational Enhancement Committee since its inception. Dr. Young's other contributions to the WSWS include Chair of the Horticulture Crops Section in 1985, and has served on various committees, such as the Graduate Student Paper Contest Committee, Nominations Committee, and the Site selection Committee.

Dr. Young has also been active in other weed societies; presenting 4 papers at the North Central Weed Control Conference, and 3 papers at Weed Science Society of America meetings. He has served as a member of the Weed Science Society of America (WSSA) Career Brochures Committee and the Weed Loss Bibliography Committee of the WSSA. Frank has been very active in the Washington State Weed Association and has presented papers at almost every annual conference since 1982. In 1991, Dr. Young was elected an Honorary Member of the Washington State Weed Association.

Although Dr. Young has no formal teaching responsibility, he has been active in training graduate students at Washington State University and the University of Idaho. He is a member of the graduate faculty at both universities. He has served as major advisor for 5 Masters students in Weed Science at WSU and has served on graduate committees of 7 Masters students and 10 PhD students.

During his career, Dr. Young has published 31 journal articles, 4 book chapters, 5 technical bulletins, 2 extension bulletins, and many abstracts of research on weed biology, weed management, and cropping systems. In 1996, Dr. Young and co-workers received a Certificate of Excellence Award from the American Society of Agronomy for their Pacific Northwest Extension Bulletin on Russian thistle.

Currently, Dr. Young is project leader for a long-term, large-scale no-till spring cropping systems project near Ritzville, WA. This project involves the efforts of 14 scientists from ARS, Washington State University, University of Idaho, and Oregon State University, with liaison members from commodity commissions and several agribusinesses.



2000 Western Society of Weed Science Fellows
Rod Lym (left) and Frank Young (right)

FIFTY-FOURTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

COEUR D'ALENE, IDAHO

March 12 to 15, 2001

President - Don Morishita

President-Elect - Bob Parker

Secretary - Mark Ferrell

Treasurer-Business Manager - Wanda Graves

Jill Schroeder and Barbra Mullin were named Fellows of the Society. Darrell Hanavan, Colorado Wheat Commission, was named Honorary Member. Phil Stahlman and John Orr were honored as Outstanding Weed Scientists in the Public and Private Sector, respectively. Jack Schlesselman was recognized with the Presidential Award of Merit. The meeting attendance was 432 with 82 oral and 50 poster presentations.

President Don Morishita reflected on his early years in weed science and how the importance of getting to know others who attend this meeting shaped his career. Some of the important weed issues addressed were invasive species, biotechnology, chemical industry mergers and pesticide safety issues.

Robert Stevens, Washington State University Soil Scientist provided an update of the impact of the Mt. St. Helens volcanic eruption 10 years prior. Sadly, a paper was not submitted for publication.

A symposium on herbicide resistant crops with a focus on glyphosate resistant spring wheat was held. A paper given by Steve Fennimore, et al in the Weeds of Horticultural Crops section discussed glyphosate tolerant lettuce. This meeting also marked the first papers presented on glufosinate resistant sugar beet and glyphosate resistant canola, corn, sugar beet and spring wheat in Weeds of Agronomic Crops.

A second symposium on knapweed management in range and forest was held at the end of the WSWS meeting. Attendance exceeded expectations with 350 people coming from 11 western states, two Canadian provinces and 4 additional countries. Land managers who typically did not attend the WSWS meeting came specifically for this successful symposium.

The Student Paper Contest was divided into two poster sections and two oral presentation sections.

Student Paper Contest

Section 1

1st Place - Oleg Daugovish, University of Idaho

2nd Place - Nicole Wagner, Montana State University

Section 2

1st Place - Lee R. Van Wychen, Montana State University

2nd Place - Johnathon D. Holman, Montana State University

3rd Place - Branden L. Schiess, University of Idaho

Student Poster Contest

Section 1

1st Place - David S. Belles, Colorado State University

2nd Place - Lynn Fandrich, Colorado State University

Section 2

1st Place - Todd R. Wehking, North Dakota State University

2nd Place - Federico Trucco, Colorado State University

NOTE: Lee Van Wychen went on to serve as the Executive Director of Science Policy for the Weed Science Society of America, 2005 to present.

Lamar Anderson, longtime Business Manager for the WSWs, retired at this meeting.

The WSWs recognized the passing of Dan Hess, Louis Jensen, Larry Mitich, Clarence Seeley, Scott Stenquist, and Dean Swan at this meeting.



2001 Western Society of Weed Science Board of Directors

Front row (L to R): Bob Stougaard, Member-at-Large; Mark Ferrell, secretary; Wanda Graves, Treasurer-Business Manager; Don Morishita, President

Back row (L to R): Donn Thill, WSSA representative 2000; Rich Zollinger, Education and Regulatory section chair; Rod Lym, CAST representative; Phil Stahlman, Research section chair; Jeff Tichota, Past President; Bob Parker, President-elect

Absent: Steve Miller, WSSA representative

2001 FELLOWS

Barbra Mullin

It is a great pleasure for me to be able to recognize this individual as a Fellow of the WSWs. Her enthusiasm and tireless efforts on behalf of the WSWs and weed science in general over the years has been truly outstanding. She has served the WSWs in numerous capacities since 1982 including: Secretary 1995; President 1997; and committees too numerous to mention. She has been a driving force behind the development and delivery of the highly successful Noxious Weed Management Short Course; and was instrumental in obtaining funding and in the development of the publication "*Biological Control of Weeds in the West*". She has also served as editor of the WSWs Newsletter and the WSWs Research Progress Report. She recently served as the Task Force Chair for the CAST Issue paper on Invasive Plant Species published in February of 2000.

She has received numerous awards from various Federal and State organizations that have recognized her efforts in protecting federal lands from invasive species including: A Distinguished Service Award from the Agricultural Research Society for "*Biological Control of Weeds in the West*"; a special merit award from Secretary of the Interior Bruce Babbitt for her part in organizing the National Non-Native Plant Meeting held in Denver; and she was also recognized by the Western Weed Coordinating Committee for outstanding leadership and service.

To sum it up I'll read a quote from a letter of support received on her behalf: "She has dedicated her professional life and a fair amount of her personal time to noxious weed management and to the WSWs. She has always been supportive of her colleagues, and through her creative educational activities has made many valuable contributions to both the WSWs and weed science." It is a great pleasure to recognize Barbra Mullin as a Fellow of the WSWs.

Dr. Jill Schroeder

I am also very pleased to recognize this individual as a Fellow of the WSWs. She has been extremely active in the WSWs for the past 13 years. She has served on numerous committees over the years, selected as Member-at-Large and has been elected to the offices of Research Section Chair and Secretary of the WSWs. She has judged student posters, served on the Program Committee and has conducted membership surveys. In addition, she and her students have given 29 presentations at WSWs meeting in the past six years.

She has been the WSWs representative to the CAST Conversations on Change Team which has involved countless hours learning techniques for enhancing services, dealing with membership issues and providing leadership training. Both WSWs and Weed Science Society of America (WSSA) have put her skills to good use. For her outstanding commitment and service to WSWs, she received the Presidential Award of Merit in 1997.

In addition to her service to WSWS, she is active in WSSA having served as a reviewer for both *Weed Science* and *Weed Technology*, and as an Associate Editor for *Weed Technology*. She has also served as Secretary to the WSSA.

She leads a very creative and innovative research program that is well balanced and aimed at solving practical weed management problems in several crops. She has published 23 refereed journal articles and 7 experiment station publications. Her excellent research program earned her the New Mexico State University Distinguished Research award in 1999. She is also recognized as an outstanding teacher, teaching introductory and advanced courses in weed science. She has high expectations of her students and teaches them to synthesize information and more importantly to think.

"In summary, she has an outstanding record of service to WSWS, her students and her fellow weed scientists. She willingly shares her research ideas, time, and talents, and does not toot her own horn or try to upstage her colleagues. Rather she leads by example and works for the common good in a highly professional manner." It is a pleasure to recognize Jill Schroeder as a Fellow of the WSWS.



2001 Western Society of Weed Science Fellows and Honorary Member

Darrell Hanavan, Honorary Member (left), Barbra Mullin, Fellow (center), Jill Schroeder, Fellow (right)

FIFTY-FIFTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

SALT LAKE CITY, UTAH

March 12 to 14, 2002

President - Bob Parker

President-Elect - Jill Schroeder

Secretary - Richard Zollinger

Treasurer-Business Manager - Wanda Graves

Jeff Tichota and Phil Westra were recognized as Fellows of the Society. Outstanding Weed Scientists honored at this meeting were Tom Whitson and Doug Ryerson representing the Public and Private Sectors, respectively. Senator Larry Craig from Idaho was recognized as Honorary Member for his work on federal noxious weed legislation. The Presidential Award of Merit was awarded to Tom Whitson. The meeting attendance was 370 with 84 oral and 66 poster presentations. Seventeen Sustaining members contributed \$5,400 to the society.

This was the first year that all oral presentations were made using LCD projectors instead of slide projectors.

In the General session President Bob Parker reflected on the history of agriculture over the years with particular emphasis on weed management. He concluded that we shouldn't forget the past as we learn from those times, but we should look towards the future and continue to be productive in the environment we have today. Jody Holt presented interesting thoughts and questions about invasive species in all ecosystems and the research challenges associated with invasive species. She pointed out that Weed Science is a discipline defined by the organism that we study and that makes for diverse research from genetics, cellular biology, ecology, and control of weeds in cropping systems, forestry, aquatics, and wildlands, and other areas.

The symposium topic at this meeting was techniques for evaluating and diagnosing herbicide problems. Seven papers were presented on various topics including diagnosing herbicide problems in field crops, the physics of herbicide drift, distinguishing disease damage from herbicide injury, and reproducing herbicide injury symptoms in the greenhouse.

The membership voted to change the WSWs Constitution and Operating Guide by discontinuing the Resolutions Committee as a standing committee and have future resolutions handled by the Past President.

The Student Paper Contest was split into two poster and two oral presentation sections

Student Paper Contest

Section 1

1st Place - Oleg Daugovish, University of Idaho

2nd Place - Nicole Wagner, Montana State University

Section 2

1st Place - Lee Van Wychen, Montana State University

2nd Place - Johnathon Holman, Montana State University

3rd Place - Branden Schiess, University of Idaho

Student Poster Contest

Section 1

1st Place - David Belles, Colorado State University

2nd Place - Lynn Fandrich, Colorado State University

Section 2

1st Place - Todd Wehking, North Dakota State University

2nd Place - Federico Trucco, Colorado State University

Honored retirees included Carl Buchholz, Dave Cudney, Clyde Elmore, Robert Norris, Claude Ross, and Tom Whitson.

The WSSWS recognized the passing of Sud Morishita at this meeting.

No Board of Directors photo was available.

2002 Western Society of Weed Science Board of Directors

President Bob Parker

President-elect Jill Schroeder

Secretary Rich Zollinger

Research section chair Scott Nissen

Education and Regulatory section chair Phil Banks

WSSA representative Steve Miller

Past President Don Morishita

Member-at-Large Rick Boydston

CAST representative Rod Lym

Treasurer-Business Manager Wanda Graves



2002 Western Society of Weed Science Board of Directors

Front row (L to R): Jill Schroeder, President-elect; Nelroy Jackson, incoming Member-at-Large; Wanda Graves, Treasurer- Business Manager; Gil Cook, President-elect; Bob Parker, President
Back row (L to R): George Beck, Research section chair-elect; Steve Miller, WSSA representative; Bill McCloskey, Education and Regulatory section chair-elect; Rod Lym, CAST representative; Bob Stougaard, incoming secretary

Absent: Rich Zollinger, secretary; Scott Nissen, Research section chair; Phil Banks, Education and Regulatory section chair; Rick Boydston, Member-at-Large

2002 FELLOWS

Jeff Tichota

It is with great pleasure that Jeff Tichota is recognized as Fellow of the Western Society of Weed Science. Jeff received his BS in Plant Science and MS in Weed Science from South Dakota State University. He began his professional career with Uniroyal Chemical in 1976. In 1977, he went to work for Velsicol Chemical as a field rep and became a Field Manager in 1979. He continued in that position through the merger with Sandoz until 1997 at which time he went to work for Monsanto. He has held several management positions with Monsanto since that time and currently is the Agronomic Research Manager for Colorado, SE Wyoming, and Western Nebraska.

He has been a member of WSWs since 1981. Jeff has actively served western agriculture as well as the WSWs and has been recognized by industry for his contributions. He has served the Society on the Nomination and Finance committees, and moderated "What's New In Industry" sessions before becoming the President-elect/Program chair and President. He was selected for the WSWs Outstanding Weed Science Award in 1997. He has actively supported the Student Educational Enhancement Program and encouraged other field representatives to be more active in this endeavor. He received the Monsanto Award for Technical Excellence in 1999.

Jeff has authored or co-authored four papers in the WSWs. Additionally, he has published papers in the North Central Weed Science Society (NCWSS) and the Weed Science Society of America (WSSA). His research efforts with dicamba, glyphosate and Frontier herbicides have been instrumental in obtaining and fine-tuning the labels and use patterns of these products.

Some of the quotes from his nomination letters indicate the high values that Jeff has placed on his relationships with cooperators and peers in weed science and are as follows: "Jeff demonstrates a high level of dedication and enthusiasm for weed science in the western United States that serves as a model for many professionals in our discipline. Jeff's long and distinguished career in the weed science private sector, coupled with his enthusiastic support of university research programs makes him an excellent candidate for this award".

"He is a very dedicated and committed individual who has made numerous contributions to his profession as a weed scientist. Jeff is very knowledgeable, honest, ethical, and just a great individual to be around. He always projects a positive attitude and optimistic viewpoint". "Jeff strives to be the best and represents the agricultural crop protection industry in a positive manner. A key quality of Jeff is that he will always ask, 'how can I help?'"

It is with great pleasure to recognize Jeff Tichota, WSWs Fellow in 2002.

Dr. Philip (Phil) Westra

It is with great pleasure that Dr. Philip Westra is recognized as Fellow of the Western Society of Weed Science. Phil received his B.A. degree in Philosophy from the University of Wisconsin, another B.A. degree in Secondary Education from Calvin College and his PhD in Agronomy/Plant Genetics from the University of Minnesota. From 1980-1985, he was a Missionary Agronomist in Ecuador. He then joined Colorado State University, where he currently resides as Professor in the Department of Bioagricultural Pest Management.

Phil has been a member of the WSWS for over 16 years. He has served the Society as member-at-large, and on the resolutions, placement, student paper judging, and herbicide resistant weeds committees. He was named the WSWS Outstanding Weed Scientist-Public Sector in 1999. He has also been active in the North Central Weed Science Society where he has served on the board. Phil has been active in both the national and international weed science arenas. He is currently a member of the Weed Science Society of America (WSSA) where he has been involved in the photo contest, liaison committee, international affairs committee, publications board, awards committee, herbicide resistant weeds committee and the sustainable ag committee. He was named the WSSA Outstanding Extension Weed Science Worker of the Year in 1998.

Dr. Westra is dedicated to graduate student education with 4 M.S. students and 11 PhD students completed their degree programs under his direction and counsel since 1985. Additionally, 5 M.S. and 5 PhD students are currently in his program. Phil has amassed outstanding research productivity with 28 refereed journal manuscripts in the past six years. Additionally, he and his students have given over 60 papers at the WSWS and WSSA meetings. At least one of Phil's students has placed in the WSWS Graduate Student Paper Competition each year since 1995, again a testimonial to Phil's dedication to his students.

In addition to the above awards, Phil has received many other honors and awards during his career. He was recipient of the Outstanding Graduate Student Award from the WSSA in 1979. In 1980, he received the Outstanding Graduate Student of the Year Award from the North Central Weed Control Conference and in 1981 was the co-author of the Outstanding Publication of the Year in Weed Science. Phil's reputation as an excellent educator was recognized in 1996 when the Rocky Mountain Plant Food Association awarded him the Outstanding Weed Scientist of the Year because of his dedication to weed science research and education.

A quote from one of Dr. Westra's support letters probably sums it up best. "Dr. Westra is dedicated to the advancement of weed science. His outstanding publications record, commitment to his students and extension clientele, and service to our professional weed science societies have earned him an extraordinary reputation among our weed science colleagues."

It is with great pleasure that we recognize Dr. Phil Westra, WSWS Fellow in 2002.



2002 Western Society of Weed Science Fellows
Jeff Tichota (left) and Phil Westra (right)

FIFTY-SIXTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**KAUAI, HAWAII
March 11-13, 2003**

President - Jill Schroeder
President-Elect - Gil Cook
Secretary - Robert Stougaard
Treasurer-Business Manager - Wanda Graves

Carol Mallory-Smith and Vanelle Peterson were honored as Fellows of the Society in 2003. Dr. Roy Nishimoto, University of Hawaii at Manoa, was named as an Honorary Member. Frank Young received the Outstanding Weed Scientist – Public Sector award. Bill Brewster received the Professional Staff award, the first time that this award was given. Nelroy Jackson was awarded the Presidential Award of Merit by President Jill Schroeder. Wanda Graves announced that there were 348 members attending the Hawaii meeting, down about 50 people from the previous year. There were 15 Sustaining Members that contributed \$4,800 to the society.

The General Session included talks from President Jill Schroeder and talks on Biological Control of Weeds in Hawaii by Kenneth Teramoto, Hawaii Department of Agriculture and Invasive Species in Hawaii by Philip Thomas, Hawaiian Ecosystems at Risk Project. Jill spoke about the issues regarding our society now and the potential for the future. In her address she spoke about the need of the society to begin to think about future funding outside of sales of *The Weeds of the West* which has been so successful in continuing funding for the society. Jill also spoke of the need to increase student involvement in the society. Following an IRS review, the role of the Society's Business Manager was redefined and WSWS was allowed to continue as a non-profit organization.

Student Paper Contest

Section 1

1st Place - Lynn Fandrich, Oklahoma State University
2nd Place - Travis Osmond, Utah State University
3rd Place - Doug Shoup, Kansas State University

Section 2

1st Place - Mark Lubbers, Kansas State University
2nd Place - Laurie Janzen, North Dakota State University
3rd Place - Andrew Kniss, University of Nebraska

Student Poster Contest

Section 1

1st Place - Amber Vallotton, New Mexico State University
2nd Place - Erick Dvorak, North Dakota State University

Section 2

1st Place - Doug Shoup, Kansas State University

2nd Place - Mark Lubbers, Kansas State University

British Columbia, Canada was added as a member-“state” of the WSWS. In order to preserve WSWS institutional memory Jill had appointed an ad hoc committee chaired by Vanelle Peterson to update the Constitution and By-Laws to reflect the new membership. Changes were approved by the members during the annual meeting. In line with this effort, a new position on the Board of Directors, Constitution and By-Laws representative, was established. President Jill Schroeder appointed Steve Miller to serve as the first representative.

Last year President Jill Schroeder appointed a Student Activities ad hoc committee due in part to her commitment to increasing student involvement in WSWS and an idea Steve Dewey brought forward at the Salt Lake City meeting in 2002. The committee put together a Student Night Out program for the first time. Steve Dewey and Lisa Boggs (Student Representative) spearheaded this effort to have students mix with members, both academic and industry, for a relaxed evening of dinner and conversation. The primary purpose of the evening was for students to learn more about WSWS and its members and to help them feel more a part of the society. In return, members could more fully understand the perspective and needs of students in the society. A total of 31 students and 20 hosts participated. The evening was considered a success by all participants.

The Student Education Enhancement committee was scheduled to be evaluated. Students travelled with WSWS member industry representatives for one week during the field season but there were concerns because of increased liability issues and time commitments on the part of members.

Those individuals retiring this year were Ron Benchley, Don Colbert, Gaylon Goddard, Bob Norris, Paul Ogg, and Tom Whitson.

Members who passed away in the previous year were Barb Mullin and Jim McHenry.

The 2003 Proceedings were dedicated to Barb Mullin.

No photo of the Board of Directors was available.

2003 Western Society of Weed Science Board of Directors

President Jill Schroeder

President-elect Gil Cook

Secretary Bob Stougaard

Research section chair George Beck

Education and Regulatory section chair Bill McCloskey

WSSA representative Steve Miller

Member-at-Large Nelroy Jackson

Past President Bob Parker

CAST representative Rod Lym

Constitution and Operating Procedures representative Steve Miller

Treasurer-Business Manager Wanda Graves

2003 FELLOWS

Vanelle (Carrithers) Peterson

Vanelle Peterson is an eighteen-year employee of Dow AgroSciences. She received her B.S. degree in Plant Protection from the University of Idaho and her M.S. degree in Entomology from Washington State University. Vanelle is a Technical Service and Development Specialist and Development Biologist with Dow. In this capacity she has conducted research across a wide geography, from Hawaii to the Pacific Northwest and through the High Plain states.

Demonstrating field research expertise with herbicides, tree growth regulators, and insecticides she has attained a high level of technical and business knowledge in diverse markets including industrial vegetation management, forestry, range and pasture, noxious/invasive weeds, cereals, potatoes, and tree fruits. Even though these responsibilities place a high demand on her time and energy, Vanelle has unselfishly leveraged this experience and expertise to achieve significant accomplishments in numerous professional societies including the WSWs.

Vanelle has been a member of WSWs since 1985. She is a member of 11 professional societies as well as serving on the Board of Directors of the Center for Invasive Plant Management and as a part of the Washington State Commission on Purple Loosestrife. She belongs to two honor societies and has served on various committees and as a part of the leadership team for several societies. She is always willing to take leadership responsibilities when asked and is always very thorough at the tasks that she volunteers for.

For the WSWs, Vanelle has served as Chair of the Regulatory Committee and Member At Large. She has been Project Chair for both Project 5, Weeds of Aquatic, Industrial and Non-Crop Areas, and Project 6, Undesirable Woody Plants. These sessions, especially the discussion groups, were praised by other members as one of the most valuable and insightful held during that year's annual meeting. Vanelle's commitment to the WSWs is illustrated by the committee work she has chaired and the success these projects have enjoyed. Vanelle co-chaired the 1996 Weed Management on Natural Resource/Wildland Areas Symposium which was held in Albuquerque, NM. The symposium was held in conjunction with the Western Weed Coordinating Committee (WCC) which includes many federal and state land managers. In 1997 Vanelle was asked to develop objectives for and lead the Legislative Committee from an ad hoc to a Standing Committee. Vanelle sought the input of both present and previous members, then proceeded to quickly accomplish the task, including the revision statements needed for the Constitution and Bylaws. Once finished, she served as the first Chair of this Committee. In addition to her commitment to serving the Society, Vanelle has presented 10 papers during the annual meeting, and has given numerous presentations at other state and regional weed science meetings. She is actively involved in the California, Idaho, Oregon, and Washington State weed organizations and holds offices in several.

Vanelle always takes a personal interest in university students and serves as a good example of how professionals should interact with other professionals. She has gone out of her way to meet and visit with students and is a model for professionalism, dedication, and work ethic for them.

Carol Mallory-Smith

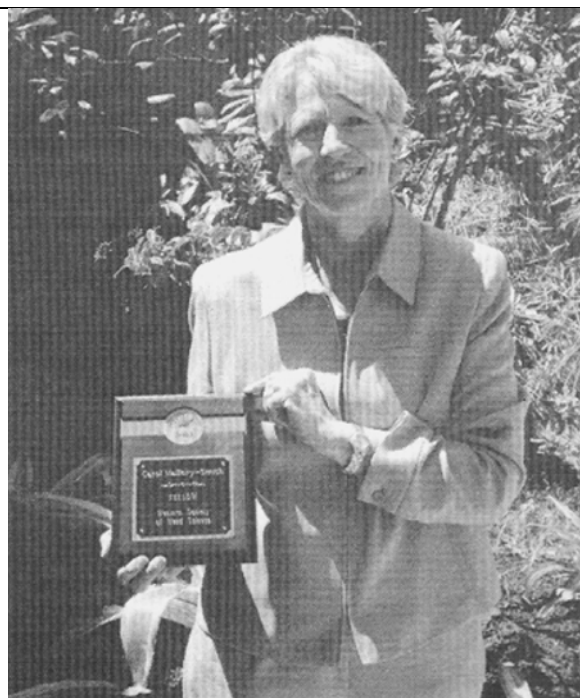
Carol Mallory-Smith is currently an Associate Professor at Oregon State University (OSU). She received both her B.S. degree (Plant Protection) and her PhD (Plant Science) from the University of Idaho.

Dr. Mallory-Smith has been actively involved in the WSWs for more than a decade. She has served as Chair of the Research Section, Project 3- Weeds of Agronomic Crops, and the Herbicide Resistance Plants Committee (she was one of the original members of this committee). On several occasions, Carol has organized sessions and symposia on current topics associated with herbicide resistant weeds and crops for the annual meeting of the WSWs. She has authored or co-authored many WSWs research progress reports and abstracts. She and her graduate students regularly present papers at the WSWs meetings. Additionally, Carol is active in the Weed Science Society of America (WSSSA) and the International Weed Science Society. She has served, or currently serves, on the Board of these two organizations. She was on the Organizing Committee for the 2000 International Weed Science Society meeting in South America.

Carol's research program is recognized both nationally and internationally for its contributions to our knowledge base in the areas of herbicide resistance and gene flow from transgenic crops to weeds. Her collaborative work with Dr. Bob Zemetra (University of Idaho) on the introgression between jointed goatgrass and wheat is particularly noteworthy. Carol's expertise in herbicide resistance has been utilized internationally. She was one of five scientists invited to speak to Brazilian biologists and agricultural professionals at the University of Sao Paulo in Jaboticabal, Brazil in 1996. She also was one of five weed scientists, and the only one from the US, invited to participate in a United Nations FAO sponsored technical committee on herbicide resistant crops in developing Countries in Rome, Italy, in 1998. In 1999, Agriculture Western Australia invited her to lecture and consult for 6 weeks on her jointed goatgrass-wheat introgression work.

Regionally, Carol is known for the major contributions she has made to developing weed management systems for cereals, row crops, and grass seed production in Oregon. She has served as major professor for 8 graduate students who have completed their M.S. or PhD degrees and 6 students who are working on their degrees. Carol has authored or co-authored 24 refereed journal articles, 5 book chapters, and 10 Extension and popular press publications. She was chosen as the George R. Hyslop Professor, an endowed professorship, in 1997.

In addition to her research competency, Carol is a very effective teacher. Her philosophy is to provide students with a unique learning experience in each class she teaches and to let students know that there are professors at OSU that value them. She has taught an upper-level undergraduate Weed Science course and teaches the graduate level Herbicide Science course. She has team taught the Orientation/Introduction to Crop and Soil Science course and Case Studies in Cropping Systems. She also has developed and taught numerous weed management short courses throughout Oregon and the Pacific Northwest. Her teaching excellence was recognized in 1997 when she received the Outstanding Teacher Award for the Department of Crop and Soil Science. She was named to the College of Agricultural Sciences Registry of Distinguished Teachers in 1999.



2003 Western Society of Weed Science Fellows
Vanelle Peterson (left) and Carol Mallory-Smith (right)

FIFTY-SEVENTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**COLORADO SPRINGS, COLORADO
March 9-11, 2004**

President - Gil Cook
President-Elect - Phil Stahlman
Secretary - Pete Forster
Treasurer-Business Manager - Wanda Graves

Phil Banks and Don Morishita were honored as Fellows of the Society in 2004. Doug Schmale, dryland wheat producer and member of the National Wheat Growers Association, was named an Honorary Member. Ron Crockett received the Outstanding Weed Scientist – Private sector award and Joe DiTomaso received the Outstanding Weed Scientist – Public sector award. Jim Vandecoevering received the Outstanding Weed Scientist - Early Career award. Joan Campbell was awarded the Presidential Award of merit by President Gil Cook.

The General Session included the Presidential address from Gil Cook and a fascinating, in-depth talk by Phil Stahlman ‘WSWS: Then, Now, and The Future’. He spoke about the annual meeting registration which has ranged from 280 to 431 with a mean and median attendance of 344. Over the 19 years of Phil’s analysis there was a significant decline in industry representatives attending. While attendance for academia varied over the years, there was more stable attendance from university than industry members. Government agency attendance averaged 40 members annually but was significantly more when symposia were held on invasive species. Over 10-year period students presented around 20% of all papers and posters indicating the importance of student participation in the annual meeting. There were 14 Sustaining Members that contributed \$4,800 to the society in 2004.

There were 2 symposia during this meeting: Soil Organic Matter (in the Education and Regulatory section) and a separate one on saltcedar. The saltcedar symposium was successful with 9 papers discussing the distribution, mapping, biology, ecology, management, and restoration of infested areas. Biocontrol of this weed and the importance of federal legislation were also discussed. Many members attended and there were 27 walk-in registrations just to attend this symposium.

Student Paper Contest

Session 1

- 1st Place - Krishona Martinson, University of Minnesota & North Dakota State University
- 2nd Place - Margaret Rayda, University of Wyoming
- 3rd Place - Eric Blinka, Kansas State University

Session 2

- 1st Place - Jeanne Falk, Kansas State University
- 2nd Place - David Belles, Colorado State University
- 3rd Place - Bradley Hanson, University of Idaho & Oregon State University

Student Poster Contest

Session A

1st Place - Jeanne Falk, Kansas State University

2nd Place - Krishona Martinson, University of Minnesota & North Dakota State University

3rd Place - Lynn Fandrich, Oregon State University

Session B

1st Place - Leandro Perugini, Kansas State University

2nd Place - Scott O'Meara, Colorado State University

3rd Place - Brian Thrift, Montana State University

Undergraduate Student Paper

1st Place - Jon-Joseph Q. Armstrong, Kansas State University

The Student Education Enhancement committee made recommendations and options for continuing the effort to coordinate time for students with WSSWS member industry representatives for 1 week during the field season. The Board of Directors did not decide at this time whether or not to continue the program. It was later discontinued.

The Board had decided to have a benchmarking and membership survey conducted at the 2004 meeting. It was thought that there needed to be an update on what activities that members felt was important to have at the meeting. Jill Schroeder and Vanelle Peterson had fun giving colored sticky dots to members for their name tags when members had completed the survey. Results would be shown to the members at the 2005 meeting.

Members who passed away in the previous year were Donald Burgoyne, Charles Scifres, Joseph Wayne Whitworth, and Wood Powell Anderson.

No photo was available of the Board of Directors.

2004 Western Society of Weed Science Board of Directors

President Gil Cook

President-Elect Phil Stahlman

Secretary Pete Forster

Research section chair Dan Ball

Education and Regulatory section chair Monte Anderson

WSSA representative Nelroy Jackson

Past President Jill Schroeder

Member-at-Large Kassim Al-Khatib

CAST representative Rod Lym

Treasurer-Business Manager Wanda Graves

2004 FELLOWS

Dr. Phil Banks

Dr. Phil Banks received his B.S. and M.S. degrees in Agronomy from Oklahoma State University and his PhD in Agronomy, with an emphasis in Weed Science, from Texas A&M University. He began his Weed Science career at the University of Georgia where he held a teaching and research position from 1979 to 1990. In 1990, he moved to New Mexico and started Marathon Agricultural and Environmental Consulting, a contract research and consulting firm that is well-respected throughout the US.

Dr. Banks has served WSWS in several capacities, including Chair of the Education and Regulatory Section, and member of numerous committees such as Local Arrangements, Herbicide Resistant Plants, and the ad hoc Constitution and Operating Procedures Committee. He is also a Sustaining Member of WSWS and has hosted a student in the Student Educational Enhancement Program.

In addition to his work with WSWS, Dr. Banks has been very active in both the Southern Weed Science Society (SWSS) and the Weed Science Society of America (WSSA). He served in several offices in SWSS, including President, and on numerous committees. At the national level, he has served on the Board of Directors as Member-at-Large and as CAST rep for WSSA. He also has been a reviewer for both *Weed Science* and *Weed Technology* and has served as Associate Editor for *Weed Technology*. Phil has authored or co-authored 51 refereed journals articles and four books or book chapters.

Dr. Banks has a long history of training and supporting graduate students. He has served as major professor for 13 Masters students, eight PhD students, and five Master of Plant Protection students. He taught Weed Science classes at both Texas A&M University and the University of Georgia, and guest lectures on a regular basis at New Mexico State University, where he is an Adjunct Professor.

In addition to his impressive record of service, Phil has always taken the time to mentor his colleagues. He's never too busy to listen to concerns and share his insight.

Dr. Banks has an outstanding record of accomplishments and service to WSWS, the discipline of Weed Science, and his colleagues.

Dr. Don Morishita

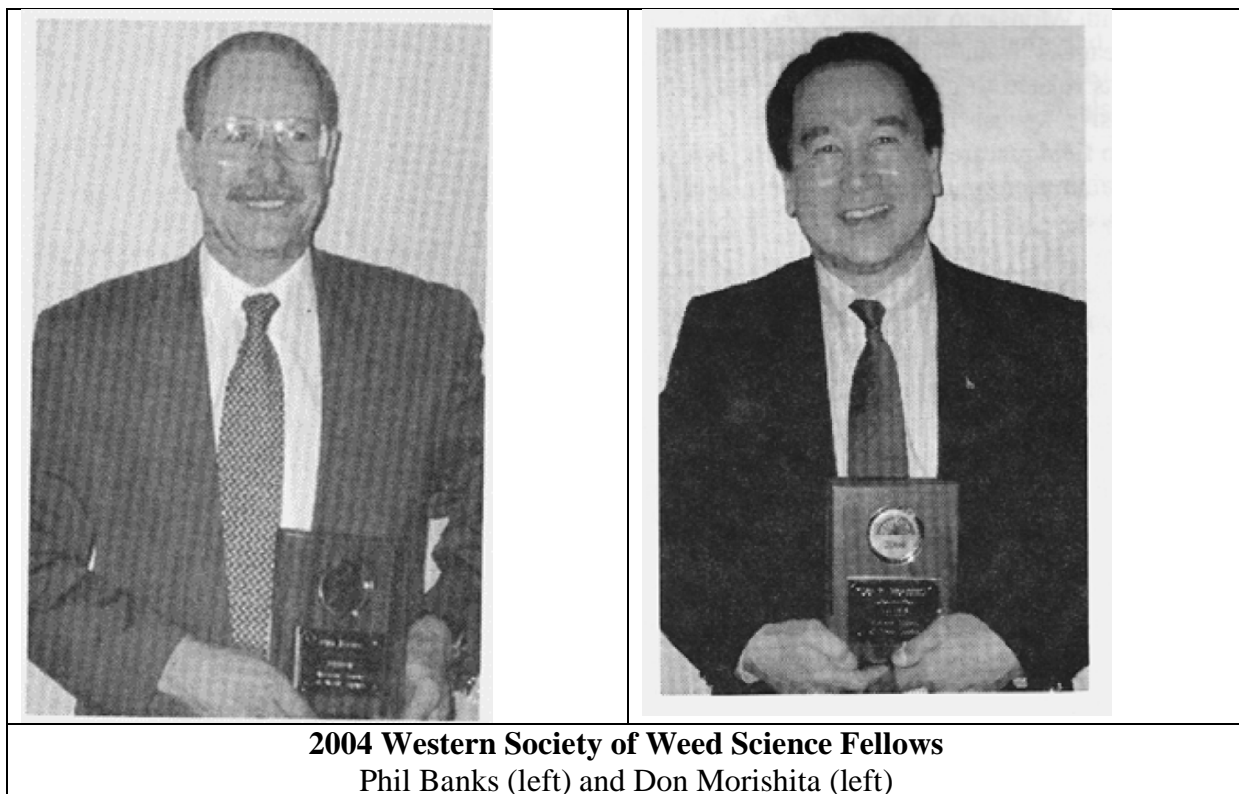
Dr. Don Morishita is a Professor of Weed Science at the University of Idaho. He received his B.S. in Environmental Health from Utah State University and his M.S. and PhD in Weed Science from the University of Idaho. He began his career in academia as a weed scientist for Kansas State University, and later moved to the University of Idaho, where he has been the Cereals and Sugarbeet Extension Weed Specialist for the past 14 years.

Don has a long history of outstanding service to the WSWs. He has held every major elected position in the society including President, Secretary, Research section chair, and Education and Regulatory chair. He is currently the WSWs Newsletter editor, and he has chaired or served on numerous projects and committees, including the Publications committee where he dedicated countless hours to helping revise *Weeds of the West*. Don has authored or co-authored 32 WSWs presentations and abstracts, and over 200 Research Progress reports.

Along with his service to WSWs, Don has been active in the Weed Science Society of America (WSSA) and was just elected Secretary. He has been a reviewer for both *Weed Science* and *Weed Technology*, and he has served on the Extension committee, the WSSA Retreat and Strategic Planning committee, and the Graduate Student Activities committee. Don is active in the Idaho Weed Control Association (IWCA) as well, where he has served in several positions, including President. He received the IWCA Weed Worker of the Year in 1996 in recognition of his many contributions to weed management in Idaho.

In addition to his excellence as an Extension Weed Specialist, Don is also an exceptional teacher. He is highly regarded not only by the students in his Introductory Weed Science course, but by the farmers, fieldmen, and colleagues in his Extension seminars, workshops, and short courses, and by the children in his 4-H club. Whether he is in the formal classroom situation or out in the field, Don has the uncanny ability to use the occasion to educate his audience about weeds and weed science.

Don's professionalism, leadership ability, and great sense of humor are admired and respected by all with whom he works.



FIFTY-EIGHTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**VANCOUVER, BRITISH COLUMBIA
March 8-10, 2005**

President - Phil Stahlman
President-Elect - Phil Banks
Secretary - Vince Ulsted
Treasurer-Business Manager - Wanda Graves

Nelroy Jackson and Roland Shirman were honored as Fellows of the Society in 2005. Kelly Luff received the Outstanding Weed Scientist – Private sector award and Kassim Al-Khatib received the Outstanding Weed Scientist – Public sector award. Guy Kyser received the Outstanding Achievement Award. Eric Lane received the Outstanding Weed Manager Award. Tony White was awarded the Presidential Award of Merit by President Phil Stahlman for his dedication and service to the society in working with the website development.

Wanda Graves announced that there were 290 members attending this meeting in British Columbia, one of the lowest attended meetings in the recent history of the Society. The Weed Science Society of America (WSSA) meeting had been held the previous month in Hawaii which may have reduced the attendance at WSSS this year. The registrations included 29 graduate students and 10 spouses. Phil Stahlman announced that Wanda Graves would be retiring at the conclusion of the 2006 meeting. The WSSS expressed appreciation of her service and while the society strongly regretted her decision, best wishes were given to her for her retirement. She was the backbone of every board with which she served.

The General Session included a talk from President Phil Stahlman about the Board work during the year and the 2004 survey results. Vanelle Peterson gave a more detailed update on the membership survey conducted at the 2004 meeting (more details below and in the 2005 Proceedings). There were 12 Sustaining Members that contributed \$4,200 to the society.

Tom Whitson was recognized for his efforts on *Weeds of the West*, which has sold about 128,000 copies. Sales were maturing, but the book had contributed significantly to the financial health of the society (see separate report on the history of the *Weeds of the West*). Janet Clark assumed responsibilities for *Weeds of the West*.

The results of the benchmarking survey and the membership survey at the 2004 meeting in Colorado Springs was reviewed in depth by the Board of Directors (with a consultant) at their summer meeting. Several priorities were identified: (1) Maintain the core topics at the annual weed science meeting and expand content to include invasive species, ecology, and biotechnology which would provide value to a diverse audience from the western U.S. and Canada; and (2) Membership broadening including mentoring/leadership development (retention & recruitment) and alliances with other organizations. The Board of Directors expressed thanks to Jill Schroeder and Vanelle Peterson for coordinating and leading the process from the membership survey through the Board review process.

Sixty-two posters and 75 papers were presented during the meeting. Both numbers were very close to historical averages even though registration numbers were lower. There were 2 successful symposia: Crop Protection Chemistry versus Genetically Modified Crops: Meeting the Challenge of Sustainable Pest Control; and Dose Response Functions.

Rod Lym reminded the society that the WSWS logo was officially registered in 1998 with the U.S. Patent & Trademark Office for a 10-year period.

Membership discussed and voted to approve a motion for a constitutional change to allow for an additional member-at-large. This change will increase representation and diversity, as well as provide for an odd number on the board for voting purposes. After a discussion it was decided that the President-Elect will appoint a member-at-large to serve with them through their term, thus alternating between industry and public.

Student Paper Contest

Weeds of Agricultural and Horticultural Crops

1st Place - Ryan Ractor, Arizona State University

2nd Place - Frederic Pollnac, Montana State University

Weeds of Range and Forest Section

1st Place - Kevin Branum, New Mexico State University

2nd Place - Sara Sweet, University of California, Davis

3rd Place - Erik Lehnoff, Montana State University

Student Poster Contest

1st Place - Todd Gaines, Colorado State University

Undergraduate Paper Contest

1st Place - Irene Calderon, New Mexico State University

Members who passed away in the previous year were Elvin Knip, Gail Wicks, and Rodney Kepner.



2005 Western Society of Weed Science Board of Directors

Front row (L to R): Wanda Graves, Treasurer-Business Manager; Phil Stahlman, President; Charlie Hicks, Education and Regulatory section chair; Rod Lym, CAST representative

Back row (L to R): Phil Banks, President-elect; Gil Cook, Past President; Nelroy Jackson, WSSA representative; Vanelle Peterson, Member-at-Large; Drew Lyon, Research section chair; Vince Ulsted, secretary

Absent: Jill Schroeder, Constitution and Operating Procedures representative

2005 FELLOWS

Roland Shirman

Roland Shirman has had a varied career in weed science. After graduating from the University of Wisconsin he began his career in product development with Chevron Chemical Company located in Fresno, CA. With Chevron he covered 11 western states. After two years he accepted employment with the USDA-ARS in Pullman Washington. He conducted weed research for over 14 years with the ARS. From 1979, he began working for Washington State University as an Extension Agent and County Chair for Columbia County. He always had the best interest of the producer in mind when he was conducting research with the ARS and continues to do so in his present position. Roland is an excellent agronomist and has the deep respect of the growers in his, and the neighboring counties in southeast Washington. He has conducted numerous herbicide trials, evaluated alternative crops, worked extensively with direct seeding and minimum or no-till, and distributed bio-agents for the control of weeds. He works closely with the County Noxious Weed Board as their advisor.

Roland has been attending the annual meetings of the Western Society of Weed Science since 1967. He has served on several committees within WSWs, including Finance (more than once) Resolutions, Necrology, and Nominating. He was chair of the Physiology/Chemical section. While with the USDA, he contributed frequently to the Research Progress Report and made several presentations. Roland has volunteered his time at the registration desk when things got busy and working with session chairs setting up for the meeting, running the projectors or lights, and staying to take down equipment.

Roland is a member of the Washington State Weed Association and has served on the Board of Directors. In 1992, he was named “Weed Warrior,” the highest honor awarded to a member. Only one “Weed Warrior” is selected annually from a membership of 750 to 900 members. He has received other awards for his contributions to his profession. They include two extension awards, the “Kenneth J. Morrison Award” from the WSU Department of Crop and Soil Sciences and the “Excellence in Extension Award” from the National Association of Wheat Growers. He also received the “Professional Service Award” from the Washington Association of Conservation Districts, selected as “Honorary Member” of the Washington State Weed Association, and recognized for his service to the Spokane Junior Livestock Show.

Nelroy Jackson

Nelroy received his PhD in Plant Pathology from Ohio State University in 1970 and worked for Monsanto on herbicide development for most of his career. He is recognized in California, nationally, and internationally for his work with industry and as a spokesperson for invasive species issues. He is truly dedicated to addressing the issues of invasive plants and is greatly concerned with the impacts of invasive non-native plants in wildland areas. He had the ability to communicate not only the importance of controlling invasive species, but he also educated groups on the risks and benefits of judicious use of herbicides as a tool for managing invasive plants.

Although his position at Monsanto does not afford him the opportunity to conduct rigorous scientific research and publish results in refereed journals, he has made major contributions to the field of Weed Science in many other areas. In particular, he has helped to develop management options for several invasive weeds and has contributed to an outstanding educational program that has led to the acceptance of glyphosate as an environmentally safe compound, even among many environmental groups that were previously completely opposed to the use of herbicides.

Nelroy was one of the founders in 1990 of Cal-IPC (California Invasive Plant Council, originally called Cal-EPPC – Exotic Pest Plant Council) and served on the Board of Directors for several years. His activities in the organization included organizing the annual symposia and producing the quarterly newsletter. In California, he helped to start Team Arundo (for the management of *Arundo donax* (giant reed)) and was part of the organizing committee to establish the California Noxious and Invasive Weed Action Plan. Nelroy served as the president of California Weed Science Society (CWSS) in 1994 and received the CWSS Outstanding Industry Award.

Nelroy was an active member of the Weed Science Society of America (WSSA) and was awarded the WSSA Outstanding Industry Award in 2009. He was a co-organizer of the 2003 Invasive Weed Symposium that was co-sponsored by WSSA and the Ecological Society of America. Nelroy was instrumental in helping to set up the National Invasive Species Advisory Committee in Washington, DC. He served two terms as a member of this Advisory Committee and was Vice-Chair for one of those terms. The invitation to serve on this National committee came from two different Presidential administrations.

WSWS responsibilities include Member-at-Large, WSSA representative, Local Arrangements chair, and Section chairs. In 2003 Nelroy was awarded the WSWS Presidential Award of Merit. During his term as Member-at-Large (2002-03) he worked with an ad hoc committee to update the constitution and by-laws of the society. He is reliable and conscientious and has the ability to bring diverse groups of people together to address the issues facing our discipline. He brought a great deal of experience and thought to board meetings and various committee assignments.

Two statements in the supporting letters for his Fellow nomination are descriptive of Nelroy and his character:

“I would like to say that I have tremendous respect for Dr. Jackson. I also appreciate his friendship and humor. He is someone that I admire for his contributions to weed science and for his personal ethics.”

“Dr. Nelroy Jackson was a friend of mine for many years, and I was honored to call him that. I believe that Dr. Nelroy Jackson’s accomplishments are also deserving and certainly warrant this lifetime achievement award bestowed by the society.”



FIFTY-NINTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

SPARKS, NEVADA

March 14-16, 2006

President - Phil Banks

President-Elect - Kassim Al-Khatib

Secretary - Vince Ulsted

Treasurer-Business Manager - Wanda Graves

Joan Campbell and Celestine Duncan were honored as Fellows of the Society in 2006. Wanda Graves was named an Honorary Member of WWS. Rick Arnold received the Outstanding Weed Scientist – Public sector award. Ed Peachy received the Professional Staff Award. Janet Clark was awarded the Presidential Award of Merit by President Phil Banks. Wanda Graves announced that there were 340 members attending the meeting, up significantly from 2005. There were 13 Sustaining Members that contributed \$4,600 to the society.

The General Session included a talk from President Phil Banks, The Long & Winding Road of WWS, in which he mentioned that the objectives of the WWS have changed very little, but the ways we accomplish them have changed dramatically. We now have a better understanding of our science and the techniques we use are greatly improved. He also talked about the future of WWS noting that “We have individuals <members> that conduct their science with the same skill and ability as great musicians such as B.B. King or Mozart. Or have the organizational skills and leadership skills as the best entrepreneurs or elected officials. The point that I’m trying to make is that “you”, the membership of WWS, are the “Long and Winding Road that is WWS”. Joe DiTomaso gave a fascinating talk on the Invasive Plants that Threaten the Lake Tahoe Region and noted that “the species that are considered landscape transformers are of highest priority in research and management efforts within the Tahoe Basin.” Charles Goldman also spoke about Lake Tahoe, Four Decades of Change in Lake Tahoe. It is worth reading the full talk in the 2006 Proceedings if you are interested in the history of the area around Lake Tahoe. A total of 117 papers and 77 posters were presented at the annual meeting.

A search committee drafted the job description and advertised for the new business manager position. Four applications were received by the board. Marathon Consulting Services was awarded a contract to supply business management for the society.

Phil Westra reviewed the success of the national jointed goatgrass research effort. Phil thanked Alex Ogg for his efforts on chairing this project. The program will be revised to include a broader spectrum for managing weeds in wheat.

The first annual student business meeting was held at this year’s meeting. Students approved the motion to formalize student representation to the WWS and the Weed Science Society of America (WSSA). Two student liaisons are required to meet national and regional guidelines.

Janet Clark and Tom Whitson reported that 138,000 copies of *Weeds of the West* have been sold since first published.

The 2006 Proceedings were dedicated to Wanda Graves in honor of her years of service to the WSWs.

Student Paper Contest

Weeds of Range and Forest Section

1st Place - Dirk Baker, Colorado State University

2nd Place - Luke Samuel, North Dakota State University

Agronomic Crops Section

1st Place - Todd Gaines, Colorado State University

2nd Place - Sonja Nunez, New Mexico State University

3rd Place - Gustavo Sbatella, University of Wyoming

Student Poster Contest

1st Place - Ryan Rector, University of Arizona

2nd Place - Alejandro Perez-Jones, Oklahoma State University

3rd Place - Lydia Clayton, University of Idaho

Undergraduate Poster Contest

1st Place - Adrienne Olson, University of Wyoming

WSWS member Tom Muzik passed away in the previous year.



“Most of you already know that Wanda Graves, our Business Manager for the past 17 meetings, is retiring at the end of March. Wanda has done a great job as our Business Manager and most members have no idea of the time and effort required to make sure the Society runs smoothly, and all members needs and questions are met. Wanda has done this with grace and efficiency for all of these years.”

Phil Banks, President

2006 Honorary Member

Wanda Graves



2006 Western Society of Weed Science Board of Directors

Front row (L to R): Rod Lym, CAST representative; Phil Banks, President; Wanda Graves, Treasurer-Business Manager; Phil Stahlman, Past President; Tim Miller, Education and Regulatory section chair; Kassim Al-Khatib, President-elect

Back row (L to R): Kai Umeda, Constitution and Operating Procedures representative; Ron Crockett, Member-at-Large; Vince Ulsted, secretary; Joe DiTomaso, Research section chair-elect; Nelroy Jackson, WSSA representative; Corey Ransom, Research section chair; Janet Clark, Member-at-Large

2006 FELLOWS

JOAN CAMPBELL

Joan Campbell is a Research and Instructional Associate at the University of Idaho. She received her B.S. in Agronomy with a Weed Science Option and her M.S. in Weed Science from North Dakota State University. She has been at the University of Idaho and a member of the Western Society of Weed Science (WSWS) since 1981.

Joan is a dedicated member of WSWS. She has served as a Member-at-Large, Agronomic Section chair, Proceedings Editor, and Progress Report Editor. She was the Website Founder and its first Editor. She also has served on numerous committees including Necrology, Student Paper Judging, Resolutions, Posters, and Editorial Committee Chairperson. Joan has authored over 100 WSWS Research Progress Reports. She has presented 17 papers at the annual meetings and for publication in the proceedings. Joan received the Presidential Award of Merit in 2004.

Joan is active in the Weed Science Society of America and has served on numerous committees. She is also a member of the Idaho Weed Control Association and the International Weed Science Society.

Joan teaches the Introductory Weed Science Class at the University of Idaho. She also teaches laboratory classes for the advanced weed science classes. She is instrumental in advising graduate students in the Weed Science Project. She has a vast knowledge of field plot techniques and has helped most of the graduate students with their field projects.

Joan has an outstanding record of service to WSWS and to Weed Science.

CELESTINE DUNCAN

Celestine Duncan is the owner and manager of a private consulting business that specializes in invasive plant management on range and wildland sites in the western states since 1988. Celestine received her B.S. in Horticulture from New Mexico State University and her M.S. in Agronomy with a minor in Range Science from Montana State University. Before starting her own business, she was the State Weed Coordinator with the Montana Department of Agriculture.

Celestine has been an active member of WSWS since 1983. She received the Presidential Award of Merit in 1999. Celestine served a Project chair for Weeds of Range and Forest and for Weeds of Wetlands and Wildlands. She has served on numerous committees.

Celestine is recognized nationally as a leader in invasive weed control. Celestine served as vice- chair of the National Invasive Species Advisory Committee. She also served on the Invasive Plant Management working group for the development of the National Invasive Species Management Plan.

Celestine has been the coordinator of the WSWs Noxious Weed Short course since its inception in 1990. She developed curriculum and coordinated the course which has included over 32 instructors. More than 700 federal, state, county, and private land managers have been trained in identification, inventory, and management of invasive plants on range and wildland areas in the Western U.S.

Celestine has made outstanding contributions to WSWs and Weed Science.



2006 Western Society of Weed Science Fellows

Carol Mallory-Smith awarding Fellow to Joan Campbell (left); and Carol awarding Fellow to Celestine Duncan Fellow (right)

SIXTIETH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**PORTLAND, OREGON
March 13-15, 2007**

President - Kassim Al-Khatib
President-Elect - Ron Crockett
Secretary - Pamela Hutchinson
Treasurer-Business Manager - Phil Banks

Phil Stahlman and Bill Cobb were honored as Fellows of the Society in 2007. Rob Hedberg, former Weed Science Society of America (WSSA) Science Policy Advisor, was named an Honorary Member of WWS. Rod Lym received the Outstanding Weed Scientist – Public sector award and John Fenderson received the Outstanding Weed Scientist – Private sector award. Carl Libby received the Professional Staff Award and Jim Freeman received the Land Manager award. After presenting the awards, chair Don Morishita jokingly told members that those attending the last talk of this meeting would be entered in a drawing for a car. There were 16 Sustaining Members that contributed \$5,978 to the society.

The General Session included a talk from President Kassim Al-Khatib, *Rising Above the Clouds: WWS Future in a Changing World*. Kassim reported that the WWS membership was distributed mainly in academia (35%) and industry (24%) followed by federal, state and county members (19%). Students represented 9% of membership. Kassim concluded by saying that “we have a strong and relevant society, and I am excited about the future of WWS and the opportunities that lie ahead. Our challenge is to maintain what we do collectively so well, identify opportunities and take advantage of it.”

At this meeting, 90 papers and 60 posters were presented; attendance was 380; there were 28 walk-ins for the full meeting and a Knotweed symposium brought in 20 walk-ins.

At the summer board meeting the WWS Board of Directors decided to organize a special symposium at the end of each annual meeting. The subject of the symposium would be to address weeds or issues of particular interest within the region where the annual meeting is held. The special symposium was not intended to replace the regularly scheduled half-day-symposium that is organized by Program chair during the meeting. The purpose of such special symposium is to provide educational program that might attract local people. It was also an effort to provide opportunities for federal and state weed managers to attend the annual meetings. The committee for the special symposium selected knotweed as a topic for the special symposium in this meeting and *Arundo donax/Phragmites australis* topic will be for Anaheim meeting in 2008. The pre-registration for this year’s knotweed symposium overwhelmingly indicated great support for this type of educational program. Sixteen papers were presented in the knotweed symposium. Presenters were university professors, weed managers, non-profit organizations (The Nature Conservancy), National Park Service, Departments of Agriculture, and others from the U.S., United Kingdom, Czech Republic, and Canada. Topics ranged from genetics to management in the field.

Phil Banks began a first-ever new member and officer orientation during this meeting. During the orientation Phil briefed the new officers about their duties and responsibilities to improve productivity. He also met with new members to answer questions and listen to their input.

In his financial report Phil indicated the Society had done well and that even though the society lost approximately \$25K, the reprinting cost of the *Weeds of the West* was approximately \$100K, so WSWS had a good cash flow. Phil mentioned the society was earning money by website sales of books. Sales of *Weeds of the West* continued at more than 500 copies per month which brings significant income to the society. There also was some income generated from marketing educational materials on the website.

Vanelle Peterson, WSSA representative, reported that WSSA is starting a new journal, *Invasive Plant Science and Management*. Two WSWS members (Vanelle Peterson and Lars Anderson) served WSSA as co-chairs of the committee charged with understanding the implications of starting a new journal and its feasibility. After 2 years of work and discussion the WSSA Board decided to add this new journal. More WSWS members were involved in the startup of the journal - Janet Clark was hired as the project manager and Joe DiTomaso was hired as the first editor.

Kai Umeda, Constitution and Operating Procedures representative reported that the procedures were amended for Presidential duties so the president can conduct business through email. A first in moving toward electronic communication for the Board! Another move toward electronic communication was that members could now opt to receive an electronic version of the newsletter. About 2/3 of the members had already selected this option.

Scott Nissen reporting for the Education committee said that the committee taught their 1st online Mode of Action course with 7 students. It was a three-credit, graduate level class which will be offered again. The on-line course was created due to a decrease in registration for on-campus classes. This class targeted off-campus people such as extension educators who are working towards a grad degree.

Participants in the student paper and poster contests totaled 29, with 25 grad and 4 undergrad students.

Student Paper Contest

Weeds of Agronomic Crops

1st Place - Michael Duff, Kansa State University

2nd Place - Joanna Eginca, Montanan State University

Horticulture/Weeds of Range and Forest

1st Place - Luke Samuel, North Dakota State University

2nd Place - Matt Williams, Washington State University

Student Poster Contest

1st Place - Dirk Baker, Colorado State University

2nd Place - Maria Zapiola, Oregon State University

3rd Place - Seth Gershndorf, University of Idaho

Undergraduate Poster Contest

1st Place - Maria Lockhart Washington State University

WSWS members Ken Dunster and Thomas J. Muzik passed away in the previous year.

No photo of the Board of Directors was available

2007 Western Society of Weed Science Board of Directors

President Kassim Al-Khatib

President-Elect Ron Crockett

Secretary Pamela Hutchinson

Research section chair Joe DiTomaso

Education and Regulatory section chair Joe Yenish

WSSA representative Vanelle Peterson

Past President Phil Banks

Member-at-Large Janet Clark

Member-at-Large Jeff Koscelny

Treasurer-Business Manager Phil Banks

CAST representative Rod Lym

Constitution and Operating Procedures representative Kai Umeda

2007 FELLOWS

Dr. William (Bill) Cobb

Dr. William Cobb received his PhD in Plant Pathology in 1973 at Oregon State University. Bill is a Certified Professional Agronomist, Certified Professional Plant Pathologist, Certified Crop Advisor and a Certified Environmental Inspector. These certifications give a prelude to the diversity of Bill's knowledge and experience as a consultant on agronomic and pesticide issues.

Bill has been a member of WSWS since 1975, when he attended his first WSWS meeting. He has been a faithful member of WSWS since that time giving numerous oral and poster presentations. He has also co-organized 3 symposia including a Soil Organic Matter Symposium in 2004, serves on several committees, was elected Chair/Editor of the Research Reports for the Horticultural section. One of Bill's greatest contributions to WSWS was to initiate the Elanco Breakfast tradition at the 1976 meeting. This event evolved into the WSWS Breakfast Business meeting hosted by Elanco, then Dow AgroSciences and now by BASF. This tradition greatly increased attendance at the annual business meeting.

Bill has been an active member of the Washington State Weed Association. He has attended many annual meetings and served on the Board of Directors from 1974 to 1978. He was recognized for his outstanding contributions to this organization as an Honorary member in 1976. And in 2004 he received this association's highest award by being selected "Weed Warrior of 2004". He is also an active member of the American Phyto Pathological Society since 1968 and has served on several important committees and has given several presentations at their annual meetings.

Although Bill received his formal university training as a Plant Pathologist, he has received extensive practical training in Weed Science. In 1970, Bill accepted a position as manager of Sun Royal Co. in Washington in the heart of a highly diverse irrigated-agriculture region which meant that he had to address all the pest problems of over 50 different crops. Bill rose to the challenge and in the 2nd year of his leadership, Sun Royal received the Chevron Golden Dealer Award, only 1 of 5 awarded across the US. In 1974 Bill accepted a position as Senior Scientist and Research Scientist with Lilly Research laboratories, the Eli Lilly Company. He was responsible for research and development of candidate pesticides on all crops in the greater Pacific Northwest region. From 1974 to 1988 he planned and conducted over 400 field research trials on weeds and other pests in irrigated and dryland crops. In this capacity, Bill expanded his practical knowledge of weeds and herbicides. During the last 4 to 5 years with Lilly his research shifted towards determining the environmental fate and groundwater contamination of new pesticides. This line of research led him to establish his own consulting company, Cobb Consulting Services, located in Kennewick, WA. As leader of Cobb Consulting Services, Bill investigated crop loss and pesticide injury claims and consulted on environmental issues related to agricultural waste-water disposal, bioremediation of soils contaminated with pesticides and potential for groundwater contamination by agricultural chemicals. Bill also did contract research and independent quality assurance for laboratories conducting research under the Good Laboratory Practices. Bill has led many training classes for field staff of agricultural companies,

university departments and state governmental agencies. The subject matter of these classes included soil, plant and water sampling techniques and explanation of soil factors affecting pesticide behavior. Cobb Consulting has received grants from a wide array of companies and governmental agencies to support these training classes.

Dr. Cobb is also recognized as an expert in pesticide claims investigations, and he has given many presentations regarding the appropriate steps to follow in these investigations. He is highly sought out by attorneys for expert testimony in cases involving injury claims and pesticide behavior in the environment. He is especially noted for bringing a high level of science and integrity to the courtroom.

During his career, Bill has given 40 invited presentations and lectures including 9 guest lectures to the Weed Science classes at Oregon State University. He has authored over 20 scientific, technical, or popular articles related to weeds science and agricultural issues.

Dr. Phillip (Phil) Stahlman

Dr. Phillip Stahlman currently serves as Professor and Senior Weed Scientist at the Kansas State University (KSU) Agricultural Research Center-Hays. Dr. Stahlman has served in this position since November 1976 with a 100% research appointment. Prior to moving to Hays, Phil was Superintendent at the Harvey County Experiment Field near Hesston, KS and Assistant Agronomist at the North Central Branch Experiment Station near Minot, ND. In 1985, Phil took sabbatical leave followed by a leave of absence to work towards a PhD in weed science at the University of Wyoming. During this period, he continued to direct a limited research project in Kansas through communications with a Research Technician and periodic visits to Hays. In 1986, he resumed full-time responsibilities at Hays, and completed his PhD in 1989. For the past 30 years, he has been heavily involved in herbicide testing and development research involving crops grown in western Kansas. Much of his research involves winter wheat, sorghum, sunflower, and fallow; however, corn, soybean, and pasture experiments are also performed.

Current research includes integrated weed management systems, risks, and benefits of herbicide resistant crops, weed spectrum shifts associated with herbicide-resistant cropping systems, expansion of current herbicides into novel crops, and continued evaluations of selective herbicides. The goal of Phil's program is to improve current weed management strategies in dryland cropping systems and develop innovative methods of reducing the risks of soil erosion and crop failure using plant residue and soil water management. Consequently, research conducted by him, or under his direction, includes weed ecology, weed-crop competition, herbicide efficacy, crop tolerance, cultural agronomics, and evaluation of new chemistries. These studies are conducted to determine critical periods of weed interference and weed density thresholds, to optimize herbicide performance while maintaining or improving crop tolerance, and to integrate cultural and chemical control practices. Experimental and non-labeled herbicides are evaluated for utility in crops of the semi-arid dryland cropping systems.

Dr. Stahlman has been deeply involved in weed science from the local to international levels throughout his career. He often entertains requests for extension-oriented activities despite not having official extension responsibilities. On the regional level, Phil organized the KSU Weed Science Forum. This organization annually brings together scientists, graduate students, agronomists, and other technical personnel interested in weed science issues. On a larger scale, Dr. Stahlman, along with researchers at other universities, helped establish guidelines for field bindweed control in wheat, sorghum, and fallow. Phil also served for three years on the National Jointed Goatgrass Research Program steering committee and hosted a former national extension coordinator for the program. He also participates in regional studies examining potential weed shifts and resistance development associated with glyphosate-tolerant cropping systems.

His expertise in weed management has led to consultation with colleagues in Egypt, England, Germany, Russia, Kazakhstan, Ukraine, and Australia. Dr. Stahlman has served as the major advisor for 4 M.S. and 2 Ph.D. weed science students and has served on the committees of several others. He has performed several merit reviews of USDA projects and external promotion/tenure reviews of university and USDA peers. Phil also has been a reviewer for *Weed Technology*, *Weed Science*, *Agronomy Journal*, USDA-CSREES and National Research Council's Agency for International Development grants. Phil has served as weed science representative on the North Central Regional Integrated Pest Management Committee and on the Research Committee of the National Sunflower Association and is an original member of the Western Regional Committees on Biology and Control of Winter Annual Grass Weeds in Wheat and Managing Invasive Weeds in Wheat.

Phil petitioned for entry of Kansas in the Western Society of Weed Science in 1985. During the twenty-one years since, he has attended all but three of the WSWs annual meetings. Phil served WSWs as President, President-elect, Research Section Chair, and is currently CAST representative. He also served on nine committees in WSWs including the Graduate Student Contest, S.T.E.E.P., Program, Distinguished Achievement Awards, Publications, and Nominations. He was Agronomic Crops Section Chair, served on the Member Survey Committee, and chaired the search committee for Business Manager-Treasurer. Dr. Stahlman authored 52 papers/posters and 14 Research Reports for WSWs. In 2001, Phil received the WSWs Outstanding Weed Scientist – Public Sector award.



2007 Western Society of Weed Science Fellows
Bill Cobb (left) and Phil Stahlman (right) both with President Kassim Al-Khatib

SIXTY-FIRST MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**ANAHEIM/GARDEN GROVE, CALIFORNIA
March 11-14, 2008**

President - Ron Crockett
President-Elect - Dan Ball
Secretary - Pamela Hutchinson
Treasurer-Business Manager - Phil Banks

George Beck and Rick Boydston were named Fellows of the Society at the 2008 meeting. Robert Zemetra, University of Idaho, was named Honorary Member. Pat Clay was named Early Career Weed Scientist, Robert Wilson was named Outstanding Public Weed Scientist, Leo Charvet was the Outstanding Private Practice Weed Scientist, Lori Howlett received the Outstanding Professional Staff award, and Lars Baker received the Outstanding Weed Manager Award. Registration for the meeting was 328 with an additional 100 registrations for the Arundo/Phragmites Symposium held in conjunction with the meeting. There were 19 Sustaining Members that contributed over \$6,200 to the Society.

In the General Session, Ron Crockett gave the Presidential Address: "Personal Reflections on a Career in Weed Science. Looking Back, While Walking Forward". Other speakers were Lee Van Wychen who gave an update as the Director of Science Policy, Lars Anderson and Leigh Johnson who presented concerns related to marine invasive species, and an update from Joe DiTomaso, editor, concerning the new Weed Science Society of America (WSSA) journal, Invasive Plant Science and Management.

There were 126 oral and 56 poster presentations at the meeting as well as a symposium on Adjuvant Technology organized by Patrick McMullan.

South Dakota was approved by the Board of Directors as a new member state.

Student Paper Contest

Weeds of Agronomic Crops and Horticultural Crops

1st Place - Lydia Clayton, University of Idaho

2nd Place - Dilpreet Riar, Washington State University

Weeds of Range and Forest and Basic Sciences

1st Place - Amy Blair, Colorado State University

2nd Place - Travis Almquist, North Dakota State University

3rd Place - Jordana LaFantasie, University of Wyoming

Student Poster Contest

1st Place - Jordana LaFantasie, University of Wyoming,

2nd Place - Randall Stephens, Washington State University

Undergraduate Poster Contest

1st Place - Jessica Ebler, New Mexico State University

The following WSWS members passed away during the past year: William R. (Bill) Furtick, W. Orvid Lee, John William Wilcut, and Robert (Bob) Edward Wilson.



2008 WSWS Board of Directors

Front row (L to R): Kassim Al-Khatib, Past President; Tony White, Webmaster; Dan Ball, President-elect; Ron Crockett, President; Pam Hutchinson, secretary; Angela Kazmierczak, Student Liaison President; Dirk Baker, Student Liaison chair 2007

Back row (L to R): Kai Umeda, Constitution & Operating Procedures representative; Bill Cobb, Education and Regulatory section chair-elect; Kirk Howatt, Research section chair-elect; Phil Banks, Treasurer- Business Manager; Joe Yenish, Education and Regulatory chair 2007; Phil Stahlman, CAST representative; Todd Gaines, Student Liaison; Joe DiTomaso, Research section chair 2007; Rick Boydston, Research section chair; Mike Edwards, Education and Regulatory section chair; Vanelle Peterson, WSSA representative

Absent: Carol Mallory-Smith, Member-at-Large; Jeff Koscelny, Member-at-Large

2008 FELLOWS

Dr. Rick Boydston

Dr. Rick Boydston is a native of Nebraska and grew up in several small towns including Weeping Water and Walthill and graduated from Loup City. He received a B.S. in Agronomy from the University of Nebraska, an M.S. in Plant Physiology, and a PhD in Weed Science both from the University of Illinois. Rick first attended WWS in 1986 and became very active in the Society. He was on the Executive Board as Member at Large in 2001, served on the Finance Committee (twice), and was the Research Section Chair in 1994-1995 and is currently the Chair-elect for a second time. He has also chaired several WWS sections including Teaching and Technology Transfer, Weeds in Horticultural Crops, and the Physiology and Chemical Studies section.

Rick began his career as a Plant Physiologist at the USDA Irrigated Agriculture Research and Extension Center in Prosser, WA in 1985 where he has remained except for 2 years when he was an agronomist for a private firm in Washington. He has cooperated with several scientists in the Pacific Northwest and Midwestern states on various research projects which has resulted in 51 refereed journals and extension publications, 4 book chapters, and numerous extension bulletins. He has authored 24 papers and posters presented at the WWS annual meeting.

Dr. Boydston's research responsibilities include weed control in potatoes, mint, and associated rotational crops. Results of his innovative research program includes fall planted rapeseed and white mustard to suppress weeds in potato, a program that has been adopted on over 25,000 acres and increasing; development of improved volunteer potato management methods in onion and corn which can save over \$200/A in control costs; and research that led to the registration of seven herbicides in mint.

Rick became an Honorary Member of the Washington State Weed Association in 1997 and received the IR-4 Meritorious Service Award in 1994. He has twice awarded Friend of the Industry from the Washington Mint Growers Association. As stated in one of his supporting letters "I have always been pleasantly surprised by Rick's massive volume of extension work since he is an ARS scientist...he goes above and beyond the call of duty by his involvement with potato growers and agricultural professions."

As a scientist, scholar, and teacher the WWS is pleased to present Rick Boydston as a Fellow in the Society.

Dr. K. George Beck

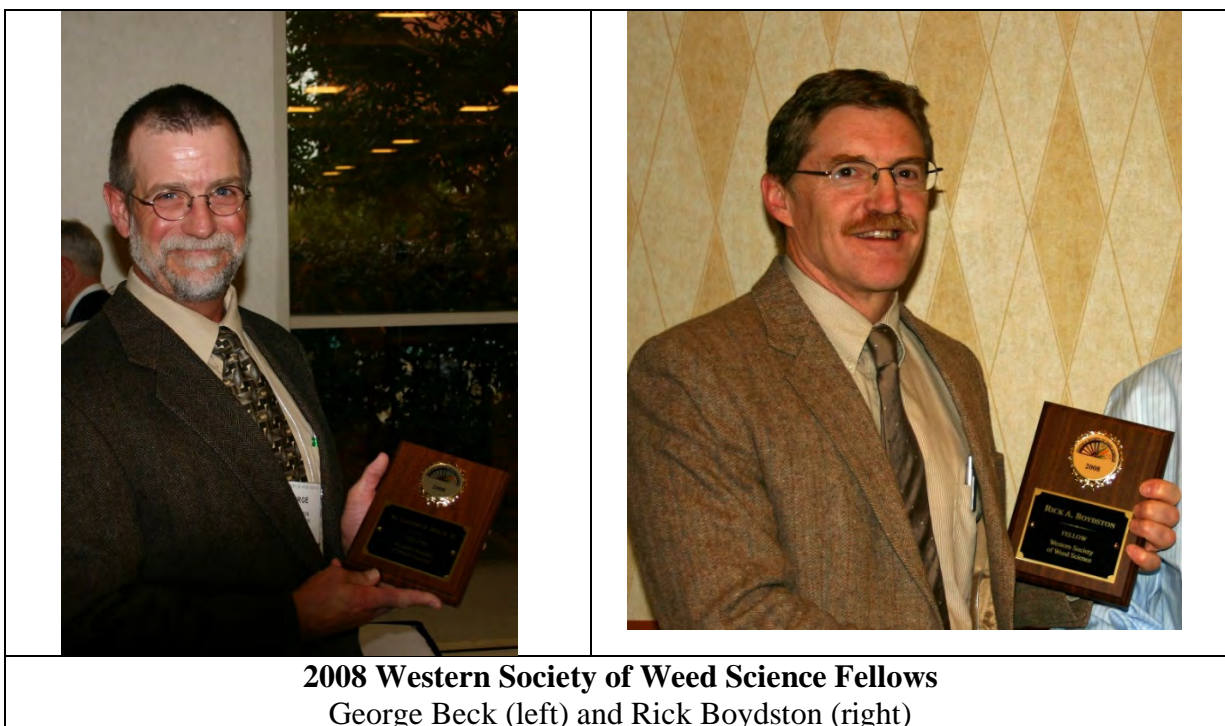
Dr. George Beck is a native of Sepulveda, CA located in the San Fernando Valley. George received a B.S. and M.S. in Animal Science and a PhD in Plant Science all from the University of Idaho. George has been a member of WWS for 24 years. He has served the Society as Member-at-Large, was elected to Chair of Project 1- Weeds of Range and Forest (twice) and was Research Section Chair for 2002-2003. George has published 28 papers in the WWS Proceedings and 103 in the Research Progress Report. George has served on numerous committees including the Intermountain Noxious Weed Advisory, Resolutions (twice), Poster, and Legislative (Chair) Committees. Dr. Beck received the WWS Outstanding Weed Scientist award in 2000.

Dr. Beck is most known nationally for his efforts in securing passage of the Federal Noxious Weed Law beginning in 1987 and continuing through the 1990's. During this time, George worked many hours in writing letters, making calls, and frequently visiting Washington DC to meet with Legislators and their aids. "For many years, he has effectively worked and with legislative committees on state and federal noxious weed legislation, which has resulted in the proactive management of noxious weeds in Colorado, the West, and the Nation."

George serves on the Invasive Species Advisory Committee which is composed of eight members of the President's Cabinet and representatives from the EPA and USAID. This has allowed Dr. Beck to make additional advances concerning a variety of invasive species issues at the international, national, and state levels.

George has also been an effective teacher, training 10 M.S. and 5 PhD students as well as serving on committees of many others. He has served as an instructor for the WWS Noxious Weed Course on three occasions. George has served this society and others for many years as indicated by receiving the Lifetime Achievement Award from both the Colorado Weed Management Association and the North American Weed Management Association.

Dr. K. George Beck is dedicated to weed science endeavors and is a man of integrity, honesty, and good humor. His many achievements and contributions to weed science in general and the WWS make him extremely qualified to become a Fellow of the Western Society of Weed Science.



SIXTY-SECOND MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**ALBUQUERQUE, NEW MEXICO
March 9-12, 2009**

President - Dan Ball
President-Elect - Jesse Richardson
Secretary - Ian Burke
Treasurer-Business Manager - Phil Banks

Scott Nissen and Kassim Al-Khatib were named Fellows of the Society at the 2009 meeting. Tom Brokaw, NBC News, was named Honorary Member for his comments that were made to the Western Governors Association conference where he told them that our *Weeds of the West* book was one of his favorite books. Mr. Brokaw accepted the award via teleconference and expressed his gratitude for the recognition. Alan Helm was named Early Career Weed Scientist, Carol Mallory-Smith was named Outstanding Weed Scientist - public sector, Pete Forster was the Outstanding Weed Scientist - private sector. Gary Willoughby received the Outstanding Professional Staff award, and April Fletcher received the Outstanding Weed Manager Award. The Presidential Award of Merit was given to Mike Edwards. Registration for the meeting was 306. There were 20 Sustaining Members that contributed over \$6,600 to the Society.

In the General Session, Dan Ball gave the Presidential Address that was very uplifting. “We deal with weeds, my friends, probably not the most glamorous profession out there. But when we make progress in our work, we win some victory for ourselves and for humanity. Through understanding and managing weeds, we allow for more crop production and help to feed the world. We improve native ecosystems and protect the world’s natural resources. In short, whether glamorous or not, we win some victory for humanity, and we should know that our work, our service, is important.” Guest speaker, Lowell Catlett, Dean of the College of Agriculture & Home Economics, New Mexico State University, presented “What Does the Future Hold for U.S. Agriculture?” Other speakers were Lee Van Wychen who gave an update as the Director of Science Policy and Steve Dewey, the Weed Science Society of America (WSSA) Liaison to EPA Office of Pesticide Programs related to his duties “WSSA SME Position – Building Bridges with EPA”. The meeting included two symposia. One symposium was on the “Jointed Goatgrass Project Summary” in which there were 5 talks and a brainstorming session on how the principles developed in this national program can be applied to other invasive weed problems. The second symposium was “Biological Control of Invasive Plants” organized by April Fletcher.

There were 80 oral and 67 poster presentations plus the 29 invited symposium papers.

Student Paper Contest

Weeds of Agronomic Crops and Basic Science

1st Place - Jordan Hoefing, North Dakota State University

2nd Place - Melissa Bridges, Colorado State University

3rd Place - John Frihauf, Kansas State University

Weeds of Range and Forest and Weeds of Wildlands and Wetlands

1st Place - Brad Lindenmayer, Colorado State University

2nd Place - Melody Rudenko, Oregon State University

Student Poster Contest

1st Place - Maria Zapiola, Oregon State University

2nd Place - Tanya Skurski, Montana State University

3rd Place - Suphannika Intanon, Oregon State University

Undergraduate Poster Contest

1st Place - Jared Unverzagt, University of Wyoming

2nd Place - Carol Lange, New Mexico State University

The following WSSW members passed away during the past year: George Kapusta, Larry C. Burrill, Paul J. Ogg, and Ellery L. Knake.



2009 Western Society of Weed Science Board of Directors

Front row: (L to R) Ian Burke, secretary; Pam Hutchinson, secretary 2007 & 2008; Ron Crockett, Past President; Dan Ball, President; Jesse Richardson, President-elect; Phil Munger, Member-at-Large; Tony White, Website editor

Back row: (L to R) Rick Boydston, Research section chair 2008; Kai Umeda, Constitution and Operating Procedures representative; Ed Peachey, Research section chair-elect; Mike Edwards, Education and Regulatory section chair 2008; Vanelle Peterson, WSSA representative 2008; Bill Cobb, Education and Regulatory section chair; Carol Mallory-Smith, Member-at-Large; Kirk Howatt, Research section chair; Pat Clay, Education and Regulatory section chair-elect; Ryan Edwards, Student Liaison; Melissa Bridges, Student Liaison chair; Phil Banks, Treasurer-Business Manager

Absent: Phil Stahlman, CAST representative; Tim Miller, WSSA representative

2009 FELLOWS

Dr. Kassim Al-Khatib

Dr. Kassim Al-Khatib received B.S. and M.S. degrees from the University of Baghdad (Iraq), and a PhD in Crop Physiology from Kansas State University. He has been an active member of the WWS since 1989, and also is an active member of the NCWSS and WSSA. He has provided considerable service to each of those societies and has made significant contributions to the discipline of Weed Science. He has served the WWS in numerous capacities, including Chair of the Basic Sciences Project, Chair of the Alternative Weed Control Method Project, Chair of the Graduate Student Contest Committee, Chair of the Program Committee, and has served multiple terms on the Board of Directors. He was elected President-Elect of the WWS in 2006 and served as President in 2007.

Kassim began his professional career as Technical Development Manager of Intrachem SA in Geneva, Switzerland for three years before coming to the U.S. to begin doctoral studies. After obtaining his PhD in 1984, he served as a post-doctoral research associate in crop physiology at Kansas State University for five years. Then, in 1989, he accepted a position of Assistant Agronomist with Washington State University at Prosser, and from 1992-1996 was Extension Weed Specialist at Washington State University, Mt. Vernon. In 1996, he returned to Kansas State University as Assistant Professor of Weed Science and quickly progressed to the rank of Professor. At Kansas State University, he has directed 5 Post-Doctoral Associates, 9 PhD students, and 6 M.S. students. Several of his students have won outstanding paper or poster awards from WWS and the North Central Weed Science Society.

Dr. Al-Khatib directs a multi-faceted research program that focuses on various aspects of herbicide-plant interactions, including herbicide resistant weeds, herbicide drift, environmental interactions, basic herbicide mode of action, and the ecological impacts of herbicide programs and cropping systems. Some of Kassim's more notable research accomplishments include the identification, transformation, patenting, and release of sorghum germplasm with resistance to ALS- and lipid synthesis-inhibiting herbicides; project management of an experimental herbicide owned by Kansas State University; identification of the source of herbicide resistance incorporated into Clearfield sunflowers; initial confirmations of waterhemp resistance to PPO-inhibitor herbicides and common sunflower resistance to ALS- inhibitor herbicides; gene flow among related crop and weed species; and the effects of herbicide drift on non-target crops.

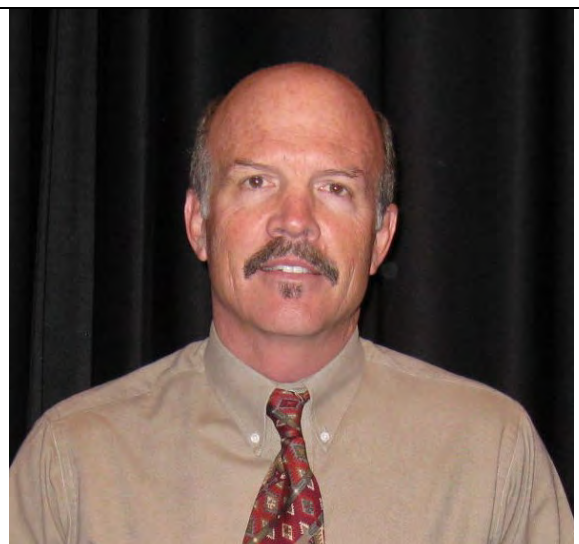
Dr. Al-Khatib was previously recognized for his research accomplishments by receiving the WWS Outstanding Weed Scientist Award.

Dr. Scott J. Nissen

Dr. Scott J. Nissen received a B.S. in Botany from the University of Montana, a M.S. in Agronomy/Soil Science from the University of Nevada, Reno, and a PhD in Crop Science/Biochemistry from Montana State University. Scott has been an active member of the WSWS since 1977 and has served the Society in several capacities including Research Section Chair and as a member of the Board of Directors. He has been a long-time member of the Education Committee and Distance Education Sub-committee, has served on the Local Arrangement Committee, and as Chair of the Physiology Section.

Scott began his professional career as a post-doctoral researcher at the University of California for two years before joining the University of Nebraska faculty as an Assistant Professor in 1989. In 1995, he moved to Colorado State University where he progressed to the rank of Professor of Weed Science in the Department of Bioagricultural Sciences and Pest Management. He has advised or co-advised 11 M.S. and 4 PhD students. Five of the M.S. students have gone on to complete PhD degrees at other universities and several students have received awards for outstanding papers or posters from the WSWS or the North Central Weed Science Society.

Dr. Nissen has a three-way appointment split among research, teaching, and extension. His responsibilities include integrated weed management in crop and non-crop environments and involve field, laboratory, and greenhouse studies to understand herbicide performance, weed biology, and application technology in addition to outreach programming and extension education. Scott has authored or co-authored 55 refereed journal articles in a variety of journals, and he has contributed his expertise to several comprehensive extension publications. Scott has contributed to the education mission of the WSWS by collaborating with others to develop award-winning on-line herbicide-mode-action modules offered for graduate credit offered through Montana State University's distance education program. He regularly provides educational training and programs for land managers dealing with invasive weeds through the Colorado Weed Management Association and Upper Arkansas Cooperative Weed Management Area.



2009 Western Society of Weed Science Fellows
Kassim Al-Khatib (left) and Scott Nissen (right)

SIXTY-THIRD MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

WAIKOLOA, HAWAII

March 8-11, 2010

President – Jesse Richardson

President-Elect – Joe DiTomaso

Secretary – Ian Burke

Treasurer-Business Manager – Phil Banks

Rick Arnold and Tracy Sterling were named Fellows of the Society at the 2010 meeting. Harry Cline, Western Farm Press, was named Honorary Member. Ian Burke was named Early Career Weed Scientist, Drew Lyon was named Outstanding Public Weed Scientist, and Cheryl Fiore received the Outstanding Professional Staff award. The Presidential Award of Merit was given to Phil Motooka. Registration for the meeting was 249. There were 17 Sustaining Members that contributed over \$7,000.00 to the Society.

In the General Session, Jesse Richardson gave the Presidential where he thanked the many members and the Local Arrangements Committee for preparing for the meeting. He also talked about the three facets of life that we should all pay more attention to: “Family, Friends and Faith”. Other speakers were Celia Smith University of Hawaii, Honolulu “Invasive Algae: A Growing Problem for Coral Reefs in a Time of Change and Stimulus” and Dennis Gonsalves USDA-ARS, Hilo, Hawaii “Development and Impact of Transgenic Papaya: A Decade After its Commercialization”. Lee Van Wyche presented an update on his duties as the WSSA Director of Science Policy.

The meeting included two Symposia: “Kochia scoparia: Enhanced Threat in Western North America” and “Ecology, Impact and Management of Arid Perennial Grass Invasions”

There were 197 presentations that included 70 posters, 96 volunteer paper and 27 invited presentations.

Student Paper Contest

Weeds of Range & Natural Areas/Basic Sciences

1st Place - Jared Bell, Washington State University

2nd Place - Jeremiah Mann, University of California, Davis

Weeds of Agronomic Crops/Weeds of Horticultural Crops

1st Place - Michael Ostlie, Colorado State University

2nd Place - Jonathan Mikkelsen, North Dakota State University

Student Poster Contest

1st Place - Roberto Luciano, North Dakota State University

2nd Place - Stephanie Christensen, Utah State University

3rd Place - Cassandra Setter, North Dakota State University

Undergraduate Poster Contest

1st Place - Holden Hergert, University of Wyoming

The following WSSWS members passed away during the past year: Keith E. Wallace and John “Jack” May.



2010 Western Society of Weed Science Board of Directors

Front row (L to R): Vanelle Peterson, Research section chair-elect; Ed Peachey, Education and Regulatory chair; Jesse Richardson, President; Dan Ball, Past President; Melissa Bridges, Student Liaison; Tony White, Webmaster; Phil Banks, Treasurer-Business Manager
Back row (L to R): Tanya Skurski, Student Liaison 2009; Ryan Edwards, Student Liaison chair; Tim Miller, WSSA representative; Joe DiTomaso, President-elect; Pat Clay, Education and Regulatory chair; Kai Umeda, Constitution and Operating Procedures representative; Carol Mallory-Smith, Member-at-Large 2008-2009, Phil Stahlman, CAST representative Absent: Ian Burke, secretary; Kassim Al-Khatib, Member-at-Large; Phil Munger, Member-at-Large

2010 FELLOWS

Richard (Rick) Arnold

Richard “Rick” Arnold obtained B.S. and M.S. degrees from New Mexico State University and served as the Assistant Technical Director of the Navajo Agricultural Products Industry from 1976 to 1979. After a short stint as a private consultant, he joined New Mexico State University at the Agricultural Science Center at Farmington where he holds a 100% research appointment. He has progressed up the academic ranks from Instructor to Professor. When Rick assumed his position at the Agricultural Science Center, he had limited resources and no existing research program. He successfully developed a weed-pest management program of value and relevance within his geographic area of responsibility as well as gaining recognition from university and industry scientists outside of New Mexico. This is no small accomplishment considering the relative isolation of his field research station.

Current responsibilities include weed control in cropland and non-cropland, insect control in agronomic and horticultural crops, and revegetation of disturbed lands using coal bed methane produced water to help establish native and introduced grasses in the oil and gas producing basin of northwest New Mexico. He is the principal investigator for weed and insect control in northwest New Mexico and has conducted an extensive number of trials evaluating the efficacy and selectivity of herbicides for major crops grown in the Four-Corners Region of New Mexico, Colorado, Utah, and Arizona.

Rick has been a faithful and active member of the WWS since 1986. He has served the Society in numerous capacities including member of the Student Contest, Finance, and Weed Management Short Course Committees; Chair of the Sustaining Membership Committee, Chair of the Horticultural Crops and Agronomic Crops Section's, Chair of the Education and Regulatory Section, and as Member-at-Large on the Board of Directors. He is also a member of the Weed Science Society of America and is active in the New Mexico Academy of Science, having served as Vice-President and President of that organization. He has also served his profession as an Associate Editor of the Crop Plant Section of the Plant Management Network, affiliated with the Crop Science Society of America.

Rick has received numerous previous awards and recognitions including the New Mexico State University Staff Appreciation Award in 2004, for outstanding teamwork with the oil/gas industry, cattle producers, Bureau of Land Management and the United States Forest Service for the amelioration of rangelands.

In 2006, he was named the WWS Outstanding Weed Scientist from the Public Sector.

Dr. Tracy M. Sterling

Dr. Tracey M. Sterling, Department Head and Professor for the Land Resources and Environmental Sciences Department (LRES) at Montana State University (MSU), Bozeman, Montana was selected as a fellow of the Western Society of Weed Science (WSWS) at their 63rd annual meeting of the WSWS, which was held at the Waikoloa Beach Marriott, Waikoloa, Hawaii in March of 2010.

Tracy was originally a hard pavement girl from St. Paul, Minnesota, who during her undergraduate career at the University of Minnesota, fell in love with agriculture. She received a B.S. in Agronomy and Horticulture from the University of Minnesota in 1983, her M.S. in Horticulture from Michigan State University in 1985 and her PhD in Agronomy/Botany in 1988 from the University of Wisconsin.

Her professional career began in 1989 at the New Mexico State University (NMSU) as an assistant professor in the Entomology, Plant Pathology and Weed Science Department. In 1995, Dr. Sterling was promoted to associate professor at NMSU and in 2001, she was promoted to full professor. In 2009 Dr. Sterling accepted the position of department head and full professor at MSU.

During her academic career, Dr. Sterling has been the author or co-author of 39 refereed scientific journal articles, 4 book chapters and 128 proceeding abstracts. She has also been very active in the national weed science organization, the Weed Science Society of America (WSSA) and has held several committee positions in that organization, as well being a reviewer for *Weed Science* and *Weed Technology*. She has served as a co- editor several sections on the WSSA *Herbicide Handbook*.

The fellow award has two basic components: Demonstrated proficiency in weed science and service to the WSWS organization. Dr. Sterling's contributions to the WSW include, but certainly are not limited to, serving on at least 8 different committees within WSWS and being chairperson of 5 of those committees; many of the committee assignments within the WSWS were multiple year assignments and she often served on more than one committee at any given time. She has contributed to the society in a multitude of other ways also.

Dr. Tracy Sterling is an outstanding weed scientist and a valuable and committed contributor to the Western Society of Weed Science.



2010 Western Society of Weed Science Fellows
Tracy Sterling (left) and Rick Arnold (right)

SIXTY-FOURTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

SPOKANE, WASHINGTON

March 7-10, 2011

President - Joe DiTomaso

President-Elect - Vanelle Peterson

Secretary - Rick Boydston

Treasurer-Business Manager - Phil Banks

Dan Ball and Roger Gast were named Fellows of the Society at the 2011 meeting. A.G. Kawamura, California Secretary of Agriculture, was named Honorary Member. Brad Hanson was named Early Career Weed Scientist, Monte Anderson was named Outstanding Private Weed Scientist, and Robert Higgins received the Outstanding Professional Staff award. The Presidential Award of Merit was given to Kai Umeda. Registration for the meeting was 332. There were 21 Sustaining Members that contributed over \$13,100 to the Society.

The general session started the meeting with an interesting talk on professional partnerships and cooperative efforts and life by President Joe DiTomaso and was followed by a legislative update by Lee Van Wychen who also presented an update on his duties as the WSSA Director of Science Policy. Dr. Vic Baker, University of Arizona, gave a fascinating talk, Ice Age Megafloods and The Landscape In Eastern Washington, on the geology of the area, the history of the discovery of the process of its formation and how those processes apply to the landscape on Mars. Mick Qualls did a pinch-hit fun talk on the history of central Washington because Dick Ford had to cancel participation.

The meeting included two Symposia: “*Ventenata dubia* Emerging Threat to Crops and Wildlands” and “Ecological Effects of Invasive Plants”.

There were 177 presentations that included 74 posters and 103 volunteer papers.

Student Paper Contest

Agronomic Crops/Biology

1st Place - Joseph Vassios, Colorado State University

2nd Place - Nevin Lawrence, University of Wyoming

Range/ Horticulture Crops

1st Place - Ryan Edwards, Colorado State University

2nd Place - Cameron Douglas, Colorado State University

3rd Place - Katie Conklin, North Dakota State University

Student Poster Contest

Agronomic Crops/ Biology

1st Place - Connor Ferguson, Oklahoma State University

2nd Place - Jared Unverzagt, University of Wyoming

3rd Place - Bianca Martins, Oregon State University

Range/ Horticulture Crops

1st Place - Joseph Vassios, Colorado State University

2nd Place - Clarke Alder, Utah State University

3rd Place - Cassandra Setter, North Dakota State University

Retirees that were recognized at the Monday evening reception were Jim Olivares and Steve Dewey.

The following WSWs members passed away during the past year: Stuart W. Turner and Lynn B. Jensen.

There was no photo of the Board of Directors available.

2011 WSWs Board of Directors

President Joe DiTomaso

President-Elect Vanelle Peterson

Secretary Rick Boydston

Research section chair Brad Hanson

Education and Regulatory section chair Marvin Butler

WSSA Representative Tim Miller

Past President Jesse Richardson

Member-At-Large Public Sector Kassim Al-Khatib

Member-At-Large Private Sector Pete Forster

Treasurer/Business Manager Phil Banks

CAST Representative Phil Stahlman

Constitution & Operating Procedures Representative Corey Ransom

Webmaster & Web Editor Tony White

Student Liaison chair Tanya Skurski

Student Liaison Michael Ostlie

2011 FELLOWS

Dan Ball

Dr. Dan Ball is a Professor of Weed Science at Oregon State University (OSU) and located at the Columbia Basin Agricultural Research Center near Pendleton, Oregon. He has been at the Center for over 20 years, with research and Extension responsibilities for weed management in dryland crops, and more recently with weed management in grass seed production in eastern Oregon and Washington. Dan has been a very active and important member of the WSWs since he was a graduate student at the University of Wyoming, where he completed his PhD in 1987. He also has been an active member of the Weed Science Society of America (WSSA) and has served in leadership positions in the Oregon Weed Science Society (OWSS).

In the WSWs, Dan has served as Research Section Chair, Education and Regulatory Section Chair, President-elect, and President. He is currently serving as immediate Past-President for the WSWs. In addition, he has served on the Resistance Management Committee, Weeds of the West Revision Committee, Student Paper Judging Committee, and Alternative Weed Control Methods Committee. In the OWSS, Dan has served as 2nd Vice President, President-elect, and President and is currently a member of the Board of Directors. As a Weed Science Society of America (WSSA) member, Dan has served as the Graduate Student Award Subcommittee Chair.

Through his career to date, Dr. Ball has authored or co-authored over 60 refereed articles and extension bulletins, numerous abstracts and special reports pertaining to weed management issues in the Pacific Northwest. He also has made over 80 presentations as an invited speaker or contributor at the WSWs meeting and other weed science related professional meetings and has made more than 200 extension presentations.

Dan has been a mentor to many graduate students over the years and has served as major professor or as a committee member for 13 graduate students. Several of these have been in collaboration with weed scientists at other universities in addition with faculty at OSU.

Roger Gast

Roger Gast has been an active member of the Western Society of Weed Science (WSWS) for the past 15 years as well as a member of the North Central Weed Science Society and Weed Science Society of America. Even though his job responsibilities caused him to re-locate to the Midwest, Roger has maintained an active role in the WSWs. He currently is a member of the poster committee and will serve as chair in 2013. Roger also has served as a member of the Placement and Finance committees, and chair of the Weeds of Agronomic Crops Project. For 5 years Roger coordinated the Dow AgroSciences sponsorship of the business breakfast meeting. Roger actively pursued Dow funding for this event and spent time managing it from the selection of the food to making sure that it ran smoothly during the meeting. Sponsorship of these activities is critical to the success of the annual meeting.

Roger has authored or co-authored 61 papers and posters at professional weed meetings (18 at WSWS) including international meetings. He has co-authored or coordinated book chapters such as the chapter on tree and vine weed control in “*Principles of Weed Control in California*” and a chapter on triazolopyrimidines in *Modern Crop Protection Compounds* (volume 1). He is recognized for his work with minor crop registrations and in 2008 wrote an article “Industry Views of Minor Crop Weed Control” for *Weed Technology*. Roger has worked closely with university and federal weed scientists over the years on numerous cooperative research projects. He is known for his professional conduct and desire to solve grower problems. Throughout his earlier work with Dow AgroSciences in California, Roger conducted numerous field research trials in the Western region leading to new herbicide registrations and use patterns important to Western specialty crop producers.

It is not always easy for members from private industry to find support within their companies to be an active member of a professional society. The WSWS is fortunate that Roger is one of those individuals.



2011 Western Society of Weed Science Fellows
Dan Ball (left) with President Joe DiTomaso and Roger Gast (right)

SIXTY-FIFTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**RENO, NEVADA
March 12-15, 2012**

President - Vanelle Peterson
President-Elect - Kai Umeda
Secretary - Rick Boydston
Treasurer-Business Manager - Phil Banks

Jodi Holt and Lars Anderson were named Fellows of the Society at the 2012 meeting. There was no named Honorary Member for 2012. Andrew Kniss was named Early Career Weed Scientist, Brett Oemichen was named Outstanding Private Weed Scientist, and James Sebastian received the Outstanding Professional Staff award. Jerry Asher was posthumously named the Weed Manager of the Year and his wife and daughter attended the meeting to receive this award for their husband and father. It was an emotional moment for all of us who worked with Jerry and understood his passion for managing federal lands to preserve native plants by controlling weeds. The Presidential Award of Merit was given to Tim Miller. Registration for the meeting was 274. There were 19 Sustaining Members that contributed over \$13,850.00 to the Society.

Vanelle Peterson started the general session with the Presidential Address to the membership and was followed by a legislative update by Lee Van Wychen, WSSA Director of Science Policy. Robert Norris, University of California, Davis, presented an “Historical Perspectives on the First Regional Weed Science Society. In his presentation, he said that WSWS is the oldest of the Weed Science Societies, being formed in 1938. He also emphasized the diversity of the WSWS not only geographically but also culturally. “An Ethical Challenge” was presented by Robert Zimdahl, Colorado State University. Dr. Zimdahl posed the concept that our ethical standards guide us toward helping to create a world that is just, peaceful, generally prosperous, democratic, free of prejudice, and humane. The final presentation at the General Session “Aquatic Weed Management at Lake Tahoe: Collaborative Research, Regulatory and Response Actions are Working!” was presented by Lars W. Anderson, USDA-ARS, Davis, CA.

There were 2 symposia during the meeting. An all-day symposium: “Ecology and Management of Downy Brome (*Bromus tectorum*) in the West: What Can the Past Tell Us About the Future?” was presented on Thursday. In the Horticulture session, the symposium “Tree and Vine Weed Control: New Issues and Opportunities in the U.S.” was presented. There were 182 presentations that included 79 posters, 84 volunteer papers as well as 19 invited papers.

On July 26-27, 2011, the WSWS was represented by several teams at the Weed Science Society of America (WSSA) Weed Olympics in Knoxville, TN. There are 3 graduate teams (Washington State University, Kansas State University, and Oklahoma State University) and 2 undergraduate teams (New Mexico State University and Oklahoma State University (OSU) – the OSU undergraduate team had too few to be an “official” team. There were 12 graduate students and 6 undergraduate students that entered as individual contestants.

The competition had several parts – a written exam, plots for the identification of herbicide symptoms, weed ID, calibration exercise, and problem solving – all in one day! It was a grueling day for the contestants starting at 7 am and ending at about 5 pm. The feedback from the students was that it was a tough, but fun, day and they were glad that they were taking part. At the final banquet and award ceremony Robert Norris gave a talk on the History of WSWS.

President Vanelle Peterson presented awards to the WSWS Regional winners:

Individual Graduate students

- 1st place - J.D. Riffel, Kansas State University
- 2nd place - Samantha Ambrose, Oklahoma State University
- 3rd place - Jared Bell, Washington State University

Undergraduate Students

- 1st place - Joni Blount, New Mexico State University
- 2nd place - Drew Garnett, New Mexico State University

Graduate teams

- 1st place - Washington State University
Team members: Jared Bell, Misha Manuchehri, Nevin Lawrence, and Alan Raeder with coach Ian Burke
- 2nd place - Kansas State University
Team members: Josh Putnam, J. D. Riffel, and Jessica Zimmerman with coach Dallas Peterson
- 3rd place - Oklahoma State University
Team members: Samantha Ambrose, Robert Steven Calhoun, Matt Terry, and Lydia Tomlinson with coach Joe Armstrong

Undergraduate team

- 1st place - New Mexico State University
Team members: Joni Blount, Andy Dyer, Drew Garnett, and Heather Bedale with coaches Phil Banks and Jill Schroeder

At the annual meeting the Student Paper and Poster awards were:

Student Paper Contest

Range & Agriculture

- 1st Place - Krista Ehlert, Montana State University
- 2nd Place- Brandon Greet, University of Wyoming
- 3rd Place - Holden Hergert, University of Wyoming

Biology

- 1st Place - Andrew Wiersma, Colorado State University
- 2nd Place - Mohsen Mohseni-Moghadam, New Mexico State University

Student Poster Contest

Agriculture

- 1st Place - Louise Lorent, University of Wyoming
- 2nd Place - Aman Anand, North Dakota State University

Range, Horticulture, & Biology

1st Place - Holden J. Hergert, University of Wyoming

2nd Place - Heather Elwood, Utah State University

Undergraduate Poster Contest

1st Place - Ann Bernert, Oregon State University

Retirees that were recognized at the Monday evening reception were Lars Anderson and John Brock.

The following WSWs members passed away during the past year: Jim Helmer, Bill Fischer and Jerry Asher.



2012 Western Society of Weed Science Board of Directors

Front row (L to R): Tony White, Webmaster; Mike Ostlie, Student Liaison chair; Rick Boydston, secretary; Tim Miller, WSSA representative; Vanelle Peterson, President; Tim Prather, Education and Regulatory section chair; Phil Banks, Treasurer- Business Manager;
Back row (L to R): Bob Stougaard, Member-at-Large; Cameron Douglass, Student Liaison; Pete Forster, Member-at-Large; Joe DiTomaso, Past President; Joe Yenish, Research section chair; Corey Ransom, Constitution and Operating Procedures representative; Kai Umeda, President-elect
Absent: Phil Westra, CAST representative

2012 FELLOWS

Jodi Holt

Dr. Jodi Holt is a professor of plant physiology and the chair of the Department of Botany and Plant Sciences at University of California (UC), Riverside. She has been a professor of plant physiology with research and teaching responsibility since 1982 at UC Riverside, and department chair since 2003. Her many contributions to Weed Science range from herbicide resistance research, to modeling temperature and moisture-based weed emergence and development, to studying the biology and management of invasive weed species. Jodi has been an active and important member of the Western Society of Weed Science and Weed Science Society of America.

Through her career to date, Dr. Holt authored or co-authored over 36 technical refereed journal publications and eight book chapters including a co-authoring a well-respected book, *Ecology of Weeds, and Invasive Plants: Relationship to Agriculture and Natural Resource Management*. She has also authored or co-authored over 55 semi-technical publication, special reports, and proceedings pertaining to invasive plant science issues. She made more than 69 presentations or posters as an invited speaker or contributor at the WSWs meeting and other weed science related professional meetings and served on numerous committees in WSWs and Weed Science Society of America (WSSA). Dr. Holt also served as a consultant and expert on Pandora's vegetation in James Cameron's Avatar movie.

Dr. Holt has been a mentor to many graduate students over the years and has served as major professor for 16 graduate students. Several of these have been in collaboration with weed scientists at other universities in addition with faculty at UC Riverside.

Her numerous awards and recognitions include Outstanding paper published in Weed Science (1992 and 2000); Fellow WSSA (2000), Fellow American Association of the Advancement of Science (2006), University of California Riverside Distinguished Teaching award (2009), and WSSA Outstanding Research award (2010).

Lars Anderson

Dr. Lars Anderson retired in January 2012 from his position as lead scientist and director of the USDA Agricultural Research Service (ARS) Exotic and Invasive Weed Research Unit in Davis, California. Dr. Anderson received his PhD from the University of California, Santa Barbara in 1974 and worked for 37 years on basic and applied research on the biology and management of invasive aquatic weeds. His work experience included two years with the US Environmental Protection Service and 35 years with the USDA-ARS. During his career he developed basic physiological and ecological information directly related to improving control and eradication of invasive aquatic plants with chemical and non-chemical methods. In addition to his research

program, he also developed a strong outreach and education program.

In the WSWS, Dr. Anderson has been an active member of the Western Society of Weed Science and California Invasive Plant Council and served as president of the Western Aquatic Plant Management Society, Aquatic Plant Management Society, and the California Weed Science Society. During his career he published over 70 peer-reviewed publications and 35 peer-reviewed technical reports and popular articles. Dr. Anderson led an expansion of the WSWS Aquatic Section which eventually evolved to the Western Aquatic Plant Management Society in 1985, of which he was a co-founder. He has been actively involved in policy and political issues regarding invasive aquatic species.

Dr. Anderson served as a graduate advisor for 12 students (both M.S. and PhD). He is currently President of Board of Trustees for the Explicit Science Center.

Dr. Anderson has received numerous awards and recognitions including the USDA Unit Distinguished Service Award and the California Weed Science Society Award of Excellence.



SIXTY-SIXTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**SAN DIEGO, CALIFORNIA
March 11-13, 2013**

President - Kai Umeda
President-Elect - Roger Gast
Secretary - Andy Hulting
Treasurer-Business Manager - Phil Banks

Tim Miller and Tom Lanini were chosen as Fellows of the Society in 2013. Mary Halstvedt was chosen as the Outstanding Weed Scientist in the Private Sector while Jane Mangold was named Outstanding Weed Scientist – Early Career. Phil Banks received the Presidential Award of Merit.

There were 253 members registered for the San Diego meeting as attendance continued to decline during the decade. The WSWS operated in the red during the year with a net loss of \$17, 500. Sixteen sustaining members contributed \$11,050 to the WSWS.

There were no special symposia held during the meeting. However, a revolving theme of the meeting was control of invasive weed species overtime with topics such as “Two Centuries of Invasive Plants in Southern California” by Carl Bell during the general session and a discussion of native species turning invasive held during the Weeds of Range and Natural Areas session.

A commemorative desk clock was given to all attendees in recognition of the 75 years that WSWS has existed. In his Presidential address Kai Umeda reminded the society that “the origins of WSWS date back to 1936 with the Western Plant Quarantine Board where thirteen states were represented and reported about problem species, regulatory control, and educational programs.” It was proposed to conduct an annual symposium to bring together weed workers in western states, interchange suggestions for weed problems, and study weed problems as a unit. He went on to discuss that although the methods to control weeds have changed, the cooperation between state, federal and private individuals remains strong in the WSWS.

A 5K fun run was held prior to the poster session on Tuesday morning. Several similar runs had been held during the Weed Science Society of America annual meeting and members of the WSWS wanted to join in the fun. Approximately 35 members ran the course along the water on a bike trail starting in front of the Catamaran Resort. Very uncharacteristic of sunny southern California, the event was held in a thick fog coming in from the Pacific.

Student Paper Contest

Weeds of Agronomic Crops & Weeds of Horticultural Crops

- 1st Place - Craig Beil, Colorado State University**
- 2nd Place - Christopher Van Horn, Colorado State University**
- 3rd Place - Jared Unverzagt, University of Wyoming**

Weeds of Rangeland and Natural Areas & Basic Biology and Ecology

1st Place - Christina Herron-Sweet, Montana State University

2nd Place - Samantha Ambrose, Oklahoma State University

3rd Place - Hally Berg, Montana State University

Student Poster Contest

1st Place - Amar Godar, Kansas State University

2nd Place - Carl Coburn, University of Wyoming

3rd Place - Marcelo Moretti, University of California, Davis

Undergraduate Poster Contest

1st Place - Leslie Holland, New Mexico State University

Five members were listed in the Necrology Report in 2013: Elena Raquel Sanchez Olguin, Mark Boyles, Lowell Jordan, Richard J. (Dick) Aldrich, and John Lydon.



2013 Western Society of Weed Science Board of Directors

Front row (L to R): Cameron Douglass, Student Liaison chair; Andrew Kniss, Education and Regulatory section chair-elect; Kai Umeda, President; Vanelle Peterson, Past President; Roger Gast, President-elect; Craig Beal, Student Liaison

Back row (L to R): Phil Westra, CAST representative; Bob Stougaard, Member-at-Large; Brad Hanson, Education and Regulatory section chair; Andy Hulting, secretary; Pat Clay, WSSA representative; Monte Anderson, Member-at-Large

Absent: Tony White, Research section chair and Webmaster; Phil Banks, Treasurer-Business Manager; Corey Ransom, Constitution and Operating Procedures representative

2013 FELLOWS

Tim Miller

Dr. Tim Miller is an Associate Professor of Weed Science at Northwestern Washington Research and Extension Center, Washington State University (WSU) in Mount Vernon, WA. Tim was an Extension support scientist at the University of Idaho from 1992-1997 and Extension Agent in Idaho from 1988-1992. He was also a Chemical Officer in the U.S. Army from 1981-1985.

His main areas of interest and expertise are integrated weed management in specialty and horticultural crops, but he also works with invasive and aquatic plant management. In addition to his service to the WSWS, Tim has been an active member of Weed Science Society of America (WSSA), the Washington State Weed Association, Washington State Noxious Weed Control Board, Oregon Society of Weed Science, Alaska Committee for Noxious and Invasive Plant Management, and the Idaho Weed Management Association.

Tim has conducted over 550 weed control trials on specialty and horticultural crops, non-crop sites, and aquatics. He has delivered nearly 500 presentations on weed management or weed identification in the last 14 years, authored or co-authored 13 journal articles, 4 book chapters, and 50 extension bulletins. Tim has served as a major professor for 3 M.S. graduate students and has served on the graduate committee for one PhD student. Tim also participates regularly in the Master Gardener program and is an instructor for the WSWS Noxious Weed Short Course.

Dr. Miller has served on numerous committees, judged graduate student papers and posters, served on local arrangements committees, and has represented WSWS at Weed Science Society of America meetings. He has served on the WSWS Board of Directors and served as Chair of the Education and Regulatory section, the Horticultural Crops section, and the Teaching and Technology Transfer sections. In addition, he chaired a very successful WSWS Knotweed Symposium in 2007. He has authored or co-authored 32 papers or posters at WSWS annual conferences since 1995 and submitted 59 WSWS Research Project Reports. For his numerous contributions and service to WSWS, Dr. Miller was selected for the WSWS Presidential Award of Merit in 2007 and 2012. Tim is well regarded by weed science and other colleagues throughout the Western United States and has initiated several cooperative research projects with significant importance to Pacific Northwest horticultural crops. Tim has established solid working relationships with industry representatives, in addition to academic colleagues and northwest specialty crop producers.

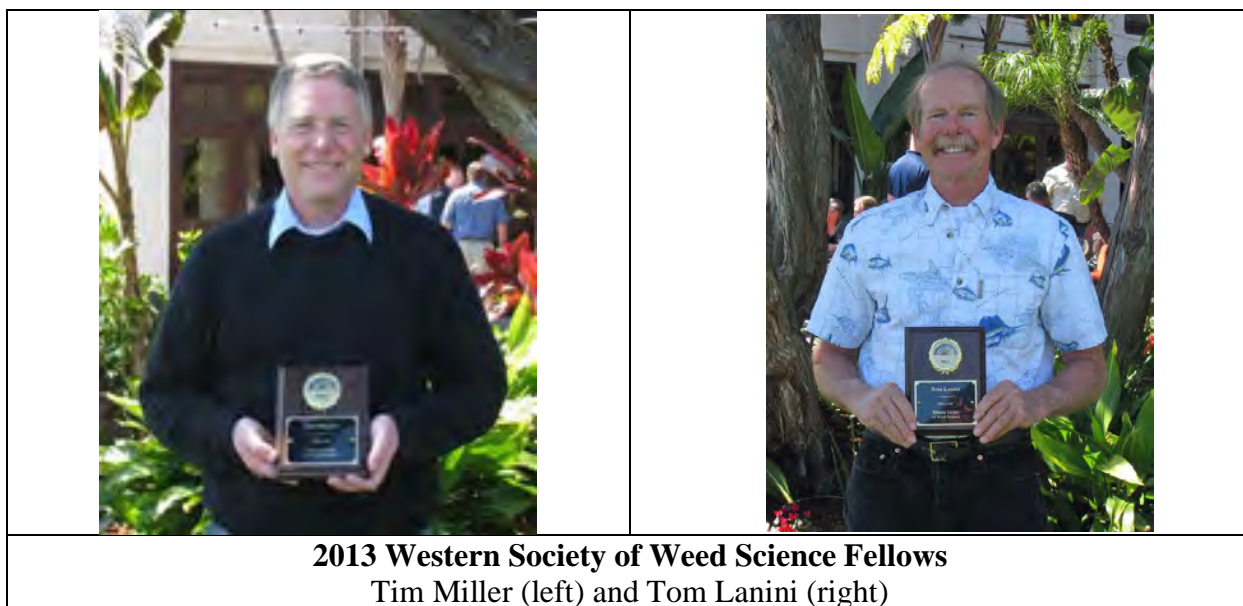
Tom Lanini

Dr. Tom Lanini serves as an Extension Weed Ecologist at the University of California at Davis (UC Davis). Tom spent three years at Pennsylvania State University (1983-86) and 27 years as an Extension Weed Ecologist at UC Davis. Dr. Lanini will be retiring from his UC Davis position in 2013.

Tom has been very active and provided significant service to the WSWS by serving on numerous committees, including local arrangements, graduate student paper judging, and chaired the horticultural crops section. He served as local arrangement chair for the WSWS in 2006. He has also served on numerous committees for the Weed Science Society of America (WSSA) and was chair of the local arrangements committee for WSSA in 2002. Dr. Lanini is a regular reviewer for *Weed Technology* and *Weed Science* journals.

Dr. Lanini's primary responsibilities are in vegetable crop production, but he has extended his expertise into a broad range of other areas including weed control in wildlands, aquatic, forestry, alfalfa, orchard and specialty crops, and non-crop areas. He is also considered an expert on dodder management, precision weed management, and organic methods of weed control. Tom has delivered more than 600 extension presentations, published over 50 peer-reviewed manuscripts, and over 280 extension papers, proceedings, and reports. In 1993, he spent his sabbatical leave at the USDA- Agricultural Research Service (ARS) Aquatic Weed Control Lab in Florida, gaining experience in aquatic weed control. In 2004-2005, he spent a sabbatical in Chile expanding his expertise in agronomic crops. Some of Dr. Lanini's major contributions to agriculture in the western U. S. include his educational program centered on the development of low input and cultural weed management strategies, understanding weed biology, and weed/crop interactions and thresholds.

He has served on the steering, program, and collegiate committee for the California Weed Science Society (CWSS), served on the board of directors, and received the Award of Excellence from the CWSS. Dr. Lanini served as mentor to several other extension weed scientists at UC Davis. Tom has also trained 11 graduate students at the Master and PhD level in ecology, plant pest protection, and vegetable crops graduate groups.



SIXTY-SEVENTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**COLORADO SPRINGS, COLORADO
March 10-13, 2014**

President - Roger Gast
President-Elect - Drew Lyons
Secretary - Andy Hulting
Treasurer-Business Manager - Phil Banks

Robert Norris and Robert “Bob” Stougaard were chosen as Fellows of the Society in 2013. Dr. Dave Armstrong of the Sylvan Dale Guest Ranch near Loveland, CO was named an Honorary Member. Dr. Armstrong was recognized for his work, participation, and service to the WSWs Invasive Weed Short course which has been held at the Guest Ranch on and off since the 1990s. Charlie Hicks was chosen as the Outstanding Weed Scientist in the Private Sector while Rita Beard was given the Weed Manager Award and recognized for her many years of helping to initiate weed control programs in both the National Park Service and the National Forest Service. Carl Libby received the Presidential Award of Merit.

There were 269 members registered for the 2014 annual meeting. Phil Banks pointed out that it takes approximately 300 registrants to break even with expenses at the annual meeting and attendance has been below that level for the last several years. There was a positive cash flow of \$18,500 for the year. Seventeen sustaining members contributed \$12,200 to WSWs.

A special symposium was held concerning “Biology and Management of Invasive Toadflax in the Western US”. Five speakers reviewed both yellow and Dalmatian toadflax identification, biology, and control using both chemical and biological control agents.

At the request of the Graduate Student Organization the WSWs Student Scholarship program was renamed the “Elena Sanchez Memorial WSWs Outstanding Student Scholarship Program”. In 2012, Elena Raquel Sanchez Olguin passed away while attending the VI International Weed Science Congress in Hangzhou, China. At the time of her death, she was a PhD candidate in Weed Science at Oregon State University.

The WSWs proposed Ethics Statement was put forth to the membership for a vote. After a lively discussion, the motion to affirm the ethics statement passed unanimously with one abstention. Also, an ad hoc committee recommended that the *Weeds of the West* not be reprinted. At the time there were approximately 3 years of books remaining in inventory.

Student Paper Contest

Weeds of Range and Natural Areas & Weeds of Horticultural Crops

1st Place - Kallie Kessler, Colorado State University

2nd Place - Thomas Getts, Colorado State University

3rd Place - Jason Adams, North Dakota State University

Weeds of Agronomic Crops & Basic Biology and Ecology

1st Place - Derek Sebastian, Colorado State University

2nd Place - Vipin Kumar, Montana State University

3rd Place - Curtis Hildebrandt, Colorado State University

Student Poster Contest

Weeds of Range and Natural Areas & Weeds of Horticultural Crops

1st Place - Julia Workman, University of Wyoming

2nd Place - Jason Adams, North Dakota State University

Weeds of Agronomic Crops, Teaching and Technology Transfer, & Basic Biology and Ecology

1st Place - Vipin Kumar, Montana State University

2nd Place - Cody Creech, University of Nebraska-Lincoln

3rd Place - Nevin Lawrence, Washington State University

Undergraduate Student Poster Contest

1st Place - Hannah Tomlinson, University of Idaho

Five members passed away in 2014 - Clark Amen, Mark Boyles, Margaret “Ann” Henson, Dwight Van Peabody Jr., and Edward F. Sullivan Jr.



2014 Western Society of Weed Science Board of Directors

Front row (L to R): Brad Hanson, Education and Regulatory section chair 2013; Vanelle Peterson, Past President 2013; Kai Umeda, Past President; Roger Gast, President; Phil Banks, Treasurer- Business Manager; Phil Westra, CAST representative

Back row (L to R): Tony White, Webmaster; Joel Felix, Education and Regulatory section chair; Andy Hulting, secretary; Corey Ransom, Constitution and Operating Procedures representative, Andrew Kniss, Research section chair; Craig Beal, Student Liaison chair; Pat Clay, WSSA representative, Monte Anderson, Member-at-Large

Absent: Drew Lyon, President-elect; Brian Jenks, Member-at-Large; Marcel Moretti, Student Liaison

2014 FELLOWS

Dr. Robert Norris

Dr. Robert Norris is an Emeritus Professor, University of California (UC) at Davis. Robert was raised in the United Kingdom and graduated with a BS in Horticultural Botany from Reading, England in 1960. He did his graduate work at the University of Alberta in Crop Ecology and completed a Post Doctorate program in Horticulture at Michigan State University in 1967.

He joined UC Davis Botany department in 1967 and retired from the UC Davis Vegetable Crops Department in 2001. During his career at UC Davis, Robert taught Botany for non-majors, Weed Science, Weed Biology and Ecology, and undergraduate and graduate level Integrated Pest Management (IPM) courses. Robert was one of the founding members of the UC Davis IPM program and author of the only IPM textbook used for undergraduate teaching in the U.S.

Through his research, he has developed and influenced weed management strategies in alfalfa and sugar beets and is considered a leading expert on soil seedbanks. He is well known for his zero-tolerance philosophy of letting weeds produce seed.

Robert is a Fellow of the Weed Science Society of America (WSSA) and is an Honorary member of the California Weed Science Society. He has served as a reviewer for *Weed Research*, *Journal of Applied Ecology*, and *Weed Technology* (associate editor 13 years), and *Weed Science* (associate editor 4 years). He has also been active in the Master Gardener program for over 30 years.

Robert has served the WSWS in many capacities; chaired the Research section, chaired the Chemical and Physiology section twice, and was the “Senior Ambassador” representing WSWS at the 2011 WSSA Weed Olympics in Knoxville, TN. Robert was editor of the WSWS Research Progress Reports in 1979. He has been active in WSWS for more than 40 years and made numerous presentations.

Dr. Robert (Bob) Stougaard

Dr. Stougaard is a Professor of Weed Science at Montana State University in Kalispell, MT. Bob received his B.S. in soil science from the University of Wisconsin in 1978 and initially worked as a sales representative for Shell Chemical in Illinois. Bob earned his M.S. in Weed Science from Southern Illinois University and PhD in Weed Science from the University of Nebraska. He joined the University of Nebraska as an Extension Weed Specialist from 1987 to 1991. Bob has been located at the Northwestern Ag Research Center in Kalispell for the past 23 years and is currently serving as the Superintendent of the station.

His main areas of interest and expertise are integrated weed management in wheat, barley, canola, and specialty crops. Of particular note were a series of highly referenced papers on the effects of wheat seed size, quality, and seeding rate on wheat and wild oat interference. Bob has expanded his research program to other disciplines, including entomology, plant pathology, and variety development, to serve the needs of the Montana clientele. Bob's research is relevant and addresses grower problems with a practical approach. As a result, he is highly respected by growers, crop consultants, and university research and extension colleagues. Bob has authored numerous extension publications, abstracts, and journal articles and has mentored graduate and undergraduate students.

Bob has been and continues to be a very active and important member of the WSWs. He has presented numerous times at WSWs and has served in leadership roles on the Board of Directors as Secretary, twice as Member-at-Large, and served as Agronomic Research Section Chair, Poster Committee Chair, and Placement Committee Chair. He has also served as an Associate Editor for *Weed Technology* and served on the Awards committee and Resolutions committee of the Weed Science Society of America (WSSA).



2014 Western Society of Weed Science Fellows
Robert Norris (left) and Bob Stougaard (right), both with President Roger Gast

SIXTY-EIGHTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**PORTLAND, OREGON
March 9-12, 2015**

President - Drew Lyons
President-Elect - Joe Yenish
Secretary - Curtis Rainbolt
Treasurer-Business Manager - Phil Banks

Pete Forster and Gil Cook were chosen as Fellows of the Society in 2015. Brian Mealor was named the Outstanding Weed Scientist. Carol Mallory-Smith received the Presidential Award of Merit.

There were 247 members registered for the 2015 annual meeting which included 45 students. Student attendance had steadily increased over the last 5 to 7 years while attendance from regular members declined. Much of this was attributed to the decrease in federal employees attending because they were not allowed to travel due to budget constraints. There had also been a reduction in the number of industry representatives coming to the meeting as consolidation of companies continued.

Phil Banks reported there was an increase in Society net worth of approximately \$24,000 compared to 2014 due to sales of *Weeds of the West* and payment received from the University of Wyoming. Without the book, WSWS would have posted a small loss year over year. At the summer board meeting a search committee was established to select a new WSWS business manager as Phil Banks announced his intention to step down from that position. Fourteen sustaining members contributed \$10,850 to the WSWS.

A special symposium was held concerning “The Use of Various Laboratory Tests to Help Diagnose Suspected Herbicide Problems”. Speakers reviewed the state-of-the-art methods for determining the presence and specific herbicide in plants. Methods to distinguish herbicide injury from pathogen or insect symptoms were presented.

Student Paper Contest

Weeds of Range and Natural Areas, Weeds of Horticultural Crops & Basic Biology and Ecology

1st Place - Marcelo Moretti, University of California, Davis

2nd Place - Nevin Lawrence, Washington State University

3rd Place - William Rose, University of Wyoming

Weeds of Agronomic Crops

1st Place - Thomas Schambow, University of Wyoming

2nd Place - Christopher Van Horn, Colorado State University

Student Poster Contest

Weeds of Range and Natural Areas, Weeds of Horticultural Crops, & Weeds of Agronomic Crops

1st Place - Derek Sebastian, Colorado State University

2nd Place - Alan Raeder, Washington State University

Basic Biology and Ecology

1st Place - Curtis Hildebrandt, Colorado State University

2nd Place - Gabriel Flick, Oregon State University

3rd Place - Triston Hooks, New Mexico State University

Three current or former members were listed in the Necrology Report in 2015. John D. Nalewaja, Kent McKay, and Earl Crittendon Spurrier (former Honorary Member).



2015 Western Society of Weed Science Board of Directors

Front row (L to R): Jane Mangold, Research section chair-elect; Sandra McDonald, Education and Regulatory section chair-elect; Joe Yenish, President-elect; Roger Gast, Past President; Drew Lyon, President; Brian Jenks, Member-at-Large

Back row (L to R): Phil Westra, CAST representative; Kirk Howatt, Education and Regulatory section chair; Corey Ransom, Constitution and Operating Procedures representative; Pat Clay, WSSA representative; Ed Davis, Research section chair; Marcel Moretti, Student Liaison chair; Carl Coburn, Student Liaison

Absent: Curtis Rainbolt, secretary; Michael Hubbard, Member-at-Large; Phil Banks, Treasurer-Business Manager

2015 FELLOWS

Pete Forster

Pete Forster is a Senior Scientist in charge of product evaluation with Syngenta Crop Protection at Greeley, Colorado, where he has been stationed since 2000. Prior to this position, Pete was with Ciba in Sanger, California, beginning in 1988.

He has presented many times at WSWS as well as at North Central Weed Science Society. He has also contributed on the WSWS Sustaining Membership (2008-2010) and Site Selection (2013-Present) committees. Pete has been the Syngenta contact for the Graduate Student and Spouse Breakfasts at the WSWS Annual Meeting (2000-2010), coordinated multiple other sponsored events at the WSWS annual meeting (2010-Present), and helped judge the Graduate Student Contests several times. Pete has served on the WSWS Board of Directors as Secretary (2003-2004) and Member-at-Large (2011-2013) and was named the WSWS Outstanding Weed Scientist in 2009.

Gil Cook

Gil Cook is currently a private consultant with Cook Ag Science Expertise in Spokane Valley, Washington. Most of our membership will remember Gil as serving with DuPont Crop Protection from 1976 until his retirement in 2004. Since then, Gil has conducted private research with BASF, Dow AgroSciences, DuPont, FMC, Gowan, Helena, NovaSource, Wilbur-Ellis, Walla Walla Farmers Co-op, and Loveland and has conducted trainings on herbicide resistance and forensic pathology.

With DuPont Crop Protection, Gil received the Achievement Award (1984), the Leadership Award (1988), the Environmental Excellence Award (1992), the Project Stewardship Award (Sulfonylurea Herbicides) (1998), and the Accomplishment Award (2002). He was also one of the Washington State Weed Association's Honorary Members (1992) and Weed Warrior (2003).

With WSWS, Gil has presented many times at the annual meetings and has served on the Necrology (1992-1994), Finance (1994-1996), Student Educational Enhancement (1996-1997), and Local Arrangements (1999-2001) committees. Gil was elected Chair of the Education and Regulatory Committee in 1998 and was WSWS President in 2003.



2015 Western Society of Weed Science Fellows
Pete Forster (left) and Gil Cook (right)

SIXTY-NINTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**ALBUQUERQUE, NEW MEXICO
March 7-10, 2016**

President - Joe Yenish
President-Elect - Kirk Howatt
Secretary - Curtis Rainbolt
Treasurer-Business Manager - Phil Banks

Joe DiTomaso and Jesse Richardson were chosen as Fellows of the Society in 2016. Prashant Jha was named the Outstanding Weed Scientist. Long-time member Roland Schirman received the Presidential Award of Merit. There were 235 members registered for the 2016 annual meeting which included 51 students, likely the highest student registration ever for WSWs. Student attendance has doubled in the last 10 years while attendance from regular members has declined. Sustaining members contributed \$13,500 to WSWs.

In his Presidential Address, Joe Yenish stated that the annual meeting attendance continued to be below 300 which is the financial break-even point for the Society. He stated the *Weeds of the West* has provided the Society with income for many years which has kept WSWs financially sound. However, the sale of the book has declined recently and will no longer be reprinted. Therefore, WSWs will need to consider other options for sustainability including mergers with other societies.

Joe also informed the members that Phil Banks will be leaving as the Treasurer – Business Manager at the end of the 2017 meeting. WSWs entered a joint search for a replacement with Weed Science Society of America (WSSA), the North Central Weed Science Society (NCWSS), and the Southern Weed Science Society (SWSS) along with the North American Invasive Species Management Association to seek a replacement.

The Weeds of Agronomic Crops discussion session held a future planning meeting with the topic of “21st Century Technologies in Weed Management”. Technologies discussed included robotic weeders, aerial imagery, and the use of unmanned aerial systems (UAS).

Student Paper Contest

Weeds of Range and Natural Areas, Weeds of Horticultural Crops, & Teaching and Technology Transfer

1st Place - Derek Sebastian, Colorado State University
2nd Place - Travis Carter, North Dakota State University

Weeds of Agronomic Crops

1st Place - Junjun Ou, Kansas State University
2nd Place - Clint Beiermann, University of Wyoming
3rd Place - Curtis Hildebrandt, Colorado State University

Basic Biology and Ecology

1st Place - Breanne Tidemann, University of Alberta

2nd Place - Carl Coburn, University of Wyoming

3rd Place - Neeta Soni, Colorado State University

Student Poster Contest

Weeds of Range and Natural Areas, Weeds of Horticultural Crops & Basic Biology and Ecology

1st Place - Carl Coburn, University of Wyoming

2nd Place - Albert Adjewor, University of Wyoming

3rd Place - Samantha Willden, Utah State University

Weeds of Agronomic Crops

1st Place - Charlemagne Lim, University of Wyoming

2nd Place - Rachel Zuger, Washington State University

Undergraduate Poster Contest

1st Place - Jessica Bramhall, Kansas State University

Five current or former members passed away in 2016. Richard W. W. Baldwin, Thomas T. Bauman, Wayne S. Belles, Oliver George Russ, and Stanford N. Fertig.



2016 Western Society of Weed Science Board of Directors

Front row (L to R): Jane Mangold, Research section chair; Sandra McDonald, Education and Regulatory section chair; Kirk Howatt, President-elect; Joe Yenish, President; Drew Lyon, Past President; Brian Jenks, Education and Regulatory section chair-elect

Back row (L to R): Ed Davis; Prashant Jha, Research section, chair-elect; Phil Banks, Treasurer-Business Manager; Marty Schraer, WSSA representative; Michael Hubbard, Member-at-Large; Curtis Rainbolt, secretary; Corey Ransom, Constitution and Operating Procedures representative; Carl Coburn, Student Liaison chair; Scott Nissen, Member-at-Large
Absent: Phil Westra, CAST representative; Breanne Tidemann, Student Liaison

2016 FELLOWS

Joe DiTomaso

Joe DiTomaso received his B.S. degree in Wildlife Biology in 1977 from the University of California at Davis (UC Davis), his M.S. degree in 1981 at Humboldt State University in Plant Taxonomy and his PhD in Weed Science at UC Davis in 1986. He was on the faculty at Cornell University from 1987 to 1994, where he primarily worked in the area of weed physiology. In 1995 he joined the UC Davis, Weed Science Program where he is a Cooperative Extension Weed Specialist and Professor.

His research and extension program focuses on understanding the biology and ecology on invasive plants in natural areas and using this information to develop more effective, scientifically based, and cost effect methods for their management.

Over his career he has published over 140 peer-review manuscripts, authored 38 book chapters, and published four books, including *Weeds of the Northeast*, *Aquatic and Riparian Weeds of the West*, *Weeds of California and Other Western States*, and *Weed Control in Natural Areas in the Western United States*. He teaches two courses at UC Davis and has been the major advisor to 22 graduate students (10 PhD and 12 M.S.). Within his extension program, Joe has given over 850 presentations since 1995.

Joe served as the President of three professional societies, including WSWs, California Invasive Plant Council (Cal-IPC), and the Weed Science Society of America (WSSA). He was the first editor of the new WSSA journal, *Invasive Plant Science and Management*, and served eight years in that capacity. He is the Director of the Weed Research and Information Center in the University of California and served for eight years on the National Invasive Species Advisory Committee and five years on the California Invasive Species Advisory Committee. Among his awards, he received the Lifetime Achievement Award by Cal-IPC (California - Invasive Plant Council), Outstanding Weed Scientist Award by WSWs, and the Outstanding Extension Award by the Weed Science Society of America (WSSA). He is also a Fellow of WSSA.

Jesse Richardson

Jesse Richardson has been an active member of WSWs since 1983. During those 32 years, he has been a consistent participant in the society in several roles as oral paper presenter, WSWs officer, and committee member. As a WSWs officer, Jesse served as Secretary from 1992-1993 and as Research section chair from 1999-2000. He served as Program chair in 2009 and President in 2010-2011. He has chaired six WSWs committees: Site Selection, Student Paper Contest, Program, Sustaining Membership, Poster, and Finance. Other committee assignments included Student Educational Enhancement and Herbicide Resistant Weeds. In 2006, he represented WSWs at a Shared Leadership Conference sponsored by CAST. He also

served on the Local Arrangements Committee from 2012-2014 and served as chair. He is currently serving on the finance committee again serving as chair.

Jesse is a lifelong resident of the western U.S. Upon earning a PhD in Agronomy/Weed Science at Washington State University, he began his career as a field Technical Service and Development Specialist for Dow Chemical in 1986. Having worked for the company for over 21 years, he is presently a Crop Protection R&D Specialist for Dow AgroSciences, working in agronomic and horticultural crops in California, Arizona, New Mexico, and Texas.

In addition to WSWS service, Jesse has provided leadership for the California Weed Science Society as Secretary, Vice President/Program Chair, President, and Past President. He considers his greatest accomplishment in life to be his F1 generation.



2016 Western Society of Weed Science Fellows
Jesse Richardson (left) and Joe DiTomaso (right)

SEVENTIETH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**COEUR D'ALENE, IDAHO
March 7-10, 2017**

President – Kirk Howatt
President-Elect – Monte Anderson
Secretary – Chad Cummings
Treasurer-Business Manager – Phil Banks/Tara Steinke

The 2017 meeting was held jointly with the Western Aquatic Plant Management Society. The theme of the meeting was Weeds of All Types, whether on land or water. WAPMS members contributed 38 papers to the meeting with a total of 125 presentations and 50 posters. There were 330 members in attendance 90 of which were WAPMS members. The joint meeting also included three symposia and all time slots were filled for the first time in over 8 years. Sustaining members of WSWS contributed \$15,500 to the society.

This was the first meeting with a new Business Manager in attendance. Tara Steinke of Interactive Management Incorporated began the transition of the position from Phil Banks.

Ralph Whiteside and Ed Peachy were chosen as Fellows of the Society in 2017. Erik Lehnoff was named the Outstanding Weed Scientist, early career. Phil Stahlman received the Presidential Award of Merit.

The Proceedings were dedicated to Rita Beard who passed away in October 2016. Rita had overseen invasive weed management control efforts in both the National Park Service and the US Forest Service. She was a respected colleague by all in the invasive weed control universe and effectively changed the way invasive weeds were managed in the country especially on federally managed lands.

Student poster and paper contest winners were:

Student Paper Contest

Aquatic Weeds

1st Place - Erika Haug, North Carolina State University

Weeds of Range and Natural Areas

1st Place -Tara Burke, Washington State University

Weeds of Horticulture Crops

1st Place - Caio Brunharo, University of California, Davis

Basic Biology and Ecology of Weeds

1st Place - Carl Colburn, University of Wyoming

2nd Place - Neeta Soni, Colorado State University

Weeds of Agronomic Crops

1st Place - Charlemagne Lim, Montana State University

2nd Place - Curtis Hildebrandt, Colorado State University

Student Poster Contest

Weeds of Range and Natural Areas, Aquatics, Weeds of Horticultural Crops & Basic Biology and Ecology

1st Place - Mirella F. Ortiz, Colorado State University

2nd Place - Albert Adjesiwor, University of Wyoming

Weeds of Agronomic Crops

1st Place - Tara Burke, Washington State University

2nd Place - Clint Beiermann, University of Nebraska

Undergraduate Poster

1st Place - Grace Ogden, Oklahoma State University

In addition to Rita Beard, three other current or former members were listed in the Necrology Report in 2017. Richard “Dick” Nielsen, Amy Peters, and Dennis J. Tonks.



2017 Western Society of Weed Science Board of Directors

Front row (L to R): Caio Brunharo, Student Liaison; Chad Cummings, secretary; Monte Anderson, President-elect; Joe Yenish, Past President; Kirk Howatt, President; Tim Miller, Constitution and Operating Procedures representative; Tara Steinke, Treasurer-Business Manager (transitioning)

Back row (L to R): Prashant Jha, Research section chair; Dirk Baker, Education and Regulatory section chair-elect; Charlie Hicks, Member-at-Large; Brian Jenks, Education and Regulatory section chair and CAST representative; Phil Banks, Treasurer-Business Manager; Scott Nissen, Member-at-Large; Brad Hanson, Research section chair-elect; Marty Schraer, WSSA representative

2017 FELLOWS

Ralph Whitesides

Ralph Whitesides received his B.S. in Agronomy/Botany from Utah State University in 1974, his M.S. (1978) and his PhD (1979) in Crop Science/Weed Science from Oregon State University (OSU). He was a faculty member at OSU, Washington State University, and Utah State University. Ralph has worked extensively in Weed Science Education as an Extension Specialist and in university teaching assignments. University courses included: World Food Crops, Field Crops, University Survival, Forage Production & Pasture Ecology, Weed Management, Weed Biology and Control, and a variety of topics as Special Problems. He has taught Extension Programs in Utah and many other states, Thailand, and China.

He has conducted invasive plant management training for the U.S. Forest Service, U.S. Fish and Wildlife Service, USDA Farm Services Agency, and the Utah Weed Control Association. Ralph has been an active member of the WSWS for 24 years as a participant and presenter and has served as member-at-large, Chair of the Education and Regulatory Section, on the Ethics Committee, *Weeds of the West* marketing committee, Necrology Committee, Student Paper Judging Committee, and as Emcee of the WSWS Awards Banquet.

Ralph was recognized in 2008 with the USDA Certificate of Appreciation from USDA-Farm Service Agency, in 2010 by Utah State University's College of Agriculture as Teacher of the Year, in 2014 by the Utah Weed Control Association with the Weed Supervisor Appreciation Award, and in 2014 with the Utah State University E. G. Peterson Extension Award.

Ralph has also served Weed Science Society of America as an Executive Board Member (Constitution and Operating Procedures) from 2005-2011, Utah State Weed Board 2005-2016, and on the Executive Committee of the Utah Weed Control Association 2002-2016. He retired from Utah State University as Professor and Extension Weed Specialist in July 2016.

Ralph recognizes many colleagues and friends for their contributions to his career, with special thanks to Dr. Arnold P. Appleby. He considers his greatest accomplishment in life to be his relationship with his wife and children, none of whom pursued a career in Weed Science, but all of whom have supported Ralph in his love for undesirable vegetation management.

Ed Peachey

Dr. Ed Peachey is from a small farming community in central Pennsylvania. After leaving the farm for greener pastures in Oregon, it took a few years working in the building industry before he rediscovered his interest in agriculture and enrolled at Oregon State University (OSU). There he worked as an undergraduate for weed scientists Dr. Arnold Appleby and Larry Burrill. The project he was assigned was time-lapse photography of herbicide effects on weeds. The hook was set, and from that point on, weed science was the focus of his career. He continued studies at OSU and received a B.S. degree in Horticulture in 1987.

After a 3-year term in Bangladesh with a non-governmental rural development organization, he returned to Oregon and completed an M.S. in Horticulture in 1993 and began a PhD in Crop and Soil Science in 2001, completing in 2004.

Ed first attended WSWs in 1993 and has been an active member since, missing only one meeting in 24 years. He has served in several capacities including Research section chair and as a member of the Board of Directors. He also has chaired the Weeds in Horticultural Crops section twice, and the Alternative Methods of Weed Control section.

Dr. Peachey is currently serving (since 2015) as regional weed and pest management specialist in the Willamette Valley of Western Oregon. His primary focus is processed vegetables, but he also evaluates weed and other pest management technologies in fresh market vegetables and seed crops. From 2008 to 2014, he worked to develop chemical and biological controls for perennial weeds such as field bindweed in cane berries, blueberries, strawberries, and hazelnuts, in addition to work in vegetable crops. In 2008, he also became the managing editor of the *Pacific Northwest (PNW) Weed Management Handbook*. He has worked with scientists in the PNW and across the country to develop sustainable and cost-effective weed management options in conventional and organic crops and worked closely with IR-4 (USDA) to bring several crucial registrations to growers of specialty crops, including snap beans, processing squash, vegetable crops grown for seed, rhubarb, blueberries, and cane berries. Dr. Peachey received the Weed Worker of the Year award from Oregon Society of Weed Science in 2003, and the Professional Service Award from WSWs in 2006.



2017 Western Society of Weed Science Fellows

Ralph Whitesides (left) with President Kirk Howatt (far left) and Ed Peachey (right) with Bill Cobb (far right)

SEVENTY-FIRST MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**GARDEN GROVE, CA
March 12-15, 2018**

President - Monte Anderson
President-Elect - Andrew Kniss
Secretary - D. Chad Cummings
Treasurer-Business Manager - Tara Steinke

Kai Umeda and Phillip Munger were honored as Fellows of the Society in 2018. Brian Schutte received the Outstanding Weed Scientist – Early Career and Rick Boydston received the Outstanding Weed Scientist – Public sector award. Roger Gast received the Presidential Award of Merit. The recipients of the Elena Sanchez Memorial Scholarship were Clint Beierman, (University of Nebraska-Lincoln, Charlemagne Lim, (Montana State University-Bozeman), and Grace Ogden, (Oklahoma State University-Stillwater). The Rita Beard Endowment Student Scholarship recipients were Shannon Clark, (Colorado State University), and Clay Wood, (University of Wyoming).

There were 193 people pre-registered with 34 of those being student registrations. A total of 56 students signed up to participate in the Student Night Out. There were 18 Sustaining Members that contributed \$9,500 to the society.

The General Session included a talk from President Monte Anderson about changes, especially in the make-up of the herbicide companies. He stated that “If not for many changes in my life and career, I wouldn’t be here as your president. I had no clue growing up that identifying weeds, participating in crops judging, and working in the seed lab would lead to where I am today. Surviving five different company names and the associated moves has been incredible and unexpected.” Lee Van Wyche gave a Washington, D.C. Update, and guest speakers gave talks on Land Acknowledgement and Contemporary Indigenous Issues in Science by Lydia Jennings, (University of Arizona, Tucson, AZ), and Growing Disneyland by David Marley, (California State University, Fullerton, CA).

This was a joint meeting with the Western Aquatic Plant Management Society (WAPMS). For this meeting there were 133 submissions: 73 oral papers (of which 38 were for WAPMS) and 60 poster presentations. The total numbers were substantially below 2017 submissions. However, the number of presentations at WSWs has been declining by an average of 7 papers per year since 2010. Prior to the 2018 annual meeting, the number of student contest participants had been increasing, but there was a substantial drop in 2018. Only 28 student contest papers and posters were submitted in 2018, compared to an average of 37 from the previous 5-year period.

The Student Paper and Poster contest included 10 graduate and 2 undergraduate poster presentations and 16 oral presentations.

Student Paper Contest

Basic Biology and Ecology of Weeds

1st Place - Albert Adjesiwor, University of Wyoming

2nd Place - Hudson Takano, Colorado State University

Weeds of Agronomy, Horticulture and Range

1st Place - Gabriel Flick, Oregon State University

2nd Place - Clint Beierman, University of Nebraska

Student Poster Contest

1st Place - Nami Wada, Oregon State University

2nd Place - Lucas Kopecky Bobadilla, Oregon State University

3rd Place - Ramawater Yadav, Montana State University

Those individuals retiring this year were Jeff Tichota, Charlotte Eberlein, Rod Lym, Rick Boydston, and Curt Thompson.

WSWS members Ron Crockett, (President 2008) Art Lange (Fellow 1977), Steve Orloff, and Gustavo Sbatella (who tragically was killed in a motorcycle accident on his way to the WSWS summer board meeting), passed away in the previous year. The 2018 Proceedings were dedicated to Gustavo.



2018 Western Society of Weed Science Board of Directors

Front row (L to R): Caio Brunharo, Student Liaison chair; Brian Jenks, CAST representative; Andrew Kniss, President-elect; Monte Anderson, President; Tara Steinke, Treasurer-Business Manager; Kirk Howatt, Past President; Chad Cummings, secretary; Tim Miller, Constitution and Operating Procedures representative

Back row (L to R): Clint Beiermann, Student Liaison; Dirk Baker, Education and Regulatory chair; Brian Schutte, Education and Regulatory section chair-elect; Brad Hanson, Research section chair; Marty Schraer, WSSA representative; Charlie Hicks, Member-at-Large; Gustavo Sabatella, Research section chair-elect

Absent: Lynn Sosnoskie, Member-at-Large

2018 FELLOWS

Phillip (Phil) Munger

Philip (Phil) Munger received his B.S. degree in Agronomy in 1981 from the Ohio State University, his M.S. degree in 1983 at Texas Tech University in Agronomy and Weed Science and his PhD in Plant Physiology and Weed Science at Texas A&M University, in 1986. He began his career as a Field Biologist in South Texas for the BASF Corporation in 1986 and continued his career with BASF for over 30 years retiring in 2016 as a Field Biology Manager. He is currently an Independent Field Agricultural Research specialist with Bravin Kataela Agricultural Research, Inc. He has served the WSWs on the Finance Committee and was elected as a Member-at-Large-Private Sector.

Kai Umeda

Kai Umeda received his B.S. degree in Pest Management from the University of California, at Berkeley and his M.S. degree at Southern Illinois University. He began his weed science work with American Cyanamid in 1981, moving to the University of Arizona in 1994 as a Vegetable Area Extension Agent and since 2003 as an Area Extension Agent, Turfgrass Science. He has been a member of the WSWs since 1985, serving on Student Paper, Public Relations, and Nominations committees, as the Constitution and Operating Procedures representative. He was also elected as Education and Regulatory section chair and served as WSWs president in 2013.

In his extension duties, he has planned and conducted scores of field days, workshops, seminars, and schools for growers, commercial and municipal landscapers, golf course superintendents, and crop consultants. As an agricultural/horticultural professional, Kai has authored/co-authored more than 50 abstracts and conference proceedings in a host of meetings. Thirty of these have been for WSWs meetings, reflecting his 32 years of service to the society. He has also presented at regional and national entomology, horticulture, and agronomy meetings, displaying his ability to work collaboratively with scientists from many different disciplines. In addition, Kai has written over 100 WSWs Research Progress Reports, indicative of his dedication to WSWs and to Weed Science.



2018 Western Society of Weed Science Fellows
Phillip Munger (left) and Kai Umeda (right)

SEVENTY-SECOND MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**DENVER, CO
March 11-14, 2019**

President - Andrew Kniss
President-Elect - Pat Clay
Secretary - D. Chad Cummings
Treasurer-Business Manager - Eric Gustafson

Joe Yenish and Drew Lyon were honored as Fellows of the Society in 2019. Todd Gaines received the Outstanding Weed Scientist – Early Career, Don Morishita received the Outstanding Weed Scientist – Public sector award. Bill Cobb received the Outstanding Weed Scientist – Private sector award. Traci Rauch received the Professional Staff Award and Sandra McDonald received the Presidential Award of Merit. The recipients of the Elena Sanchez Memorial Scholarship were Larissa Larocca de Souza, Oregon State University, Ramawatar Yada, Montana State University, and Lucas Kopecky Bobadilla, Oregon State University. The Rita Beard Endowment Student Scholarship recipients were Christie Hubbard, University of Idaho; Rory O'Connor, Kansas State University; Rachel Seedorf, Colorado State University; and Travis Sowards, Brigham Young University. There were 248 registrations including 53 students and 12 registrations for the Symposia only. There were 14 Sustaining Members that contributed \$19,400 to the society.

The General Session included a philosophical talk from President Andrew Kniss. He supported actively recruiting and welcoming people with a different set of backgrounds and experiences than our current members. “We must find members whose backgrounds do not mirror our own. We must find those botanists and biologists and engineers and ecologists and social scientists and chemists who may not even be aware that ‘weed science’ is a thing. We need to welcome them into our discipline and into our society, so they feel every bit as welcome as we do. We need to show them why the problems we are trying to solve are so challenging and interesting. And we must listen to their ideas about how we might address those problems. And this is how we will grow our society into the best society we can be.”

Along the lines of inclusion of potential new members and other disciplines in WSWS the Board implemented a Diversity and Inclusion Committee in 2018. Elizabeth Mosqueda spoke about Discovering Weed Science Possibilities for a More Inclusive Society during the General Session. Also, during the General Session, Lee Van Wyche gave a Washington, D.C. update and a guest speaker, Sarah Lupis discussed Big Impacts: Why Impactful Reporting Matters and How to do it Better.

There were 160 submitted papers; 88 oral papers and 72 poster presentations. There were two symposia which added 19 additional presentations. In total, this year's meeting had 183 papers and posters including the four presentations from the General Session.

The two symposia were titled; “Integrated Pest Management Research in the West” and “Rights-of-Way – Beyond Integrated Vegetation Management to Integrated Habitats”. Both were well attended.

Program chair, Pat Clay reported that the total presentations were similar to the joint meeting in 2017 as well as 2010-2012 annual meetings. He stated that although the paper numbers do temporarily reverse the trend of declining paper and poster submission, there are several contributing factors that need to be considered. Student contest numbers were at a high compared with the last 10 years and the two symposia provided a sizable boost to the total number of papers. He felt that in order “to grow our society and...the offerings to our membership we will need to: 1) Continue our efforts to make students a central part of our Society; 2) Solicit and encourage robust symposia topics; 3) Consider joint meetings with aligned societies/interest groups; and 4) Need sites chosen for ease of travel and affordability.”

The student competition included 22 graduate student posters, 9 undergraduate posters and 23 graduate student papers.

Student Paper Contest

Weeds of Agronomic Crops

1st Place - Katie E. Driver, University of California-Davis

2nd Place - Clint W. Beiermann, University of Nebraska-Lincoln

3rd Place - Jodie A. Crose, Oklahoma State University

Range, Forest, and Natural Areas

1st Place - Christie Hubbard Guetling, University of Idaho

Weeds of Horticulture Crops

1st Place - Eric Augerson, Oregon State University

Basic Biology and Ecology

1st Place - Hudson K. Takano, Colorado State University

2nd Place - Elizabeth G. Mosqueda, University of Wyoming

Student Poster Contest

Weeds of Agronomic Crops

1st Place - Lucas Kopecky Bobadilla, Oregon State University

2nd Place - Elizabeth G. Mosqueda, University of Wyoming

3rd Place - Justin Childers, Oklahoma State University

Weeds of Range and Forest

1st Place - Shannon L. Clark, Colorado State University

2nd Place - Rachel H. Seedorf, Colorado State University

Weeds of Horticulture Crops

1st Place - Larissa Larocca de Souza, Oregon State University

Basic Biology and Ecology

1st Place - Abigail Barker, Colorado State University

Undergraduate Poster Contest

1st Place - Samantha R. Nobes, University of Wyoming

2nd Place - Lauren B. Stanko, Utah State University

Those individuals retiring this year were Don Morishita, Carol Mallory-Smith, Tim Miller, and Don Drader.

WSWS members John Abernathy, Arnold Appleby, J.C. Banks, Timothy Chicoine, Nelroy Jackson, Michael Hickman, Rupert Palmer and Bill Phillips passed away in the previous year.



2019 Western Society of Weed Science Board of Directors

Front row (L to R): Tim Miller, Constitution and Operating Procedures representative; Lynn Sosnoskie, Member-at-Large; Andrew Kniss, President; Monte Anderson, Past President; Chad Cummings, secretary

Back row (L to R): Lucas Kopecky Bobadilla, Student Liaison; Joel Felix, Education and Regulatory section chair-elect; Pat Clay, President-elect; Brian Schutte, Education and Regulatory section chair; Brad Hanson, Research section chair; Clint Beiermann, Student Liaison chair; Marty Schraer, WSSA representative

Absent: Brian Jenks, CAST representative; Ryan Rapp, Member-at-Large; Eric Gustafson, Treasurer-Business Manager

2019 FELLOWS

Joe Yenish

Dr. Joe Yenish received degrees at North Dakota State University (B.S.), University of Wisconsin-Madison (M.S.) and North Carolina State University (PhD). Joe came west after two years in a postdoctoral position at Univ of Minnesota and never looked back. He had a successful research and extension program at Washington State University as associate professor from 1996 to 2010. Growers benefited from his research on the ecology and biology of crops and weeds in dryland rotations and subsequent management strategies. He specifically worked on grain legumes, dry peas, lentils, and chickpeas as well as supporting timothy hay, grass for seed, canola, mustard, camelina, and other crop species.

Joe joined Dow Agrosiences in 2010 as a field scientist where he continues research with a primary focus on weed control and nitrogen stabilization in cereal protection. He provides technical service, training, and education for U.S. cereals crop protection products and advises the Cereals Portfolio Leader and Product Manager with biological and agronomic information for the development and positioning of U.S. cereals products. Joe gets around the West as he supports Northern Plains and Pacific Northwest Sales Districts which include MN, ND, MT, WY, ID, UT, NV, OR, and WA. He was awarded Research and Development awards from his company in 2014 and 2015 as well as Above and Beyond in 2012, 2014, and 2015.

Among all that, Joe provided great service to WWS. He and his graduate students presented papers almost annually. He served on the board as Research Section and Education and Regulatory section chairs and served as President 2015-2016. Multiple times, Joe served as student paper judge, helped facilitate annual meetings, and served on committees.

A quote from one of his letters of support: “As the former president of the WWS, I can remember many times where Joe provided leadership on issues and provided thoughtful input into the society’s future vision.”

Dr. Drew Lyon

Dr. Drew Lyon received degrees from University of Illinois (B.S.) and University of Nebraska, (M.S. and PhD). His early career included Technical Service Representative for American Cyanamid Company and Assistant County Extension Advisor at the University of Illinois until he joined University of Nebraska in Research and Extension in 1990. He had a successful career there as Professor of Agronomy & Horticulture until 2012.

Drew then became the first weed scientist awarded the Endowed Chair, Small Grains, Extension and Research, Weed Sciences at Washington State University (WSU). His research includes weed control in dryland small grain production systems of eastern Washington including crops grown in rotation with small grains and summer fallow. Integrated weed management is the primary focus and research results are quickly transferred to Washington growers through his Extension program.

From a supporting letter, “In addition to his service to weed science, Dr. Lyon is a solid resource for the farmers in the state of Washington and is accessible through the WSU small grains website, his podcast and grower presentations.”

He has published a book, seven book chapters, 86 journal articles, 88 extension publication, 10 software releases, and serves as Associate Editor *Weed Technology*. Drew has received 17 honors and awards including WWS Outstanding Weed Scientist.

Drew has authored or co-authored papers for the WWS annual meeting just about every year since 1993 and has submitted papers to the WWS Research Progress Reports. Service to WWS includes Weeds of Agronomic Crops Chair, Research Section Chair, numerous committees, and Drew has served as WWS President.



SEVENTY-THIRD MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

MAUI, HI
March 11-14, 2020

President - Pat Clay
President-Elect - Corey Ransom
Secretary - D. Chad Cummings
Treasurer-Business Manager - Eric Gustafson

Traci Rauch and Monte Anderson were honored as Fellows of the Society in 2020. Dr. William Price, University of Idaho, was named an Honorary member. Awards for 2020 were: Vipin Kumar, Outstanding Weed Scientist – Early Career; Tim Harrington, Outstanding Weed Scientist – Public sector; Marty Schraer, Outstanding Weed Scientist – Private sector; and Steve Sauer, Land Manager. Marty Schraer received the Presidential Award of Merit. The recipients of the Elena Sanchez Memorial Scholarship were Hudson Takano, Colorado State University, Jaycie Arndt, University of Wyoming, and Hanah Huhns, University of Wyoming. The Rita Beard Endowment Foundation Board of Trustees selected three travel award scholarship recipients for 2020. Awards were given to Jaycie Arndt, University of Wyoming, Michelle Majeski, Montana State University, and Alexandra Stoneburner, Colorado State University and National Park Service intern.

Also, since this was a joint meeting with The Weed Science Society of America (WSSA) it is appropriate to mention that: Vipin Kumar, Kansas State University, received the WSSA Outstanding Reviewer award for *Weed Science*; Hudson Takano, Colorado State University, received the WSSA Outstanding Graduate Student award; and James Leary, University of Hawaii at Manoa, et al received the Outstanding Paper Award for *Invasive Plant Science and Management*.

There were 11 Sustaining Members that contributed \$13,200 to the society.

This was a joint meeting between WSWS and WSSA which made for a fun, action-packed meeting. There were 5 symposia and a Workshop. Program chair, Corey Ransom, reported that program was shaped up nicely with coordination between himself and the WSSA program chair. In order to accommodate the differences in the meeting formats between WSSA and WSWS, major changes to the meeting included presentation of WSWS awards during the General Session in lieu of the usual WSWS Awards Luncheon, presentation of student contest winners on Wednesday night prior to Student Night Out, and presentation of retirees at the WSWS business meeting on Thursday morning. Where possible WSWS projects (7) and WSSA sections (14) with similar topics were combined so members of each society could attend sections of interest. There were over 600 presentations at the meeting, including oral and posters as well as the 3 Minute Thesis (3MT) Research competition.

Members of WSWS submitted over half of the presentations (333 oral presentations) and 147 posters plus 3 of the general session presentations. There were 19 WSWS students participating in the Poster Contest (22 in 2019) and 36 in the Oral Paper Competition (23 in 2019). This

increase was especially positive given the high cost associated with the meeting location but may be because the exotic location was an incentive for students to participate in order to justify their travel.

The 3MT noted above is a part of the WSSA program which challenges graduate students to present their research in 3 minutes! There were 2 sections, one each for Masters students and PhD students.

A few presenters had to withdraw papers due to travel restrictions or higher than usual meeting expenses due to the meeting location. Other presenters had to withdraw papers due to travel restrictions and the start of the coronavirus pandemic. Some members had travel restrictions imposed by their organization and were unable to travel to the meeting. The coronavirus was discussed at length in the hallways at the meeting, but at this time there was so much unknown about this virus that no health safety restrictions were put in place by the hotel nor by the Societies. No known cases of COVID-19 were reported from the meeting.

WSWS is the only Weed Science Society that includes discussion sections in the annual meeting so, although they were included in the program, the time allowed was shortened to 45 minutes and they were scheduled at the end of the day. Discussion sections topics were:

Weeds of Range, Forests, and Natural Areas: Compiling and using regional scale infestation maps for more efficient management of invasive weeds

Weeds of Horticultural Crops: Encouraging innovation between public institutions and industry

Weeds of Agronomic Crops Cultural & Mechanical Weed Management: What's Working? Basic Biology and Ecology How can we apply basic herbicide resistance knowledge to weed management practices?

Teaching and Technology Transfer: What do you wish graduate school would have taught you?

In the fall of 2019 President Pat Clay formed an ad hoc Invasive Species committee with Brian Mealor and Chad Cummings serving as co-chairs. This ad hoc committee's objectives included enhancing coordination and cooperation among invasive weed-related organizations in the Western U.S. at meetings such as: Society for Range Management, Western Governors Association Working Lands Roundtable, and Western Weed Coordinating Committee. Brian and other members worked on a symposium on Invasive Annual Grass Management for the 2021 WSWS virtual meeting, and Chad spoke with Mary Jo Foley-Birrenkot, SRM Director of Membership and Outreach, to identify keyways WSWS could work with SRM in the western U.S.

The Student Night Out was very successful. About 134 students signed up and hosts volunteered so that all students were covered. With the joint 2020 meeting, the WSWS held their own student paper contest while the poster contest was held in combination with the WSSA, and results were posted in the WSSA April 2020 newsletter.

Three WSWS students placed in the WSSA/WSWS poster contest: 1st Place - Carlos Alberto Rigon, Colorado State University; 2nd Place - Neeta Soni, Colorado State University; and 3rd Place - Crystal Sparks, Colorado State University.

The WSWs graduate student paper contest had a total of 33 contestants and 15 judges volunteered their time.

Student Paper Contest

Weeds of Agronomic Crops

1st Place - Clint W. Beiermann, University of Nebraska-Lincoln

2nd Place - Justin Childers, Oklahoma State University

Pasture, Range, Forest, Rights of Ways, and Natural Areas

1st Place - Jodie Crose, University of Wyoming

2nd Place - Mirella F. Ortiz, Colorado State University

3rd Place - Jake Courkamp, Colorado State University

Weeds of Horticulture Crops and Integrated Weed Management

1st Place - Nathan Haugrud, North Dakota State University

Basic Biology and Ecology

1st Place—Pragya Asthana, Washington State University

2nd Place - Marcelo Figveireda, Colorado State University

Physiology

1st Place - Olivia E. Todd, Colorado State University

WSWS members Jerry Caulder and Bob Andersen passed away in the previous year.

No photo of the Board of Directors was available.

2020 Western Society of Weed Science Board of Directors

President Pat Clay

President-elect Corey Ransom

Secretary Chad Cummings

Research section chair Mithila Jugulam

Education and Regulatory section chair Joel Felix

WSSA representative Marty Schraer

Past President Andrew Kniss

Member-at-Large Public sector Julie Kraft

Member-at-Large Private sector Ryan Rapp

Treasurer-Business Manager Eric Gustafson

CAST representative Greg Dahl

Constitution and Operating Procedures representative vacant

Student Liaison chair Lucas Kopecky Bobadilla

Student Liaison Mirella F. Ortiz

Webmaster David Krueger

2020 FELLOWS

Traci Rauch

Traci Rauch completed her bachelor's degree in Biology at Pacific Lutheran University in 1992 and her Master of Science degree at the University of Idaho in 1998. Traci started her career in Weed Science as a Scientific Aide in 1995 and is currently a Research Associate at the University of Idaho. She conducts field and greenhouse experiments in the agronomic weed science program.

Traci has been an active member in WSWs since 1993. She has authored/coauthored 245 WSWs Research Progress Reports, 30 WSWs Proceedings Abstracts, 8 other professional abstracts, 3 *Weed Technology* articles, and has been WSWs Proceedings co-editor for 6 years, and WSWs Research Progress Report editor or co-editor for 9 years. She has presented at 152 other meetings and field tours.

Growers and industry personnel seek her out for consultation on weed control in wheat, legumes, seed crops and other commodities. She has helped train graduate students at the University of Idaho since the mid-1990's.

Monte Anderson

Monte Anderson originates from a South Dakota wheat, corn, and livestock farm. He obtained B.S. and M.S. degrees in Agronomy from South Dakota State University and got his first exposure to the Weed Science societies as a grad student at three North Central Weed Science Society (NCWSS) conferences. During his 36 years in industry, he has worked for and survived working for five companies. Starting out with one of the smallest companies in 1984 and now with the largest company, Monte has worked on more crops and chemistry than he could ever imagine. He has presented on a wide variety of herbicides at the NCWSS, WSWs, and Weed Science Society of America meetings.

Starting out with American Hoechst as a Research & Development/Technical Service associate, he covered the Red River Valley of North Dakota and Minnesota. With Hoechst- Roussel Agri-Vet he covered 5.5 states based out of Spokane, WA as a Field Technical Group representative, that's when he first joined the WSWs in 1985. When Hoechst Roussel Agri-Vet teamed up with NorAM to become AgrEvo, he was asked to work with transgenic corn and soybeans, essentially the Liberty Link technology, based out of eastern Nebraska. The advent of combining AgrEvo and Rhone Poulenc as Aventis brought him back to the Pacific Northwest and back to WSWs. Then, when Aventis was sold to Bayer, Bayer CropScience has let him stay right where he was to work on almost anything. Then as Bayer acquired Monsanto, now he truly does cover anything and everything it seems! Last fall, Bayer CropScience assigned him a position as a Field Agronomist in the Field Solutions group that develops only the new stuff but finds his experience with the old stuff is

going to keep him fully engaged for some time until it's no longer fun. He's currently a Principal Scientist residing near Spokane, WA covering WA, OR, and ID.



2020 Western Society of Weed Science Fellows
Traci Rauch (left) with President Pat Clay and Monte Anderson (right)

SEVENTY-FOURTH MEETING OF THE WESTERN SOCIETY OF WEED SCIENCE

**On-line only virtual meeting
(due to the COVID-19 pandemic and restrictions prohibiting meetings in-person)
March 1-4, 2021**

President - Corey Ransom
President-Elect - Sandra McDonald
Secretary - John Madsen
Treasurer-Business Manager - Eric Gustafson

Carl Libby and Charlie Hicks were honored as Fellows of the Society in 2021. Dr. Michael Walsh, University of Sydney, Australia was named an Honorary member. Awards for 2021 were: Nevin Lawrence, Outstanding Weed Scientist – Early Career; Prashant Jha, Outstanding Weed Scientist – Public sector. Elizabeth Mosqueda received the Presidential Award of Merit from President Corey Ransom. The recipients of the Elena Sanchez Memorial Scholarship were Mirella Ortiz, Colorado State University, and Joshua Miranda, University of Nebraska. The Rita Beard Endowment Foundation Board of Trustees did not award travel scholarships in 2021 due to COVID-19 pandemic travel restrictions and the fact that the annual meeting had to be held virtually. There were 305 WSWs members registered including 41 students. There were 11 Sustaining Members that contributed \$11,800 to the society.

This was a joint meeting with the Western Aquatic Plant Management Society (WAPMS). The 2021 Proceedings were dedicated to the “Resiliency of Our WSWs Membership”.

The Student Night Out was held via a zoom meeting and was divided into different breakout rooms with several professionals in each room. Each breakout room had a different theme; academia, industry, government, and students were able to move between breakout rooms. Eight professionals volunteered to participate. The Student Silent Auction was held in a Google forms format where everyone could see the highest bid of each item.

Symposia held were titled: Annual Invasive Grass management; Are Herbicide-Resistant Crops the Solution to Herbicide-resistant Weeds?; and Updates from Weed Biocontrol- An Unsung Component of Integrated Weed Management on Land and in Water.

Discussion sections topics were:

Weeds of Range, Forests, and Natural Areas: New Technologies for Combatting Invasive Weeds on Rangeland and Natural Areas

Weeds of Horticultural Crops: Weed Management Concerns for Specialty Crops

Weeds of Agronomic Crops: Herbicide-Resistance Management in Minor and Specialty Crops
Basic Biology and Ecology: What high throughput data can teach us about weed biology and control?

Teaching and Technology Transfer: Transfer Techniques & Ideas That Will Make Your Virtual Meeting Zooom

The WSWs graduate student paper contest had a total of 33 contestants and 15 judges volunteered their time.

Student Paper Contest

Weeds of Range, Forestry, and Natural Areas

1st Place - Mirella F. Ortiz, Colorado State University

2nd Place - Natalie Fronk, Utah State University

Weeds of Agronomic Crops

1st Place - Ednaldo Borgato, Kansas State University

2nd Place - Hannah Lindell, Oklahoma State University

Weeds of Horticulture Crops, Basic Biology and Ecology, Teaching and Technology

1st Place - Chandrima Shyam, Kansas State University

2nd Place - Lydia Fields, Washington State University

Student Poster Contest

Weeds of Horticulture Crops, Basic Biology and Ecology, Weeds of Range, Forestry and Natural Areas

1st Place - Jacob Courkamp, Colorado State University

2nd Place - Natalie Fronk, Utah State University

Weeds of Agronomic Crops

1st Place - Joshua Wa Miranda Teo, University of Nebraska

2nd Place - Prashasti Agarwal, New Mexico State University

3rd Place - Samuel Revolinski, Washington State University

Undergraduate Poster Contest

1st Place - Liliana Fendler, Colorado State University

Tim Harrington was the only WSSWS member reported to be retiring this year.

WSSWS members Jim Gray, Travis Bean, and Stanley Heathman passed away in the previous year.

No photo of the Board of Directors was available.

2021 Western Society of Weed Science Board of Directors

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President-elect Sandra McDonald

Secretary John Madsen

Research section chair Mithila Jugulam

Education and Regulatory section chair Todd Neel

WSSA representative Marty Schraer

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CAST representative Greg Dahl

Constitution and Operating Procedures representative Chad Cummings

Student Liaison chair Mirella Ortiz

Student Liaison Jodie Crose

Webmaster David Krueger

2021 FELLOWS

Carl Libbey

Carl Libbey, a native of Whidbey Island in the Pacific Northwest, completed his bachelor's degree in Horticulture at Washington State University (WSU) in 1983. In the summer of 1980, while attending WSU, he began his official Weed Science career when he was hired as a summer research assistant for the Weed Science program at the Northwestern Washington Research and Extension Unit in Mount Vernon.

After graduating he was employed in the ornamental nursery industry in Oregon until relocating back to the Skagit Valley when he became an Agricultural Research Technologist at the "experiment station". He was employed in Mount Vernon for the next 35 years working under the direction of Dwight Peabody, Stott Howard, Kassim Al-Khatib, and Tim Miller. There he oversaw day to day operations that included conducting field and greenhouse experiments.

In 1990 he attended his first WSWs meeting in Reno and has been participating in almost all of them ever since with over 15 poster presentations. He has been active in the WSWs by being a member of the Poster Committee. Carl has been the newsletter editor or coeditor since 2011 and in 2018 he was asked to take on the role of the WSWs Proceedings editor. He received the Professional Staff Award in 2007 and in 2014 was given the Presidential Award of Merit by then President Roger Gast.

Charlie Hicks

Charlie Hicks has a B.S. degree in Agronomy from the Ohio State University and an M.S degree in Weed Science from Purdue University. Charlie began his career in Weed Science in Southern Indiana with a summer internship at Mobil Chemical. Since then, through mergers and acquisitions, he has worked with some 7 different companies over the years, often not by his own doing! Could be an industry record?

Charlie is a Field Agronomist with Bayer CropScience based in Fort Collins, Colorado covering CO, WY, MT, and Western NE. Over the past 30 years, he has screened and help bring to market several important active ingredients and herbicide safeners across a wide range of cropping systems. More importantly, Charlie has established a high level of trust and an excellent working relationship with many university cooperators, crop consultants and growers.

Charlie has been a member of the WSWs since 1987 and has enjoyed serving the society in many roles. His activities include Chair of the Education and Regulatory section and board member 2005, Member at Large 2018, Sustaining Members Committee, Poster Committee and Site Selection Committee, Graduate Student Poster and Paper Contest Judge. He has been the host of the Graduate Student Luncheon since 2001, the moderator of the What's New in Industry session since 2010 and was named the WSWs Outstanding Weed Scientist in 2014. In addition, he presented 14 oral papers at WSWs meetings over the years and co-authored many more.



2021 Western Society of Weed Science Fellows
Carl Libby (left) and Charlie Hicks (right)

ADDITIONAL HISTORIES AND BACKGROUND INFORMATION

History of the *Weeds of the West* publication

By Phil Banks

The *Weeds of the West* publication was the brainchild of Tom Whitson (University of Wyoming) who served as the Editor of the book. The first edition was published in 1991 with the last 11th printing in 2013. All remaining books in inventory were sold by the end of 2017. The publication was a joint effort between the University of Wyoming and the Western Society of Weed Science (WSWS). The book contains high quality photos (usually three) of 350 weed species with a taxonomic description and where the weed is most commonly found. The original authors of the book are listed (and in photo) below as well as authors of several of the later printings.

First Edition (1991) Authors (see photo below)

Tom D. Whitson (Editor)	University of Wyoming
Larry C. Burrill	Oregon State University
Steven A. Dewey	Utah State University
David W. Cudney	University of California at Riverside
B.E. Nelson	Rocky Mtn. Herbarium, University of Wyoming
Richard D. Lee	New Mexico State University
Robert Parker	Washington State University

Additional Authors in later Editions

Daniel A. Ball	Oregon State University
Clyde L. Elmore	University of California, Davis
Rodney G. Lym	North Dakota State University
Don W. Morishita	University of Idaho
Dean Swan	Washington State University
Richard K. Zollinger	North Dakota State University

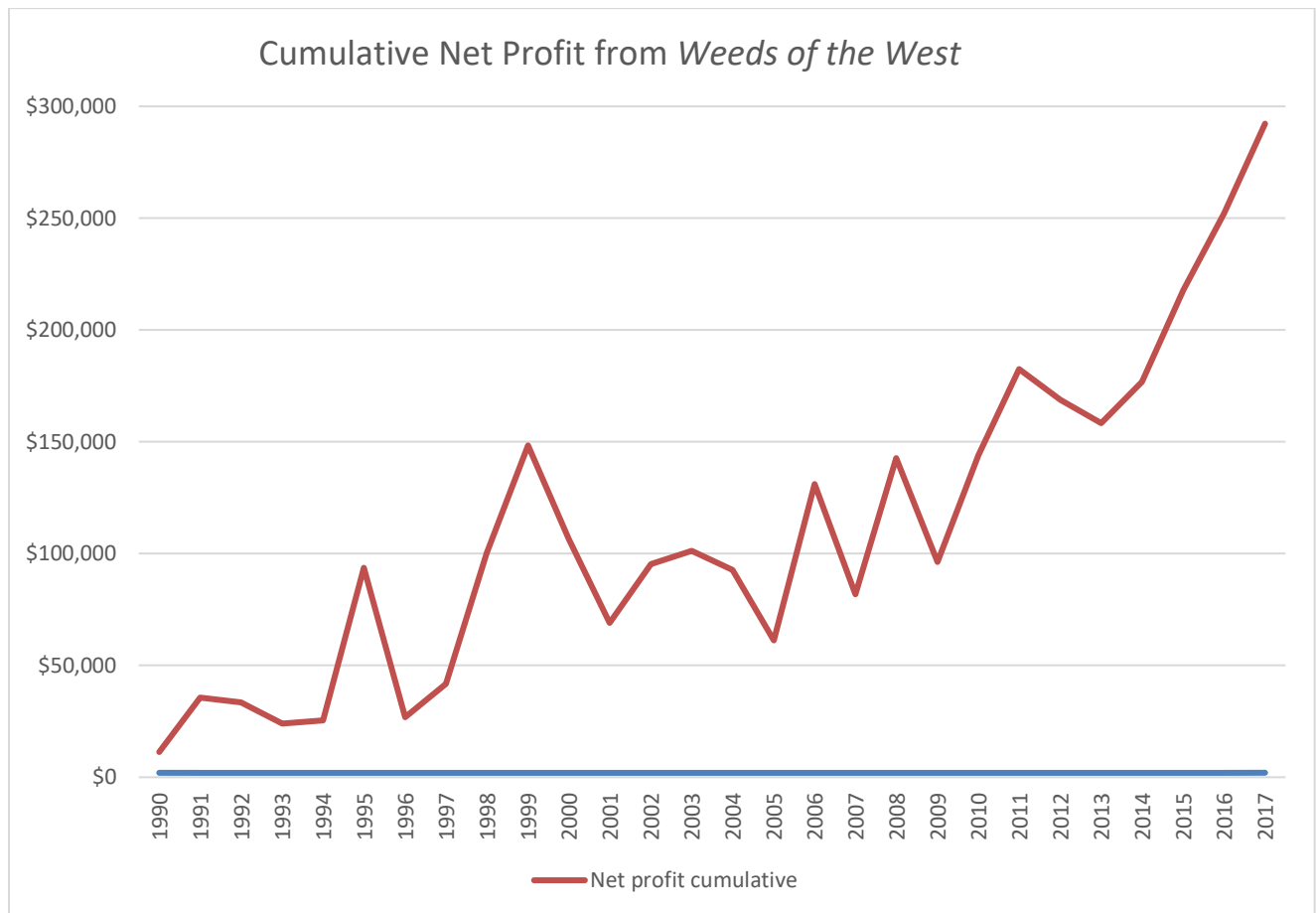
There were numerous WSWS members and students who contributed to the publication either through the donation of photographs or from editing of the revisions as nomenclature changed over time. This endeavor was truly a team effort from all members. Books were available for purchase through the WSWS Business Office, from the University of Wyoming publications office, through various University Extension publications offices, in commercial bookstores, and in various State and National Park bookstores.

A copy of the book in electronic format is currently available for no charge from the University of Wyoming publications office

(http://www.wyoextension.org/publications/Search_Details.php?pubid=696&pub=WSWS-1)

Over the lifetime of the book, 190,000 copies were printed and sold. Total gross sales were approximately 2.25 million dollars with a net profit to WSWS of over \$290,000 (see the chart below for cumulative net profit by year). Additional profits were received by the University of Wyoming, as well, to support scholarships for Weed Science students. Besides the income from the book that allowed WSWS to be financially comfortable, it increased the visibility and professional reputation of the Society. This was best exhibited when WSWS named news

broadcaster Tom Brokaw an Honorary Member in 2009. In giving an address to the Western Governors Conference he mentioned that *Weeds of the West* was his favorite book and he used it often to identify weeds on his ranch in Montana.





The authors (left to right): Robert Parker, Richard D. Lee, Burrell E. Nelson, David W. Cudney, Larry C. Burrill, Tom D. Whitson, Steven A. Dewey

Photo of the original authors from the back cover of the book

PUBLISHER

The Western Society of Weed Science in cooperation with the
Western United States Land Grant Universities
Cooperative Extension Services

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Richard D. Lee

Extension Weed Specialist, New Mexico State University

Robert Parker

Extension Weed Scientist, Washington State University

11th Edition, 2012

Western Society of Weed Science
Research Progress Report: 1952 to 2021
By Traci Rauch and Joan Campbell

In 1952, the first Research Progress Report was published with the objective to “provide brief representative reports and as comprehensive coverage as possible of the progress that has been made in research on the different phases of weed control since the last Conference meeting”. Timely dissemination of information and to aid in planning of future research were two of the key principles guiding this publication. After the first Research Progress Report in 1952, it has been published every year that the Western Society of Weed Science (WSWS) has held an annual meeting so out of the last 69 years it has been produced 68 times.

The Research Progress Report was compiled by the Chair of the Research Committee from 1952 until 1978. In 1979, the Research Committee became the Research Section but the Chair was still in charge of producing the Research Progress Report. Stephen Miller became the first Editor of the WSWS publication in 1994 and worked with the Research Section Chair to complete the final version of the report. Stephen was Editor from 1994 to 1998. Barb Mullin took over Editor duties for the next 4 years until her untimely death in 2002. Joan Campbell and Traci Rauch became Co-Editors in 2003 and performed editorial duties until 2011 which was a 9-year appointment. Traci took over as Editor in 2012 and is still in that position today.

From 1993 until 2021, a total of 2,357 reports were published (Table 1). In 1993, the greatest number of reports were submitted at 185. Common lambsquarters was the number one indexed weed for 20 out of the 28 years (Table 2). Redroot pigweed was a close second with 18 years in the number one or two spot. With herbicides, 2,4-D was the most indexed herbicide in 16 out of the 28 years (Table 3). Also appearing numerous times in the top 5 herbicides was bromoxynil, dicamba, and glyphosate.

Author identification of state and agency was included for the first time in 1999. States contributing to the Research Progress Report included: Arizona, California, Colorado, Idaho, Kansas, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.

Table 1. Total report number by project from 1993 to 2021.

Report Year	Report Number by Project ¹							Total Reports
	1 ²	2	3	4 ³	5 ⁴	6 ⁵	7 ⁶	
1993	56	15	100	4	2	5	3	185
1994	31	14	61	3	4	0	1	114
1995	32	7	66	23	1	0	1	109
1996	12	13	75	3	2	0	1	106
1997	17	14	77	2	3	1	1	115
1998	25	26	104	1	0	0	-	156
1999	26	24	78	1	1	2	-	132
2000	24	14	101	2	4	2	-	147
2001	20	14	93	1	2	0	-	130
2002	24	15	58	0	4	0	-	101
2003	13	15	77	1	9	3	-	118
2004	12	15	50	1	2	3	-	83
2005	9	15	61	2	1	0	-	88
2006	20	24	51	2	1	0	-	98
2007	17	16	35	1	7	0	-	76
2008	16	13	42	1	7	4	-	83
2009	39	5	30	1	5	2	-	82
2010	23	7	32	1	0	-	-	63
2011	21	8	29	1	0	-	-	59
2012	11	11	22	1	0	-	-	45
2013	18	8	26	1	0	-	-	53
2014	15	4	34	1	0	-	-	54
2015	5	2	25	1	0	-	-	32
2016	6	2	45	1	0	-	-	54
2017	4	7	28	0	1	-	-	40
2018	5	3	29	0	0	-	-	37
2019	7	6	30	0	0	-	-	43
2020	6	6	18	0	0	-	-	30
2021	8	3	21	0	0	-	-	32

¹Project 1= Weeds of Range, Forestry, and Natural Areas

Project 2 = Weeds of Horticultural Crops

Project 3 = Weeds of Agronomic Crops

Project 4 = Teaching and Technology

Project 5 = Weeds of Aquatic, Industrial and Non-Crop Areas (now combined with Project 1)

Project 6 =Basic Biology (now Project 5 and named Basic Biology and Ecology)

Project 7 = Alternative Methods of Weed Control (discontinued in 1997)

²Project 1 renamed to Weeds of Range, Forestry, and Natural Areas in 2010.

³Project 4 renamed from Extension, Education, and Regulatory to Teaching and Technology in 1997.

⁴Project 5 changed from Weeds of Aquatic, Industrial, and Non-Crop Areas to Weeds of Wetlands and Wildlands in 1999. Discontinued in 2009 and combined with Project 1.

⁵Project 6 Basic Biology discontinued in 2009 and moved to Project 5 and renamed Basic Biology and Ecology.

⁶Project 7 discontinued in 1997.

Table 2. Top 5 weeds by year included in Research Project Report from 1993 to 2021.¹

Year	1	2	3	4	5
1993	c. lambsquarters	r. pigweed	leafy spurge	kochia	downy brome
1994	c. lambsquarters	r. pigweed	leafy spurge	kochia	downy brome
1995	c. lambsquarters	r. pigweed	black nightshade	leaf spurge mayweed chamomile hairy nightshade wild oat	wild oat
1996	c. lambsquarters	r. pigweed	kochia	field pennycress downy brome kochia wild oat	
1997	r. pigweed c. lambsquarters	c. lambsquarters	hairy nightshade	wild oat	
1998	r. pigweed		kochia	barnyardgrass kochia	wild oat
1999	r. pigweed	wild oat	c. lambsquarters	hairy nightshade	
2000	c. lambsquarters	r. pigweed	kochia	g. foxtail	yellow foxtail
2001	c. lambsquarters	wild oat	r. pigweed	kochia	downy brome
2002	c. lambsquarters	r. pigweed	wild oat	downy brome	prostrate pigweed
2003	c. lambsquarters	r. pigweed	kochia	hairy nightshade barnyardgrass g. foxtail kochia	green foxtail
2004	c. lambsquarters	r. pigweed	kochia		
2005	c. lambsquarters	r. pigweed	wild oat		Italian ryegrass g. foxtail kochia
2006	c. lambsquarters	r. pigweed	wild oat downy brome	hairy nightshade	
2007	c. lambsquarters	r. pigweed	western snowberry	g. foxtail hairy nightshade Italian ryegrass Russian thistle prickly lettuce	g. foxtail
2008	c. lambsquarters	r. pigweed	kochia		
2009	c. lambsquarters	r. pigweed	g. foxtail		downy brome
2010	c. lambsquarters r. pigweed		kochia	g. foxtail mayweed chamomile g. foxtail kochia Russian thistle annual sowthistle Hairy fleabane Russian thistle	Russian thistle
2011	c. lambsquarters	r. pigweed	hairy nightshade		
2012	c. lambsquarters	r. pigweed Palmer amaranth mayweed chamomile kochia	g. foxtail		
2013	Canada thistle	c. lambsquarters			
2014	c. lambsquarters	kochia	g. foxtail Russian thistle		r. pigweed
2015	g. foxtail	kochia	Russian thistle	c. lambsquarters I. ryegrass Palmer amaranth r. pigweed Russian thistle	
2016	c. lambsquarters	g. foxtail	kochia		c. lambsquarters Russian thistle
2017	kochia Palmer amaranth	Palmer amaranth	g. foxtail	jungerice crabgrass	
2018	kochia		g. foxtail	c. sunflower	
2019	kochia	g. foxtail	Palmer amaranth	c. sunflower downy brome crabgrass g. foxtail ventenata	ventenata
2020	kochia Palmer amaranth	Russian thistle	Palmer amaranth kochia		
2021	g. foxtail		shattercane		annual bluegrass

¹c = common, g= green, r=redroot

Table 3. Top 5 common herbicides by year included in the Research Progress Report from 1993 to 2021.

Year	1	2	3	4	5
1993	2,4-D	picloram	dicamba	bromoxynil	metsulfuron glyphosate thifensulfuron tribenuron
1994	2,4-D	picloram	dicamba	bromoxynil clopyralid	
1995	2,4-D	picloram	dicamba	metolachlor	
1996	2,4-D	bromoxynil	dicamba	tribenuron	thifensulfuron dicamba metribuzin dimethenamid bromoxynil
1997	bromoxynil	2,4-D	pendimethalin	metsulfuron	
1998	2,4-D	dicamba picloram	dimethenamid	metolachlor	
1999	2,4-D	dicamba		dimethenamid	MCPA
2000	imazamox	2,4-D fluroxypyr	metribuzin sulfentrazone		dicamba
2001	2,4-D	glyphosate		fenoxaprop	imazamox
2002	2,4-D	glyphosate 2,4-D	clopyralid dicamba	picloram	metsulfuron
2003	thifensulfuron	tribenuron		glyphosate bromoxynil	pendimethalin
2004	2,4-D	dimethenamid	clopyralid	metolachlor flucarbazone fluroxypyr imazamox	
2005	clopyralid	MCPA	bromoxynil flucarbazone imazamox		
2006	clopyralid 2,4-D	mesosulfuron		chlorsulfuron imazamox	clodinafop
2007	MCPA 2,4-D		clopyralid		
2008	glyphosate		aminopyralid	clopyralid chlorsulfuron picloram	bromoxynil
2009	2,4-D	aminopyralid	glyphosate aminopyralid bromoxynil		fluroxypyr pyrasulfotole
2010	glyphosate				
2011	2,4-D	aminocyclopyrachlor glyphosate		bromoxynil chlorsulfuron pyroxsulam metribuzin 2,4-D aminocyclopyrachlor pyroxasulfone pyroxsulam saflufenacil	
2012	dimethenamid glyphosate		bromoxynil aminocyclopyrachlor aminopyralid metribuzin		
2013	2,4-D	glyphosate		aminocyclopyrachlor chlorsulfuron metribuzin pyroxsulam	
2014	2,4-D	dicamba pyroxasulfone dicamba glyphosate metribuzin			
2015	pyroxasulfone				bromoxynil
2016	pyroxasulfone	glyphosate	atrazine dicamba metolachlor		
2017	glyphosate	dicamba clopyralid dicamba	2,4-D	pyroxasulfone saflufenacil	
2018	glyphosate			bicyclopyrone atrazine bicyclopyrone	atrazine
2019	glyphosate	metolachlor	clopyralid bromoxynil metolachlor thiencarbazone		
2020	glyphosate	atrazine			
2021	pyroxasulfone	glyphosate	metribuzin	indaziflam metolachlor	

History of the 'What's New in Industry' Session

By Charlie Hicks

The 'What's New in Industry' (WNI) session, in one form or another, has had a long history in the Western Society of Weed Science (WSWS). It began as an informal opportunity for industry representatives to give a brief, 5-minute, update on new products and product label changes. The first session, “New Herbicides and New Uses for Old Herbicides”, was held at 1963 meeting in Portland, Oregon. The WNI session was held on an as needed basis for many years with good participation.

Due to a lack of liquid assets prior to the annual meeting, the topic of sustaining membership was discussed at the 1990 meeting. At the 1991 meeting in Seattle, WA, a proposal to institute WSWS Sustaining Membership was voted on and passed with 82% in favor. It was also decided that the WNI Session be limited to sustaining members only.

The WNI Session is typically moderated by an industry representative with the primary responsibility of limiting presenters to the 5-minute time constraint. Going back to the 80's, Paul Ogg was moderator. It then transferred to Gus Foster in the 90's then to Doug Ryerson in the early 2000s. Charlie Hicks started moderating the session around 2010. It has been a labor of love for Charlie and others. Charlie and others used humor to keep sustaining members presentations limited to the 5 minutes allotted to each speaker and made the sessions even more enjoyable.

With a peak of 20 sustaining members, time was of the essence. With many company consolidations in the early 2000s, sustaining member numbers have dropped into the 11 to 14 range. However, the WNI session continues to be very well attended and a popular part of the program for both the private and public sector.

History of the Western Society of Weed Science

Noxious Weed Management Short Course

By Celestine Duncan and Rod Lym

During the early 1990's the federal government, responding to public pressure, began to take an increased role in controlling non-native plants on federally controlled lands. Land-mangers were sincere in their desire to control noxious weeds, but few if any had formal training in identification and management options.

The Western Society of Weed Science (WSWS) under the direction of Celestine Duncan started a four-day short course in 1990 to help train federal and state land managers in identifying and controlling noxious weeds. The core instruction revolved around hands-on noxious weed identification, weed biology, herbicide mode of action, safety and handling; sprayer calibration; inventory and mapping infestations, and chemical and biological control methods. The course was designed to be an interactive learning experience and included about 40 different live noxious weeds, and hands-on lab exercises concerning herbicide movement in soil, biological control agents, sprayer calibration and use, and general weed physiology. The use of slides for talks was described as "death by Power-point" and thus was not allowed. A variety of specialists were recruited for teaching. There was a core group of instructors who taught every year, Celestine Duncan, Steve Dewey, Barb Mullin, and Rod Lym. Other scientists were recruited annually to teach in specialty areas such as aquatic plant management, biocontrol with insects and diseases, or grazing management.

Besides the formal classroom and lab sessions, learning by fun activities was a standard of the course. Students were divided into teams for such learning games as weed jeopardy, weed Pictionary, and the popular noxious weed rodeo. Melissa Munson served as a facilitator and logistics coordinator for the course for 10 years and was widely known for her starring role as "Vanna" in Weed Jeopardy. These activities taught weed basics and were often the highlights of the week for students and instructors alike.

The initial response by the students from throughout the west was overwhelming in popularity. The course filled up rapidly each year and there was often a long waiting list. To ensure maximum interaction with instructors, the course was limited to 40 students per class. Beginning in 1997 there were two courses held, one in the spring and one in the fall. Later, the two courses were held in back-to-back weeks in the spring so that set-up and growing plants for weed identification only had to be done once. Even with two annual courses there was always more demand than space available.

Steve Dewey chaired a committee in 1994 which was assigned to investigate the need of and support for an intermediate course. The idea was people who had taken the initial course would return for more advanced training in weed management. The federal agencies did not express interest in a second course but instead wanted more land managers trained in the initial instruction. The short course was held in a variety of locations over the 19 years, beginning at various motels in Bozeman, MT, then Sylvan Dale Guest Ranch in Loveland, CO and finally Chico Hot Springs in Pray, MT.

The Noxious Weed Short Course was financed by registration fees which not only covered the costs but earned a profit of over \$20,000 during the 19 years of the course. The extra funds were deposited in the WSWs general fund account each year. Approximately 1,150 federal, state, county and private land managers attended the short course which after 20 years ended in its original format in 2009. At that time the group of core instructors including Director, Celestine Duncan, and instructors, Rod Lym and Steve Dewey (Barb Mullin had passed away some years prior) decided to retire from coordinating and teaching the course.

The short course was not held in 2010 as the WSWs board of directors requested proposals from the membership to start a new version of the course. Three proposals were submitted and Sandra McDonald, Mountain West PEST, was awarded a two-year contract to continue teaching the Noxious Weed Management short course. After the contract ended, the short course continued through Mountain West PEST but was no longer affiliated with the WSWs.

Elena Sanchez Memorial
WSWS Outstanding Student Scholarship
By Don Morishita

Elena Raquel Sanchez Olguin passed away in 2012 while attending the VI International Weed Science Congress in Hangzhou, China. At the time of her death, she was a PhD candidate in the Weed Science Program at Oregon State University. In 2014, at the request of the WSWS Graduate Student Organization, the Western Society of Weed Science (WSWS) renamed the WSWS Outstanding Student Scholarship to be the Elena Sanchez Memorial WSWS Outstanding Student Scholarship in honor of Elena.

This scholarship is fully funded through donations from the silent auction held at each meeting. It is awarded to promote greater student participation at the WSWS annual meeting and encourage new Weed Science research and future Weed Science careers. Scholarships are awarded to three outstanding undergraduate and/or graduate WSWS student members who will attend and present at the WSWS annual meeting.

Rita Beard Endowment Foundation

By Phil Banks

The Rita Beard Endowment Foundation (RBEF) was funded and created by Rita Beard's family following her passing in 2016 (see the tribute to Rita below). The RBEF is a 501(c)(3) charitable foundation that supports travel to professional meetings for students or early career young professionals that are studying or working in the area of invasive species management. The awardees can choose one of four meetings to attend: Western Society of Weed Science (WSWS), Society of Range Management (SRM), Western Aquatic Plant Management Society (WAPMS), or the North American Invasive Species Management Association.

The first awards were made in 2018 (see the history of the individuals receiving these awards in the table below). The RBEF is governed by a five-member Board of Trustees (see a list of Board members below). Donations to the RBEF can be made by any person or organization with interest in invasive species management by visiting the WSWS website.

WSWS RBEF Board of Trustees					
	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
President	Mark Daluge	Celestine Duncan	Phil Banks	Kirk Howatt	Todd Neel
Vice President	Celestine Duncan	Phil Banks	Kirk Howatt	Todd Neel	Julie Kraft
Secretary	Phil Banks	Kirk Howatt	Todd Neel	Julie Kraft	Tim Prather
Board Member 2nd	Kirk Howatt	Todd Neel	Julie Kraft	Tim Prather	Jane Mangold
Board Member 1st yr	Todd Neel	Julie Kraft	Tim Prather	Jane Mangold	Erik Lehnhoff

WSWS Rita Beard Endowment Foundation Scholarship Awardees				
Year	Name	Student/Young Professional	Location	Meeting attended
2018	Shannon Clark	Student	Colorado State University	WSWS
2018	Clay Wood	Student	University of Wyoming	WSWS
2019	Christie Hubbard Guetling	Student	University of Idaho	WSWS
2019	Rory O'Connor	Student	Kansas State University	SRM
2019	Rachel Seedorf	Student	Colorado State University	WSWS
2019	Travis Sowards	Student	Brigham Young University	SRM
2020	Jaycie Arndt	Student	University of Wyoming	WSWS
2020	Michelle Majeski	Student	Montana State University	WSWS
2020	Alexandra Stoneburner	Young Professional	Colorado State University	WSWS
2021	No Awards were made this year as annual meeting was virtual due to the Coronavirus pandemic.			



Rita Beard was known to be camera shy. This is the only photo found of her! The 2017 Western Society of Weed Science Proceedings were dedicated to her.

Rita Beard, a luminary in the federal and private sector of the invasive species world, passed away in October 2016 at her home in Fort Collins, CO. Throughout her career, Rita advanced her vision of coordinating invasive species management on a national scope. By encouraging collaboration from the field to congressional levels, she effectively changed the way invasive species are managed in this country. In addition, she worked to make sure that all invasive species management decisions were based on the latest and best available research and technology, thus ensuring that management decisions were supported by science. Towards that end, Rita spearheaded the development of the original mapping standards for the North American Invasive Species Management Association (NAISMA), which unified management practices to help ensure consistent data collection.

Rita's academic background served her well: she received her bachelor's degree in Ecology and Biosystematics from the University of California at Berkeley, followed by two Master of Science degrees; in Range and Wildlife Science from Montana State University, and in Forest and Public Policy from Oregon State University. She began her career in the late 1970s as the Range Conservationist and Invasive Plant Specialist, with the U.S. Forest Service on the Townsend Ranger District in western Montana. During this time, Rita made history by preparing the first Environmental Impact Statement (EIS) on invasive plants in the United States, pioneering the use of herbicides to control invasive plants in wilderness areas.

In April 2005, she joined the National Park Service (NPS) as the National Invasive Plant Management Program Coordinator. At NPS she supervised 18 Exotic Plant Management Teams (EPMTs) and guided the development of policies related to invasive plant management and prevention. She professionalized this program by raising the level of technical expertise through training for her staff, communicating the importance of invasive plant management to NPS leadership, and increased the amount of funding available for weed management. She guided each EPMT team in working with their partner parks to develop proposed invasive plant management strategies for the protection of park resources in accordance with federal laws. Rita was a constant advocate for the EPMT program, its staff, and its mission to assist the parks with invasive plant management.

Rita's depth of knowledge and experience made her an invaluable partner of the NPS Integrated Pest Management Program. She provided guidance on the selection and toxicology of herbicides as part of the Integrated Pest Management (IPM) approach and helped train IPM practitioners in site evaluation, the proper selection and consequences of herbicides and related National Environmental Policy Act (NEPA) concerns, of which she was an expert. Rita also provided assistance to the NPS Cultural Landscape and the Facilities Management Programs in invasive plant management and restoration planning.

On the national level, Rita was an effective liaison for local weed management partners, federal and nonfederal agencies, Congress, and others in Washington, D.C., ensuring that management decisions were based on science and core natural resource values. She served on several Departmental committees, including the National Invasive Species Council and the Federal Interagency Committee for the Management of Noxious and Exotic Weeds promoting the practical application of weed science principles and practices for invasive plant management.

Rita retired from the NPS in 2013 and continued to provide training and technical expertise to her partners. In 2014, Rita received the Western Society of Weed Science's Distinguished Achievement Award in the category of "Weed Manager" for her tireless efforts in advancing the cause of invasive plant management across the entire country.

Throughout her career Rita never lost sight of the challenges that on-the-ground managers face in controlling invasive plants. She understood the constraints of working in the federal system, and her goal was always to garner as much support as possible for on-ground managers, hence she worked to ensure that leadership understood and supported this cause.

We honor Rita Beard, who exemplified the qualities of a rare colleague and complete person: grace, kindness, composure, intelligence, fearlessness, poise, and to be deliberate, unassuming, truthful, and loving.

Year	President	Secretary	Research Section Chair	Education & Reg. Chair	WSSA Representative	Member-at-Large*	CAST Representative	Constitution/ Operating Procedures	Student Liason Chair	Student Liason Elect*	Business Mgr
1991-92	Paul Ogg	Jack Schlesselman	Ed Schweizer	Tom Whitson	John Evans	Don Colbert	Gary Lee				Wanda Graves
1992-93	Steve Miller	Jesse Richardson	Charlotte Eberlein	Don Morishita	Rod Lym	Philip Westra	Gary Lee				Wanda Graves
1993-94	Douglas Ryerson	Charlotte Eberlein	William Dyer	Vanelle Peterson	Rod Lym	Steven Dewey	John Evans				Wanda Graves
1994-95	Tom Whitson	Don Morishita	Rick Boydston	Scott Howard	Paul Ogg	Vanelle Peterson	John Evans				Wanda Graves
1995-96	Gus Foster	Barbra Mullins	Jill Schroeder	Kai Umeda	Paul Ogg	Joan Campbell	John Evans				Wanda Graves
1996-97	Charlotte Eberlein	Wayne Belles	Rodney Lym	Jack Schlesselman	Paul Ogg	Jill Schroeder	John Evans				Wanda Graves
1997-98	Barbra Mullin	Neal Hageman	Don Morishita	Rick Arnold	Donn Thill	Shaffee Ali	Steve Miller				Wanda Graves
1998-99	Rodney Lym	Jill Schroeder	Carol Mallory-Smith	Dan Ball	Donn Thill	Rick Arnold	Steve Miller				Wanda Graves
1999-00	Jeff Tichota	John Orr	Jesse Richardson	Gilbert Cook	Donn Thill	Philip Westra	Steve Miller				Wanda Graves
2000-01	Don Morishita	Mark Ferrell	Phil Stahlman	Rich Zollinger	Steve Miller	Bob Stougaard	Rodney Lym				Wanda Graves
2001-02	Bob Parker	Richard Zollinger	Scott Nissen	Phil Banks	Steve Miller	Rick Boydston	Rodney Lym				Wanda Graves
2002-03	Jill Schroeder	Robert Stougaard	K. George Beck	William McCloskey	Steve Miller	Nelroy Jackson	Rodney Lym	Steve Miller			Wanda Graves
2003-04	Gilbert Cook	Pete Forster	Dan Ball	Monte Anderson	Nelroy Jackson	Kassim Al-Khatib	Rodney Lym	Jill Schroeder			Wanda Graves
2004-05	Phil Stahlman	Vince Ulstad	Drew Lyon	Charlie Hicks	Nelroy Jackson	Vanelle Peterson	Rodney Lym	Jill Schroeder			Wanda Graves
2005-06	Phil Banks	Vince Ulstad	Corey Ransom	Tim Miller	Vanelle Peterson	Janet Clark (PUB) Ron Crockett (PRI)	Rodney Lym	Kai Umeda			Wanda Graves
2006-07	Kassim Al-Khatib	Pam Hutchinson	Joe DiTomaso	Joe Yenish	Vanelle Peterson	Janet Clark (PUB) Jeff Koscelny (PRI)	Rodney Lym	Kai Umeda	Dirk Baker, Angela Kazmierczak*		Phil Banks
2007-08	Ron Crockett	Pam Hutchinson	Rick Boydson	Mike Edwards	Vanelle Peterson	Jeff Koscelny (PRI) Carol Mallory-Smith (PUB)	Phil Stahlman	Kai Umeda	Angela Kazmierczak, Todd Gaines*		Phil Banks
2008-09	Dan Ball	Ian Burke	Kirk Howatt	Bill Cobb	Tim Miller	Philip Munger (PRI) Carol Mallory-Smith (PUB)	Phil Stahlman	Kai Umeda	Melissa Bridges	Ryan Edwards	Phil Banks
2009-10	Jesse Richardson	Ian Burke	Ed Peachey	Pat Clay	Tim Miller	Philip Munger (PRI) Kassim Al-Khatib (PUB)	Phil Stahlman	Kai Umeda	Ryan Edwards	Tanya Skurski	Phil Banks
2010-11	Joe DiTomaso	Rick Boydston	Brad Hanson	Marvin Butler	Tim Miller	Pete Forster (PRI) Kassim Al-Khatib (PUB)	Phil Stahlman	Corey Ransom	Tanya Skurski	Michael Ostlie	Phil Banks
2011-12	Vanelle Peterson	Rick Boydston	Joe Yenish	Tim Prather	Tim Miller	Pete Forster (PRI) Bob Stougaard (PUB)	Phil Westra	Corey Ransom	Michael Ostlie	Cameron Douglass	Phil Banks
2012-13	Kai Umeda	Andy Hulting	Tony White	Brad Hanson	Pat Clay	Monte Anderson (PRI) Bob Stougaard (PUB)	Phil Westra	Corey Ransom	Cameron Douglass	Craig Beil	Phil Banks
2013-14	Roger Gast	Andy Hulting	Andrew Kniss	Joel Felix	Pat Clay	Monte Anderson (PRI) Brian Jenks (PUB)	Phil Westra	Corey Ransom	Craig Beil	Marcel Moretti	Phil Banks
2014-15	Drew Lyon	Curtis Rainbolt	Ed Davis	Kirk Howatt	Pat Clay	Michael Hubbard (PRI) Brian Jenks (PUB)	Phil Westra	Corey Ransom	Marcel Moretti	Carl Coburn	Phil Banks
2015-16	Joe Yenish	Curtis Rainbolt	Jane Mangold	Sandra McDonald	Marty Schraer	Michael Hubbard (PRI) Scott Nissens (PUB)	Phil Westra	Corey Ransom	Carl Coburn	Breanne Tidemann	Phil Banks
2016-17	Kirk Howatt	Chad Cummings	Prashant Jha	Brian Jenks	Marty Schraer	Charlie Hicks (PRI) Scott Nissen (PUB)	Brian Jenks	Tim Miller	Breanne Tidemann	Caio Brunharo	Phil Banks
2017-18	Monte Anderson	Chad Cummings	Brad Hanson	Dirk Baker	Marty Schraer	Charlie Hicks (PRI) Lynn Sosnoskie (PUB)	Brian Jenks	Tim Miller	Caio Brunharo	Clint Beiermann	Tara Steinke
2018-19	Andrew Kniss	Chad Cummings	Harlene Hatterman- Valenti	Brian Schutte	Marty Schraer	Ryan Rapp (PRI) Lynn Sosnoskie (PUB)	Brian Jenks	Tim Miller	Clint Beiermann	Lucas Bobadilla	Eric Gustafson
2019-20	Pat Clay	Chad Cummings	Brian Mealar	Joel Felix	Marty Schraer	Ryan Rapp (PRI) Julie Kraft (PUB)	Gregory Dahl	Vacant	Lucas Bobadilla	Mirella Ortiz	Eric Gustafson
2020-21	Corey Ransom	John Madsen	Mithila Jugulam	Todd Neel	Marty Schraer	John Coyle (PRI) Julie Kraft (PUB)	Gregory Dahl	Chad Cummings	Mirella Ortiz	Jodie Crose	Eric Gustafson

*non-voting members of Board

Western Society of Weed Science Presidents 1938 to 2022

1938	H. L. Spence, Jr.	1970	Harold P. Alley	2000	Jeffrey M. Tichota
1940	G. R. Hyslop	1971	Kenneth W. Dunster	2001	Don W. Morishita
1941	C. L. Corkins	1972	Arnold P. Appleby	2002	Robert Parker
1942	W. W. Robbins	1973	David E. Bayer	2003	Jill Schroeder
1944	E. Hutchins	1974	D. Bugoyne	2004	Gilbert Cook
1945	Lee M. Burge	1975	Gary A. Lee	2005	Phil Stahlman
1946	B. E. Kuhns	1976	William L. Anliker	2006	Phil Banks
1947	H. E. Morris	1977	Clyde L. Elmore	2007	Kassim Al-Khatib
1948	Virgil H. Freed	1978	Lowell S. Jordan	2008	Ron Crockett
1949	Bruce J. Thornton	1979	Richard D. Comes	2009	Dan Ball
1950	E. W. Whitman	1980	Larry C. Burrill	2010	Jesse Richardson
1952	W. W. Robbins	1981	L. E. "Jack" Warren	2011	Joe DiTomaso
1954	Clarence I. Seely	1982	Alex G. Ogg, Jr.	2012	Vanelle Peterson
1956	Walter S. Ball	1983	J. Wayne Whitworth	2013	Kai Umeda
1958	H. Wolfe	1984	Gary Massey	2014	Roger Gast
1960	Richard A. Foose	1985	E. Stanley Heathman	2015	Drew Lyon
1962	William R. Furtick	1986	Harvey D. Tripple	2016	Joe Yenish
1963	P. Eugene Heikes	1987	John O. Evans	2017	Kirk Howatt
1965	Jesse M. Hodgson	1988	Larry W. Mitich	2018	Monte Anderson
1967	Louis A. Jensen	1989	Donn C. Thill	2019	Andrew Kniss
1968	S. Strew	1990	Sheldon E. Blank	2020	Pat Clay
1969	K. C. Hamilton	1991	Peter K. Fay	2021	Corey Ransom
		1992	Paul J. Ogg	2022	Sandra McDonald
		1993	Stephen D. Miller		
		1994	Doug K. Ryerson		
		1995	Tom D. Whitson		
		1996	Gus Foster		
		1997	Charlotte V. Eberlein		
		1998	Barbra Mullin		
		1999	Rodney G. Lym		

History of the Western Society of Weed Science Presidential Gavel-hoe

As told by Gus Foster and edited by Vanelle Peterson

The Presidential gavel-hoe was the idea of then President Gus Foster (1995-1996) who hired a wood worker, Tim Simmons of Kremling CO, to craft a gavel-hoe. Gus based the design on the short handle hoe commonly used for weeding and thinning in sugarbeet fields in Colorado. Charlotte Eberlein was the first President to receive the Presidential gavel-hoe as Gus passed the responsibilities of leading the WSWS to incoming President Charlotte. The original wooden gavel-hoe was not substantial enough to withstand multiple years of travel with the Presidents to and from meeting locations. So, in 2000, Gus asked Tim Simmons to craft another, stronger hoe for WSWS. It is a beautiful piece made from different types of wood including a 3-layer handle. When the new gavel-hoe was made, a plaque with the WSWS logo (created in 1998) and the word "President" was placed on the front of the hoe. The tradition of passing the gavel-hoe from President to incoming President at the end of the annual meeting continues today.



Western Society of Weed Science Presidential Gavel-Hoe

This gavel-hoe is a wooden replica of a short-handled hoe and is passed from the President to the incoming President at the end of the annual meeting (photos courtesy of Phil Westra)

Western Society of Weed Science Fellows*

1968 to 2021

1968	Robert B. Balcom Walter S. Ball Alden S. Crafts F. L. Timmons D.C. Tingey	1987	Alex G. Ogg Jr. Jean H. Dawson	2005	Nelroy Jackson Roland Shirman
1969	Lambert C. Erickson Jesse M. Hodgson	1988	Harvey D. Tripple E. Stan Heathman	2006	Celestine Duncan Joan Campbell
1970	Lee. M. Burge Bruce Thornton	1989	John O. Evans W. B. "Jim" McHenry	2007	Bill Cobb Phil Stahlman
1971	Virgil H. Freed W.A. Harvey	1990	Harry S. Agamalian Bart A. Brinkman	2008	K. George Beck Rick Boydston
1972	H. Fred Arle Boysie E. Day	1991	Larry W. Mitch Edward E. Schweizer	2009	Kassim Al-Khatib Scott Nissen
1973	Harold P. Alley K.C. Hamilton	1992	Donald C. Thill Harold M. Kempen	2010	Tracy Sterling Rick Arnold
1974	William R. Furtick Oliver A. Leonard	1993	Paul J. Ogg Peter K. Fay	2011	Daniel A. Ball Roger Gast
1975	Richard A. Fosse Clarence I. Seely	1994	Sheldon E. Blank Gus J. Foster	2012	Jodie Holt Lars Anderson
1976	Arnold P. Appleby	1995	Stephen D. Miller John T. Schlesselman	2013	Tim Miller Tom Lanini
1977	J. LaMar Anderson Arthur H. Lange	1996	Don Cobert Robert Parker	2014	Robert Stougard Robert Norris
1978	David E. Bayer Kenneth W. Dunster	1997	Steven A. Dewey Mike Newton	2015	Pete Forster Gilbert Cook
1979	Louis A. Jensen Gary A. Lee	1998	Doug K. Ryerson Tom D. Whitson	2016	Jesse Richardson Joe DiTomaso
1980	W.L. Anliker	1999	Charlotte V. Eberlein John E. Orr	2017	Ralph Whitesides Edward Peachey
1981	P. Eugene Heikes J. Wayne Whitworth	2000	Rodney G. Lym Frank L. Young	2018	Kai Umeda Phil Munger
1982	Bert L. Bohmont Lowell S. Jordan	2001	Barbra Mullin Jill Schroeder	2019	Joe Yenish Drew Lyon
1983	Richard D. Comes Clyde L. Elmore	2002	Jeff Tichota Phillip Westra	2020	Monte Anderson Traci Rauch
1984	Larry C. Burrill	2003	Vanelle Peterson Carol Mallory-Smith	2021	Charlie Hicks Carl Libbey
1985	L.E. "Jack" Warren	2004	Don W. Morishita Phil Banks		
1986	Dwight V. Peabody Robert L. Zimdahl				

* The first Fellow awards were given in 1968. Fellows of the Society are members who have given meritorious service in Weed Science, and who are elected by two-thirds majority of the Board of Directors.

Western Society of Weed Science
Honorary Members
1976 to 2021

1976	Dick Beeler
1978	Dale W. Bohmont
1982	R. Phillip Upchurch
1983	Virgil H. Freed
1984	Warren C. Shaw
1987	Norman B. Akesson
1988	Logan A. Norris
1989	Gary A. Lee
1990	Earl Spurrier
1992	Bruce Ames
1993	Jerry Caulder
1994	Will D. Carpenter
1995	K. James Fornstrom
1997	F. Dan Hess
2001	Darrell Hanavan
2002	Senator Larry Craig - Idaho
2003	Roy Nishimoto
2004	Doug Schmale
2006	Wanda Graves
2007	Rob Hedberg
2008	Robert Zemetra
2009	Tom Brokaw
2010	Harry Cline
2011	A. G. Kawamura
2014	David Armstrong
2020	Dr. William Price
2021	Michael Walsh

Western Society of Weed Science

Outstanding Weed Scientists

1989 to 2021

1989	Jean H. Dawson	2006	Rick Arnold
1990	Arnold P. Appleby	2007	John Fenderson
1991	Stephen D. Miller		Rod Lym
	Harvey D. Tripple	2008	Robert G. Wilson
1992	Alex G. Ogg		Leo Charvat
	Kenneth W. Dunster		Pat Clay
1993	Edward E. Schweizer	2009	Carol Mallory-Smith
	Sheldon E. Blank		Pete Forster
1994	Larry C. Burrill		Alan Helm
1995	Larry W. Mitich	2010	Drew Lyon
	Paul J. Ogg		Ian Burke
1996	Donald C. Thill	2011	Monte D. Anderson
	Neal R. Hageman		Bradley D. Hanson
1997	Jeff Tichota	2012	Brett Oemichen
	Harry S. Agamalian		Andrew Kniss
1998	Donald R. Colbert	2013	Mary Halstvedt
	Clyde L. Elmore		Jane Mangold
1999	Gus J. Foster	2014	Charlie Hicks
	Philip Westra	2015	Brian Mealor
2000	Bart Brinkman	2016	Prashant Jha
	K. George Beck	2017	Erik Lehnhoff
2001	John E. Orr	2018	Brian Schutte
	Phillip W. Stahlman		Rick Boydston
2002	Doug Ryerson	2019	Todd Gaines
	Tom Whitson		Don Morishita
2003	Frank Young		William (Bill) Cobb
2004	Ron P. Crockett	2020	Timothy Harrington
	Joe DiTomaso		Stephen (Marty) Schraer
	Jim Vandecoevering		Vipan Kumar
2005	Kassim Al- Khatib	2021	Prashant Jha
	Kelly Luff		Nevin Lawrence

Western Society of Weed Science Outstanding Achievement Awards 2003 to 2020

2003	Bill Brewster	Professional Staff
2005	Guy Kyser	Professional Staff
	Eric Lane	Weed Manager
2006	Ed Peachey	Professional Staff
2007	Jim Freeman	Weed Manager
	Carl Libbey	Professional Staff
2008	Lars Baker	Weed Manager
	Lori Howlett	Professional Staff
2009	April Fletcher	Weed Manager
	Gary Willoughby	Professional Staff
2010	Cheryl Fiore	Professional Staff
2011	Robert Higgins	Professional Staff
2012	James Sebastian	Professional Staff
	Jerry Asher	Weed Manager
2013	Joan Campbell	Professional Staff
	Tim D'Amato	Weed Manager
2014	Ed Davis	Professional Staff
	Rita Beard	Weed Manager
2015	Brent Beutler	Professional Staff
2019	Traci Rauch	Professional Staff
2020	Steve Sauer	Weed Manager

**Western Society of Weed Science
Presidential Award of Merit
1994 to 2021**

1994	Rodney G. Lym
1995	John E. Orr
1996	Steven A. Dewey
1997	Jill Schroeder
1999	Celestine Duncan
2000	Gus Foster
2001	Jack Schlesselman
2002	Tom Whitson
2003	Nelroy Jackson
2004	Joan Campbell
2005	Tony White
2006	Janet Clark
2007	Tim Miller
2009	Mike Edwards
2010	Phil Motooka
2011	Kai Umeda
2012	Tim Miller
2013	Phil Banks
2014	Carl Libbey
2015	Carol Mallory-Smith
2016	Roland Schirman
2017	Phil Stahlmann
2018	Roger Gast
2019	Sandra McDonald
2020	Stephen (Marty) Schraer
2021	Elizabeth Mosqueda

**Western Society of Weed Science
Proceedings Editors
1990 to 2021**

1990 - 1997	Rod Lym
1998 - 2000	Kathy Christianson
2001	Joan Campbell and Donn Thill
2002 - 2003	Joan Campbell
2004 - 2010	Joan Campbell and Traci Rauch
2011 - 2017	Bill McCloskey
2018 - present	Carl Libby

**Western Society of Weed Science
Newsletter Editors
2002 to 2021**

2002 - 2003	Don Morishita
2004 - 2006	Pat Clay
2007 - 2011	Cheryl Fiore
2011 (fall) - 2013	Cheryl Fiore and Carl Libby
2013 to present	Carl Libby

Prior to 2002, the President served as newsletter editor. There was no regular schedule for publication. Typically issues included a spring newsletter following the annual meeting and a fall newsletter that included the Call for Papers and Research Progress Reports. In 1999-2000, President Jeff Tichota and the Board of Directors decided that there should be a separate position for the newsletter editor and to increase the regularity of its publication to four issues per year.

**Western Society of Weed Science
Business Managers and Treasurers
1939 to present**

1939-1953	Walter Ball	Secretary/ Treasurer
1954-1955	W.A. Harvey	Secretary/ Treasurer
1956-1957	W.C. Robocker	Secretary/ Treasurer
1958-1959	W.R. Furtick	Secretary/ Treasurer
1960-1961	Eugene Heikes	Secretary/ Treasurer
1962-1963	Edward Boles	Secretary/ Treasurer
1964-1966	Edward Boles	Business Manager
1967-1989	LaMar Anderson	Treasurer / Business Manager
1990-2006	Wanda Graves	Treasurer / Business Manager
2007-2017	Phil Banks	Treasurer / Business Manager
2017-2018	Tara Steinke	Treasurer / Business Manager
2018-2019	Kala Travis	Treasurer / Business Manager
2019- current	Eric Gustafson	Business Manager*
2020 - current	Phil Banks	Treasurer

* A separate position for Treasurer on the Board of Directors was created in 2020

Western Society of Weed Science Student Paper and Poster Awards 1983 to 2021

1983 Las Vegas, NV

Student Paper Contest

1st Place - David L. Zamora, University of Idaho

2nd Place - Stott Howard, Utah State University

3rd Place - George Beck, University of Idaho

1984 Spokane, WA

Student Paper Contest

1st Place - Dan Devlin, Washington State University

2nd Place - Tim Chicoine, Montana State University

3rd Place - Celestine Lacey, Montana State University

1985 Phoenix, AZ

Student Paper Contest

1st Place - Jesse Richardson, Washington State University

2nd Place - Stott Howard, Washington State University

3rd Place - Dan Burkhart, Montana State University

1986 San Diego, CA

Student Paper Contest

1st Place - Gwen Fleming, Washington State University

2nd Place - Dwayne A. Martin, University of Wyoming

3rd Place - Don W. Morishita, University of Idaho

1987 Boise, ID

Student Paper Contest

1st Place (tie) - Eric R. Gallant, Montana State University

1st Place (tie) - David W. Johnson, University of Wyoming

3rd Place - Edward S. Davis, Montana State University

1988 Fresno, CA

Student Paper Contest

1st Place - Peter A. Dotray, Washington State University

2nd Place - Carlos C. Reyes, Colorado State University

3rd Place (tie) - Bernal E. Valerde, Oregon State University

3rd Place (tie) - Timothy J. Fritz, Washington State University

1989 Honolulu, HI

Student Paper Contest

- 1st Place - Blake Willis, Utah State University
- 2nd Place - Sandra Halstead, Washington State University
- 3rd Place - Richard Evans, University of Idaho

1990 Sparks, NV

Student Paper Contest

- 1st Place - Emanuel Pomela, Utah State University
- 2nd Place - David Barton, University of Idaho

1991 Seattle, WA

Student Paper Contest

- 1st Place - Mostapha A. Haidar, Colorado State University
- 2nd Place - Rose Wallander, Montana State University
- 3rd Place - Miaocheng Ying, Montana State University
- 4th Place - Pedro J. Christoffoleti, Colorado State University
- 5th Place - Keith D. Miller, Washington State University
- 6th Place - Claudio Dunan, Colorado State University

1992 Salt Lake City, UT

Student Paper Contest

Agronomy Section

- 1st Place - Jean A. Doty, Washington State University
- 2nd Place - Abdel Mesbah, University of Wyoming
- 3rd Place - Blair L. Waldron, Utah State University

Basic Science Section

- 1st Place - K. Sivakumaran, Montana State University
- 2nd Place - James D. Harbour, University of Wyoming
- 3rd Place - Mostapha A. Haidar, Colorado State University

1993 Tucson, AZ

Student Paper Contest

- 1st Place - Marianne K. Pederson, New Mexico State University
- 2nd Place - Kris H. Johnson, University of Wyoming
- 3rd Place - John M. Squire, Utah State University

Student Poster Contest

- 1st Place - Abdel Mesbah, University of Wyoming
- 2nd Place - Yanglin Hou, New Mexico State University

1994 Coeur D' Alene, ID

Student Paper Contest

Division 1

1st Place - Wade Malchow, Montana State University

2nd Place - Dean Richards, Washington State University

Division 2

1st Place - Corey Colliver, Montana State University

2nd Place - Anthony Kern, Montana State University

Student Poster Contest

1st Place - Kris Johnson, University of Wyoming

1995 Sacramento, CA

Student Paper Contest

1st Place - B. Correiar, University of California, Davis

2nd Place - Patrick A. Miller, Colorado State University

3rd Place - Anthony J. Kern, Montana State University

Student Poster Contest

1st Place - Mark Waldrop, New Mexico State University

2nd Place - Troy M. Price, Utah State University

1996 Albuquerque, NM

Student Paper Contest

Applied Section

1st Place - Michael Wille, University of Idaho

2nd Place - Stephen Enloe, Colorado State University

3rd Place - Jessie Strobbe, Montana State University

Basic Section

1st Place - Dean Riechers, Washington State University

2nd Place - W. Mack Thompson, Colorado State University

3rd Place - Patrick Miller, Colorado State University

Student Poster Contest

1st Place - Justin Knight, New Mexico State University

2nd Place - Joyce Payne, New Mexico State University

3rd Place - Asuncion Rios-Torres, New Mexico State University

1997 Portland, OR

Student Paper Contest

Basic Section

1st Place - Anthony Kern, Montana State University

2nd Place - Ramon Cinco-Castro, University of Arizona

3rd Place - Harwood Cranston, Colorado State University

Applied Section

1st Place - Patrick Miller, Colorado State University

2nd Place - Sandra Shinn, University of Idaho

3rd Place - Jeff Nelson, North Dakota State University

Student Poster Contest

1st Place - Andrea Sultana, New Mexico State University

2nd Place - Marie Campanella, New Mexico State University

3rd Place - Martina Murray, New Mexico State University

1998 Waikoloa, HI

Student Paper Contest

Section 1

1st Place - Carrie B. Benefield, University of California, Davis

2nd Place - Suzanne Sanders, University of Idaho

3rd Place - Jeff A. Nelson, North Dakota State University

Section 2

1st Place - Sandra L. Shinn, University of Idaho

2nd Place - Mark J. Renz, University of California, Davis

3rd Place - Martina W. Murray, New Mexico State University

Student Poster Contest

1st Place - Dawn Y. Wyse-Pester, Colorado State University

2nd Place - W. Mack Thompson, Colorado State University

1999 Colorado Springs, CO

Student Paper Contest

Section 1

1st Place - John R. Roberts, Oklahoma State University

2nd Place - Holli A. Murdoch, Utah State University

3rd Place - Ginger G. Light, Texas Tech University

Section 2

1st Place - Lynn Fandrich, Colorado State University

2nd Place - Matthew D. Schuster, Oregon State University

3rd Place - Martina W. Murray, New Mexico State University

Student Poster Contest

Section 1

1st Place - Dodi Kazarian, Colorado State University

2nd Place - Darrin L. Walenta, Oregon State University

3rd Place - Tehmina Sheikh, Texas Tech University

Section 2

1st Place - Michael W. Marshall, Kansas State University

2nd Place - Sandra L. Shinn, University of Idaho

3rd Place - Curtis R. Rainbolt, University of Idaho

2000 Tucson, AZ

Student Paper Contest

Section 1

- 1st Place - Federico Trucco, Colorado State University
- 2nd Place - Jennifer Drewitz, University of California, Davis
- 3rd Place - Dodi Kazarian, Colorado State University

Section 2

- 1st Place - Mark Renz, University of California, Davis
- 2nd Place - Curtis Rainbolt, University of Idaho
- 3rd Place - Eric Nelson, North Dakota State University

Section 3

- 1st Place - Kevin Kelley, Utah State University
- 2nd Place - Oleg Daugovish, University of Idaho
- 3rd Place - Michael Marshall, Kansas State University

Student Poster Contest

- 1st Place - Elme' Coetzer, Kansas State University
- 2nd Place - Lynn Fandrich, Colorado State University
- 3rd Place - Brian Olson, Kansas State University

2001 Coeur D' Alene, ID

Student Paper Contest

Section 1

- 1st Place - Oleg Daugovish, University of Idaho
- 2nd Place - Nicole Wagner, Montana State University

Section 2

- 1st Place - Lee R. Van Wychen, Montana State University
- 2nd Place - Johnathon D. Holman, Montana State University
- 3rd Place - Branden L. Schiess, University of Idaho

Student Poster Contest

Section 1

- 1st Place - David S. Belles, Colorado State University
- 2nd Place - Lynn Fandrich, Colorado State University

Section 2

- 1st Place - Todd R. Wehking, North Dakota State University
- 2nd Place - Federico Trucco, Colorado State University

Student Paper Contest

Section 1

- 1st Place - Oleg Daugovish, University of Idaho
- 2nd Place - Nicole Wagner, Montana State University

Section 2

1st Place - Lee R. Van Wychen, Montana State University

2nd Place - Johnathon Holman, Montana State University

3rd Place - Branden Schiess, University of Idaho

Student Poster Contest

Section 1

1st Place - David Belles, Colorado State University

2nd Place - Lynn Fandrich, Colorado State University

Section 2

1st Place - Todd Wehking, North Dakota State University

2nd Place - Federico Trucco, Colorado State University

2003 Kauai, HI

Student Paper Contest

Section 1

1st Place - Lynn Fandrich, Oklahoma State University

2nd Place - Travis Osmond, Utah State University

3rd Place - Doug Shoup, Kansas State University

Section 2

1st Place - Mark Lubbers, Kansas State University

2nd Place - Laurie Janzen, North Dakota State University

3rd Place - Andrew Kniss, University of Nebraska

Student Poster Contest

Section 1

1st Place - Amber Vallotton, New Mexico State University

2nd Place - Erick Dvorak, North Dakota State University

Section 2

1st Place - Doug Shoup, Kansas State University

2nd Place - Mark Lubbers, Kansas State University

2004 Colorado Springs, CO

Student Paper Contest

Session 1

1st Place - Krishona Martinson, U. of Minnesota & ND State U.

2nd Place - Margaret Rayda, University of Wyoming

3rd Place - Eric Blinka, Kansas State University

Session 2

1st Place - Jeanne Falk, Kansas State University

2nd Place - David Belles, Colorado State University

3rd Place - Bradley Hanson, University of Idaho & OR State U.

Student Poster Contest

Session A

1st Place - Jeanne Falk, Kansas State University

2nd Place - Krishona Martinson, U. of Minnesota & ND State U.

3rd Place - Lynn Fandrich, Oregon State University

Session B

1st Place - Leandro Perugini, Kansas State University

2nd Place - Scott O'Meara, Colorado State University

3rd Place - Brian Thrift, Montana State University

Undergraduate Student Paper

1st Place - Jon-Joseph Q. Armstrong, Kansas State University

2005 Vancouver, British Columbia, Canada

Student Paper Contest

Weeds of Agricultural and Horticultural Crops

1st Place - Ryan Ractor, Arizona State University

2nd Place - Frederic Pollnac, Montana State University

Weeds of Range and Forest Section

1st Place - Kevin Branum, New Mexico State University

2nd Place - Sara Sweet, University of California, Davis

3rd Place - Erik Lehnoff, Montana State University

Student Poster Contest

1st Place - Todd Gaines, Colorado State University

Undergraduate Paper Contest

1st Place - Irene Calderon, New Mexico State University

2006 Sparks, NV

Student Paper Contest

Weeds of Range and Forest Section

1st Place - Dirk Baker, Colorado State University

2nd Place - Luke Samuel, North Dakota State University

Agronomic Crops Section

1st Place - Todd Gaines, Colorado State University

2nd Place - Sonja Nunez, New Mexico State University

3rd Place - Gustavo Sbatella, University of Wyoming

Student Poster Contest

1st Place - Ryan Rector, University of Arizona

2nd Place - Alejandro Perez-Jones, Oklahoma State University

3rd Place - Lydia Clayton, University of Idaho

Undergraduate Poster Contest

1st Place - Adrienne Olson, University of Wyoming

2007 Portland, OR

Student Paper Contest

Weeds of Agronomic Crops

1st place - Michael Duff, Kansa State University

2nd place - Joanna Eginca, Montanan State University

Horticulture/Weeds of Range and Forest

1st place - Luke Samuel, North Dakota State University

2nd place - Matt Williams, Washington State University

Student Poster Contest

1st place - Dirk Baker, Colorado State University

2nd place - Maria Zapiola, Oregon State University

3rd place - Seth Gershdorf, University of Idaho

Undergraduate Poster Contest

1st place - Maria Lockhart Washington State University

2008 Anaheim/Garden Grove, CA

Student Paper Contest

Weeds of Agronomic Crops and Horticultural Crops

1st Place - Lydia Clayton, University of Idaho

2nd Place - Dilpreet Riar, Washington State University

Weeds of Range and Forest and Basic Sciences

1st Place - Amy Blair, Colorado State University

2nd Place - Travis Almquist, North Dakota State University

3rd Place - Jordana LaFantasie, University of Wyoming

Student Poster Contest

1st Place - Jordana LaFantasie, University of Wyoming,

2nd Place - Randall Stephens, Washington State University

Undergraduate Poster Contest

1st place - Jessica Ebler, New Mexico State University

2009 Albuquerque, New Mexico

Student Paper Contest

Weeds of Agronomic Crops and Basic Science

1st Place - Jordan Hoefing, North DakotaState University

2nd Place - Melissa Bridges, Colorado State University

3rd Place - John Frihauf, Kansas State University

Weeds of Range and Forest and Weeds of Wildlands and Wetlands

1st Place - Brad Lindenmayer, Colorado State University

2nd Place - Melody Rudenko, Oregon State University

Student Poster Contest

- 1st Place - Maria Zapiola, Oregon State University
- 2nd Place - Tanya Skurski, Montana State University
- 3rd Place - Suphannika Intanon, Oregon State University

Undergraduate Poster Contest

- 1st Place - Jared Unverzagt, University of Wyoming
- 2nd Place - Carol Lange, New Mexico State University

2010 Waikoloa, HI

Student Paper Contest

Weeds of Range & Natural Areas/Basic Sciences

- 1st Place - Jared Bell, Washington State University
- 2nd Place - Jeremiah Mann, University of California, Davis

Weeds of Agronomic Crops/Weeds of Horticultural Crops

- 1st Place - Michael Ostlie, Colorado State University
- 2nd Place - Jonathan Mikkelsen, North Dakota State University

Student Poster Contest

- 1st Place - Roberto Luciano, North Dakota State University
- 2nd Place - Stephanie Christensen, Utah State University
- 3rd Place - Cassandra Setter, North Dakota State University

Undergraduate Poster Contest

- 1st Place - Holden Hergert, University of Wyoming

2011 Spokane, WA

Student Paper Contest

Agronomic Crops/Biology

- 1st Place - Joseph Vassios, Colorado State University
- 2nd Place - Nevin Lawrence, University of Wyoming

Range/ Horticulture Crops

- 1st Place - Ryan Edwards, Colorado State University
- 2nd Place - Cameron Douglas, Colorado State University
- 3rd Place - Katie Conklin, North Dakota State University

Student Poster Contest

Agronomic Crops/ Biology

- 1st Place - Connor Ferguson, Oklahoma State University
- 2nd Place - Jared Unverzagt, University of Wyoming
- 3rd Place - Bianca Martins, Oregon State University

Range/ Horticulture Crops

- 1st Place - Joseph Vassios, Colorado State University
- 2nd Place - Clarke Alder, Utah State University
- 3rd Place - Cassandra Setter, North Dakota State University

2012 Reno, NV

Student Paper Contest

Range & Agriculture

1st Place - Krista Ehlert, Montana State University

2nd Place - Brandon Greet, University of Wyoming

3rd Place - Holden Hergert, University of Wyoming

Biology

1st Place - Andrew Wiersma, Colorado State University

2nd Place - Mohsen Mohseni-Moghadam, New Mexico State University

Student Poster Contest

Agriculture

1st Place - Louise Lorent, University of Wyoming

2nd Place - Aman Anand, North Dakota State University

Range, Horticulture, & Biology

1st Place - Holden J. Hergert, University of Wyoming

2nd Place - Heather Elwood, Utah State University

Undergraduate Poster Contest

1st Place - Ann Bernert, Oregon State University

2013 San Diego, CA

Student Paper Contest

Weeds of Agronomic Crops & Weeds of Horticultural Crops

1st Place - Craig Beil, Colorado State University

2nd Place - Christopher Van Horn, Colorado State University

3rd Place - Jared Unverzagt, University of Wyoming

Weeds of Rangeland and Natural Areas & Basic Biology and Ecology

1st Place - Christina Herron-Sweet, Montana State University

2nd Place - Samantha Ambrose, Oklahoma State University

3rd Place - Hally Berg, Montana State University

Student Poster Contest

1st Place - Amar Godar, Kansas State University

2nd Place - Carl Coburn, University of Wyoming

3rd Place - Marcelo Moretti, University of California, Davis

Undergraduate Poster Contest

1st Place - Leslie Holland, New Mexico State University

2014 Colorado Springs, CO

Student Paper Contest

Weeds of Range and Natural Areas & Weeds of Horticultural Crops

1st Place - Kallie Kessler, Colorado State University

2nd Place - Thomas Getts, Colorado State University

3rd Place - Jason Adams, North Dakota State University

Weeds of Agronomic Crops & Basic Biology and Ecology

1st Place - Derek Sebastian, Colorado State University

2nd Place - Vipin Kumar, Montana State University

3rd Place - Curtis Hildebrandt, Colorado State University

Student Poster Contest

Weeds of Range and Natural Areas & Weeds of Horticultural Crops

1st Place - Julia Workman, University of Wyoming

2nd Place - Jason Adams, North Dakota State University

Weeds of Agronomic Crops, Teaching and Technology Transfer, & Basic Biology and Ecology

1st Place - Vipin Kumar, Montana State University

2nd Place - Cody Creech, University of Nebraska-Lincoln

3rd Place - Nevin Lawrence, Washington State University

Undergraduate Student Poster Contest

1st Place - Hannah Tomlinson, University of Idaho

2015 Portland, OR

Student Paper Contest

Weeds of Range and Natural Areas, Weeds of Horticultural Crops & Basic Biology and Ecology

1st Place - Marcelo Moretti, University of California, Davis

2nd Place - Nevin Lawrence, Washington State University

3rd Place - William Rose, University of Wyoming

Weeds of Agronomic Crops

1st Place - Thomas Schambow, University of Wyoming

2nd Place - Christopher Van Horn, Colorado State University

Student Poster Contest

Weeds of Range and Natural Areas, Weeds of Horticultural Crops, & Weeds of Agronomic Crops

1st Place - Derek Sebastian, Colorado State University

2nd Place - Alan Raeder, Washington State University

Basic Biology and Ecology

1st Place - Curtis Hildebrandt, Colorado State University

2nd Place - Gabriel Flick, Oregon State University

3rd Place - Triston Hooks, New Mexico State University

2016 Albuquerque, NM

Student Paper Contest

Weeds of Range and Natural Areas, Weeds of Horticultural Crops, & Teaching and Technology Transfer

1st Place - Derek Sebastian, Colorado State University

2nd Place - Travis Carter, North Dakota State University

Weeds of Agronomic Crops

1st Place - Junjun Ou, Kansas State University

2nd Place - Clint Beiermann, University of Wyoming

3rd Place - Curtis Hildebrandt, Colorado State University

Basic Biology and Ecology

1st Place - Breanne Tidemann, University of Alberta

2nd Place - Carl Coburn, University of Wyoming

3rd Place - Neeta Soni, Colorado State University

Student Poster Contest**Weeds of Range and Natural Areas, Weeds of Horticultural Crops &****Basic Biology and Ecology**

1st Place - Carl Coburn, University of Wyoming

2nd Place - Albert Adjesiwor, University of Wyoming

3rd Place - Samantha Willden, Utah State University

Weeds of Agronomic Crops

1st Place - Charlemagne Lim, University of Wyoming

2nd Place - Rachel Zuger, Washington State University

Undergraduate Poster Contest

1st Place - Jessica Bramhall, Kansas State University

2017 Coeur d'Alene, IDStudent Paper Contest**Aquatic Weeds**

1st Place - Erika Haug, North Carolina State University

Weeds of Range and Natural Areas

1st Place - Tara Burke, Washington State University

Weeds of Horticulture Crops

1st Place - Caio Brunharo, University of California, Davis

Basic Biology and Ecology of Weeds

1st Place - Carl Colburn, University of Wyoming

2nd Place - Neeta Soni, Colorado State University

Weeds of Agronomic Crops

1st Place - Charlemagne Lim, Montana State University

2nd Place - Curtis Hildebrandt, Colorado State University

Student Poster Contest**Weeds of Range and Natural Areas, Aquatics, Weeds of Horticultural Crops & Basic Biology and Ecology**

1st Place - Mirella F. Ortiz, Colorado State University

2nd Place - Albert Adjesiwor, University of Wyoming

Weeds of Agronomic Crops

1st Place - Tara Burke, Washington State University

2nd Place - Clint Beiermann, University of Nebraska

Undergraduate Poster

1st Place - Grace Ogden, Oklahoma State University

2018 Garden Grove, CA

Student Paper Contest

Basic Biology and Ecology of Weeds

1st Place - Albert Adjesiwor, University of Wyoming

2nd Place - Hudson Takano, Colorado State University

Weeds of Agronomy, Horticulture and Range

1st Place - Gabriel Flick, Oregon State University

2nd Place - Clint Beierman, University of Nebraska

Student Poster Contest

1st Place - Nami Wada, Oregon State University

2nd Place - Lucas Kopecky Bobadilla, Oregon State University

3rd Place - Ramawater Yadav, Montana State University

2019 Denver, CO

Student Paper Contest

Weeds of Agronomic Crops

1st Place - Katie E. Driver, University of California-Davis

2nd Place - Clint W. Beiermann, University of Nebraska-Lincoln

3rd Place - Jodie A. Crose, Oklahoma State University

Range, Forest, and Natural Areas

1st Place - Christie Hubbard Guetling, University of Idaho

Weeds of Horticulture Crops

1st Place - Eric Augerson, Oregon State University

Basic Biology and Ecology

1st Place - Hudson K. Takano, Colorado State University

2nd Place - Elizabeth G. Mosqueda, University of Wyoming

Student Poster Contest

Weeds of Agronomic Crops

1st Place - Lucas Kopecky Bobadilla, Oregon State University

2nd Place - Elizabeth G. Mosqueda, University of Wyoming

3rd Place - Justin Childers, Oklahoma State University

Weeds of Range and Forest

1st Place - Shannon L. Clark, Colorado State University

2nd Place - Rachel H. Seedorf, Colorado State University

Weeds of Horticulture Crops

1st Place - Larissa Larocca de Souza, Oregon State University

Basic Biology and Ecology

1st Place - Abigail Barker, Colorado State University

Undergraduate Poster Contest

1st Place - Samantha R. Nobes, University of Wyoming

2nd Place - Lauren B. Stanko, Utah State University

2020 Maui, HI

Student Paper Contest

Weeds of Agronomic Crops

1st Place - Clint W. Beiermann, University of Nebraska-Lincoln

2nd Place - Justin Childers, Oklahoma State University **Pasture, Range, Forest, Rights of Ways, and Natural Areas**

1st Place - Jodie Crose, University of Wyoming,

2nd Place - Mirella F. Ortiz, Colorado State University

3rd Place - Jake Courkamp, Colorado State University

Weeds of Horticulture Crops and Integrated Weed Management

1st Place - Nathan Haugrud, North Dakota State University

Basic Biology and Ecology

1st Place - Pragya Asthana, Washington State University

2nd Place - Marcelo Figveireda, Colorado State University

Physiology

1st Place - Olivia E. Todd, Colorado State University

WSSA/WSWS poster contest

1st Place - Carlos Alberto Rigon, Colorado State University

2nd Place - Neeta Soni, Colorado State University

3rd Place - Crystal Sparks, Colorado State University

2021 Virtual meeting during the COVID-19 Pandemic

Student Paper Contest

Weeds of Range, Forestry, and Natural Areas

1st Place - Mirella F. Ortiz, Colorado State University

2nd Place - Natalie Fronk, Utah State University

Weeds of Agronomic Crops

1st Place - Ednaldo Borgato, Kansas State University

2nd Place - Hannah Lindell, Oklahoma State University

Weeds of Horticulture Crops, Basic Biology and Ecology, Teaching and Technology

1st Place - Chandrima Shyam, Kansas State University

2nd Place - Lydia Fields, Washington State University

Student Poster Contest

Weeds of Horticulture Crops, Basic Biology and Ecology, Weeds of Range, Forestry and Natural Areas

1st Place - Jacob Courkamp, Colorado State University

2nd Place - Natalie Fronk, Utah State University

Weeds of Agronomic Crops

1st Place - Joshua Wa Miranda Teo, University of Nebraska

2nd Place - Prashasti Agarwal, New Mexico State University

3rd Place - Samuel Revolinski, Washington State University

Undergraduate Poster Contest

1st Place - Liliana Fendler, Colorado State University

* The first graduate student oral paper contest was in 1983 at Las Vegas, NV and the first graduate student poster contest was in 1993 at Tucson, AZ. The first undergraduate student oral paper contest was in 2004 at Colorado Springs, CO.

Herbicide Company “Genealogy”

Compiled by Dr. Arnold Appleby, Emeritus
Oregon State University



The following chart is intended to show the history of the major U.S. herbicide companies. The information depends largely on people’s memories, which sometimes can be inexact, on records from the headquarters of major companies, and from histories on the internet. No guarantees are made for accuracy, although I think it is close. The dates of the founding of companies or of acquisitions and mergers sometime vary slightly from one reference to another, so they should not be considered as solid historical facts.

Only U.S. companies are listed. International companies are listed only if they had subsidiaries in the U.S., such as Bayer or BASF. I have tried to include mergers or acquisitions of entire companies or the ag divisions of companies, but acquisition of individual products are mentioned only occasionally. In many cases, the major company continues in existence and it is the agricultural division that becomes part of another company. Example: Aventis sold its ag products division to Bayer while the pharmaceutical portion of Aventis continues. Acquisitions of seed companies are not included.

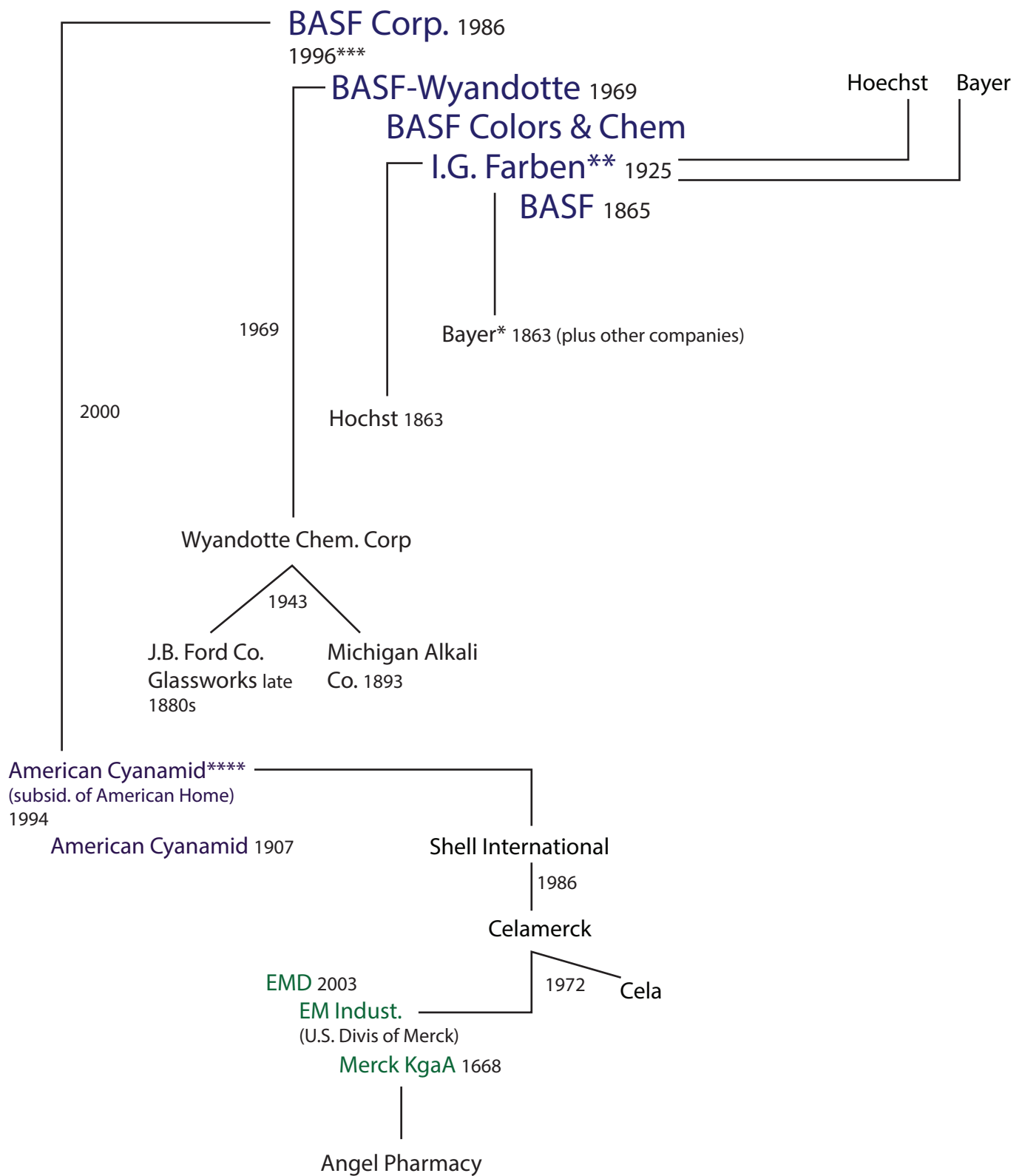
The major companies included are those with a history of synthesis, screening, and development of herbicides in the U.S., even if their parent company is overseas. This excludes marketing companies, post-patent distributors, and those companies dealing only with non-herbicide pesticides. Some companies have a distinguished herbicide history but no longer develop new herbicides. These are so noted.

Numerous companies and individuals have been consulted and have been very helpful. But I have not always followed suggestions exactly if I felt I had more accurate information from a different source, so all the errors and omissions are mine.

Dr. Arnold Appleby, Emeritus, Oregon State University, February 2018

NOTE: Dr. Appleby passed away on December 6, 2018.

NOTE: For the 2022 WSWS History Dr. Appleby’s genealogy has been re-formatted for easier reading. Colors were added to some company names to assist readers following the flow of company changes. Any errors and omissions in this version are unintended and are mine. Vanelle Peterson, editor

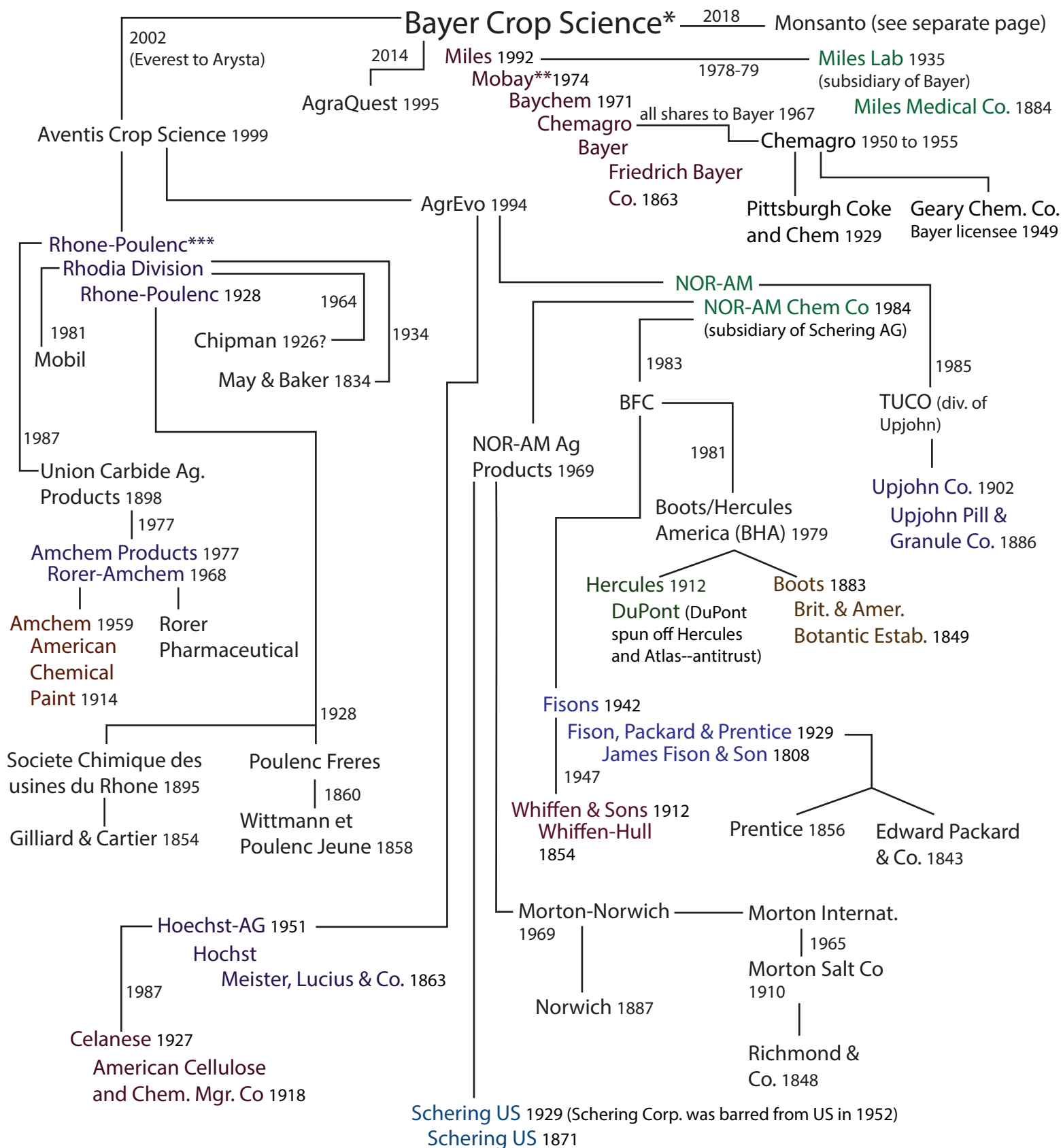


* BASF comes from Badische Anilin & Soda Fabrik)

** I.G. Farben dissolved in 1945 and 12 companies emergd in 1951 including the original three major ones

*** BASF acquired Sandoz corn herbicides and some personnel--1996 when Sandoz merged with Ciba

**** Home & Garden to Rhone Poulenc in 1990; Celamerck in Germany; sold to Scotts in 1998



1863 See BASF for I.G. Farben period

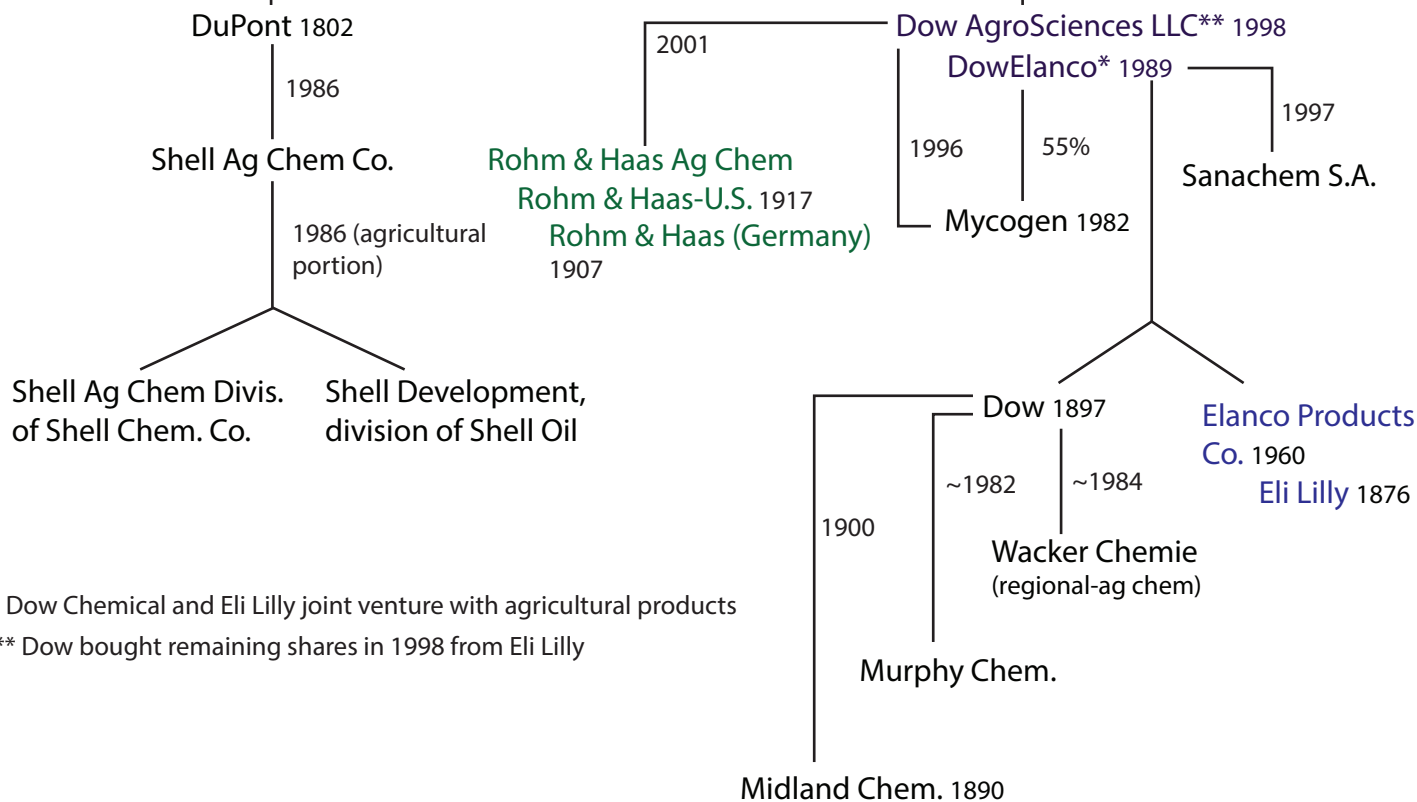
* Bayer regained the rights to the company name in the U.S. in 1994

** Bayer and Monsanto formed Mobay in 1954 to make polyurethanes. In 1977, Bayer bought out Monsanto because of anti-trust actions.

*** History of Rhone-Poulenc varies with reference. Encyclopedia Britannica says R-P originated in 1801 as Maison Debai-Extraits Tintoriaux

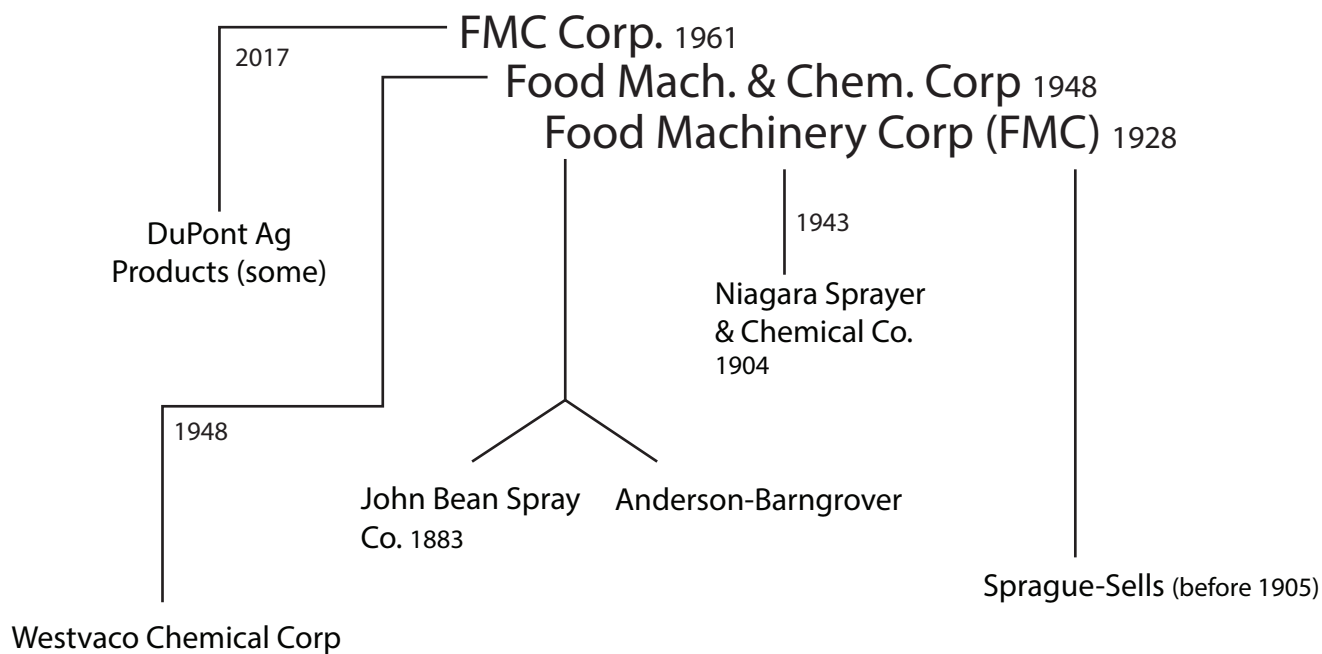
Corteva

Dow/DuPont 2016

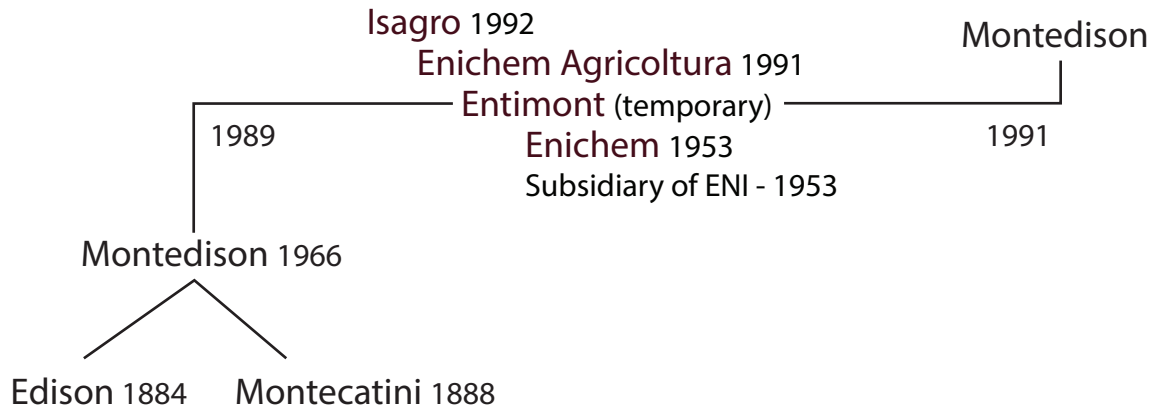


* Dow Chemical and Eli Lilly joint venture with agricultural products

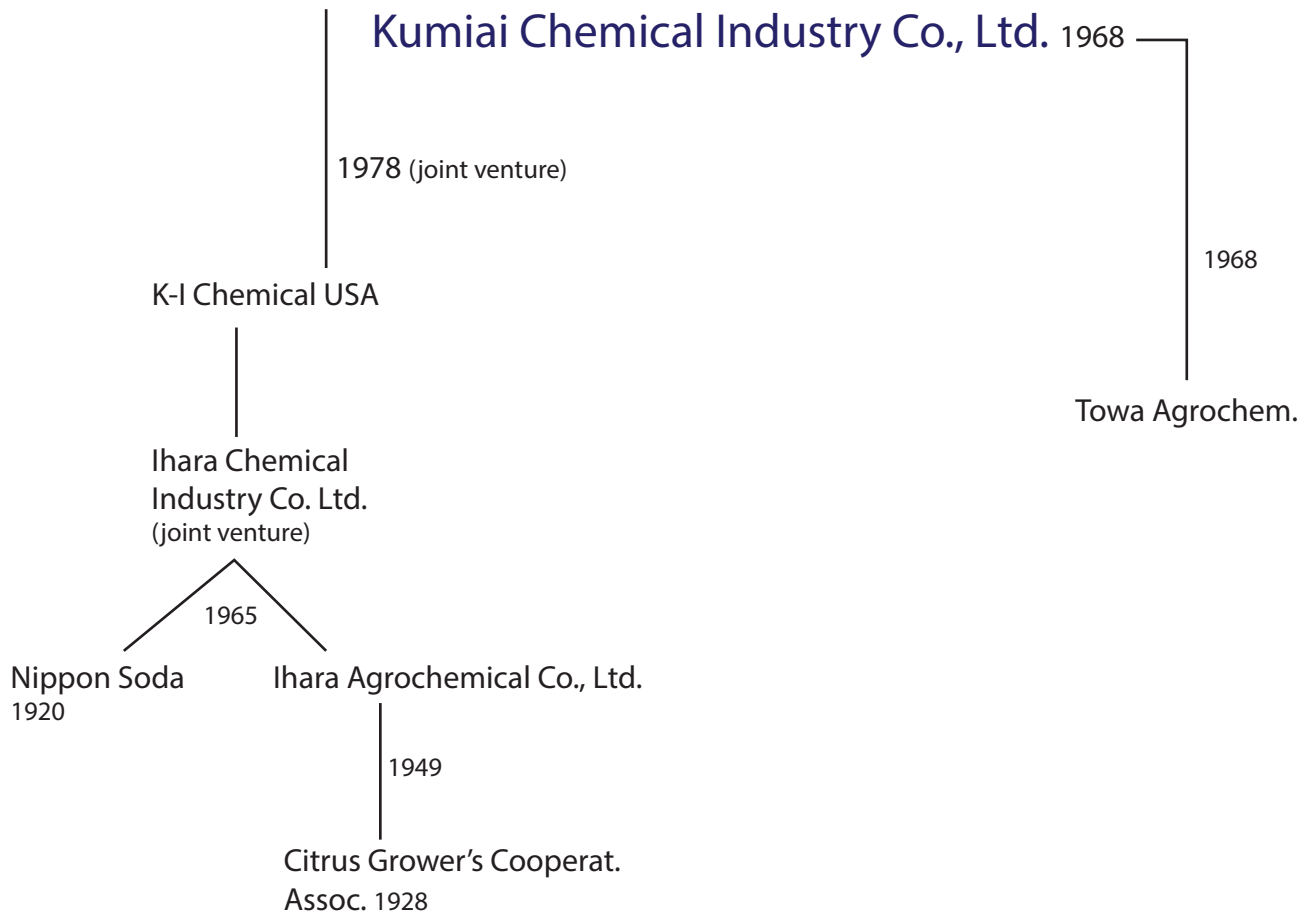
** Dow bought remaining shares in 1998 from Eli Lilly

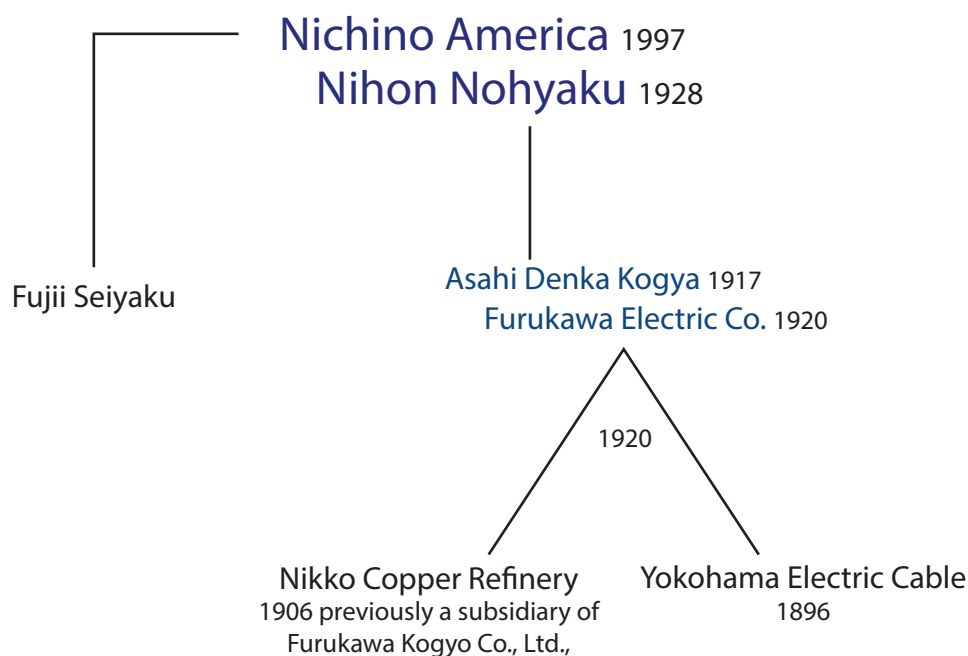
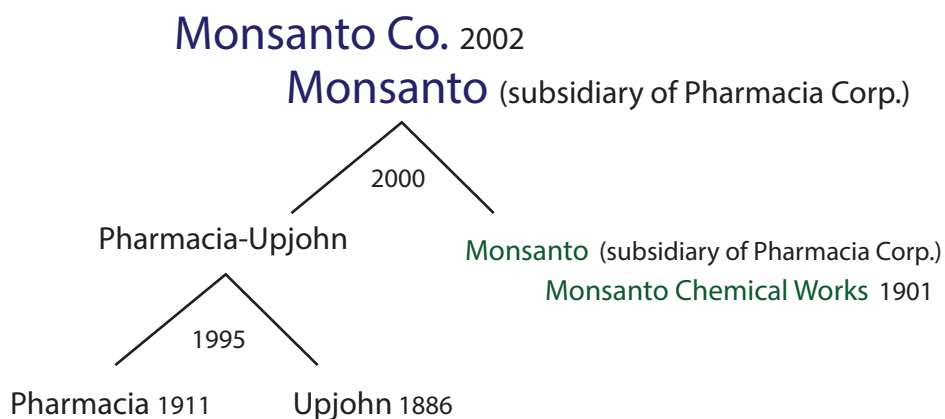


Isagro USA 2003



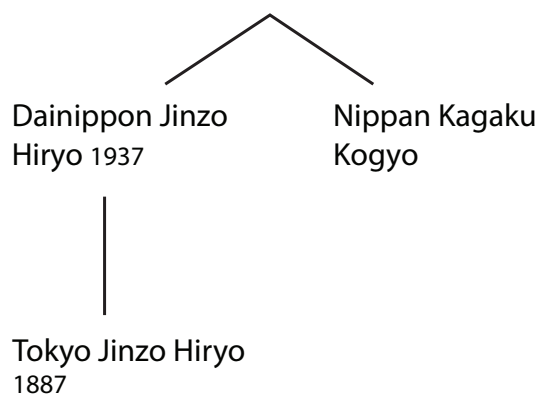
Kumiai America 1970





Nissan Chemical America Corp. 1989

Nissan Chemical Industries, Ltd.



PPG Industries (no longer in agr. chem.)

PPG Industries 1968

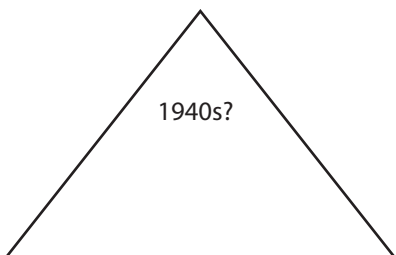
Some products to Chevron, some to American Cyanamid

Pittsburgh Plate Glass 1883



Columbia-Southern Chem.
(Chemical Division of Pittsburgh Plate Glass)

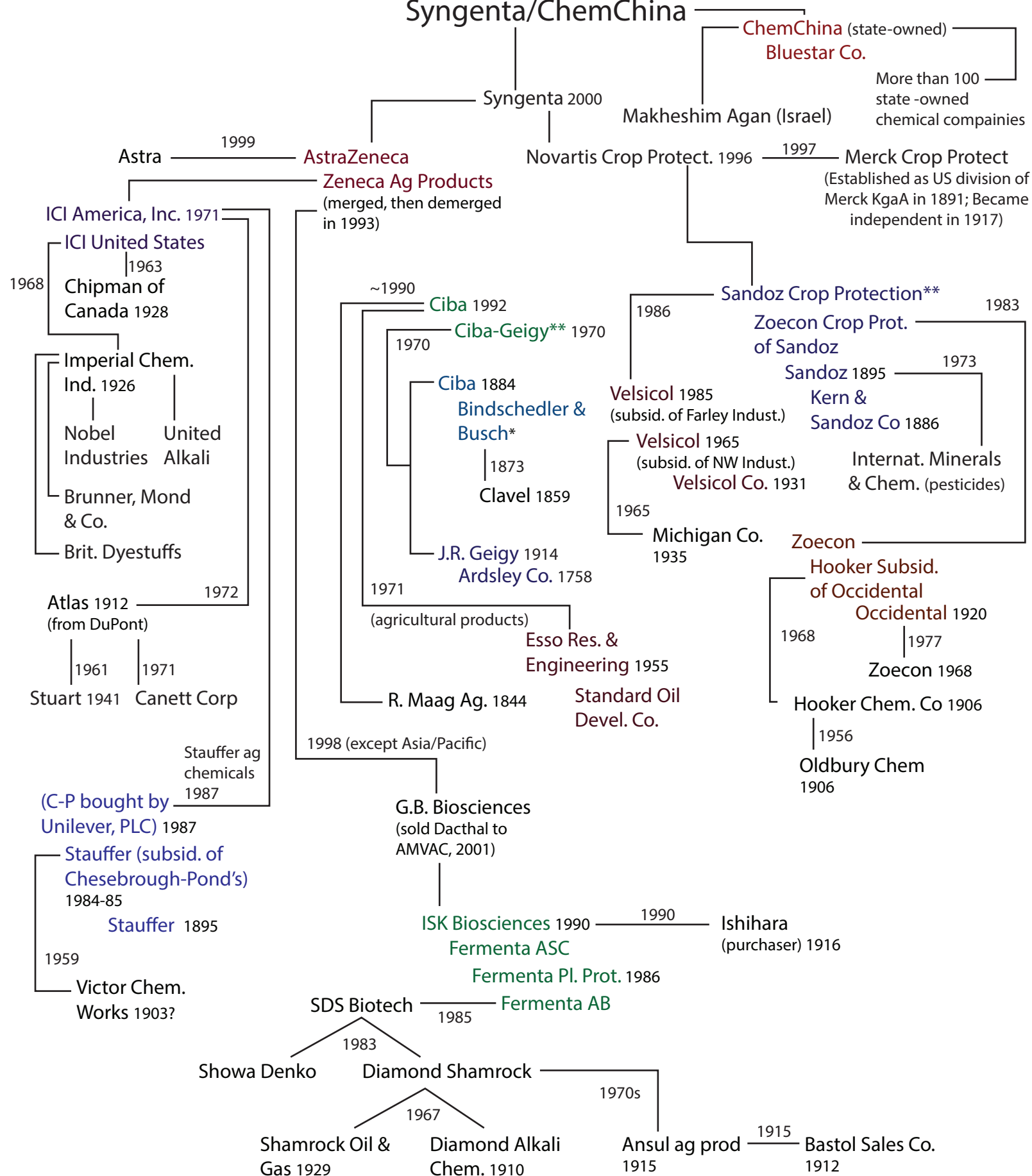
1940s?



Columbia Chem. Co. 1899

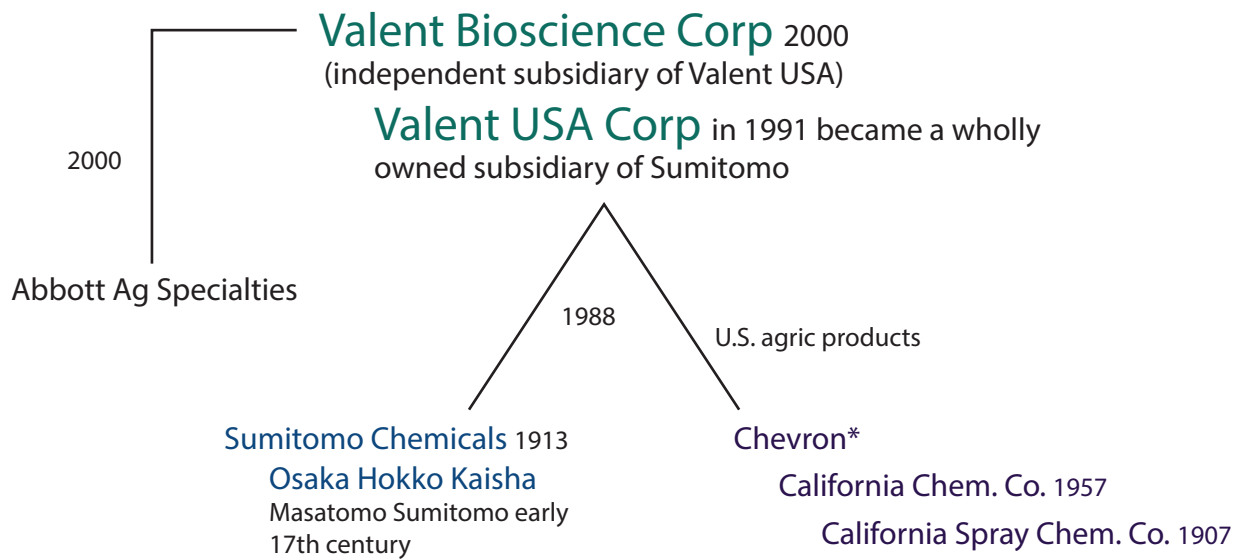
Southern Alkali Co. 1930-1934?

Syngenta/ChemChina



* In 1884, Bindshedler & Busch became "Gesellschaft fur Chemische Industrie Basel". The abbreviation "Ciba" became so common it became Ciba in 1945

** Basel AG was a cartel of Ciba, Sandoz, and Geigy from 1918 to 1951



* Chevron ex-U.S. agric products to Tomen Agro. and Rhone Paulenc
Chevron lawn and garden (Ortho) to Monsanto (Solaris Divis. in 1993). These products then sold to Scotts in 1998.

Other Companies

Besides the 80-some names included in the preceding chart, there were other companies that were once associated with herbicides. Some are still companies, such as PPG, but are no longer in the herbicide business. Some apparently sold any products and ceased to exist. Some perhaps were primarily distributors and owned no products of their own, although I have omitted what I perceive to be strictly marketing companies or herbicide distributors.

Following is a partial list along with examples of products that were associated with them.

NOTE: Dr. Appleby passed away on December 6, 2018.

<u>Company</u>	<u>Herbicides</u>
Agrolinz	Sold pyridate to Sandoz in the 1990s.
Air Products	AP-20
Allied Chem. (General Chem. Div.)	HCA. Urox, Urab (Some products to Hopkin Products. Since dropped.) United Ag
Antara	Primarily wetting agents
Atlas and Hercules	Atlas had Atlacide (later sold by Chipman), Hercules had Herban and Antor. Hercules formed in 1882 jointly by Laflin & Rand and DuPont. Because of antitrust action, Atlas and Hercules were formed from DuPont in 1912. Atlas was purchased by ICI in 1971 and Hercules merged with Boots.
Buckman Labs.	Buban
Esso (Standard Oil of NJ) –ag chem sold to Ciba-Geigy. Name then changed to Exxon.	Stoddart solvent, Tolban sold to Ciba-Geigy.
PBI-Gordon	Private Brands, Inc. was formed in 1947. It bought Gordon Corp. in 1956 and company name became PBI-Gordon in 1970. It worked with many major companies as formulator and packager. Were associated with phenoxes, diclofenil, Embark, et al. Now market phenoxy formulations, primarily for lawn care, including TrlMec.
3 M	Destun, Sustar, Embark was sole to PBI-Gordon.
Reichhold	Na PCP
Sharples	Introduced endothall in 1951. Became subsidiary of Pennsylvania Salt Co. in 1951, and their chem. products integrated in 1955.
Spencer → Gulf	Clobber, Outfox, Topcide, Prefox. Carbyne sold to Velsicol.
Sunco	Major supplier of Stoddart Solvent.
Tenneco	TCH-1626. TCH- 1636
U.S. Borax	Borascu, Borolin, Ureabor, Cobex (Some products to Occidental; Cobex now produced by Wacker in Germany)
Vertac	dinoseb, manufactured and distributed several generic chemicals
Vineland	organic arsenicals

2021-2022 Western Society of Weed Science ad hoc History Committee

Much hard work and too many zoom meetings went into creating this history of WSWs. Many thanks are due to these co-editors/WSWS Past Presidents!



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