

128th Annual Meeting: Program Summary

History and Philosophy of Science (L)

Program chairman: Norwood Russell Hanson, chairman, department of history and logic of science, Indiana University.

All eight sessions of the program of Section L are cosponsored by the American Philosophical Association and the Philosophy of Science Association.

Tuesday 26 December

Empiricism and the Status of Theories. Norwood Russell Hanson will preside. How to be a good empiricist, Paul K. Feyerabend. Discussants: George T. McClure and Wilfrid Sellars. Theoretical fruitfulness as a measure of concepts, Henry A. Finch. Discussants: Milik Capek and Ernest W. Adams.

Prediction and Causality. Wilfrid Sellars, Yale University, will preside. Reflexive predictions, Roger Buck. Discussants: Adolf Grünbaum and Michael Scriven. A workable concept of causation, Michael Scriven. Discussants: William H. Dray and William Rozeboom.

Wednesday 27 December

History and Philosophy of Science. Ernan McMullin, University of Notre Dame, will preside. Hypotheses in late medieval and early modern science, Edward Grant. Discussants: Giorgio de Santillana and Gerald Holton. Ethical problems within science, Nicholas Rescher. Discussants: Wolfgang Yourgrau and Robert S. Cohen.

Conventionalism and Laws within Modern Physics. David Hawkins, University of Colorado, will preside. Philosophical aspects of quantum field theory, A. E. Woodruff. Discussants: Satoshi Watanabe and Hilary Putnam. Convention and the concept of state in physics, Richard A. Mould. Discussants: Joseph Epstein and Robert S. Cohen.

Thursday 28 December

Induction, and Vice Presidential Address. Wolfgang Yourgrau, chairman, department of history and methods of science, Smith College, will preside. A probabilistic view of formation of concept and of association, Satoshi Watanabe. Discussant: Herbert Feigl. Vice presidential address of section L. Scientists and logicians: a confrontation, Norwood Russell Hanson, professor of philosophy, Indiana University; vice president of Section L.

Section L Luncheon. Arranged by David Hawkins, University of Colorado.

Second George Sarton Memorial Lecture. Sponsored by the George Sarton Memorial Foundation. Chauncey D. Leake, retiring president, AAAS, presiding. The international geophysical year, Joseph Kaplan, University of California, Los Angeles.

Friday 29 December

Machines and Brains. Herbert Feigl, director, Minnesota Center for Philosophy of Science and professor of philosophy, University of Minnesota, will preside. Brains and behavior, Hilary Putnam. Discussants: William Rozeboom and Newton Garver. Design for a mind, David Hawkins. Discussants: Bruce Aune and Peter Winch.

Methodological Problems of the Social Sciences. Kenneth R. Hammond, University of Colorado, will preside. Reduction of psychology to physiology? Herbert Feigl. Discussants: Roger Buck and Merle Turner. Some problems in the logic of sociological theory, Richard Rudner. Discussants: Benjamin Nelson and Grover Maxwell.

Saturday 30 December

The Nature of Historical Explanation. Adolf Grünbaum, University of Pittsburgh, will preside. The present

state of the Popper-Hempel thesis, Alan Donagan. Discussants: Benjamin Nelson and Nicholas Rescher. Causal judgment in history, William H. Dray. Discussant: Newton Garver.

American Philosophical Association

The American Philosophical Association is a cosponsor of the entire program of Section L—History and Philosophy of Science.

Philosophy of Science Association

Friday 29 December

Law, Science and Decision Making. Panel discussion. Joint program of the Philosophy of Science Association and the Institute of Management Sciences. Arranged by C. West Churchman, University of California, Berkeley. Lewis Zerby, Michigan State University, will preside. Panel members: Thomas Cowan, C. West Churchman, and Richard S. Rudner.

The Philosophy of Science Association is a cosponsor of the entire program of Section L—History and Philosophy of Science.

Society for General Systems Research

Friday 29 December

The Teaching of Systems Thinking. Symposium arranged by R. L. Meier, Mental Health Research Institute, University of Michigan, Ann Arbor, who will preside. Management games as instruments for teaching systems principles, James R. Jackson. Teaching through participation in microsimulations of social organization, Richard L. Meier. Use of simulation in the teaching of international systems, Chadwick F. Alger. Computer simulation of a community for farming, Nathan D. Grundstein.

Industrial Science (P)

Tuesday 26 December

Industrial Science Award Presentation. Allen T. Bonnell, vice president, Drexel Institute of Technology, will preside. Presentation of award by S. O. Morgan, Bell Telephone Laboratories, Murray Hill, New Jersey.

Wednesday 27 December

Luncheon Meeting and Vice Presidential Address. S. O. Morgan, presiding. Speaker, J. A. Hutcheson, vice president engineering, Westinghouse Electric Corporation; retiring vice president for Section P.

Section P is a cosponsor of the symposium of the Institute of Management Sciences.

Education (Q)

Tuesday 26 December

Joint Session of AAAS Section Q—Education and the Council for Exceptional Children, arranged by Louis A. Fliegler, University of Denver, who will preside. The realism of level of aspiration of mentally handicapped children, James Lent. A study of personality, value, and interest patterns of student teachers in the areas of elementary, secondary, and special education, Marion Phillipus and Louis A. Fliegler. An empiricist's approach to research with exceptional children, Joseph E. Spradlin. The dynamics of intellectualization with the gifted, Edwin Richardson. An investigation of the body image in secondary stutterers as revealed through self drawings, Joseph Fitzpatrick.

Wednesday 27 December

A second **Joint Session of AAAS Section Q—Education and the Council for Exceptional Children**, arranged by Louis A. Fliegler, University of Denver. Norris Haring, University of Kansas, will preside. An investigation of the Syracuse sociometric scale for assessing social needs of mentally retarded children, Barbara Edmonson. A study of the qualities and qualifications desired in teachers of the gifted, Alice Hayden. Problems of classroom adjustment of Indian children to public school classrooms in the Southwest, Miles Zintz. Recent research findings on creativity, Calvin Taylor.

Friday 29 December

Contributed Papers I, Vice Presidential Address, and Business Meeting, arranged by Herbert A. Smith, University of Kansas. H. Craig Sipe, George Peabody College, will preside. The application of discriminate function to problems in science education, Kenneth E. Anderson. Twelve yearly studies of televiewing, Paul Witty.

Vice Presidential Address of Section Q. Herbert A. Smith will preside. Imperatives of curriculum research and development, William H. Bristow, director, Bureau of Curriculum Research, Board of Education of the City of New York; vice president for Section Q.

Business Meeting of Section Q. William H. Bristow will preside.

The Shaping of a Scientist: Some Basic Theory, symposium arranged by Alice Y. Scates, research coordinator, cooperative research branch, U.S. Office of Education. Ralph Tyler, director, Institute for the Advanced Study of the Behavioral Sciences, Stanford, Calif., will preside. Student achievement in high school science courses, Victor Cline. The science aptitudes of high school students, John Dailey. Higher education for potential scientists and secondary school science teachers, Howard Gruber. Development of mathematical concepts in children, Patrick Suppes.

Saturday 30 December

Intervention in Personality Development of College Students Preparing To Teach, symposium. Joint program of AAAS Section Q—Education and the American Educational Research Association, arranged by Daniel D. Feder, San Francisco State College. David G. Ryans, System Development Corporation, Santa Monica, Calif., will preside. Introduction—overview of the mental health in teacher education demonstration, Robert F. Peck and Oliver H. Bown. Measurement of personality change during the college years, Robert F. Peck and Donald Veldman. Studies in attrition of students preparing to teach, Glenn E. Barnett. A model for planning and assessing intervention through instruction, J. Carson McGuire. Intervention through counseling with students and increasing faculty awareness of psychodynamics of students, Oliver H. Bown.

Contributed Papers II, arranged by Herbert A. Smith, University of Kansas. Joseph D. Novak, Purdue University, will preside.

Technology in Education, symposium. Joint program of AAAS Section Q—Education and the American Educational Research Association, arranged by Daniel D. Feder, San Francisco State College. Launor F. Carter, System Development Corporation, Santa Monica, Calif., will preside. The results of research on several variables in auto-

mated instruction, Harry Silberman. The Encyclopaedia Britannica Films studies in the use of self-instructional material, Allen Calvin. Educational television and the Midwest program of airborne television instruction, Leon Hibbs. Educational data processing, Murray Tondow. A system laboratory for the integrated study of the application of technology to education, Launor F. Carter.

Contributed Papers III, arranged by Herbert A. Smith. William H. Bristow, Board of Education, City of New York, will preside.

AAAS Cooperative Committee on the Teaching of Science and Mathematics (Q1)

Wednesday 27 December

Studies in Teacher Education. Joint program of the AAAS Cooperative Committee on the Teaching of Science and Mathematics, AAAS Section Q—Education, and the National Association for Research in Science Teaching, arranged by John R. Mayor, AAAS, who will preside. Certification of science teachers by examination, J. Charles Jones. Mathematics for elementary school teachers, college student teaching, and a new type of teacher examination, John A. Barlow. Report on the Hunter College practicum in science for elementary teachers, Archie Lacey.

Program notes for the other sections have appeared in previous issues of *Science*: "Chemistry" and "Mathematics and Related Programs," 27 October, page 1376; "Physics" and "Astronomy," 3 November, page 1438; "Agriculture" and "Geology and Geography," 10 November, page 1534; "Zoological Sciences," "Botanical Sciences," "Medical Sciences," "Dentistry," and "Pharmacy," 17 November, page 1630; and "Anthropology," "Psychology," and "Social and Economic Sciences," 24 November, page 1700.

On page 1720 of this issue appears a coupon which readers can mail in to obtain hotel reservations for the annual meeting.

Study of science following student teaching, W. Ware Marsden. The San Francisco State College Science Teaching Center project, Charles E. Burleson. A seminar for preservice teachers of science, Millard J. Seeley. A teaching laboratory, the new curriculum materials, and a liberal education, J. A. Easley, Jr. Some promising modifications in teacher education programs, W. W. Wyatt. By title only: role of problem solving in student teaching and related methods courses in mathematics and social studies, John A. Brown.

Elementary School Science, arranged by John R. Mayor, AAAS. Thomas S. Hall, department of zoology, Washington University, will preside. Reports on programs for the development of course content in elementary science. Speakers: J. A. Cooley, department of mathematics, University of Tennessee; Philip G. Johnson, Science Education Section, Cornell University; Robert Karplus, department of physics, University of California, Berkeley; and Stanley P. Wyatt, department of astronomy, University of Illinois.

Friday 29 December

Teaching Machines and Mathematics Programs: The Interaction of Content and Programing Specialists in Developing Self-Instructional Programs, symposium. Joint program of AAAS Cooperative Committee on the Teaching of Science and Mathematics and AAAS Sections A—Mathematics and I—Psychology, arranged by Joseph Hammock, Bell Telephone Laboratories, Murray Hill, N.J., and John R. Mayor, AAAS. Joseph Hammock will preside. Speakers: Lewis D. Eigen, Center for Programed Instruction, New York, N.Y.; John A. Barlow, Emory University; Norman A. Crowder, U.S. Industries, Inc., New York, N.Y.; Lloyd E. Homme, Teaching Machines, Inc., Albuquerque, N.M.; and Jack E. Forbes, Britannica Center for Studies in Learning and Motivation, Palo Alto, Calif. Discussants: Max Beberman, University of Illinois; R. Creighton Buck, University of Wisconsin; and Robert M. Gagné, Princeton University.

Science Service

Friday 29 December

Extracurricular Motivation for Science, arranged by Leslie Watkins, Science Clubs of America, Washington, D.C. Watson Davis, Science Service,

Washington, D.C., will preside. Student research projects, F. P. Venditti. Summer institute programs, R. B. Feagin. Student summer employment, Charles L. Bragaw. Extracurricular activities and the school program, Richard S. Peterson. Science teachers and club sponsors, science fair committee members, and Science Talent Search cooperators are especially invited to attend this session and participate in the discussion.

Science Teaching Societies Affiliated with AAAS

Coordinated Program of: National Association of Biology Teachers, National Association for Research in Science Teaching, National Science Teachers Association, and American Nature Study Society.

The science teaching societies affiliated with the AAAS first met jointly in Washington, D.C., in 1948, the year of the AAAS centennial, and have done so every year since then. The occasion serves as the annual meeting of ANSS and NABT, the annual symposium of NARST, and the winter regional meeting of NSTA. In addition to one or more joint general sessions, the coordinated program is designed to provide separate meetings for each society and other functions cosponsored by two or more of the societies.

Program Coordinator: Sam S. Blanc, coordinator of instruction, Denver Public Schools, Denver.

Wednesday 27 December

Molecular Biology, symposium, all science teaching societies; arranged by Alfred Novak, chairman, science and mathematics division, Stephens College, who will preside. Greetings and welcome, Kenneth E. Oberholtzer, superintendent, Denver Public Schools. Genetic architecture, Leonard Lerman. Molecular structure of proteins, Henry Borsook. Enzymes and their relation to the molecular architecture of the cell, Irwin W. Sizer. Discussion.

Studies in Teacher Education, AAAS Cooperative Committee and NARST, arranged by John R. Mayor, AAAS, who will preside.

Annual NABT Luncheon and Address. Paul Webster, president, NABT, will preside. The biology of nuclear war, Bentley Glass, chairman BSCS; Johns Hopkins University.

Elementary Science Session, all sci-

ence teaching societies; arranged by Sam S. Blanc, Gove Junior High School, Denver. James A. Bailey, supervisor of science, Denver Public Schools, will preside. Trends in elementary science teaching, Albert Piltz. Providing opportunities for the development of critical thinking abilities, Louise A. Neal.

Nature Study Around the World, American Nature Study Society. S. Glidden Baldwin, Danville, Ill.; president elect, ANSS, will preside. A naturalist explores Iran, John F. Wana-maker. Secondary school science teaching in Brazil, Paul Klinge. Introducing general science in Pakistan, Richard L. Weaver. World-wide interest in nature and conservation, Mrs. S. Glidden Baldwin.

Vistas in Earth Science, session I; National Science Teachers Association. Rodney F. Mansfield, consultant, science and mathematics, State of Colorado Department of Education, will preside. The chemist in oceanography, Norris W. Rakestraw, dean, graduate division, Scripps Institution of Oceanography. Panel: James R. Wailes, John Marean, and Donald W. Stotler.

Accent on Investigating, part I, NABT. Paul Webster, Bryan High School, Bryan, Ohio, president, NABT, will preside. A "new course"—individual investigation in biology, Paul F. Brandwein. An individual research approach, Flavin J. Arseneau. Individual and group approach to research, Stanley Roth. Discussion.

Elementary School Science. Program of the AAAS Cooperative Committee on the Teaching of Science and Mathematics, arranged by John R. Mayor, AAAS.

Coffee Hour: Joint mixer. All science teaching societies.

Thursday 28 December

Outdoor Nature Interpretation. ANSS. Olaus J. Murie, director, the Wilderness Society, Moose, Wyo., will preside. Nature interpretation in the desert, W. H. Woodin. Grasslands natural history reservation, Ted F. Andrews. The role of national parks in the field of nature interpretation, Edwin C. Alberts. Guided versus self-guided activities in national parks nature interpretation, Wayne W. Bryant.

Accent on Investigating, part II: **New Teaching Opportunities**. NABT. Clarence J. Goodnight, Purdue University; first vice president, NABT, will preside. Programmed teaching in biology, Chester A. Lawson. Utilization of AIBS films

and the television course of Learning Resources Institute, John K. Bodel. Biology and team teaching, Robert H. Johnson.

Session II: Vistas in Science Facilities. NSTA. William W. Day, University High School, University of Wyoming, will preside. New trends in science facilities, Fred R. Schlessinger, director, second NSTA science facilities study, Department of Education, Ohio State University. Panel: Paul DeH. Hurd, Louise A. Neal, and Frank A. Anderson.

NABT Presidential Address. Muriel Beuschlein, Chicago Teachers College, Chicago, president elect, NABT, will preside. The biology teacher and his Association, Paul Webster, Bryan City Schools, Bryan, Ohio; president, NABT.

Conservation and International Resource Development, symposium; joint session of ANSS and NABT, arranged by Muriel Beuschlein, Chicago Teachers College, Chicago. Robert L. Smith, DeKalb High School, DeKalb, Ill.; third vice president, will preside. Conservation of resources of the Mediterranean area, Walter P. Taylor. Resource use in Pakistan, Richard L. Weaver. Conservation of natural resources in New Zealand, Frank O'Leary. Conservation and resource use in Thailand, Robert C. Leestma. Summary, S. Glidden Baldwin.

Accent on Investigating, part III: The Revised Versions of the Biological Sciences Curriculum Study. Brother G. Nicholas, Notre Dame University; second vice president, NABT, will preside. BSCS green version—team I: Gerald Tague and Thomas R. Mummey. BSCS yellow version—Team II: Eugene D. Gennaro and James F. Ragin. BSCS blue version—Team III: Frances W. Smith Jr., and Harry K. Wong.

Annual Showing of Kodachromes. John Wanamaker, Principia College, Elsau, Ill., will preside.

Friday 29 December

Joint Field Trip of ANSS and NABT. West field trip—covering the foothills, Front Range, Red Rocks Theatre and Genesee Mountains area, and geology and plant and animal life. Leaders: Donald M. Thatcher and David O. Davis. South field trip—covering the transition area between the mountains and Great Plains to the Garden of the Gods at Colorado Springs; geology and plant and animal life. Leaders: Paul W. Nesbit and Herbert I. Jones.

Session III: Vistas of Space Science.

Program of NSTA, cosponsored by the National Aeronautics and Space Administration. Lavar L. Sorensen, science supervisor, Salt Lake City Schools, will preside. Modern space science, Nelson Spencer, National Aeronautics and Space Administration, Goddard Space Flight Center, Greenbelt, Md. Teaching materials and techniques in space science, James V. Bernardo, assistant director, Office of Technical Information and Educational Programs, National Aeronautics and Space Administration, Washington, D.C.

Research Symposium. NARST, arranged by Miss Edith M. Selberg, Colorado State College. Herbert A. Smith, University of Kansas; president NARST, will preside. Educational implications of creative research findings, Calvin M. Taylor. Creativity in scientific research, Edward U. Condon.

Biology Film Showing. NABT. Richard Fox, Richwoods Community High Schools, Peoria Heights, Ill., will preside. Living biology film series and program. Roman Vishniac, New York.

The Catholic High School and the BSCS Curriculum. Sister Mary Gabrielle, O.S.F., principal, Holy Trinity High School, Hartford, Conn., will preside. Sister Mary Ivo, B.V.M., Reverend Joseph Mulroy, O.S.M., and Father Donald Chegar.

Annual Report to the Society and Business Meeting. American Nature Study Society.

Annual Banquet of the American Nature Study Society. Ruth E. Hopson, Portland Extension Center; president ANSS, will preside. Nature adventures around the world, S. Glidden Baldwin, president-elect, ANSS. A movie with sound by Mrs. Baldwin: A report on their recent eight-month wildlife survey.

Saturday 30 December

Natural History of the Rocky Mountains, symposium, NABT, arranged by Ruth E. Hopson, Portland Extension Center, Portland, Ore., who will preside. The physical evolution of the Rocky Mountains: Illustrated chalk talk, S. H. Knight. From plains to peak tops: The changing panorama of animal life, plant life, and scenery from the Colorado Plains to the high country, Richard G. Beidleman. The lure of nature in the mountains, Paul W. Nesbit. Animals in the freedom of the Rockies, Olaus J. Murie.

Accent on Investigating, part IV. NABT. Herman C. Kranzer, Temple University, secretary-treasurer, NABT,

will preside. Laboratory design for the teaching of experimental biology, Philip Fordyce. Promising practices with the gifted student, Jerome Metzner. Some new materials for teaching biology, H. Seymour Fowler. The training of secondary school biology teachers, Paul DeHart Hurd. Training in science of elementary school teachers, Dorothy C. Matala.

Session IV: Vistas of Science Curricula. NSTA. Joseph A. Struthers, vice-president, Colorado Science Teachers Association, Colorado Springs, will preside. The NSTA curriculum study plan, Donald G. Decker, dean of the college, Colorado State College, Greeley. NSTA findings from film research program, Henry Angelino, College of Education, University of Oklahoma.

Session V: Colorado Science Teachers Association Luncheon. NSTA. Joseph Pierce, president, Colorado Science Teachers Association, Durango, Colo., will preside. Teaching moments, J. Darrell Barnard, New York University; president, NSTA.

Museum School Service and Displays. Joint session of ANSS and NABT, arranged by Alfred M. Bailey, director, Denver Museum of Natural History, who will preside. Museum School Service and the Planetarium, Robert E. Samples. Preparation of museum displays. The evolution of life series, Arminta P. Neal. The habitat group, Alfred M. Bailey. Background work, William H. Traher. Foreground building, Robert R. Wright. Preparation of specimens, Henry C. Wichers. Field work: expedition film (Galapagos Islands). Museum tour.

Science in General (X)

Academy Conference

Wednesday 27 December

Breakfast Meeting of the Executive Committee.

Business Meeting and Discussion of Activities. Robert C. Miller, California Academy of Sciences; president, Academy Conference, will preside.

Debate Discussion: Why Collegiate Academies? E. Ruffin Jones, president elect, Academy Conference, will preside. Debaters: Norman D. Levine and Clinton L. Baker. Discussants: Charles M. Allen, Amy Le Vesconte, L. R. Edmunds, and R. S. Kiser.

Academy Conference Dinner and Presidential Address. John G. Arnold, Jr., retiring president, Academy Con-

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ference, will preside. Academies of science as catalytic agents, Robert C. Miller, director, California Academy of Science; president, Academy Conference.

Thursday 28 December

Session on Junior Academies. Gerald Acker, Bowling Green State University, will preside. Report on standing committee on junior academies. Regional high school science conferences, Myron S. McCay. Scientific papers by high school students, Lincoln Pettit. A national junior academy, pro and con, Elnore Stoldt.

Conference on Scientific Communication (X5)

The Conference on Scientific Communication has been a recurrent part of the annual meeting of the AAAS since 1952. The original purpose of the Conference was to bring before the Association some of the important problems that confront those who prepare scientific manuscripts. Subsequently, the scope was expanded to provide a forum where members or organizations concerned with all media for communicating scientific knowledge could meet to discuss mutual problems and to interchange ideas.

Those who have conducted the Conference on Scientific Communication at AAAS meetings for the past 10 years would welcome the establishment of a new AAAS section devoted to information and communication, though it would eliminate the need for a continuation of the Conference. It is anticipated that the spirit of the Conference would pass over into the new section and that all who have supported the Conference would support the new section.

Saturday 30 December

Luncheon for those interested in communication.

"Inauguration Session of New Section" (applicable if the AAAS Council votes approval of the new section), arranged by Chauncey D. Leake, Ohio State University; chairman, AAAS board of directors, who will preside. Introduction by the chairman. The scientific explosion, a puff or a bang, and what shall we do about it? Phyllis Parkinson. The collecting, storage, and retrieval of scientific information, Ralph R. Shaw. Indexing in depth, Isaac Welt. Solving the problems of interdisciplinary

nary communication in science, Foster E. Mohrhardt. The status of reviews in interdisciplinary communication, George L. Seielstad. Panel I: Interdisciplinary science communication. Panel members: Dale Baker, Miles Conrad, Graham DuShane, Eugene Garfield, Richard Orr, and Charles Shilling. Panel II: Communicating science to the people. Panel members: Victor Cohn, Watson Davis, Hillier Kriehbaum, Edward G. Sherburne, Jr., and John Sherrod.

Conference on Scientific Manpower

The Conference on Scientific Manpower has met during the annual meetings of the American Association for the Advancement of Science since the 118th meeting at Philadelphia in 1951. Its objective is the recognition and consideration of problems involving scientific manpower in the fields of physical, biological, engineering, and social sciences.

Wednesday 27 December

Invited Address. Program of the Conference on Scientific Manpower, co-sponsored by the Engineering Manpower Commission, Scientific Manpower Commission, National Research Council, National Science Foundation, and AAAS Sections E-Geology and Geography and M-Engineering. Howard A. Meyerhoff, Scientific Manpower Commission, will preside. Engineering and science—a struggle for survival? Truman H. Kuhn, dean of faculty, Colorado School of Mines.

National Association of Science Writers

Wednesday 27 December

Business Meeting. Victor Cohn will preside.

Reception, by invitation.

Annual Dinner and Announcement of AAAS-Westinghouse Science Writing Awards. Victor Cohn will preside.

Scientific Research Society of America

Friday 29 December

Annual Convention of the Scientific Research Society of America.

Joint Luncheon of the Society of the Sigma Xi and the Scientific Research Society of America and Annual Ad-

dress of the Scientific Research Society of America. W. J. Coppoc, presiding. Award of William Procter prize by W. J. Coppoc. Cooperation—a responsibility of the scientist, Edward R. Weidlein, former director, Mellon Institute, Pittsburgh.

Sigma Delta Epsilon Graduate Women's Science Fraternity

Thursday 28 December

Tea for All Women in Science. Ernestine B. Thurman, National Institutes of Health, will preside.

Society of the Sigma Xi

Friday 29 December

Joint Luncheon of the Society of the Sigma Xi and the Scientific Research Society of America.

Sixty-second Annual Convention of the Society of the Sigma Xi. Wallace R. Brode will preside.

Joint Address of the Society of the Sigma Xi and the United Chapters of Phi Beta Kappa. William W. Rubey, member, AAAS Board of Directors, will preside. Science and government, Harrison Brown, professor of geochemistry, California Institute of Technology.

Wilderness Society, Wildlife Management Institute, and Wildlife Society

These societies are cosponsors of Section O's symposium, Land and Water Use.

Forthcoming Events

December

12-15. American Soc. of Agricultural Engineers, Chicago Ill. (J. L. Burt, ASAE, 420 Main St., St. Joseph Mich.)

13. American Acad. of Arts and Sciences, Brookline, Mass. (J. L. Oncley, 280 Newton St., Brookline 46)

15-16. Modern Trends in Activation Analysis, College Station, Tex. (R. E. Wainerdi, Activation Analysis Research Laboratory, Texas A. and M. College, College Station)

15-16. Oklahoma Acad. of Science, Stillwater. (D. Buck, Northern Oklahoma Junior College, Tonkawa)

17-18. International Congr. of Comparative Pathology, 9th, Paris, France. (L. Grollet, Comité International Permanent des Congrès de Pathologie Comparée, 63 Avenue de Villiers, Paris 17°)

19-23. Inter-American Congr. of Psy-

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