## Meetings

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

From the programs and other events already in an advanced stage of planning, it is apparent that the 125th meeting of the American Association for the Advancement of Science, 26–31 Dec., will be well balanced, particularly well attended, and especially significant. This annual meeting for the year 1958 will also be the seventh Washington meeting.

Unlike the previous AAAS Washington meeting of September 1948, when the Association celebrated its centenary without participating societies and with no commercial exhibits, this year's meeting will be similar in pattern to those of recent years.

The programs of the 18 AAAS sections will cover the principal fields of science, and some 44 organizations will have their own sessions. Included are 13 national meetings-notably those of the American Astronautical Society, the American Society of Zoologists, the Society of Systematic Zoology, the History of Science Society, and the science teaching societies-and special or regional meetings of 31 societies. Among this latter group are societies not previously represented, such as the American Society of Photogrammetry, the Instrument Society of America, and the Washington Academy of Sciences. Many of the more than 300 sessions will be cosponsored by an additional 40 or more societies.

Among the highlights of the Washington meeting will be a five-session symposium commemorating the Linnaean Bicentennial, sponsored by the Society of Systematic Zoology and cosponsored by the Systematic Section of the Entomological Society of America, the American Society of Plant Taxonomists, and others, and the three sessions devoted to the International Geophysical Year. There will be distinguished evening addresses sponsored by the Scientific Research Society of America, the Society of the Sigma Xi, and the United Chapters of Phi Beta Kappa, and the National Geographic Society will present another of its uniformly excellent illustrated lectures.

The Association as a whole-in addi-

tion to its business sessions, the retiring presidential address of Laurence H. Snyder, a reception, and a smoker—will have a two-session general symposium, "Moving Frontiers of Science III," concerned with the comparative structure of science and scientific organizations throughout the world. The problems in science and education that confront the nation at the present time will be reflected in a number of the programs. The Association's Committee on the Social Consequences of Science is considering presentation of a two-day program devoted to air and water pollution.

Thus this 125th 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." 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 279 affiliates and a membership approaching 60,000, the AAAS more than ever is prepared to consider matters that affect all scientists and society. In recent years the Association has also increasingly recognized its responsibility to inform the general public on developments in science and its obligation to help strengthen the nation's educational system.

The significance of the seventh Washington 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. The 1958 version of the Association's Annual Exposition of Science and Industry will be one of the most complete and attractive ever staged. It is probable that supplemental space will have to be used for the special exhibits that governmental agencies and nonprofit organizations have expressed a wish to show. Fortunately, such space is available, on the approaches to the exhibit hall. Incidentally, the exposition is not intended for young people below the college level-most of the exhibits would be too technical. (The Association, to meet the interests of younger students of science, annually arranges a Junior Scientists Assembly, at which eminent scientists address a large audience of highschool students on aspects of science and scientific careers.)

Center of the meeting and AAAS Headquarters will be the attractive Sheraton-Park Hotel, 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. This hotel's large ballroom will be the site of the AAAS Smoker for all registrants, on the evening of 29 Dec.

Other hotels will be the headquarters of related sections and societies-the Shoreham, for example, will house the science teaching societies. Hotel headquarters assignments in the Dupont Plaza, Roosevelt, Sheraton-Carlton, and Statler, in the Hotel Twenty-four Hundred, and in the Washington, Willard, Windsor Park, and Woodner 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 book-size General Program-Directory early in December, by first-class mail.

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 Washington meeting is Leonard Carmichael, secretary of the Smithsonian Institution, which generously housed the AAAS for many years prior to 1946. Carmichael's 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 at 4 P.M. on the afternoon of 26 Dec. with the vice-presidential address, "Recent developments in topological and analytical dynamics," by G. A. Hedlund, Yale University. A group of invited papers on "Mathematics for the Social Scientists"-probably a joint presentation with the Operations Research Society of America-is scheduled for the morning of 27 Dec. A panel discussion on "The Problem of Formulating a Problem," under the leadership of Richard Burington, Naval Ordnance, which will also be of interest to those who work in applied mathematics and peripheral areas, will be held the morning of 28 Dec.

The recently affiliated Association for Computing Machinery (Jim Douglas, SCIENCE, VOL. 127 Mathematics Department, Rice Institute) will hold one of its two annual national meetings with the AAAS in Washington.

#### Physics (B)

Section B (J. Howard McMillen, National Science Foundation) will hold a three-session symposium, "Recent Advances in Physics," from the afternoon of 28 Dec. through 29 Dec. Topics and speakers will include: "Effects of lightning on trees and buildings," by Francis Defandorf, National Bureau of Standards; "Elementary particles," by Maurice Shapiro, Naval Research Laboratory; "The properties of positronium," by Richard Ferrell, University of Maryland; and "The present status of relativity theory," by Joseph Weber, University of Maryland. At the physicists' luncheon, which Section B will sponsor jointly with the American Association of Physics Teachers, Chesapeake Section, Raymond T. Birge, University of California, Berkeley, will give the retiring vice-presidential address of the section and Robert Bruce Lindsay, Brown University, will serve as toastmaster.

Previously unrepresented at AAAS meetings, the recently affiliated American Astronautical Society (Ross Fleisig, 516 Fifth Avenue, New York 36), will hold its fifth annual meeting with the AAAS. There will be some three days of sessions for invited and submitted papers on aspects of space science, grouped by subject.

The American Meteorological Society (Kenneth Spengler, AMS, Boston) will cosponsor appropriate sessions and plans to have several sessions of its own.

#### Chemistry (C)

The program of Section C includes a three-session symposium on "Chemical Effects of High Energy Radiation" (Leo A. Wall, National Bureau of Standards) with Wall, Milton Burton (University of Notre Dame), and S. D. Bailey (Quartermaster Research and Development Center) as discussion leaders; a two-session symposium, "Frozen Free Radicals" (F. O. Rice, Chemistry Department, Catholic University of America); and a third symposium, "Gas Phase Reaction Kinetics" (Ralph Klein, National Bureau of Standards), to be held within the period 27-30 Dec. At the chemists' dinner, 29 Dec., F. O. Rice will give the vice-presidential address of Section C. There will also be sessions for contributed papers.

Alpha Chi Sigma, Washington Professional Chapter (Andrew F. Freeman, U.S. Department of Agriculture, Washington, D.C.) will give a chemists' luncheon and will present an address for all chemists.

The American Association of Clinical Chemists (Elizabeth G. Frame, Clinical Center, National Institutes of Health, Bethesda, Md.) will have a symposium, sessions for contributed papers, and a dinner with a speaker.

#### Astronomy (D)

Section D (Frank K. Edmondson, Goethe Link Observatory, Indiana University) is organizing a symposium on celestial mechanics, which, together with the retiring vice presidential address by Chester B. Watts, U.S. Naval Observatory (Dirk Brouwer, Yale University, presiding), will be held early in the meeting period so that astronomers may also attend the American Astronomical Society meeting in Florida.

The Astronomical League (Grace C. Scholz, 410 Mason Hall Apartments, Alexandria, Va.) will have a day of sessions.

#### Geology and Geography (E)

The program of Section E (Frank C. Whitmore, Jr., U.S. Geological Survey, Washington, D.C.) includes a two-session symposium (27 Dec.) on the history of geology, cosponsored by Section L; contributed papers on geology and geography (28 Dec.); and two two-session symposia on 29–30 Dec., one of them, "Multiple Glaciations," arranged by Richard J. Lougee, of Clark University. As usual, the Geological Society of America will cosponsor all geologic sessions, including the Section E smoker, 27 Dec., at which the retiring vice-presidential address of Robert R. Shrock, Massachusetts Institute of Technology, will be given, with Byron N. Cooper, Virginia Polytechnic Institute, presiding. In addition, Section E will cosponsor the symposium of Section O and the program of the American Society of Photogrammetry.

The Association of American Geographers, Middle Atlantic Division will cosponsor the geographical sessions of Section E and will have a two-session symposium of its own, 27 Dec.

The National Speleological Society (William E. Davies, U.S. Geological Survey, Washington, D.C.) will have two sessions for contributed papers, principally on biology, and a symposium on karst phenomena, cosponsored by Section E. The National Geographic Society will have its usual outstanding lecture and accompanying film, probably on the evening of 30 Dec.

#### Zoological Sciences (F)

The program of Section F (Karl M. Wilbur, Department of Zoology, Duke University) will be coordinated with the national meetings of the American Society of Zoologists and the Society of Systematic Zoology. It will consist of one or more symposia, such as "Unsolved Problems in Biology III," and the cosponsorship of appropriate sessions. At

the zoologists' dinner, presented jointly with the zoological societies, the vicepresidential address of the section will be given by Harold H. Plough, Amherst College.

The national meeting of the American Society of Zoologists (Sears Crowell, Indiana University ) will include a threesession symposium on vertebrate morphology, arranged by Alfred Romer; a two-session symposium on arthropod physiology; a series of sessions for contributed papers; the cosponsorship of appropriate programs; and the annual business meeting.

The Society of Systematic Zoology (G. W. Wharton, Department of Zoology, University of Maryland) will celebrate the occasion of its tenth annual meeting and commemorate the 200th anniversary of the publication of the tenth edition of Linnaeus' Systema Naturae with a program of special interest to all systematic biologists. The theme will be "The Linnaean Bicentennial: 200 Years of Progress in Systematics." The following symposia and panel discussions are planned: (i) "Linnaeus and Nomenclatorial Codes," including Linnaeus' contributions to systematic biology, the botanical code, the microbiological code, and the zoological code; (ii) "Biological Bases of Linnaean Concepts" (this symposium, arranged by Alfred Emerson, Society of Systematic Zoology, will stress biological rather than historical or nomenclatorial subjects); (iii) "Systemat-ics-Present and Future," including the status of systematic botany, the status of systematic zoology, the future of systematic botany, and the future of systematic zoology; (iv) a panel discussion on the London Congress and zoological nomenclature (Curtis Sabrosky will lead a discussion of the new code to be adopted at London, and panel members will be drawn from among systematists who attend the London Congress); (v) a summary panel: each of the preceding symposia will be summarized, and a panel composed of those who have spoken previously will discuss questions that have arisen in the course of the presentations. Cosponsors of the foregoing program include AAAS Sections F and G, the American Society of Zoologists, Entomological Society of America, Association of Southeastern Biologists, Society for the Study of Evolution, American Ornithologists' Union, American Society of Mammalogists, American Society of Ichthyologists and Herpetologists, and the American Society of Plant Taxonomists.

The Society of Systematic Zoology will also have sessions for contributed papers, a dinner, and a business meeting and will cosponsor a biologists' smoker early in the meeting period. Another feature will be the annual SSZ Library and Lounge for all zoologists.

#### **Biological Sciences (FG)**

Between biennial meetings, Beta Beta Beta Honorary Biological Society (Mrs. Frank G. Brooks, Box 336, Madison Square Station, New York 10) will hold a meeting of its study committee with the AAAS, 27 Dec. It is anticipated that the Ecological Society of America (John H. Davis, Jr., Department of Botany, University of Florida), will have its usual regional meeting with the Association, with sessions for contributed papers and cosponsorship of appropriate programs.

The annual national meeting of the National Association of Biology Teachers (Paul Klinge, Jordan Building, Indiana University) will begin with business meetings 26 Dec. During the meeting period there will be a luncheon, a joint meeting with the American Nature Study Society, the National Association for Research in Science Teaching, and the National Science Teachers Association (28 Dec.), and a series of separate sessions. A field trip with the American Nature Study Society, 30 Dec., will conclude the program. The Biometric Society, ENAR (Jerome Cornfield, Division of Research Services, National Institutes of Health) is planning a joint program with the American Statistical Association that will not conflict, in time, with the society's national meetings in Chicago. It is expected that the American Society of Naturalists (Bruce Wallace, Biological Laboratory, Cold Spring Harbor, N.Y.) will either arrange a symposium or cosponsor one in the F, FG, or G series.

#### Botanical Sciences (G)

In addition to the symposium "Some Unsolved Problems in Biology III," held jointly with Section F, Section G (Barry Commoner, Henry Shaw School of Botany, Washington University) will have sessions for contributed papers in the principal fields of botany; these will probably be cosponsored by the American Society of Plant Physiologists, the Ecological Society of America, and others. Other symposia are planned, and, following the annual botanists' dinner, the vice-presidential address of Section G will be given by Oswald Tippo, Yale University.

#### Anthropology (H)

The plans of Section H (James L. Giddings, Haffenreffer Museum, Mount Hope Grant, Bristol, R.I.) are yet to be announced but probably will include a symposium and one or more vice-presidential addresses.

## Psychology (I)

Section I (Clifford T. Morgan, Town Point, Cambridge, Md.) will have six sessions of invited papers covering the principal areas of research activity in psychology. The vice-presidential address will be given by B. F. Skinner, Harvard University.

### Social and Economic Sciences (K)

Section K will have a symposium on "Research Problems in the Social Sciences"; in addition, the National Academy of Economics and Political Science (Donald P. Ray, George Washington University), the American Economic Association, and Section K, on the evening of 27 Dec., will jointly sponsor a symposium on "Major Problems of the American Economy." This will include the vice-presidential address of Joseph J. Spengler, Duke University. 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 will again sponsor sessions for contributed papers in the social and economic sciences.

The AAAS Committee on the Social Consequences of Science (Chauncey D. Leake, Ohio State University College of Medicine) is planning a four-session symposium on "Pollution of Airs and Waters."

The American Society of Criminology (Donal E. J. MacNamara, New York Institute of Criminology) will have a four-session symposium, "Controversial Areas in 20th Century Criminology," 27-28 Dec., and a luncheon with speakers. Among the "controversial areas" which will be discussed are criminal somatotyping, delinquency prediction techniques, legalization of gambling, integration of small police units, graphological diagnosis or identification of personality defects and criminal tendencies, hypnosis and crime, personnel screening techniques, crime and delinquency statistics, and the certification or licensing of practitioners in criminological and allied fields. Cosponsors of the program are the Association for the Psychiatric Treatment of Offenders, Institute for Research on Crime and Delinquency, New York Institute of Public Service Training, New York Institute of Criminology, and Character Underwriters Inc.

The American Political Science Association (Evron M. Kirkpatrick, APSA, Washington, D.C.) is considering sponsoring a special program jointly with Section K.

The American Sociological Society (Kingsley Davis, Institute of International Studies, University of California, Berkeley) plans a special meeting with the AAAS. One symposium, "Demographic and Sociological Aspects of Scientific Manpower," 27 Dec., arranged by Theodore Caplow, University of Minnesota, may include papers on the changing prestige and reward system of the learned occupations in America, the medical profession and scientific manpower (a comparative analysis of interoccupational relations), professional manpower allocation in the Soviet Union, and a sociological analysis of the reasons for deficient scientific education in American schools.

A second symposium, "Sociological Studies of Mental Disorder," chaired jointly by A. B. Hollingshead and Jerome K. Myers of Yale University, may include papers on sociological aspects of alcoholism in the United States, the social structure of institutions for mental care, statistical problems in measuring the incidence and prevalence of mental disorder, social stratification and schizophrenia, and new departures in medical sociology with particular reference to mental health.

The American Statistical Association (Ezra Glazer, 305 E. George Mason Drive, Falls Church, Va.) will have a regional meeting of particular interest to local statisticians in both the physical and biological sciences.

The Metric Association (J. T. Johnson, Claremont, Calif.) plans a joint program with Section C.

## History and Philosophy of Science (L)

The program of Section L (John W. Streeter, Franklin Institute, Philadelphia), coordinated with the national meeting of the History of Science Society, will include a symposium on communications, joint with the Conference on Scientific Communication Problems, a second symposium on free fall or the concept of space, possible sessions for contributed papers, and a business meeting. The vice-presidential address of Carl B. Boyer, Brooklyn College, will be given at a dinner, sponsored jointly with the History of Science Society. Section L will cosponsor appropriate portions of the society's program and Section E's "History of Geology" symposium.

The annual national meeting of the *History of Science Society* (Morris C. Leikind, Armed Forces Institute of Pathology, Washington, D.C.) will include a symposium on the progress of the history of science in America, another on recent studies of pre-Darwinian evolution, one or more sessions for contributed papers, one or more luncheons or dinners, and a business meeting.

It is anticipated that the Philosophy of Science Association (C. West Churchman, Case Institute of Technology) will have a multisession symposium. The Society for General Systems Research (Richard L. Meier, Mental Health Research Institute, Ann Arbor, Mich.) will hold its annual meeting with the AAAS. One session will be a symposium, "Population Dynamics for Humans, Organisms, and Concepts," held on the morning of 29 Dec., arranged by Kenneth E. Boulding, University of Michigan; the afternoon session, following an informal luncheon, will be for contributed papers.

#### Engineering (M)

Section M will have a two-session symposium, "National and International Aspects of the Systems of Units of Science and Technology," arranged by a committee (Carl F. Kayan, College of Engineering, Columbia University, chairman); it will cosponsor other appropriate programs.

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

Two affiliated societies which have not participated previously in AAAS meetings have arranged special sessions: The *American Society of Photogrammetry* (Richard G. Ray, U.S. Geological Survey, Washington, D.C.) plans to hold a two-session symposium, 29 Dec., cosponsored by Section E and other appropriate sections, on applications of photogrammetry in different disciplines. The *Instrument Society of America* (Orval L. Linebrink, Battelle Memorial Institute) has scheduled a symposium, "Instrumentation of Precision Measurement," for the afternoon of 29 Dec.

#### Medical Sciences (N)

As in previous years, Section N will have a four-session symposium, with participants coming from all parts of the Continent and, probably, with one or more speakers from abroad. This year's subject is "Congenital Heart Disease." The symposium, arranged by a committee (Gordon K. Moe, State University of New York Medical Center, Syracuse, chairman), will include papers on embryology and prenatal influences, pathology, biochemistry physiology, diagnosis, and the latest treatments; included will be the vice-presidential address of Moe and the announcement of the 14th Theobald Smith award, given by Eli Lilly and Company. Section N will also cosponsor a variety of appropriate programs.

Alpha Epsilon Delta (Maurice L. Moore, national secretary) will devote its usual morning session to the subjects of premedical and predental education. This session will be held 27 Dec., at George Washington University School of Medicine. The annual luncheon, with a speaker of prominence, and informal conferences will conclude the day's activities.

The American Psychiatric Association (L. J. West, University of Oklahoma School of Medicine) will have its usual special meeting with the AAAS—devoted, this year, to a four-session symposium in some area of neurophysiology.

Details of the program of the special meetings of the American Association of

Hospital Consultants (John C. MacKenzie, Touro Infirmary, New Orleans) and the American Physiological Society (Fred A. Hitchcock, Ohio State University) are not yet available.

#### Dentistry (Nd)

The two-session symposium of Section Nd (Reidar F. Sognnaes, Harvard School of Dental Medicine), on "Calcification in Biological Systems," to be held 29 Dec., will include the following papers and speakers: "Calcification in representative invertebrates with special reference to crustaceans," Dorothy F. Travis, University of New Hampshire; "Mineralization mechanism in the exoskeleton of molluscs and echinoderms," Gerrit Bevelander, New York University; "Mineral deposition in cartilage," Richard Follis, Armed Forces Institute of Pathology; "Relation of organic and inorganic elements of bone," Robert R. Robinson, Johns Hopkins University; "Dental aspects of mineralization," Reidar F. Sognnaes, Harvard University; "Discussion of physiological calcification mechanisms; pathological calcification," George M. Hass, Presbyterian Hospital, Chicago; "Salivary calculus deposition," S. Wah Leung, University of Pittsburgh; "Mineral nucleation on reconstituted collagen in vitro," Melvin I. Glimcher, Massachusetts Institute of Technology; and "Behavior of bone in tissue culture,' Paul Goldhaber, Harvard University. The symposium will conclude with a general discussion and a general summary. The program of the section will be cosponsored by the American College of Dentists, the American Dental Association, and the International Association for Dental Research, North American Division.

#### Pharmacy (Np)

The three-day program of Section Np (John E. Christian, School of Pharmacy, Purdue University) begins 27 Dec. with a morning session for contributed papers on hospital pharmacy and continues with symposia on "The Hospital Pharmacist of the Future" and "Advances in Conquering Cancer," arranged by George F. Archambault, U.S. Public Health Service, Washington, D.C., and Joseph Oddis, American Hospital Association, Chicago. Other sessions, for contributed papers, are scheduled for the evenings of 27 and 29 Dec. There will be a pharmacists' dinner, a vice-presidential address by Archambault, and tours of the Clinical Center, National Institutes of Health, and the American Pharmaceutical Association. 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, and National Association of Boards of Pharmacy.

#### Agriculture (O)

Section O (Roy D. Hockensmith, Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C.) will have a four-session symposium on "Water and Agriculture," 29-30 Dec. Among the subjects and speakers are the following: (Part I) "Water for the future: water resources planning and development in agriculture," Edward A. Ackerman, Resources for the Future, Inc., Washington, D.C.; "Legal aspects of water use in agriculture," Clarence A. Davis, Washington, D.C.; "Significance of small watershed programs to American agriculture," Carl B. Brown, Soil Conservation Service, Washington, D.C.; "Changing groundwater conditions and their impact on agriculture," R. L. Nace, U.S. Geological Survey, Washington, D.C. (Part II) "Water sources: factors that affect the water cycle," William C. Ackerman, Illinois State Water Survey Division; "The effects of weather modification on water supplies," Howard T. Orville, Beckman & Whitley, Inc., Long Green, Md; "Use of climatic data in guiding farming operations," C. H. M. Van Bavel, Agricultural Research Service (ARS), North Carolina State College; "Precipitation measuring and analyses as an aid to agriculture," Gerald L. Barger, Weather Bureau, Ashville, N.C. (Part III) "Water planning and use: relations between soil conservation practices and the availability of water for agriculture," Cecil H. Wadleigh, ARS, Beltsville, Md.; "Increasing water yields by forest management," Herbert C. Storey, U.S. Forest Service, Washington, D.C.; "Interdependence of upstream and downstream water management," Wayne D. Criddle, Utah State Engineer, Salt Lake City; "Views of water users in federal reclamation projects," William I. Palmer, U.S. Bureau of Reclamation, Washington, D.C. (Part IV) "Water control: drainage problems on agricultural lands," T. W. Edminster, ARS, Beltsville, Md.; "Control of aquatic vegetation and phreatophytes," F. L. Timmons, ARS, Laramie, Wyo; "Suppressing evaporation for water surfaces," G. Earl Harbeck, Jr., U.S. Geological Survey, Denver, Colo.; "Energy balance approach to evapotranspiration from crops," C. B. Tanner, University of Wisconsin. At the end of each session there will be a period for discussion after presentation of the papers. Discussion leaders include Bernard Frank (U.S. Department of Agriculture, Washington, D.C.), Kenneth C. Spengler (American Meteorological Society), William G. McGinnies (Central States Forest Experiment Station, Columbus, Ohio), and Waldo E. Smith (American Geophysical Union).

This symposium will be cosponsored

by Section E and the American Geophysical Union, American Meteorological Society, American Society of Agricultural Engineers, American Society of Civil Engineers, American Society of Agronomy, American Society for Horticultural Science, Gamma Sigma Delta, Geological Society of America, Society of American Foresters, and Soil Conservation Society of America.

#### Industrial Science (P)

The program of Section P (Allen T. Bonnell, Drexel Institute of Technology) will include, on 29 Dec., a symposium on "Industrial Science Today," of particular interest to leaders in industry. This will be followed by a luncheon at which the retiring vice-presidential address of Frank C. Croxton, Battelle Memorial Institute, will be given. The final session will be the third Industrial Citation Dinner.

The Society for Industrial Microbiology, Washington Section (Walter N. Ezekiel, Bureau of Mines, Washington, D.C.) will have a symposium cosponsored by Section P and one or more sessions for contributed papers.

Education (Q)

The program of Section Q (Herbert

## Soviet Research in ION-EXCHANGE CHROMATOGRAPHY in English translation

Twenty papers by leading Soviet chromatographers covering certain theoretical problems of the application of ion-exchange chromatography, as well as original research and review papers on various applications of ion-exchange resins, particularly in the medicine and food industries. Papers were originally read at a session of the Commission on chromatography, Div. of Chem. Sci., Acad. Sci. USSR, in the fall of 1956, and published in Russian in 1957. English translation, 184 pages, \$35.00

### TITLES OF REPORTS

The Laminar Method For Approximate Calculation of Chromatograms. Equations For Ion Exchange Isotherms and Their Experimental Verification.

Absorption of the Cations of Heavy Metals by Anion Exchange Resins. Principles of Adsorption Technology.

Laws of Adsorption From Solutions Under Dynamic Conditions During Separation of Alkaloids by Means of Ion Exchange Resins.

Ion Exchange of Alkaloids on Synthetic Ion Exchange Resins. Structure of Cation Exchange Resins, Their Suggested Chemical Structure, and Possible Breakdown Products.

Basic Problems in the Synthesis and Study of Ion Exchange Resins. The Physicochemical Properties of Ion Exchange Resins.

The Properties of Some Cation Exchange Resins and the Possibility of Using Them in the Medical and Food Industries.

The Properties of Certain Anion Exchange Resins and the Possibility of Using Them in the Medical and Food Industries.

Purification of Certain Chemical Compounds by Means of Ion Exchange Sorbents.

The Possibility of Using Ion Exchange Resins for Obtaining Drinking Water From Water of High Mineral Content.

Purification of Lactic Acid by Means of Ion Exchangers.

Methods for Isolating Anabasine, Spherophysine, and Methyl Caffeine From Plant Raw Material and Mother Liquors by Means of Ion Exchangers.

Elution Curves of Morphine During Ion Exchange Chromatography on Cation Exchangers.

The Application of Ion Exchange Adsorbents in Pharmaceutical Analysis. Absorption of Streptomycin by the Hydrogen and Hydrogen Salt Forms of Carboxylic Cation Exchangers.

The Use of Ion Exchange Sorbents for Preventing Blood Clotting. Separation of Cadmium and Copper, Cadmium and Lead, and Cadmium and Bismuth by Ion Exchange Chromatography.

Consultants Bureau's translations by bilingual scientists. Clear reproduction by multilith process from IBM cold-type, including all diagrammatic and tabular material; books staple bound in durable paper covers.



A. Smith, University of Kansas) includes two joint sessions with the International Council for Exceptional Children, 26 Dec.; two sessions, joint, with the American Educational Research Association, 30 Dec.; four sessions for contributed papers, 29-30 Dec.; and a business meeting and the vice-presidential address of Harry A. Cunningham, Kent State University, 29 Dec. The AAAS Cooperative Committee on the Teaching of Science and Mathematics (Bernard B. Watson, 2806 Blaine Drive, Chevy Chase, Md.) will cosponsor the National Association for Research in Science Teaching program.

The four science teaching societies meeting with the AAAS (coordinator, Robert H. Carleton, Executive Secretary, National Science Teachers Association, Washington, D.C.) will have a joint mixer the evening of 27 Dec. The joint session the morning of 28 Dec. will be devoted to the findings of the International Geophysical Year.

The separate portions of the program of the regional meeting of the National Science Teachers Association (William A. Kilgore, D.C. Teachers College, Washington, D.C.) consists of a meeting of the executive committee and two sessions on 27 Dec. and three other sessions on 28 and 29 Dec., the one on elementary science joint with the American Nature Study Society. Tours to the National Institutes of Health, the Bureau of Standards, and the Agricultural Research Center are scheduled for the morning of 29 Dec.

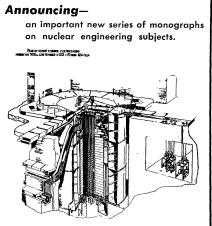
The National Association for Research in Science Teaching (Ellsworth S. Obourn, U.S. Office of Education, Washington, D.C., and Thomas P. Fraser, Morgan State College, Baltimore, Md.) will have a program of particular interest to science and mathematics supervisors, the morning of 27 Dec.

#### Science in General (X)

The annual Academy Conference (John A. Yarbrough, Meredith College, Raleigh, N.C.,) composed of delegates and other members of the 44 academies affiliated with the Association, will hold a day of sessions on 28 Dec., concluding with the annual dinner and presidential address by Yarbrough. An additional session devoted to a conference on junior academies is under consideration. The Academy Conference will sponsor the 12th annual Junior Scientists Assembly (Keith C. Johnson, Woodrow Wilson High School, Washington, D.C.) for selected high-school students, to be held at a convenient site, apart from the rest of the meetings.

The American Association of Scientific Workers (Robert J. Rutman, national secretary, 6331 Ross St., Philadelphia 44) is planning a one-day conference on participation of women in science.

SCIENCE, VOL. 127



#### **REACTORS OF THE WORLD**

**REACIORS OF THE WORLD** This unique collection of cutaway drawings of twelve atomic reactors contains a resume of technical data on each reactor such as type, purpose, capacity, fuel, canning, moderator, lattice, pressure vessel, coolant, pumping, flux, conversion, burn-up reactivity, shielding, boilers, turbo-alternators and steam dumping. The following reactors are treated: Bepo; C.P. 5; N.R.X.; Dimple; Zeus; Calder Hall; 5 MW Russian Reactor; Dido; Bradwell-on-Sea; Dounreay; E.B.W.R.; Lido. 1958. 24 plates. 834 x 1134. Illus. Card Covers. \$2.50

#### ELEMENTARY NUCLEAR PHYSICS by W. K. Mansfield

Presents the basic nuclear physics of reactors. Summarizes the atomic theory of matter, and gives an elementary account of nuclear theory dealing with radioactivity, nuclear reactions, and fission. Neutron-induced reactions and the concept of neutron flux are covered. There are chapters on the properties of nuclear radiations and radiation measurements. 1958. viii. 60 pp. Illus.  $5\frac{1}{2}$  x  $8\frac{1}{2}$ . Paper. \$2.75

#### NUCLEAR REACTOR THEORY by J. J. Syrett

by J. J. Syrett Outlines the physics of reactor design, with emphasis on the heterogeneous graphite-natural uranium thermal reactor for nuclear power plant. Covers fission chain reaction and the concept of critical size. Shows how theories of slowing down and diffusion of neutrons in a reactor lattice and conditions which must be satisfied for a stable chain reaction. Describes effect of temperature changes and neutron irradiation on reactor properties, and discusses reactors and their fueling. 1958. viii. 80 pp. III. 5½ x 8½. Paper. \$2.95

#### REACTOR HEAT TRANSFER by W. B. Hall

by W. B. Hall The transfer of heat from fuel elements to coolant is a problem of growing importance in reactor cooling. This Monograph deals with the fundamental aspects of convective heat transfer; the application of heat-transfer principles to reactor design; and miscellaneous aspects of reactor heat transfer. 1958. viii. 68 pp. Illus.  $5\frac{1}{2} \ge 8\frac{1}{2}$ . Paper. \$2.75.

#### In Preparation

- NUCLEAR REACTOR SHIELDING
- NUCLEAR REACTOR CONTROL AND
  INSTRUMENTATION
- STEAM CYCLES FOR NUCLEAR POWER
  PLANT

The American Geophysical Union (Waldo E. Smith, AGU, Washington, D.C.) is planning a regional meeting and will cosponsor appropriate sessions, such as those on the IGY program.

The program of the annual national meeting of the American Nature Study Society (Stanley Mulaik, University of Utah) begins with a board meeting on 26 Dec. and includes, besides joint sessions with the science teaching societies, general sessions on 27 Dec. and the afternoon of 28 Dec. The annual dinner, followed by the annual showing of Kodachrome slides, will be held the evening of 29 Dec.; the joint field trip with the National Association of Biology Teachers will be held on 30 Dec.

The Conference on Scientific Communication Problems (George L. Seielstad, Applied Physics Laboratory, Johns Hopkins University, Silver Spring, Md.) now in its seventh year, will have six sessions, 28–30 Dec., devoted, respectively, to "Science in the News," "Science in Storage," "Science and the National Defense," "Science and the National Defense," "Science and "Three-Dimensional Presentations," "Science in Textbooks," and "Science in Translation."

Details of the annual Conference on Scientific Manpower (Thomas J. Mills, National Science Foundation) are not yet available. As in previous years, this program will be cosponsored by the Engineering Manpower Commission, Scientific Manpower Commission, National Academy of Sciences-National Research Council, and National Science Foundation.

The three sessions devoted to the International Geophysical Year (Hugh Odishaw, National Academy of Sciences, Washington, D.C.)—which, technically, concludes with the last day of the AAAS meeting—will outline the latest IGY findings (i) in the Arctic and Antarctic, (ii) on missiles and satellites, and (iii) in meteorology and oceanography.

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

At least one of the annual addresses of the Society of the Sigma Xi (Thomas T. Holme, Yale University) and of the Scientific Research Society of America (Donald B. Prentice, Yale University) and the award of the William Procter prize are scheduled for the evening of 29 Dec., following the 59th annual convention of the Society of the Sigma Xi, the annual convention of RESA, and their joint luncheon.

The 19th annual lecture of the United Chapters of Phi Beta Kappa (Carl Billman, Phi Beta Kappa, Washington, D.C.) is scheduled for the evening of 27 Dec.

The Washington Academy of Sciences, which has as affiliates some 30 local scientific societies and local branches of national organizations, will have a special December meeting with the AAAS (George W. Irving, ARS, U.S. Department of Agriculture, Washington, D.C.).

#### Call for Papers by AAAS Sections

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

- C-CHEMISTRY. F. O. Rice, Department of Chemistry, Catholic University of America, Washington, D.C.
- E-GEOLOGY AND GEOGRAPHY. Both geology and geography, cosponsored respectively by the Geological Society of America and the Association of American Geographers, Middle Atlantic Division: Frank C. Whitmore, Jr., U.S. Geological Survey, Washington 25, D.C.
- F-ZOOLOGICAL SCIENCES (if outside the scope of the American Society of Zoologists and Society of Systematic Zoology, which are meeting with the AAAS). Karl M. Wilbur, Department of Zoology, Duke University, Durham, N.C.
- G-BOTANICAL SCIENCES. Barry Commoner, Henry Shaw School of Botany, Washington University, St. Louis 5, Mo.
- K-SOCIAL AND ECONOMIC SCIENCES. Donald P. Ray, Hall of Government, George Washington University, Washington 6, D.C.
- L-HISTORY AND PHILOSOPHY OF SCI-ENCE. John W. Streeter, Franklin Institute, Philadelphia 3, Pa.
- NP-PHARMACY. John E. Christian, School of Pharmacy, Purdue University, Lafayette, Ind.
- O-EDUCATION. Herbert A. Smith, 205 Bailey, School of Education, University of Kansas, Lawrence.

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

#### **Forthcoming Events**

#### June

23-24. Unstable Chemical Species Symp., Los Angeles, Calif. (Directorate of Advanced Studies, Air Force Office of Scientific Research, P. O. Box 2035-D, Pasadena, Calif.)

23-25. American Soc. of Heating and Air-Conditioning Engineers, semiannual, Minneapolis, Minn. (A. V. Hutchinson, ASHAE, 62 Worth St., New York 13.)

## FRONTIERS IN CYTOLOGY

edited by Sanford L. Palay

A review of areas in cytology which have been intensively investigated in recent years. Contributors include E. W. Dempsey, Don W. Fawcett, A. R. T. Denues, John J. Biesele, David P. Bloch, John I. Nurnberger and Malcolm W. Gordon, Helen Wendler Deane, Russell J. Barrnett, George E. Palade, Sanford L. Palay, H. Stanley Bennett, Gabriel C. Godman, Elias E. Manuelidis, William H. Gaylord, Jr., F. Duran-Reynals, and William G. Banfield. **\$9.75** 

## THE COMPUTER AND THE BRAIN

by John von Neumann

## by Donald R. Griffin \$3.00

THE <u>TRAVELS</u> OF WILLIAM BARTRAM

NATURALIST'S EDITION edited by Francis Harper \$8.50 \$7.50 THE WORLD OF THE ELECTRON

LISTENING

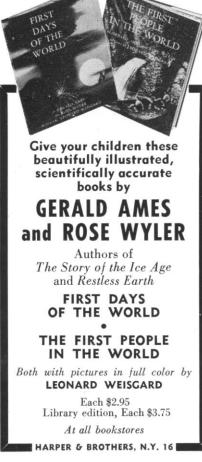
IN THE DARK

MICROSCOPE by Ralph W. G. Wyckoff \$4.00



# STEREOSCOPIC MICROSCOPE for the budget-minded!





23-25. American Soc. of Refrigerating Engineers, annual, Minneapolis, Minn. (R. C. Cross, ASRE, 234 Fifth Ave., New York 1.)

23-27. American Soc. of Civil Engineers, Portland, Ore. (W. H. Wisely, ASCE, 33 W. 39 St., New York 18.)

23-28. Low Temperature Physics, 6th internatl. conf., Leiden, Netherlands. (J. van den Handel, Kamerlingh Onnes Laboratory, Leiden.)

24-26. Carcinogenesis: Mechanisms of Action, Ciba Foundation symp. (by invitation), London, England. (G. E. W. Wolstenholme, 41 Portland Pl., London, W.1.)

24–27. American Home Economics Assoc., annual, Philadelphia, Pa. (Miss M. Horton, AHEA, 1600 20 St., NW, Washington 9.)

25-28. American Assoc. of Physics Teachers, Boulder, Colo. (F. Verbrugge, School of Physics, Univ. of Minnesota, Minneapolis.)

25-1. International Soc. of Urology, 11th, Stockholm, Sweden. (G. Giertz, Karolinska Sjukhuset, Stockholm C.)

29-2. American Astronomical Soc., Madison, Wis. (J. A. Hynek, Smithsonian Astrophysical Observatory, 60 Garden St., Cambridge 38, Mass.)

29-4. National Education Assoc., Cleveland, Ohio. (W. G. Carr, NEA, 1201 16 St., NW, Washington 6.)

30-5. High Energy Nuclear Physics Conf., annual (by invitation), Geneva, Switzerland. (CERN, Geneva 23.)

#### July

4-6. Astronomical League, Ithaca, N.Y. (Miss W. A. Cherup, 4 Klopfer St., Millvale, Pittsburgh 9, Pa.)

6-12. Cancer Cong., 7th intern., London, England. (H. F. Dorn, National Inst. of Health, Bethesda 14, Md.)

6-12. Research and Development Engineering Seminar, 2nd annual, University Park, Pa. (Extension Conference Center, Pennsylvania State Univ., University Park.)

7-9. Exchange of Knowledge in a Divided World, Chicago, Ill. (H. W. Winger, Graduate Library School, Univ. of Chicago, Chicago 37).

7-11. Technical and Industrial Communications Inst., Fort Collins, Col. (Chairman, Dept. of English and Modern Languages, Colorado State Univ., Fort Collins.)

7-12. Nuclear Physics, intern. cong., IUPAP, Paris, France. (C.I.P.N., Institut du Radium, II, rue Pierre Curie, Paris 5°).

8-11. Institute of the Aeronautical Sciences, summer, Los Angeles, Calif. (S. P. Johnston, IAS, 2 E. 64 St., New York 21.)

9-15. Zoological Nomenclature Colloquium, London, England. (F. Hemming, 28 Park Village East, Regent's Park, London, N.W.1.)

10-14. Research Methods in Soil Zoology, colloquium, Harpenden, Hertfordshire, England. (P. W. Murphy, Rothamsted Experimental Station, Harpenden.)

15-22. Association Française pour l'Avancement des Sciences, 77th cong., Namur, Belgium. (AFAS, 28, rue Serpente, Paris VI<sup>e</sup>, France.)

(See issue of 16 May for comprehensive list)