

MINUTES OF THE SIXTY-SECOND ANNUAL MEETING OF THE SOUTH DAKOTA ACADEMY OF SCIENCE

The 62nd Annual Meeting of the South Dakota Academy of Science was called to order by President Wally Klawiter at 10:15 a.m., Friday, April 15, 1977 in the Volstorff Ballroom, Student Union, South Dakota State University, Brookings, South Dakota. The Academy was welcomed to the campus by Vice President for Academic Affairs, Harold Bailey, South Dakota State University.

The Annual Academy Address was given by Dr. Henry Eyring, Professor of Chemistry, University of Utah, Salt Lake City. The title of his talk was "Mutation, Cancer, and Aging."

The Annual Business Meeting was called to order by President Wally Klawiter at 10:30 a.m., Saturday, April 16, 1977, in Volstorff Ballroom, Student Union.

COMMITTEE REPORTS

Tri-State Representatives

Dennis Clarke, Chairman of the Junior Academy Committee, introduced the two representatives from South Dakota to the Tri-State Symposium, to be held in Minneapolis; Josette Boesch, Sioux Falls Lincoln High School, and Joni Berry, Kadoka High School. Ms. Boesch presented her paper, "The Carcinogenic Effects of Trichloroethylene on White Mice." Ms. Berry presented her paper, "Effect of Grazing Pressure on *Opuntia* Cactus Populations."

President's Report

President Klawiter thanked Walt Morgan, Chairman of the Arrangements Committee, and all those who helped make the 62nd meeting a success. He reported that Margaret Peaslee had resigned during the summer, and that John Thomas had been appointed to replace her by vote of the Executive Council. The Executive Council has accepted the invitation of Dakota State College to act as host for our 63rd Annual Meeting, and has chosen the dates of April 14 and 15, 1978, for that meeting. The Executive Council has also voted to accept the invitation from the North Dakota Academy of Science to hold a joint meeting in Aberdeen at Northern State College in the spring of 1979. (See New Business.)

AAAS Representative

Wally Klawiter reported that he attended the 143rd Annual Meeting of the AAAS and AAS in Denver, February 20-25, 1977, representing the South Dakota Academy of Science. The theme of

the meeting was "Science and Change: Hopes and Dilemmas." The AAS (Association of the Academies of Science) symposium was titled "Solutions to Problems Encountered in Running an Academy of Science." He noted that the South Dakota Academy of Science ranks 3rd nationally in the number of members per capita. There was discussion at the meeting that the Visiting Scientist program may again be funded by NSF.

Secretary-Treasurer

John Thomas reported that there were 100 registrants for the Senior Academy, with 51 papers presented at the meeting, and 8 more participants in the Science Education session. Dr. Thomas presented the Treasurer's Report, which indicated a cash balance of \$759.44, and total assets of \$3086.39. The complete Treasurer's Report follows. A fiscal analysis for the past three years indicated a need for about \$300 in additional income to balance the budget next year.

Publications Committee

Carroll Hanten reported that Argus Press had again presented a bid for \$13.15 per page for publishing the Proceedings. Alternative methods for publishing the Proceedings at a lower cost are being investigated by the Publications Committee. The possibility of selling advertising space was suggested.

Membership Committee

Marvin Hansen, Chairman of the Membership Committee, reported the addition of 25 new members. Hansen moved and Walt Morgan seconded a motion to accept these new members. The motion carried. Hansen also moved that a Life Membership be awarded to Elmer Johnson, South Dakota State University. Oscar Olson seconded the motion; the motion carried unanimously.

Junior Academy

Twenty-eight students attended the annual meeting with 18 new members being signed. Seven schools were in attendance. Eleven papers were presented. Thirty people attended the awards banquet to hear Mr. Ronald E. Beck, Training Coordinator, EROS Data Center, speak about the EROS program and what it can do to help improve man's life.

The Junior Academy officers and committee members identified the following problems and offered several solutions that may help the Section grow in the future. Problems are listed as follows: 1. Better communications to students are needed. 2. The Academy needs to encourage the involvement of high school instructors. 3. Our image and objectives may need to be redefined; are we to

act as a springboard to introduce students to research and encourage this activity by serving as a forum for the presentation of the end product, or should we be concerned mainly with higher quality experienced students? Solutions are offered as follows: 1. Direct mailing to students from membership lists and students identified by regional coordinators. 2. More emphasis on the Academy and what it has to offer through teacher training methods courses. A one year complementary membership to graduating college seniors may be a consideration in this area. 3. Cooperation with other organizations that deal with science student activities. 4. Implementation of goal identification processes to determine the academy's direction. 5. Initiate a fall science experience for students working in conjunction with the S. D. Science Teacher's Association. Special recognition and awards were presented to the following individuals:

\$100.00 Scholarships —

Ryan Telkamp, Brookings. The Uni-Laser.

John Vossler, Sioux Falls Lincoln. The Effects of Food Additives on Intestine Bacteria.

Research Grants —

\$50.00. Jo Boesch, Sioux Falls Lincoln. "The Carcinogenic Effects of Trichloroethylene on White Mice."

\$25.00. Gail Marek, Sioux Falls Lincoln. "A Quantitative and Qualitative Analysis of Ultraviolet Rays on Elodea."

\$25.00. Aletta Handrahan, Kadoka. "Analysis of Soils Maintained Under Varying Crop Conditions."

Tri State Symposium Representatives —

*Joni Berry, Kadoka. "Effect of Grazing Pressure on *Opuntia* Cactus Populations."

*Jo Boesch, Sioux Falls Lincoln. "The Carcinogenic Effects of Trichloroethylene on White Mice."

Gail Marek, Sioux Falls Lincoln (Alternate). "A Quantitative and Qualitative Analysis of Ultraviolet Rays on Elodea."

The judges selected the above three individuals to have their abstracts published in the Proceedings.

AAAS Memberships — Ryan Telkamp, Brookings.

Joni Berry, Kadoka.

The 1977-78 Officers for the Junior Academy are:

President — Joni Berry, Kadoka High School, Kadoka, S. D.

Vice President — Scott Honeycutt, Sioux Falls Lincoln, Sioux Falls, S. D.

Secretary-Treasurer — Anita Totton, Kadoka High School, Kadoka, S. D.

*Papers presented to the Senior Academy.

Collegiate Academy

The report of the Collegiate Section was presented by Gary Yarrow, South Dakota State University, Collegiate Section President. Complete minutes of the Collegiate Section follow.

Auditing Committee

Harold Foss reported that the Auditing Committee had met on Friday, April 15, and found the treasurer's report to be in order as distributed by the treasurer at this meeting.

Special Awards

Wally Klawiter presented the report in the absence of Chairman L. C. Lewis. The committee has chosen the representatives and alternates from South Dakota to attend the 1977 National Science Youth Camp in West Virginia. The names will be released by Governor Kneip at a later date.

Resolutions Committee

The members of the South Dakota Academy of Science wish to express their appreciation to Dr. Sherwood Berg, President of South Dakota State University, for making the facilities of State available for this annual meeting.

The members of the Academy express their sincere thanks to Dr. Walter Morgan and the local arrangements committee for making the many physical arrangements without which this meeting could not function.

Special appreciation is expressed to Dr. W. F. Klawiter, outgoing President of the Academy, for his efforts in coordinating the activities of the Academy during the past year.

To Dr. Henry Eyring, Professor of Chemistry, University of Utah, who delivered the annual academy address on the subject, "Mutation, Cancer, and Aging," we also express our gratitude.

Signed,
L. M. Duffey, Ph.D.
For the Resolutions Committee of the
S. D. Academy of Science

Science Days

Harold Foss reported that this was the second year that colleges have been encouraged to hold Science Days for high school students. Dakota State reported a turnout of 130 students; Mount Marty held Science Days in conjunction with their Chemistry Days. USD and Huron by-passed the activity this year.

Edward P. Churchill Memorial Statement

Edward P. Churchill was born on July 19, 1882, on a farm near Allerton in southern Iowa. He received his early education there

and served as a country school teacher and high school principal for six years. His B.A. was taken at Iowa University and his Ph.D. from Johns Hopkins University in 1916. After graduating from the latter institution, he spent four years with the United States Bureau of Fisheries. His career with the Bureau was highlighted by his painstaking work on the life history of the edible blue crab.

In 1920, he was employed by the University of South Dakota as Assistant Professor of Biology and in 1922 became the first staff member to receive the title, Professor of Zoology. He was chosen to head the Department of Zoology in 1926, a position he held for 22 years. During the summers he taught zoology at several universities, including his alma mater, Johns Hopkins. In the late 1920's, Dr. Churchill and Dr. William H. Over made a survey of the lakes of South Dakota including their fish populations. This work culminated in a publication, "Fishes of South Dakota," which was designed to make the people of the state more conscious of their natural resources.

In 1948 Dr. Churchill relinquished his administrative duties but continued to teach zoology. He played an active role in the department long after his formal retirement. Dr. Churchill was active in the South Dakota Academy of Science serving on the editorial board for ten years and as President in 1935. He participated in the establishment of the chapter of Phi Beta Kappa at the University in 1926 and was active in chapter affairs until his health prevented him from attending meetings.

Dr. Churchill died on September 17, 1976 just two months after his 94th birthday. He is remembered with respect and affection by generations of students, colleagues and acquaintances.

Gregg Evans Memorial Statement

Gregg Evans was born at Emporia, Kansas, in 1890. He received his undergraduate degree from Emporia College and the masters degree from the University of Chicago. In 1922, he received the Ph.D. degree in physical chemistry from Pennsylvania State University. That same year, he came to Yankton College and for 39 years served a variety of roles, including Elizabeth S. Fiske Professor of Chemistry, professor of physics, and dean of the college. He retired from academic life in 1960, moved to Custer, and there continued a very active role in community affairs. He was elected mayor of that town soon after his arrival. Gregg Evans was a long time member of the South Dakota National Guard and a member of the American Legion for over 50 years. He also was a member of the Kiwanis and the Congregational Church. Gregg Evans died March 22, 1977.

Dr. Evans was a 50-year member of the American Chemical

Society and throughout his academic career a member of the South Dakota Academy of Science. In 1937 he served as president of the Academy. The Proceedings of that year records his presidential address which was entitled "Things That Can't Be Done." Evans' old friends at Yankton College recall especially his strong interests in young people and his activities on their behalf. In 1957 and 1958, he and his colleagues and students at Yankton College served on the International Geophysical Team, Moon Watch Project, of the Smithsonian Astrophysical Observatory. That year, on Yankton College's Pioneer Day, when "Sputnik" was lofted into space, Evans and his group picked up the radio signal emitted by the satellite, sighted it as it passed overhead, and phoned the information to Washington. Dr. Evans also traveled extensively in the state helping to improve the science programs of South Dakota schools. For many years, he served on and chaired the Basic Science testing program for the state board of medical examiners. The Evans wing of the ELM dormitory complex at Yankton College was named in his honor.

We, the members of the South Dakota Academy of Science, recognize Gregg Evans' outstanding contributions to science and to the well being of his fellow men and include this memorial in the minutes as a tribute to a life well spent.

NEW BUSINESS

President Klawiter informed the membership that he has received an invitation from the North Dakota Academy of Science to hold a joint meeting with them in the spring of 1979, with Aberdeen suggested as the meeting place. After discussion, Harold Foss moved that such a meeting be held. The motion was seconded and passed by vote of the membership, with April 20-21, 1979, proposed as the tentative date. The possibility of a future joint meeting with the Academies of Iowa and Nebraska will be investigated.

It was moved by Grieb and seconded by Fries that the annual dues be raised to \$7.00 for the coming year. The motion passed with one no vote.

Nominating Committee

Chairman Pengra presented the report of the Nominating Committee. The following list of officers was elected:

President—James Schmulbach, USD
 President-Elect—James Fries, Northern State College
 1st Vice-President—John Landegent, Lincoln High School
 2nd Vice-President—Norman Miller, USD
 Secretary-Treasurer—Raymond Dillon, USD
 Editor—Carroll Hanten, Pierre, S. D.

Executive Council Members-at-Large

Warren W. Hein, Northern State College
 Dan Martin, S. D. Dept. of Game, Fish & Parks

Collegiate Committee

Constance L. Churchill, Dakota State College
 Sister M. L. Kilzer, Mount Marty
 Gerald A. Myers, SDSU
 Evelyn Roberts, Northern State College
 Roy Kintner, Augustana College
 Robert M. Pengra, SDSU

Junior Academy Committee

Dennis Clark, Kadoka High School
 Daryl Kleppin, Sturgis High School
 Mary Naughton, Sioux Falls O'Gorman High School
 Joel Padmore, USD
 Gary Peterson, SDSU

Membership Committee

Edna Grieb, Black Hills State College
 Leslie D. Kamstra, SDSU
 Paul R. Middaugh, SDSU
 Webster H. Sill, USD
 J. D. Thompson, Augustana College

It was moved by Estee to grant a one year membership in the Academy to all beginning science and mathematics teachers. The motion was amended by Grieb to include all the usual membership rights except for the Proceedings. Morgan seconded the amended motion, which passed on a voice vote.

President Klawiter said that over 100 people were involved in the preparation for and running of this meeting, which speaks well for the Academy. President Klawiter turned the presidency over to James Schmulbach, who made the following committee appointments:

Nominating Committee

Don Hopkins, SDSM&T (Chairman)
 Mary Naughton, Sioux Falls O'Gorman High School
 Frank Einhellig, USD
 Yvonne Greichus, SDSU
 Marvin Hanson, Huron College

Special Awards Committee

Keith Morrill, SDSU (Chairman)
 Ed Miedema, USD/Springfield
 Howard Coker, USD

Auditing Committee

David Oaklund, Dakota Wesleyan (Chairman)
 Gordon Horgen, Winner High School
 Wally Raab, USD
 Arie Gaalswyk, Augustana College

Resolutions Committee

Gottfried Moller, USD (Chairman)
 Vincent Hall, Dakota State College
 John Christensen, Sioux Falls College
 Ernest Hughhins, SDSU

Conservation Committee

Keith Perkins, Sioux Falls College (Chairman)
 Nels Granholm, SDSU
 Lois Haertel, SDSU
 Jim Rasmussen, Mount Marty
 Evelyn Roberts, Northern State College

The meeting was adjourned.

Respectfully submitted,
 John A. Thomas,
 Secretary-Treasurer

REPORT OF THE TREASURER

For the Fiscal Year April 1, 1976 - April 2, 1977

Balance, April 1, 1976\$ 822.86

Receipts:

Memberships, Senior Academy (1975)	\$ 48.00
Memberships, Senior Academy (1976)	445.00
Memberships, Senior Academy (1977)	584.00
Banquet Tickets (1976)	98.75
Banquet Tickets (1977)	136.00
Memberships and Banquet, Collegiate Section (1976)	42.00
Memberships and Banquet, Junior Academy (1976)	33.00
Interest on Certificates	111.18
Page Charges, Volume 54 (1975)	2,631.65
Page Charges, Volume 55 (1976)	1,919.90
Page Charges, Volume 56 (1977)	13.50
AAAS Research Grants (1976)	100.00
Purchase of Proceedings (Volume 54)	4.00
Purchase of Proceedings (Volume 55)	4.00
Withdrawal from Savings	900.00

Total Receipts\$7,070.98

\$7,893.84

Disbursements:

USD Account #1303900160 (copy service, postage, telephone, etc.)	\$ 374.35
Secretarial Service	58.59
Bulk Mail Permit #18 and Postage	59.91
Junior Academy Awards (1976)	100.00
AAAS Dues	19.25
Service Charges (checking accounts)	2.40
Senior Academy Banquet (1976)	251.75
Office Supplies	2.25
AAAS Representative	100.00
Return Page Charges	75.75
Overpayment of Dues	4.00
Refund Banquet Ticket	4.75
Printing Proceedings Volume 54 (1975)	3,366.40
Printing Proceedings Volume 55 (1976)	2,630.00
Editorial Expenses	80.00
Nonpayment on Dues Check	5.00

Total Disbursements\$7,134.40

Balance on Hand, April 2, 1977

Natl. Bank Acct. #7563-30222-9	\$ 791.81
USD Account #1303900160	-32.37

Total Balance on Hand\$ 759.44

Total Assets:

Cash Balance on Hand	\$ 759.44
Certificates of Deposit:	
#2282	\$ 600.00
#1395	600.00
#2283	600.00
Savings Account #7801	414.64
Savings Account #84-544-2	112.31

\$3,086.39

**MINUTES OF THE
COLLEGIATE SECTION
SOUTH DAKOTA ACADEMY OF SCIENCE**

The collegiate section of the SDAS met concurrently with the senior section on April 15 and 16, 1977. Eighteen papers were presented; 9 in the physical sciences, 4 in mathematics and 5 in the biological sciences.

Events preceeding the academy meetings were as follows:

1. A letter requesting names of undergraduates who were carrying on research was sent out to department chairmen of the various colleges on October 19, 1976.
2. A second letter again requesting names of undergraduates and a request for assistance in encouraging participation in the academy was sent in January 1977.
3. A third notice in the form of a flyer was sent out with a notice to all the senior section members in February 1977.
4. Finally, in March, a letter to all undergraduates of whom I had received names, was sent out to explain the academy and its purposes, and to encourage students to make use of the opportunities of the academy.

Various meetings were held throughout the '76-77 school year to exchange ideas and to organize the happenings of the collegiate section.

All papers of the collegiate section were presented on the afternoon of April 15, 1977 in the HPER center of the SDSU campus. Professors from various colleges present to provide critiques for the papers presented were as follows: math, Dr. Arie Gaalswyk, Augustana College; biological sciences, Dr. Ray Dillon, USD; physical sciences, Drs. Joe Liu, Sioux Falls College, and Joel Padmore, USD.

A business meeting was held at 4:00 on April 15 and new officers were elected. Tim Fynskov from Augustana College was elected president, and Craig Hyde, USD, was elected vice president.

I wish to thank Drs. Gerald Myers and David Hilderbrand for their help and encouragement during my presidency.

Respectfully submitted,
Gary Yarrow,
SDAS Collegiate Pres. for 1976-77

MEMBERSHIP LIST

The letters in parentheses following the names indicate: A, Mathematics; B, Physics; C, Chemistry; D, Biology (includes Zoology, Botany, Physiology, Psychology, Bacteriology, Health, Biochemistry, Wildlife, Nutrition, and Philosophy); E, Geology; F, Agriculture (includes Agronomy, Poultry Science, Dairy Science, and Animal Science); G, Engineering (includes Metallurgy); H, English; and J, Administrative. *Life members.

SENIOR ACADEMY

Augustana College

Blankespoor, Gilbert W. (D)
Forman, Richard W. (A)
Foss, Harold (D)
Froemke, John A. (C)*
Froiland, S. Gordon (D)
Gaalswyk, Arie (A)
Gildseth, Wayne M. (C)
Haglund, Brent M. (D)
Johnson, Leland G. (D)
Kintner, Robert R. (C)
Knapp, Emil F. (A)
Landborg, Richard John (C)
Nelson, V. Ronald (B)*
Prescott, Lansing M. (D)
Rogers, Dilwyn J. (D)
Schmidt, Janet C.
Thompson, J. Darrell (B)
Viste, Arlen E. (C)

Black Hills State College

Berry Charles E. (A)
Coacher, Joe B.
Follette, Everett LeRoy (D)
Grieb, Edna (C)
Haight, Cecil
Hilpert, Marion M. (D)*
Johnson, Luann
Richmond, Mark G. (C)*

Dakota State College

Brashier, Clyde (D)
Buckman, Robert (D)
Churchill, Constance L. (C)
Hall, Vincent A. (D)

Dakota Wesleyan University

Hartzler, Jon (D)
Hills, Carroll Loran (B,C)
Houk, William F. (D)
Oakland, David O. (A,B)
Putman, David L. (D)
Tatina, Robert
Wingfield, Frank J. (D)*

Huron College

Bryce, Mary Ann
Dunlay, Dennis W. (D)
Eyer, Jerry C. (D)
Hall, Jim
Hanson, Marvin (B)
Hart, Charles R. (D)
Strong, Ralph K. (C)*

Mount Marty College

Diggins, Sr. Maureen (D)
Fasbender, Sr. Veronica M. (D)
Hansen, Robert J.
Kilzer, Sr. M. Laetitia (C)
Maldonado, Peter (C)
Rasmussen, Jim (D)
Schroeder, Barbara T. (C)
Stene, John W. (A,B)

Northern State College

Dosch, Mike (B)
Fries, James F. (C)
Hein, Warren W. (B)
Jensen, J. H. (C)*
Karim, M. Raj (D)
Miller, Gertrude N. (D)
Roberts, R. Evelyn (D)
Saunders, Jack K. (D)
Williams, Gordon E.
Woo, Andrew L. W. (C)

Sioux Falls College

Christensen, Jon E. (D)
Klawiter, W. F., Jr. (B)
Lewis, L. C. (C)
Liu, Joe (D)
Perkins, Keith III

**South Dakota School of Mines
and Technology**

Ashworth, T. (B)
Ballew, David Wayne (A)
Bjork, Philip R. (E)
Blair, Donald N.
Boldt, Charles E. (D)
Carda, Daniel D.
Carda, Harold E. (A)
Dorland, Louis J. (B)
Fish, Kent (D)
Goodell, Harold B. (D)*
Green, Morton (D)
Gries, John Paul (E,G)*
Hopkins, Don C. (B)
Howe, Sr. Marmion (D)
Jonte, J. Haworth (C)
Kopp, Fred J.
Lingard, Amos L. (G)
Martin, W. J. (C)
Mickelson, John C. (E)
Osterhof, Gerard G. (C)*
Partlo, Fay L. (J)*

Patterson, James D. (B)
 Rahn, Perry H. (E)
 Redin, Robert D. (B)
 Roberts, Willard Lincoln (E)
 Schwaller, Richard L. (A)
 Smith, David R. (B)
 Swanson, Edgar L. (A)
 Weyland, Jack A. (B)
 Willard, John W. (C)*

**University of South Dakota
 at Springfield**

Foss, Michael D. (B)
 Hempel, Robert D. (D)
 Miedema, Ed
 Oldewurtel, Lawrence
 Regehr, David L.
 Skailand, Dennis A. (D)

South Dakota State University

Aaron, David B. (B)
 Ammann, Barbara M. (D)
 Apgar, Gerald R.
 Bailey, Harold S. (J)
 Berg, Sherwood O. (J)
 Best, Robert
 Bich, Joey
 Brandwein, Bernard J. (C)
 Briggs, H. M. (J)
 Brock, Kevin T. (D)
 Bruce, James D.
 Buchenau, George (D)
 Carlson, Charles Gregg
 Chen, Chen H. (D)
 DeBoer, Darrell (F)
 Draayer, Hans (C)
 Easton, Emmett R. (D)
 Embry, Lawrence B. (F)
 Emerick, Royce J. (D)
 Fine, Lawrence (D)
 Flake, Lester D. (D)
 Fredrickson, Larry F. (D)
 Gardner, Wayne S. (D)
 Gehrke, Henry, Jr. (C)
 Geise, Harry A. (F)
 Graetzer, Hans G. (B)
 Granholm, Nels H.
 Gregory, Carolyn (D)
 Greichus, Yvonne A. (D)
 Grove, John A. (C)
 Guild, Louise (D)
 Haertel, Lois (D)
 Hales, Donald C. (D)
 Halverson, Andrew W. (D)
 Hecht, Harry G. (C)
 Hilderbrand, David C. (C)
 Holden, David J. (D)
 Huggins, Ernest (D)
 Hutcheson, H. L. (D)
 Jensen, Janice
 Jensen, William P. (C)

Johnson, Elmer R. (C)*
 Johnson, Linda L.
 Johnson, Phyllis M.
 Kamstra, Leslie D. (F)
 Klug, Harlan L. (C)*
 Kohl, Robert A. (D)
 Kohlmeyer, William*
 Leisure, Oric W. (B)
 Linder, Raymond L. (D)
 Luther, Richard M. (F)
 Lynch, Robert H. (B)
 Martin, James
 McMullen, Charles (D)
 McRoberts, Donald (C)
 Miller, Ward L. (D)*
 Monahan, Maurice L. (A)
 Moore, Donald
 Morgan, Walter (D)
 Morrill, Keith (D)
 Myers, Gerald A. (D)
 Oliver, Edwin D. (F)
 Olson, Edward S. (D)
 Olson, Edwin S. (C)
 Olson, Oscar E. (D)*
 Palmer, Ivan S. (D)
 Payer, Ronald D. (D)
 Peeters, Paul (D)
 Pengra, Robert M. (D)
 Peterson, Gary B. (D)
 Puetz, Richard D. (D)
 Radant, Randy D. (D)
 Rector, Jim
 Redfield, Judy (D)
 Ross, James G. (D)
 Rozeboom, Melvin D. (C)
 Rue, Rolland R.
 Rumbaugh, Melvin Dale (D)
 Scalet, Charles G. (D)
 Sememiuk, George (D)*
 Smolik, James D. (D)
 Spinar, Leo H. (C)
 Sraon, Harbans S. (D)
 Taylor, Charles, Jr. (D)
 Taylor, Lillian U. (D)
 Thiex, Nancy J. (C)
 Trautman, Silva (D)
 Tunheim, Jerald A. (B)
 Voelker, Howard (F)
 Vohs, Paul A., Jr. (D)
 Wadsworth, William (C)
 Walstrom, R. J. (D)
 Webster, V. S. (C)*
 Wentz, W. Alan (D)
 White, Everett M. (D)
 Worman, James J. (C)

The University of South Dakota
 Beaty, Marjorie H. (A)*
 Brady, Frank O. (D)
 Bretz, Richard F. (E)

Coker, E. Howard (C)
 Colton, Craig E.
 Danzl, Ralph (E)
 Delzell, Mark W. (J)*
 Dillon, Raymond D. (D)
 Dunlap, Donald G. (D)
 Einhellig, Frank A. (D)
 Ekman, W. E. (A)*
 Estee, Charles R. (C)
 Goldman, Max (D)
 Harrell, Byron E. (D)
 Heisinger, James F. (D)
 Jaqua, Mary Jo (D)
 Mehaffey, Alexander, Jr. (A)
 Metzner, Stephen R. (C)
 Miller, Norman (C)
 Moller, Gottfried I. (B)
 Padmore, Joel M. (C)
 Peanasky, Robert J. (D)
 Raab, Wallace A. (A)
 Read, Willard O. (D)*
 Rothrock, E. P. (E)*
 Schmulbach, James C. (D)
 Schutte, Bill (C)
 Sill, Webster H., Jr. (D)
 Small, Gary D. (D)
 Smith, Harold L. (D)
 Smith, Paul F. (D)
 Steffen, Robert (D)
 Stevenson, Robert E. (E)
 Stoner, M. Robert (C)
 Thomas, John A. (D)
 Tipton, Merlin J. (E)
 Van Bruggen, Theodore (J)*
 Vanden Berge, Robert
 Zittel, Ann E. (D)

Yankton College

Duffey, Lowell M. (D)
 Howell, S. W. (A)*
 Schulze, Arthur W. (C)

General Classification

Bauer, Stephen R. Novinger, MO
 Benson, Norman G. Fisheries Research, Yankton, SD
 Call, Daniel J.
 Chace, G. Earl Reptile Gardens, Rapid City, SD
 Cizadlo, Gerald R. College of St. Scholastica, Duluth, MN
 Cobb, Henry V. 1 Weiner St., Chapel Hill, NC 27514
 Coffman, Charles C. W.V. Dept. of Agriculture, Charleston, WV
 Cogswell, Carolyn Rock Valley, IA
 Dash, S. K. State Dept. of Agriculture, Pierre, SD
 Disrud, Dennis T. Minot State College, Minot, ND
 Faulkner, Barbara L. Lancaster, PA
 Gaylord, David R. Laramie, WY
 Gross, Delmer F. Pfizer Genetics, Doniphan, NE
 Hamilton, Louis J. Huron, SD
 Harksen, J. C. S.D. Geological Survey, Rapid City, SD
 Homan, Joseph M. Terra Chemicals, Sergeant Bluff, IA

High School Teachers

Austreim, Doug; Flandreau
 Bien, Neil; Sioux Falls Lincoln
 Burden, Harry Robert; Hill City
 Clarke, Dennis C.; Kadoka
 Curran, Gladys B.; Ft. Pierre
 Halsted, Al; Yankton*
 Hanten, Carroll J.; Ft. Pierre
 Horgen, Gordon K.; Winner
 Karnes, Guy O.; Brookings*
 Kehrwald, Sr. Jennifer
 Sioux Falls O'Gorman
 Kleppin, Daryl E.; Sturgis
 Krueger, Duane A.; Brandon
 Landegent, John, Jr.;
 Sioux Falls Lincoln
 Larsen, David M.;
 Sioux Falls Washington
 Loomer, Jerry E.; Lakefield, MN
 Lulewicz, Jerome; Mitchell
 Martin, James M.; Brookings
 McGregor, Ralph; Parkston
 Metzner, Jane; Vermillion
 Naughton, Mary;
 Sioux Falls O'Gorman
 Peterson, David C.; Brookings
 Petzoldt, Herman; Menno
 Rissky, Roy W.; Mitchell
 Schmidt, Janet;
 Sioux Falls O'Gorman
 Sidlo, Charles; Parker
 Stanhope, Russell H.;
 Worcester, MA
 Thomas, Dick; Aberdeen Central
 Ulmer, David R.; Sioux Falls
 Weimer, Jerry M.;
 Sioux Falls Washington
 Wolf, Jess; Fairfax

Hudson, Patrick L.	Southeast Reservoir Investigations, Clemson, SC
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Lee, John	Nashville, TN
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Spellman, John	Vermillion, SD
Stachour, Frances Jobes	Sibley, IA
Steece, Richard	New Brighton, MN
Stenberg, Nancy	Manhattan, KN
Stoner, Warren N.	Northern Grain Insects Research Lab., Brookings, SD
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Tichy, Jerome J.	Lower Lake, CA
Vander Zee, Chester	Volga, SD
Vaughn, Charles M.	Miami University, Oxford, OH
Wilde, Ronnie L.	Vermillion, SD
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Ann Sauer	Sioux Falls Lincoln	11
Scott Honeycutt	Sioux Falls Lincoln	10
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John Landegent	Sioux Falls Lincoln	Teacher
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Jo Boesch	Sioux Falls Lincoln	11
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Beth Ferelen	Sturgis	12
Sharon Hanzlik	Sturgis	12
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Aletta Handrahan	Kadoka	10
Anita Totton	Kadoka	10
Joni Berry	Kadoka	10