

# Association Affairs

## Preliminary Announcement of the Chicago Meeting and Call for Papers by AAAS Sections

Those who have attended recent AAAS meetings—notably New York in 1956 and last December in Washington—need not be reminded that no other scientific meeting can present such a variety of important and attractive symposia in all major fields of science, or can afford such opportunities for interdisciplinary programs that explore relatively neglected areas. Those who have not been to an AAAS meeting for some time cannot really know what they have missed!

Many of these symposia or their constituent invited papers get published—as AAAS symposium volumes, as lead articles in *Science*, or in specialized journals—but there is a time lapse. Furthermore, only those who are present can meet the authors face to face and discuss points with them afterwards.

This year's 126th meeting of the Association, 26–31 December in Chicago, from all indications, should not be missed. Twelve years have elapsed since the sixth Chicago meeting of 1947. The registration of 1940 that year almost certainly will be exceeded, and registration may be above 6000. All 18 sections and a gratifying number of participating societies have arranged sessions both for the specialist and for those concerned with other developments in science. There will be programs, events, and features of interest to all.

As the major portion of this announcement makes clear, officers of the sections and the other program chairmen have worked early and hard to emulate their past achievements. Instances where AAAS sections have found a successful formula are numerous.

Section A has combined a scholarly vice-presidential address, a symposium on new aspects of teaching, and applications of mathematics. Section B emphasizes reports of recent advances in physics, in five sessions. Section C has four symposia and additional sessions for contributed papers. The Chicago section of the American Chemical Society is an active cosponsor of the entire chemistry program. The 2-day regional meeting of

the Association of Clinical Chemists has grown in popularity.

Section D has scheduled its sessions early so that astronomers may attend both the AAAS and AAS meetings. The symposium subjects of Section E are carefully selected for timeliness, local interest, and research content.

Sections F and G will jointly sponsor a day on "Unsolved Problems in Biology IV" and both sections will have sessions for contributed papers (exclusive of systematics, since these are covered by the national meetings of the American Society of Plant Taxonomists and the Society of Systematic Zoology). The four-session symposium of the American Society of Naturalists, "Interactions in Nature," is impressive in scope, speakers, and discussants; Paul B. Sears will give the ASN presidential address.

The Ecological Society of America's symposium on dune ecology and sessions for papers in both plant and animal ecology should be well attended. Geneticists and breeders of plants and animals will be pleased with Section O's five-session symposium on the preservation and development of germ plasm.

Section K has secured the active cooperation of major societies in a wide spectrum of social and economic sciences: there will be programs in economics, statistics, political science, sociology, and criminology. This year, Section L has concentrated on philosophy and has scheduled no less than six sessions with an authority for each subtopic. Section M's program will explore further the serious international problem of unified unit systems.

In the medical field, Section N each year has one distinguished four-session symposium that ranges from the fundamental to the clinical. This year's subject is "Aging—Facts and Theories." Section Nd will have a complementary session on aging. The American Physiological Society will have a symposium on "Space Medicine III"; the American Psychiatric Association's four sessions on animal behavior will attract both members and others. Section P's symposium on food is broadly significant. In education, Section Q's program is larger than ever; the programs of the four science teaching societies are well coordinated.

## AAAS Events

The programs sponsored by the Association as a whole include the two-session general symposium, "Moving Frontiers of Science IV," organized by the Committee on AAAS meetings, on 26 and 27 Dec.; the AAAS retiring presidential address of Wallace R. Brode, followed by a reception, 28 Dec.; and the AAAS Smoker for all registrants on 30 Dec.

The AAAS Cooperative Committee on the Teaching of Science and Mathematics (Brother G. Nicholas, La Salle College, Philadelphia) will have a panel discussion on the report of the special committee on teacher certification. Speakers will include a school superintendent, a scientist, and John R. Mayor, AAAS director of education.

The AAAS Council will hold its customary two sessions, on 27 and 30 Dec. Because the elections of the AAAS president-elect and new members of the board of directors are now settled by mailed ballots, more time is available for the consideration of matters that affect all science and society. The Council is aided by its Committee on Agenda and Resolutions, and its new Committee on Council Activities and Organization, authorized last year, will afford further assistance. The AAAS Board of Directors, several committees, and many of the sections will have business meetings.

The schedule of the special sessions—outstanding general lectures by distinguished authorities sponsored by organizations that meet regularly with the Association—is as follows: 27 Dec., the first evening address of the recently affiliated Tau Beta Pi Association; 28 Dec., AAAS presidential address and reception; 29 Dec., the joint evening address of the Society of the Sigma Xi and the United Chapters of Phi Beta Kappa; 30 Dec., the evening lecture and film of the National Geographic Society.

## Science Exhibits

The significance of the seventh Chicago meeting has already been recognized by those who produce the books, instruments, and materials which scientists and teachers use. Applications for exhibit booths have been received at a most gratifying rate—indeed, at this time, 7 months in advance of the meeting, only a few booths remain.

The 1959 version of the Association's Annual Exposition of Science and Industry will be one of the most balanced and attractive ever staged. Leading publishers, optical companies, instrument makers, and suppliers of laboratory materials and equipment will show their latest publications and products. In addition, there will be selected displays of some of the research activities of large

industrial firms. The exposition alone would justify a trip to Chicago.

Incidentally, the exposition is *not* intended for young people below the college, or exceptional high-school senior, level, for most of the exhibits would be too technical. (To meet the interests of younger students of science, the Association's Academy Conference annually arranges a Junior Scientists Assembly, at which eminent scientists address a large audience of high-school students on aspects of science and scientific careers.) In the best interests of both exhibitors and those interested in their displays, only registrants are admitted to the exposition.

The AAAS Science Theatre again will show a choice selection of foreign and domestic science films in a small area reached through the exposition. Some have suggested that the theatre be enlarged into a major attraction, but it does not seem desirable to do this and, in a sense, compete with program sessions. This year, intentionally, the theatre will have fewer titles and run them more often than twice. Those who are especially interested in a particular film thus will have more opportunities to see it.

Chicago is the home of the permanent Museum of Science and Industry, located in Jackson Park on South Lake Shore Drive and 57th Street, a few blocks east of the campus of the University of Chicago. Many large-scale technological exhibits of industry are housed in the large, restored Fine Arts Building of the Columbian Exposition of 1893. Recently, with NSF funds, the science exhibits that comprised the U.S. components of the Brussels World Fair of 1958 have been brought to this museum and will be on display at the time of the AAAS meeting.

These highly technical, up-to-the-minute exhibits, organized by a committee headed by Paul Weiss, Rockefeller Institute, reflect the contributions of many leading scientists and scientific laboratories, governmental and private. The displays are grouped in four categories: the atom, the molecule, crystals, and the living cell. It is believed that many out-of-city registrants at this year's AAAS meeting, who did not get to Brussels, will plan an extra half day to see these exhibits.

Other scientific institutions: the well-known Chicago Natural History Museum, (formerly the "Field Museum"), the adjacent Shedd Aquarium, the Adler Planetarium, and the Chicago Academy of Sciences, are relatively short bus or taxi rides from the five hotels to be used for the meeting.

#### Physical Facilities

Center of the meeting and AAAS Headquarters will be the 46-story Mor-

risson Hotel (1800 rooms), which will accommodate the larger sessions, the Annual Exposition of Science and Industry, the AAAS Main Registration-Information Center, the AAAS Pressroom, the AAAS Office, and the AAAS Science Theatre.

Other hotels will be the headquarters of related sections and societies—the Sherman, for example, will house the science teaching societies. Hotel headquarters assignments in the Bismark, Hamilton, and La Salle will be announced in July, when the advertising pages of *Science* will begin to carry coupons for housing reservations and advance registration. As usual, advance registrants will receive the General Program early in December by first-class mail.

All five "Loop" hotels are within two blocks of the Morrison, and less from each other, so that a particularly convenient meeting is possible.

In summary, the 126th meeting will be consistent with the fundamental, original purpose of the Association as set forth when it was founded in September 1848: ". . . by periodical and migratory meetings to promote intercourse between those who are cultivating science in different parts of the United States." At the same time, current matters of great concern will not be neglected. The annual meeting is a major activity of the Association, now with 285 affiliates and a membership approaching 60,000. In recent years the Association has increasingly recognized its responsibility also to inform the general public on developments in science and its obligation to help strengthen the nation's educational system.

*Local committees.* No AAAS meeting could succeed without the interest and substantial assistance of local members and friends of the Association. General chairman of the seventh Chicago meeting is Edward L. Ryerson, former chairman of the board, Inland Steel Company, and honorary trustee, University of Chicago. His first appointments have been William V. Kahler, president, Illinois Bell Telephone Company, as chairman of the Exhibits Committee; and James H. Smith, associate superintendent in charge of instruction, Chicago Board of Education, as chairman of the Physical Arrangements Committee. The remaining appointments will be announced in a subsequent issue.

*Programs.* A synopsis of the programs, arranged by disciplines, follows. The names given within parentheses are section and society officers or program chairmen.

#### Mathematics (A)

The program of Section A (C. C. MacDuffee, University of Wisconsin) will begin on 26 Dec. with the vice-presi-

dential address, "Topology of Euclidean three-space," by R. H. Bing (University of Wisconsin). A symposium, "The New Look in Mathematical Education," is scheduled for 27 Dec. A group of invited papers, cosponsored by the *Society for Industrial and Applied Mathematics*, will be devoted to "Some New Developments in the Application of Mathematics in Industry." This session will be held on 28 Dec.

As at recent meetings, the *Association for Computing Machinery* (J. H. Wegstein, National Bureau of Standards) will sponsor a session of invited papers on computing machines.

#### Physics (B)

Section B (J. Howard McMillen, National Science Foundation) will have a series of five sessions for reports given under the general title of "Recent Advances in Physics." These will be scattered throughout four days of the meeting, but most will be given on 29 Dec. Subjects to be covered are: new ideas on Bevatron accelerators, progress and puzzles in nuclear structure, filament optics, optical pumping, high-energy cosmic ray jets, plasma—a state of matter, and others. The *Physics Club of Chicago* (L. I. Bockstahler, Northwestern University) will join Section B in sponsoring the address by the retiring vice president, Robert B. Lindsay (Brown University) at a noon luncheon on 29 Dec.

The *American Astronautical Society* (A. R. Teasdale, Jr., Temco Aircraft Co.) which is developing a Chicago regional section, will cosponsor programs in its field, such as "Space Medicine III," symposium of the American Physiological Society. The *American Meteorological Society* (Kenneth Spengler AMS) will cosponsor appropriate sessions and, as at the Washington meeting, will probably have several sessions of its own.

#### Chemistry (C)

The program of Section C (John A. King, Armour and Company) includes, over the entire meeting period, a series of symposia, each of one or more sessions, on recent advances in food irradiation and irradiation techniques, on recent advances in organic chemistry, on newer techniques of analytical and physical measurements, and on the physical chemistry or biophysics of protein structure. In addition, there will be sessions for contributed papers (Sydney Archer, Sterling-Winthrop Research Institute). The entire program of Section C will be cosponsored by the Chicago section of the *American Chemical Society*.

The *American Association of Clinical Chemists* will have a symposium on a topic of current interest, sessions for contributed papers, and a dinner with a speaker.

## Astronomy (D)

Section D (Frank Bradshaw Wood, University of Pennsylvania) will have two symposia, which, together with the retiring vice presidential address by Dirk Brouwer (Yale University) will be held on 26 Dec. so that astronomers may also attend the American Astronomical Society meeting in Cleveland.

One symposium, organized by Gerald Kuiper, will deal with the moon and the solar system; the other, on photoelectric techniques for amateurs, will be jointly sponsored by the *Astronomical League* (Edward Halbach, Milwaukee).

## Geology and Geography (E)

The program of Section E (Frank C. Whitmore, Jr., U.S. Geological Survey) includes a three-session symposium on quantitative terrain studies, organized by a committee headed by Charles R. Kolb (Waterways Experiment Station, Vicksburg, Miss.) on 27–28 Dec. and a three-session symposium on “The Great Lakes Basin,” arranged by George B. Maxey (Illinois Geological Survey) 30–31 Dec., jointly with the American Geophysical Union and cosponsored in part by Section M. In addition, consideration is being given to holding a third symposium of two sessions on the application of stratigraphic nomenclature to Pleistocene geologic studies. Several sessions of papers in geography are planned under the joint sponsorship of the *Association of American Geographers* and Section E (29 Dec.). Alden Cutshall (University of Illinois, Chicago branch) will coordinate the papers on geography.

At the annual Section E smoker, the vice presidential address will be delivered by Byron N. Cooper (Virginia Polytechnic Institute). All geological sessions will be cosponsored by the *Geological Society of America*.

The *National Speleological Society* (Thomas C. Barr, Jr., Tennessee Polytechnic Institute) will have two symposia, one on speciation and riaciation in cavernicoles, the other on the origin and development of limestone caverns, on 28 Dec. The *National Geographic Society* will present its usual outstanding lecture and accompanying film on 30 Dec.

## Zoological Sciences (F)

The program of Section F (Karl M. Wilbur, Duke University), 28–30 December, inclusive, will be coordinated with the national meeting of the Society of Systematic Zoology. It will consist of one or more symposia, including “Unsolved Problems in Biology IV,” joint with Section G and cosponsored by appropriate societies, including the *American Society of Zoologists*. There will be six sessions for contributed papers in the principal fields of zoology, exclusive of

systematics. At the zoologists’ dinner, the vice presidential address of the section will be given by Herbert Friedmann (Smithsonian Institution).

The *Society of Systematic Zoology* (R. E. Blackwelder, Southern Illinois University), will hold its 11th annual meeting with sessions for contributed papers, a business meeting, and other events. Another feature will be the annual SSZ library and lounge for all zoologists.

## Biological Sciences (FG)

As a major part of its annual national meeting, the *American Society of Naturalists* will sponsor a four-session symposium, “Interactions in Nature,” arranged by Arthur D. Hasler (University of Wisconsin). Subtopics are: population ecology, conversion of energy, nature of adaptation in plants, and ecology of behavior. Several of the eight speakers will be from abroad, and there will be four discussants. This symposium will be cosponsored by the Ecological Society of America and the *American Society of Limnology and Oceanography*. There will be a business meeting, and the presidential address of the society will be given by Paul B. Sears (Yale University).

The biennial meeting of *Beta Beta Beta Honorary Biological Society* (Mrs. Frank G. Brooks, Box 336, Madison Square Station, New York 10) will be held 28 Dec. The business meeting will be followed by a luncheon at which H. Bentley Glass will be the guest speaker.

The program of the *Ecological Society of America* (William C. Ashby, University of Chicago) will consist of two sessions for contributed papers on 28 Dec.; a two-session symposium on dune ecology, arranged by Jerry S. Olson (Oak Ridge National Laboratory), and the cosponsorship of appropriate programs.

The annual national meeting of the *National Association of Biology Teachers* (Howard Weaver, University of Illinois) will begin with business meetings on 26 Dec. During the meeting period there will be a joint meeting with the American Nature Study Society, the National Association for Research in Science Teaching, and the National Science Teachers Association (27 Dec.); a luncheon (28 Dec.); a joint field trip with ANSS (29 Dec.); and a series of separate sessions.

Sections F and G are considering a Biologists’ smoker for the evening of 29 Dec.

## Botanical Sciences (G)

In addition to the two-session symposium, “Unsolved Problems in Biology IV,” held jointly with Section F, Section G (Barry Commoner, Washington University) will have sessions for contributed papers in the principal fields of

botany except plant taxonomy; these sessions will probably be cosponsored by appropriate societies. Other symposia are planned, and, following the annual botanists’ dinner, the vice presidential address of Section G will be given by F. W. Went (Missouri Botanical Garden).

The annual national meeting of the *American Society of Plant Taxonomists* (L. R. Heckard, University of Illinois) 28–30 Dec. will include three sessions for contributed papers jointly with the Systematic section of the *Botanical Society of America*, one or more symposia, a business meeting, the annual ASPT dinner, and one or more informal sessions for discussion by botanists interested in general problems of taxonomy and related problems of the herbarium.

## Anthropology (H)

The program of Section H (James L. Giddings, Haffenreffer Museum), includes one symposium on linguistics and another on ancient glass as well as sessions for contributed papers.

The *Linguistic Society of America* (Murray Fowler, University of Wisconsin) will hold its annual national meeting with the AAAS.

## Psychology (I)

Section I (Clifford T. Morgan, Town Point, Cambridge, Md.) will have five sessions of invited papers covering the principal areas of research activity in psychology. The vice-presidential address will be given by Frank A. Geldard (University of Virginia).

## Social and Economic Sciences (K)

Section K (Donald P. Ray, George Washington University), the *American Economic Association*, and the *National Institute of Social and Behavioral Science*, on the evening of 27 Dec.; will jointly sponsor a symposium on world population and international relations. It is anticipated that *Pi Gamma Mu*, the national honorary society in the social sciences, will have a dinner for the speakers. In addition, Section K will cosponsor appropriate programs of the K series and Section N’s symposium on aging. Section K will sponsor sessions for contributed papers in the social and economic sciences.

The *American Political Science Association* (Evron M. Kirkpatrick, APSA) will have a special program on 28 Dec., cosponsored by Section K.

The *American Society of Criminology* (Donal E. J. MacNamara, New York Institute of Criminology) will sponsor a luncheon with speakers and four groups of invited papers on probation and parole, problems in the administration of criminal justice, science of traffic control, and scientific criminology. The program will have a number of cosponsors.

The *American Sociological Society*

has scheduled a special meeting with the AAAS. One symposium, on the use of computers in the simulation of social behavior, to be held 28 Dec., has been arranged, by James S. Coleman (University of Chicago). A second symposium, on the systematic study of family structure, scheduled for the morning of 29 Dec., has been planned by Irene B. Taeuber (Princeton University).

It is anticipated that the *American Statistical Association* will have a regional meeting 29–30 Dec. of particular interest to local statisticians, similar to their successful sessions in Washington.

The *Metric Association* (J. T. Johnson, Claremont, Calif.) plans a group of four invited papers on the advantages of extending the metric system.

Details of the annual symposium of the *National Academy of Economics and Political Science* (Amos E. Taylor, Pan American Union) are not yet available.

#### History and Philosophy of Science (L)

The program of Section L, as planned by its chairman (Herbert Feigl, University of Minnesota) will include the following symposia and subtopics:

Theory Construction in Logical and Historical Perspectives (two sessions, 27–28 Dec.): “Is there a logic of discovery?” N. R. Hanson (University of Minnesota); “The Growth of scientific concepts,” S. E. Toulmin (New York University); “On the origins of the relativity theory,” Gerald Holton (Harvard University); “The language of theories,” Wilfrid Sellars (Yale University); “Logical problems of theory construction,” Henry Mehlberg (University of Chicago).

Empirical and Conventional Elements in Physical Theory: “Law and convention in physical theory,” Adolf Grünbaum (Bethlehem, Pa.); “Meaning postulates in scientific theories,” Grover Maxwell (University of Minnesota); “The empirical foundations of Geometry,” E. W. Adams (University of California, Berkeley); “The problems of fundamental constants in physics,” Wolfgang Yourgrau (University of Minnesota).

Scientific Laws, Probability, and Simplicity: “Probability of hypotheses,” Arthur Pap (Yale University); “On the probability of nonrecurring events,” Nicholas Rescher (Lehigh University); “The role of simplicity in explanation,” Stephen Barker (Harvard University); “The key property of physical laws: inaccuracy,” Michael Scriven (Swarthmore College).

Philosophical Issues of Quantum Theory: “Escape from duality,” Alfred Landé (Ohio State University); “Some reflections on the interpretation of elementary quantum theory,” P. K. Feyerabend (University of California, Berkeley);

“Are wave mechanics and matrix mechanics equivalent theories?” N. R. Hanson (University of Minnesota); “Quantum physics and relativity theory,” E. L. Hill (University of Minnesota).

Methodological Problems of Psychology and the Social Sciences: “Methodological issues of the social sciences,” Paul F. Lazarsfeld (Columbia University); “The role of intervening variables in psychological theory,” Herbert Hochberg (Northwestern University); “Verbal utterances as data,” Alex Buchwald (Indiana University); “Formal Analysis and the language of behavior theory,” William Rozeboom (St. Olaf College).

Each session will have discussants. The vice-presidential address of Herbert Feigl, “Philosophical tangents of science,” will be given 28 Dec. It is anticipated that Section L’s program will be cosponsored by the *American Philosophical Association* and the *Philosophy of Science Association*.

The *Society for General Systems Research* (Richard L. Meier, Mental Health Research Institute) again will hold its annual meeting with the AAAS. One session will be a symposium on organization theory. Another session will be for contributed papers. It will be recalled that it was a paper on the program of this society that won the Newcomb Cleveland Prize at the 1958 AAAS meeting.

#### Engineering (M)

As a sequel to its successful four-session program at last year’s Washington meeting, Section M is planning a second series of four sessions, 28–29 Dec., under the general title “Further Problems and Progress in Simplification and Unification of Unit Systems.” The discussion, covering the realms of commerce, industry, and technology, and dealing with force, weight, mass, and dimensional units, will be grouped under two broad headings: “Public aspects, including public schools” and “Science and engineering aspects.” The program is being arranged by a committee (Carl F. Kayan, Columbia University, chairman) and will be cosponsored by the *Western Society of Engineers*. Section M will cosponsor other appropriate programs.

The *Engineering Manpower Commission* will cosponsor the sessions of the Conference on Scientific Manpower.

The recently affiliated *Tau Beta Pi Association* (Robert H. Nagel, TBPA, University of Tennessee) will sponsor an address of general interest by a prominent engineer or scientist on the evening of 27 Dec.

#### Medical Sciences (N)

As in previous years, Section N will have a four-session symposium, 29–30 Dec., with participants coming from all

parts of the country. This year’s subject is “Aging: Facts and Theories.” The symposium, arranged by a committee (Nathan W. Shock, Baltimore City Hospitals, chairman), will include papers on the implications of aging for society, tissues and cells; the integrated organism; and theories. It is anticipated that cosponsors will include the *Gerontological Society* as well as Sections K and Q. Included will be the vice-presidential address of Nathan W. Shock and the announcement of the winner of the 15th Theobald Smith award given by Eli Lilly and Company. Section N will also cosponsor a variety of appropriate programs, including Section Nd’s symposium on aging.

*Alpha Epsilon Delta* (Maurice L. Moore, national secretary) will devote its usual morning symposium to the subject of premedical and predental education. This session will be held 29 Dec., at University of Illinois School of Medicine. The annual luncheon, with a speaker of prominence, and informal conferences will conclude the day’s activities.

The *American Physiological Society* (Fred A. Hitchcock, Ohio State University) is planning a symposium on space medicine, cosponsored by the American Astronautical Society. The most recent developments in this fast-moving field will be presented.

The *American Psychiatric Association* (Eugene L. Bliss, General Hospital, Salt Lake City) will have its customary special meeting with the AAAS (28–29 Dec.), devoted, this year, to the general topic of animal behavior. The four-part symposium, “Roots of Behavior,” will include discussion of the genetics of behavior, the influence of prenatal disturbances on later behavior, the early critical period (imprinting), the effect of modifications of early experience on later behavior, studies of instinctual behavior, and primate behavior in the wild. Prominent investigators in the field have already agreed to participate.

The *National Society for Medical Research* and Section Q will have a joint symposium, 26 Dec., on “How Attitudes Affect Disease Prevention,” arranged by Ralph A. Rohweder (National Society for Medical Research).

#### Dentistry (Nd)

To commemorate the centennial of organized dentistry in the United States, Section Nd (Frank J. Orland, University of Chicago) will have two symposia—one on aging, complementing Section N’s program and cosponsored by that section, 28 Dec., and one on the history of dentistry, 29 Dec. Meal functions and a tour will be announced later.

The program of the section will be cosponsored by the *American College of Dentists*, the *American Dental Asso-*

ciation, and the *International Association for Dental Research, North American Division*.

### Pharmacy (Np)

The three-day program of Section Np (John E. Christian, Purdue University) includes morning and afternoon sessions for contributed papers (28 Dec.); two other sessions for papers; a two-session symposium on hospital pharmacy (29 Dec.); and a symposium on the potential applications of radioactive isotopes to the food, pharmaceutical, and cosmetic industries (30 Dec.).

The vice-presidential address of Glenn L. Jenkins (Purdue University), will be given on the afternoon of 29 Dec. In addition to the customary social functions, Section Np will sponsor a tour of Argonne National Laboratory.

Section Np's entire program will be cosponsored by the *American Association of Colleges of Pharmacy*, *American College of Apothecaries*, *American Society of Hospital Pharmacists*, *American Pharmaceutical Association*, Scientific Section, and the *National Association of Boards of Pharmacy*.

### Agriculture (O)

*Section O* (R. E. Hodgson, Animal Husbandry Research Division, Beltsville, Md.) will have a five-session symposium on "Germ Plasm Resources in Agriculture: Development and Protection," 28-31 Dec. Among the subjects and speakers are the following:

Origin of Germ Plasm: "Evaluation of plant germ plasm useful to agriculture," G. L. Stebbins, Jr. (University of California, Berkeley and Davis); "Geographic origin of plants useful to agriculture," Edgar Anderson (Missouri Botanical Garden); "Origin of animal germ plasm presently used in North America," H. H. Stonaker (Colorado State University); "Untapped sources of animal germ plasm," R. W. Phillips (U.S. Department of Agriculture). The discussion leader will be Henry A. Wallace, former Vice President of the United States.

Need for, and Utilization of, Additional Sources of Germ Plasm: "Horticultural Crops," F. P. Cullinan (U.S. Department of Agriculture); "Field Crops," W. M. Myers (University of Minnesota); "Small farm animals," I. M. Lerner (University of California, Berkeley); "Large farm animals," J. L. Lush (Iowa State College). The discussant will be H. A. Rodenhiser (U.S. Department of Agriculture).

Developmental Programs in Crops and Livestock: "Use of diverse germ plasm in crop improvement," Herman J. Gorz (University of Nebraska) and W. K. Smith (University of Wisconsin); "Effectiveness of selection for animal improvement," Gordon Dickerson (Kimber Farms, Inc., Niles, Calif.); "Use of hy-

brid vigor in plant improvement," G. W. Burton (Coastal Plain Experiment Station, Tifton, Ga.) and G. F. Sprague (U.S. Department of Agriculture); "Extent and usefulness of hybrid vigor in animal improvement," L. N. Hazel (Iowa State College); "Performance testing in livestock," C. E. Terrill, E. J. Warwick, N. D. Bayley, W. A. Craft, and P. B. Zumbro (U.S. Department of Agriculture). The discussant will be R. E. Comstock (University of Minnesota).

New Approaches to Plant and Animal Improvement: "Contributions of laboratory animals to research in livestock improvement," A. B. Chapman (University of Wisconsin); "Immunogenetics and its application to livestock improvement," R. D. Owen (California Institute of Technology); "Using germ plasm for new products," Quentin Jones (U.S. Department of Agriculture, Peoria, Ill.) and Ivan Wolf (U.S. Department of Agriculture, Beltsville, Md.); "Irradiation and plant improvement," W. C. Gregory (North Carolina State College). The discussant will be Sewall Wright, professor emeritus, University of Chicago).

Perpetuation and Protection of Breeding Stocks: "Perpetuation and protection of germ plasm as seeds," Edwin James (U.S. Department of Agriculture, Fort Collins, Colo.); "Perpetuation and protection of germ plasm as vegetative stock," Russell E. Larson (Pennsylvania State University); "Preservation of breeding stocks through semen storage," N. L. Van Demark (University of Illinois); "Identification and elimination of defects in animals," F. B. Hutt (Cornell University). The discussant will be T. C. Byerly (U.S. Department of Agriculture).

This symposium will be cosponsored by Sections F and G and a number of societies.

### Industrial Science (P)

The program of Section P (Allen T. Bonnell, Drexel Institute of Technology) will include a symposium of particular interest to leaders in industry, "Science Looks at the Food Industry." In scope it will be an appraisal of the rationale of the food industry from the viewpoints of the physical sciences, social sciences, behavioral sciences, and biological sciences. This will be followed by a luncheon at which the retiring vice-presidential address of Frank C. Croxton (Battelle Memorial Institute) will be given. Another session will be the fourth Industrial Citation Dinner.

The *Society for Industrial Microbiology* is considering a program to commemorate its tenth anniversary.

### Education (Q)

The program of Section Q (Herbert A. Smith, U.S. Office of Education) in-

cludes two joint sessions with the *Council for Exceptional Children* (26 Dec.); two sessions, joint, with the *American Educational Research Association* (30 Dec.); a symposium, joint, with the National Society for Medical Research (26 Dec.); at least four sessions for contributed papers, a business meeting, and the vice-presidential address of Warren G. Findley, Atlanta Board of Education, 29 Dec. Section Q is a cosponsor of Section N's symposium on aging and the program of NARST.

The annual national meeting of the National Association of Biology Teachers has been included in the FG series.

The four science teaching societies (ANSS, NABT, NARST, NSTA) meeting with the AAAS (coordinator, Muriel Beuschlein, Chicago Teachers College) will have a joint general session the morning of 27 Dec. on the subject of man and space travel. There will be a joint social event that afternoon followed by a buffet supper. As usual, there will be several joint sessions devoted to science teaching films. It is probable that the *Central Association of Science and Mathematics Teachers* (George G. Malinson, Western Michigan University) will cosponsor these general events.

The *National Association for Research in Science Teaching* (John Mayfield, University of Chicago, and Vaden W. Miles, Wayne State University) will sponsor a research symposium, cosponsored by Section Q, on 28 Dec. NARST president Vaden W. Miles will preside; the speakers and papers are: "Review of recent research in elementary science education," Betty Lockwood Wheeler (Central Michigan University); "Implications of the findings of recent research in elementary science education"; "Review of recent research in secondary science education," Margaret J. McKibben (National Science Teachers Association); "Implications of the findings of recent research in secondary science education"; "Review of recent research in college level science education," John H. Woodburn (Johns Hopkins University); "Implications of the findings of recent research in college level science education"; "Summary," Edward K. Weaver (Atlanta University).

The separate portions of the program of the regional meeting of the *National Science Teachers Association* (Herman Rider, Des Plaines, Ill.) consists of meetings of the executive committee (26 Dec.) and five sessions (27-29 Dec.), including one on elementary science joint with the American Nature Study Society. Tours are scheduled for the morning of 29 Dec.

The program of the annual national meeting of the *American Nature Study Society* (Emery L. Will, State University Teachers College, Oneonta, N.Y.) begins with a board meeting (26 Dec.)

Announcing

# DONNER computer tech notes

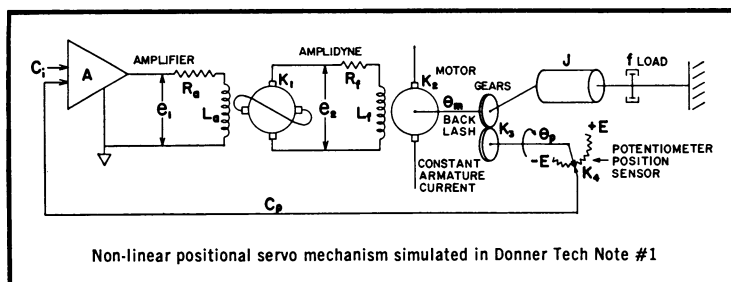


## News about

- \*Computer applications
- \*New methods of simulation
- \*Application of new feedback design techniques
- \*Analog control systems

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Lead article in the first issue is titled "How to simulate a non-linear control system with an analog computer." A step by step analysis takes you through the intricacies of setting up a Donner analog computer to simulate a non-linear positional servo mechanism.



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and includes, besides joint sessions with the science teaching societies, a session on "Reaching the Public—Problems Ahead" (27 Dec.); the annual showing of Kodachrome slides (27 Dec.); "Contributions of research to a better interpretation of nature," and a joint session with NSTA on elementary science (28 Dec.); the joint field trip (29 Dec.); and a concurrent session on the natural history of the Chicago area. The annual business meeting and ANSS banquet will conclude the program.

## Science In General (X)

The annual *Academy Conference* (A. M. Winchester, Stetson University) composed of delegates and other members of the 45 academies affiliated with the Association, will hold a day of sessions on 28 Dec., including a morning business session, a panel discussion arranged by John Yarbrough (Meredith College) and the annual dinner and presidential address by Winchester, on the "Responsibilities of scientists, or unscientific scientists." The session on junior academies (Elmore Stoldt, Jacksonville, Ill.) will be held the morning of 27 Dec. The Academy Conference will sponsor the 13th annual Junior Scientists Assembly for selected high-school students, to be held at a convenient site, apart from the rest of the meetings. This program is being arranged by M. B. Salisbury, Evanston Township High School, Evanston, Ill. The *Chicago Academy of Sciences* (Richard A. Edgren) will arrange a symposium and act as host for the Academy Conference.

The *American Geophysical Union* (William C. Krumbein, Northwestern University) will cosponsor Section E's symposium on the Great Lakes Basin and is considering a symposium on the upper atmosphere.

The *Conference on Scientific Communication* (George L. Seielstad, Applied Physics Laboratory, Johns Hopkins University), now in its eighth year, will have a multisession program on the theme, "Research in Communication," largely concerned with the latest concepts of communication and documentation in science.

This year the general title of the two-session program of the annual *Conference on Scientific Manpower* (Thomas J. Mills, National Science Foundation) is "Higher Education and Training in Emerging Fields of Technology." The conference hopes to highlight the training requirements, particularly the requirements facing higher education, which can be expected to result from new technology, especially technology associated with space exploration, new oceanographic developments, nuclear science developments, and, perhaps, some of the growing areas of chemistry, such as metallurgy and chemical fuels.

As in previous years, this program will



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- Much of text carried in labelling of illustrations.
- Clinical aspects of functions are stressed in the text, not segregated to the end of each section.
- Nomenclature follows recommendations of International Congress of Anatomists at Paris, 1955.
- Where pronounced dissimilarities exist between new and older terms, both the new and the more familiar terms are given.

## The Beginnings of Embryonic Development

**AAAS Symposium Volume No. 48**

**Published July 1957**

**Edited by Albert Tyler, California Institute of Technology**  
**R. C. von Borstel, Oak Ridge National Laboratory**  
**Charles B. Metz, The Florida State University**

6 x 9 inches, 408 pages, 132 illustrations, references,  
subject and author index, clothbound

**Price \$8.75, AAAS members' prepaid order price \$7.50**

A symposium on "Formation and Early Development of the Embryo", held 27 December, 1955, at the Second Atlanta Meeting of the AAAS, served as the basis for this volume. Emphasis was placed on the problems of early development and of the initiation of development. The investigations presented in the various communications cover both descriptive and experimental work on the biological and chemical levels. Apart from their intrinsic interest and the measure of progress that they provide, the specific discoveries and analyses presented serve to exemplify various approaches toward the understanding of the manner in which sperm and egg contrive to produce a new individual.

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**AAAS, 1515 Massachusetts Avenue, NW, Washington 5, D.C.**

be cosponsored by Section M, the *Engineering Manpower Commission*, *Scientific Manpower Commission*, *National Research Council*, and the *National Science Foundation*.

The regular annual meeting of the *National Association of Science Writers* (Pierre Fraley, *Philadelphia Evening Bulletin*) with the AAAS will include a business session and dinner. A feature of the latter will be the first awards of the new series of the AAAS-George Westinghouse Science Writing Awards for excellence in science writing in newspapers and magazines.

The national convention of the *Scientific Research Society of America* (Donald P. Prentice, Yale University) is scheduled for the morning of 29 Dec. It is expected that the award of the William Procter prize and RESA address will follow the joint luncheon with the Society of the Sigma Xi.

The national meeting of *Sigma Delta Epsilon*, graduate women's science fraternity (Esther S. Anderson, Stratford Hotel, Washington, D.C.) begins with a business meeting (27 Dec.) and includes the annual dinner and grand chapter meeting (29 Dec.) and a luncheon for all women in science (30 Dec.). A headquarters room will be maintained throughout the meeting period.

The 60th annual convention of the *Society of the Sigma Xi* (Thomas T. Holme, Yale University) will be held on 29 Dec., following the joint luncheon with RESA. In the evening the Society of Sigma Xi will join with the *United Chapters of Phi Beta Kappa* (Carl Billman, Phi Beta Kappa) in sponsoring an evening address by a prominent scientist. Since their inauguration in 1922, these distinguished lectures, of interest to the entire attendance, have been special sessions of the Association.

### Call for Papers by AAAS Sections

Seven sections of the Association will arrange sessions for contributed papers at the Chicago meeting. The secretaries or program chairmen to whom titles and abstracts should be sent, *not later than 30 Sept.*, follow:

**C-CHEMISTRY.** Sydney Archer, Sterling-Winthrop Research Institute, Rennselaer, N. Y.

**F-ZOOLOGICAL SCIENCES** (if outside the scope of the Society of Systematic Zoology, which is meeting with the AAAS). Karl M. Wilbur, Department of Zoology, Duke University, Durham, N. C.

**G-BOTANICAL SCIENCES** (if outside the scope of the American Society of Plant Taxonomists, which is meeting with the AAAS). Barry Commoner, Henry Shaw School of Botany, Washington University, St. Louis 5, Mo.

**H-ANTHROPOLOGY.** J. L. Giddings, Brown University, Providence 12, R.I.

K-SOCIAL AND ECONOMIC SCIENCES.  
Donald P. Ray, Hall of Government,  
George Washington University, Wash-  
ington 6, D.C.

NP-PHARMACY. John E. Christian,  
School of Pharmacy, Purdue Univer-  
sity, Lafayette, Ind.

Q-EDUCATION. Herbert A. Smith, U.S.  
Office of Education, Room 5919,  
General Services Administration Build-  
ing, Washington 25, D.C.

Although the deadline is 30 Sept.,  
most sections, and subsequently the  
AAAS office, would be glad to receive  
titles in advance of this date.

RAYMOND L. TAYLOR  
*Associate Administrative Secretary*

### AAAS Pacific Division to Meet

The Pacific Division of the American Association for the Advancement of Science is celebrating its 40th annual meeting on the campus of San Diego State College, 14-18 June. Meeting headquarters, registration, and most sessions will be held in the new humanities and social science building. Reservations for hotel or motel accommodations should be made by 1 June, through the San Diego Convention and Tourist Bureau, 924 Second Ave., San Diego 1, Calif. A \$10 deposit should be enclosed with each request. The AAAS sessions begin on Monday evening, 15 June, with a divisional symposium on the results of the International Geophysical Year.

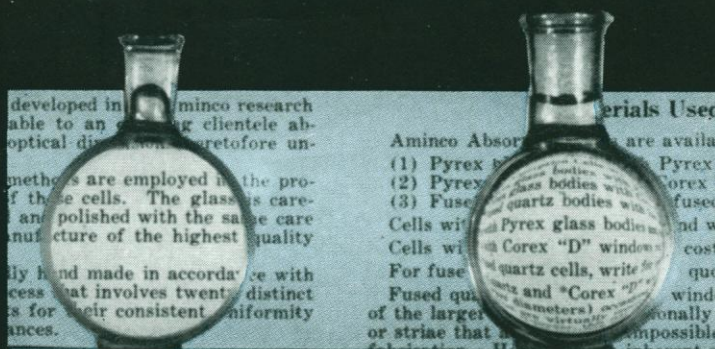
### Magnetic Materials

A conference on magnetism and magnetic materials will be held in Detroit, Mich., 16-19 November at the Sheraton-Cadillac Hotel. The conference is sponsored by the American Institute of Electrical Engineers in cooperation with the Office of Naval Research, the Metallurgical Society of the AIME, the American Physical Society, the Institute of Radio Engineers. Abstracts should be received by J. E. Goldman, Scientific Laboratory, Ford Motor Co., P.O. Box 2053, Dearborn, Mich., by 25 August. Instructions to authors as well as further conference details can be obtained from D. M. Grimes, Department of Electrical Engineering, University of Michigan, Ann Arbor, Mich.

### Calorimetry Conference

The 14th Calorimetry Conference will meet at Yale University, 10-12 September. The purpose of the conference is to promote new and improved calorimetric investigations of systems in which thermal effects play an important role. All phases of calorimetry are con-

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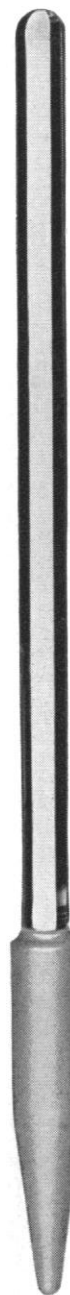
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sidered, as well as related topics such as temperature measurement, calorimetric standards, and publication policies. A feature of the 14th conference will be the H. M. Huffman memorial lecture by George S. Parks of Stanford University. Persons wishing to attend or present a paper are invited to write to the conference chairman, Prof. David White, Ohio State University, Columbus. The deadline for receipt of titles is 1 July.

### Molecular Quantum Mechanics

An international conference on molecular quantum mechanics will be held at the University of Colorado, Boulder, 21-27 June, under the sponsorship of the National Science Foundation. Steering committee members include J. O. Hirschfelder (Wis.), R. S. Mulliken (Chicago), R. Pariser (du Pont), W. T. Simpson (Washington), J. C. Slater (Massachusetts Institute of Technology), J. de Heer (Colorado) and J. H. McMullen (National Science Foundation). Persons who wish to attend may write the chairman of the steering committee, R. G. Parr, Department of Chemistry, Carnegie Institute of Technology, Pittsburgh 13, Pa. Attendance will be limited.

### Forthcoming Events

#### June

21-24. American Soc. of Agricultural Engineers, Chicago, Ill. (J. L. Butt, 420 Main St., St. Joseph, Mich.)

21-26. American Physical Therapy Assoc., Minneapolis, Minn. (Miss J. Bailey, 157 N. 79 St., Milwaukee 13, Wis.)

21-26. American Soc. for Testing Materials, annual, Atlantic City, N.J. (R. J. Painter, ASTM, 1916 Race St., Philadelphia 3, Pa.)

21-27. American Library Assoc., Washington, D.C. (D. H. Clift, American Library Assoc., 50 Huron St., Chicago 11, Ill.)

21-27. Molecular Quantum Mechanics, intern. conf., Boulder, Colo. (R. G. Parr, Carnegie Inst. of Technology, Pittsburgh, Pa.)

22-24. American Soc. of Refrigerating Engineers, Lake Placid, N.Y. (R. C. Cross, 234 Fifth Ave., New York 1.)

22-25. Agricultural Inst. of Canada, annual meeting and conv., Winnipeg, Manitoba. (National Research Council, Scientific Liaison Office, Ottawa, Canada.)

22-25. British Computer Soc., 1st conf., Cambridge, England. (British Computer Soc., 29 Bury St., London, S.W.1, England.)

22-25. Waste Disposal in the Marine Environment, 1st intern. conf., Berkeley, Calif. (Dept. of Conferences, University Extension, Univ. of California, Berkeley 4.)

22-26. Air Pollution Control Assoc., annual meeting, Los Angeles, Calif. (H.

M. Pier, APCA, 4400 Fifth Ave., Pittsburgh 13, Pa.)

22-26. American Inst. of Electrical Engineers, summer general and Pacific meeting, Seattle, Wash. (N. S. Hibshman, AIEE, 33 W. 39 St., New York 18.)

22-26. Education in Materials, American Soc. for Engineering Education and American Soc. for Testing Materials, joint symp., Atlantic City, N.J. (R. J. Painter, ASTM, 1916 Race St., Philadelphia 3, Pa.)

22-26. International Whaling Commission, 11th meeting, London, England. (IWC, Room 413, 3 Whitehall Place, London, S.W.1.)

23-26. American Home Economic Assoc., Milwaukee, Wis. (Mrs. D. S. Lyle, National Inst. of Drycleaning, Silver Spring, Md.)

23-27. International Dairy Federation, 44th general assembly, London, England. (Secretary General, Intern. Dairy Federation, 202 rue de la Loi, Brussels 4, Belgium.)

24-26. Nuclear Instrumentation, 2nd natl. symp., Idaho Falls, Idaho. (H. S. Kindler, Technical and Educational Services, ISA, 313 Sixth Ave., Pittsburgh 22, Pa.)

24-26. Significant Trends in Medical Research, Ciba Foundation 10th anniversary symp. (by invitation), London, England. (G. E. W. Wolstenholme, Ciba Foundation, 41 Portland Pl., London, W.1.)

28-4. International Inst. of Welding, annual assembly, Opatija, Yugoslavia. (G. Parsloe, Secretary General, IIW, 54 Princes Gate, London, S.W.7, England.)

29-1. Military Electronics, 3rd natl. conv., Washington, D.C. (L. R. Everingham, Radiation, Inc., Orlando, Fla.)

29-3. Dairy Cong., 15th intern., London, England. (R. E. Hodgson, Animal Husbandry Research Div. Agricultural Research Service, U.S. Dept. of Agriculture, Washington 25.)

29-3. Problems in Pastoral Psychology (Inst. for the Clergy of All Faiths), New York, N.Y. (A. A. Schneiders, Committee for the Inst. for the Clergy, Dept. of Psychology, Fordham Univ., New York 58, N.Y.)

29-3. Superconductivity, IUPAP colloquium, Cambridge, England. (D. Schoenberg, Dept. of Physics, Univ. of Cambridge, Mond Laboratory, Cambridge.)

29-4. Glass, 5th intern. cong., Munich, Germany. (P. Gilard, International Commission on Glass, 24, rue Dourlet, Charleroi, Belgium.)

30-10. International Electrotechnical Commission, Madrid, Spain. (IEC, 1-3, rue de Varembe, Geneva, Switzerland.)

#### July

1-3. Hydraulics, annual conf., Fort Collins, Colo. (W. H. Wisely, American Soc. of Civil Engineers, 33 W. 39 St., New York 18.)

1-4. British Tuberculosis Assoc., annual (closed), Cambridge, England. (BTA, 59, Portland Pl., London, W.1, England.)

1-5. International Radio and Electronics Conv., Cambridge, England. (British Institution of Radio Engineers, 9, Bedford Sq., London, W.C.1, England.)

(See issue of 15 May for comprehensive list)