

Association Affairs

Programs Planned for the AAAS Chicago Meeting

Section and society programs in the biological sciences and agriculture to be presented at the Chicago meeting are given here. Programs in mathematics, physics, chemistry, astronomy, and geology and geography have been previously announced [*Science* **130**, 1196 (30 Oct. 1959)], except the AGU-IGY symposium which follows.

Physical Sciences (continued)

Two-session symposium: "Upper Atmosphere—Solar Relations"; joint program of the American Geophysical Union and the U.S. National Committee for IGY of the National Academy of Sciences—National Research Council, cosponsored by the American Meteorological Society; arranged by Stanley Ruttenberg, National Academy of Sciences. Part I, John A. Simpson, Enrico Fermi Institute for Nuclear Studies, University of Chicago, presiding. Papers will be presented on physics and radiation of the solar atmosphere (R. Grant Athay, High Altitude Observatory, University of Colorado); physics of the sun-earth space (Eugene Parker, Enrico Fermi Institute for Nuclear Physics, University of Chicago); motions in the magnetosphere of the earth (Thomas Gold, Department of Astronomy, Cornell University); non-relativistic protons from solar flares (John R. Winckler, University of Minnesota).

Part II, John R. Winckler, presiding. Papers will be presented on preliminary results from satellite Explorer VI: ionospheric physics (Robert A. Helliwell, Stanford University); preliminary results from satellite Explorer VI: cosmic rays (John A. Simpson, University of Chicago); temperature and density of interplanetary gas near the earth (Joseph W. Chamberlain, Yerkes Observatory, University of Chicago); trapped energetic particles and their geophysical consequences (Robert A. Jastrow, National Aeronautics and Space Administration).

Biological Sciences

Section F. Two-session symposium, jointly with Section G—Botanical Sci-

ences: Some Unsolved Problems in Biology, 1959; 28 Dec. Part I: "Organization of the Cell," cosponsored by the American Society of Zoologists and the Botanical Society of America; arranged by Norman G. Anderson, Oak Ridge National Laboratory, with Karl M. Wilbur, Duke University, presiding. Papers will be presented on nuclear-cytoplasmic interrelations (David M. Prescott, Oak Ridge National Laboratory); biochemical machines (David M. Prescott); and substructures of the cell (Norman G. Anderson).

Part II: "The Cell in Development and Inheritance," cosponsored by the American Society of Zoologists, the Botanical Society of America, and the Genetics Society of America; arranged by Barry Commoner, Washington University, with Frits W. Went, Missouri Botanical Garden, presiding. Papers will be presented on the role of the nucleus in embryonic differentiation (R. W. Briggs, Indiana University); paramutation and chromosome organization (R. A. Brink, University of Wisconsin); cytoplasmic inheritance (David A. Nanney, University of Illinois); the biochemistry of inheritance (Barry Commoner).

Two-session symposium, jointly with the Division of Biological and Medical Research, Argonne National Laboratory, and the U.S. Atomic Energy Commission; cosponsored by the American Society of Zoologists and the Electron Microscope Society of America; "The Impact of Electron Microscopy on Biology"; 29 Dec.; arranged by a committee of the Division of Biological and Medical Research, Argonne National Laboratory, consisting of B. R. Nebel, F. Wassermann, and E. L. Powers (chairman). Part I, Theodore N. Tahmisian, Argonne National Laboratory, presiding. Introduction (F. Wassermann); papers on the morphology and possible functions of some of the components of the cytoplasm (Albert J. Dalton, National Cancer Institute); from DNA to chromosomes (Hans Ris, University of Wisconsin); electron microscopic evidence of cellular activity (Sanford L. Palay, National Institute of Neurological Diseases and Blindness).

Part II, L. Evans Roth, Argonne National Laboratory, presiding. Papers will be presented on recent evidence on the structure and development of organelle systems and its importance to concepts of biological organization (Charles F. Ehret, Argonne National Laboratory); correlation of ultra-structure and function in nerve (H. Fernandez-Moran, Massachusetts General Hospital); cancer and viruses: past, present and future in the light of electron microscope studies (Leon Dmochowski, M. D. Anderson Hospital and Tumor Institute, Houston, Tex.); summary and outlook (Paul Weiss, Rockefeller Institute).

There will be five sessions of contributed papers. Session I: "Cell Studies"; cosponsored by the Society of General Physiologists; 27 Dec.; George A. Edwards, New York State Department of Health, presiding. Session II: "Developmental Biology and Morphology"; 27 Dec.; Ray Watterson, Northwestern University, presiding. Session III: "Endocrinology"; 30 Dec.; Raymond Breneman, Indiana University, presiding. Session IV, cosponsored by the Society of General Physiologists: "Physiology I"; 30 Dec.; Austin M. Brues, Argonne National Laboratory, presiding. Session V, cosponsored by the Society of General Physiologists: "Physiology II"; 30 Dec.; Ira-G. Wool, University of Chicago, presiding.

Zoologists' dinner and vice-presidential address of Section F, cosponsored by the Society of Systematic Zoology: "Current Changes in the Environment of Zoological Research," by Herbert Friedmann, Smithsonian Institution; 29 Dec.; Karl M. Wilbur, Duke University, presiding.

There will be a biologists' smoker, 29 Dec., jointly sponsored by AAAS Sections F—Zoological Sciences and G—Botanical Sciences, and all biological societies.

Society of Systematic Zoology. The Society of Systematic Zoology is a cosponsor of the two-session symposium, "Speciation and Racialization in Cavernicoles," with the National Speleological Society, 28 Dec. The details can be found in *Science* [**130**, 1198 (30 Oct. 1959)].

There will be a session for contributed papers on 29 Dec.

Symposium: "Invertebrate Classification"; 29 Dec.; Libbie H. Hyman, American Museum of Natural History, presiding. Papers will be presented on the systematics and phylogeny of Protozoa (John O. Corliss, University of Illinois); the origin and phylogeny of the coelenterates (Cadet Hand, University of California); the functions and limitations of classification (R. E. Blackwelder, Southern Illinois University).

Chicago Academy of Sciences. Four-session symposium: "The Physiology of Reproduction in Birds"; 28 and 29 Dec.; at the Chicago Academy of Sciences, 2001 N. Clark St.; arranged by Richard A. Edgren, G. D. Searle & Company. Part I; R. A. Edgren, presiding. Introductory remarks, by R. A. Edgren; papers will be presented on the role of light and darkness in the regulation of reproductive cycles in birds (Albert Wolfson, Northwestern University); brain-gonadotrophin relationships in the hen (C. L. Ralph, University of Pittsburgh); endocrine control of avian ovaries (A. V. Nalbandov, University of Illinois); steroidal block of ovulation in the laying hen (T. W. Harris, G. D. Searle & Company).

Part II; Franklin C. McLean, University of Chicago, presiding. Papers will be presented on endocrine activities of the hypophysis and gonads of birds during prehatching stages (R. L. Waterson, Northwestern University); steroids and sex differentiation in the fowl (G. Pincus and T. F. Hopkins, Worcester Foundation for Experimental Biology); effects of steroidal hormones on differentiation and growth of the bursa fabricii (R. K. Meyer, M. A. Rao, and R. L. Aspinall, University of Wisconsin); the development of the avian female genital tract under different environmental conditions (A. van Tienhoven, Cornell University); the endocrine control of sex accessory growth and function in male birds (F. K. Hilton, University of Louisville).

Part III; W. J. Beecher, Chicago Academy of Sciences, presiding. Papers on hormonal effects on plasma lipids (and atherosclerosis) (Ruth Pick, Michael Reese Hospital); structure-active relationships in the steroid control of blood lipids in chicks (D. L. Cook and R. A. Edgren, G. D. Searle & Company); calcium metabolism and medullary bone formation (F. C. McLean, University of Chicago, and M. R. Urist, University of California at Los Angeles); secondary sexual characteristics and mating behavior in birds (W. J. Beecher).

Part IV; Albert Wolfson, Northwestern University, presiding. Papers on psychophysiological factors and social behavior related to sexual behavior (A. M. Guhl, Kansas State College); hormonal relations in incubation behavior of birds (D. S. Lehrman, Rutgers University).

American Society of Naturalists. Four-session symposium, cosponsored by the Ecological Society of America and the American Society of Limnology and Oceanography: "Interactions in Nature: a Symposium on Modern Ecology"; 27 and 28 Dec.; arranged by Arthur D. Hasler, University of Wisconsin. Part I: "Popula-

tion Ecology." Papers: presidential address of the American Society of Naturalists; the place of ecology among the sciences (Paul B. Sears, Yale University); interactions in insect populations (Thomas Burnett, Entomology Laboratory, Ontario). Discussant: Thomas Park (University of Chicago).

Part II: "The Conversion of Energy." Papers will be presented on efficiency in ecological steady states (L. Basil Slobodkin, University of Michigan); productivity and the flow of energy in communities (Howard T. Odum, University of Texas). Discussant: George L. Clarke (Harvard University).

Part III: "The Nature of Adaptation in Plants." Papers will be presented on biochemistry of adaptation to environment (Edwin B. Kurtz, Jr., University of Arizona); ecotypes and community function (Calvin McMillan, University of Texas). Discussant: John T. Curtis (University of Wisconsin).

Part IV: "Ecology of Behavior." Papers on spatial orientation in animal behavior (Talbot H. Waterman, Yale University); the ethological approach in animal ecology (William S. Hoar, University of British Columbia). Discussant: Theodore Bullock (University of California at Los Angeles).

Beta Beta Beta Biological Society. Biennial business meeting; 28 Dec.; George H. Mickey, Louisiana State University, presiding.

Luncheon and address: "The Genetic Basis of Human Racial Differences," by H. Bentley Glass (Johns Hopkins University); 28 Dec.; George H. Mickey, presiding.

Ecological Society of America. There will be three sessions of contributed papers. Session I: "Animal Ecology"; 28 Dec. Session II: "Plant Ecology"; 28 Dec.; Alton A. Lindsey, Purdue University, presiding. Session III: "General Ecology"; 29 Dec.; Paul B. Sears, Yale University, presiding.

Two-session symposium, cosponsored by Sections E—Geology and Geography, F—Zoological Sciences, and G—Botanical Sciences: "Sand Dune Systems: Physical and Biological Aspects of Their Development"; arranged by Jerry Olson, Oak Ridge National Laboratory; 30 Dec. Part I: "Origin of Dune Landscapes"; Jerry Olson, presiding. Papers will be presented on Bermuda's fossil sand dunes and soils (J. Harlen Bretz, University of Chicago); factors controlling dune landforms (H. T. U. Smith, University of Massachusetts); the sand dune cycle and soil formation (David Simonett, University of Kansas); some Arctic dunes and their vegetation (Robert S. Sigafos, U.S. Geological Survey); rates of succession on Florida sand dunes (Albert M. Laessle, University of Florida); vegetation dune formation along the

Pacific Coast (William S. Cooper, Boulder, Colorado).

Part II: "Organization of Dune Communities"; Charles E. Olmsted, University of Chicago, presiding. Papers will be presented on structural and developmental patterns of some dune-building grass communities (Charles C. Laing, University of Nebraska); gradient analysis and experimentation on maritime dunes (William E. Martin, University of Minnesota); experiments on seed germination of dune plants (William Gillis, Michigan State University); diversity of dune ecosystems (Jerry Olson); discussion (Howard T. Odum, University of Texas).

Botanical Sciences

American Society of Plant Taxonomists. There will be two sessions of contributed papers; 28 and 29 Dec. Session I; William C. Steere, New York Botanical Garden, presiding. Session II; A. C. Smith, Smithsonian Institution, presiding.

Annual business meeting; 29 Dec. It will be followed by an informal discussion of herbarium curators.

Botanists' dinner and vice presidential address of Section G. Joint dinner of the American Society of Plant Taxonomists and Section G—Botanical Sciences. The speakers will be William C. Steere, New York Botanical Garden, and president, American Society of Plant Taxonomists, and Frits W. Went, Missouri Botanical Garden and vice president for Section G.

Mycological Society of America. Two-session symposium: "Classification of Fungus Groups of Debatable Affinity"; 30 Dec.; arranged by Donald P. Rogers, University of Illinois. Part I; C. J. Alexopoulos, State University of Iowa, presiding. Papers will be presented on relationships of the Actinomycetales (Clifford W. Hessel-tine, U.S. Department of Agriculture, Peoria, Ill.); the systematic position of the myxomycetes (G. W. Martin, State University of Iowa); relationships and diagnostic criteria in the Synchytriaceae (John S. Karling, Purdue University); taxonomic position of the Eccrinales and related fungi (Robert W. Lichtwardt, University of Kansas).

Part II; G. W. Martin, State University of Iowa, presiding. Papers will be presented on phylogeny and classification of the Pyrenomycetes (Roy F. Cain, University of Toronto); phylogeny of the rust fungi (John W. Baxter, University of Wisconsin); taxonomic position of the Gasteromycetes in relation to the Agaricales (Alexander H. Smith, University of Michigan).

Agriculture

Section O. Five-session symposium, cosponsored by Section F—Zoological

Sciences, Section G—Botanical Sciences, Section N—Medical Sciences, Section Nd—Dentistry, Botanical Society of America, American Society of Agronomy, Gamma Sigma Delta, Society of American Foresters, Genetics Society of America, American Society of Animal Production, American Society for Horticultural Science, American Dairy Science Association, American Institute of Biological Sciences, International Association of Milk and Food Sanitarians, Poultry Science Association, American Genetic Association, American Society of Zoologists, Soil Science Society of America, and Crop Science Society of America: "Germ Plasm Resources in Agriculture: Development and Protection"; 28, 29, and 30 Dec.; arranged by R. E. Hodgson, U.S. Department of Agriculture, Beltsville, Md. Part 1, "Origin of Germ Plasm"; C. O. Erlanson, U.S. Department of Agriculture, Beltsville, Md., presiding. Papers will be presented on geographic origin of plants useful to agriculture (J. R. Harlan, U.S. Department of Agriculture and Oklahoma State University); 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, Washington, D.C.). The discussion leader will be Henry A. Wallace, South Salem, N.Y., former Vice President of the United States, Secretary of Agriculture and Secretary of Commerce.

Part II, "Need for and Utilization of Additional Sources of Germ Plasm"; H. J. Sloan, Agricultural Experiment Station, St. Paul, Minnesota, presiding. Papers will be presented on horticultural crops (F. P. Cullinan, U.S. Department of Agriculture, Beltsville, Md.); field crops (M. G. Weiss, U.S. Department of Agriculture, Beltsville); small farm animals (A. W. Nordskog, Iowa State College); large farm animals (J. L. Lush, Iowa State College). Discussant: H. A. Rodenhiser (U.S. Department of Agriculture, Washington, D.C.)

Part III, "Developmental Programs in Crops and Livestock"; E. J. Warwick, U.S. Department of Agriculture, Beltsville, Md., presiding. Papers will be presented on 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, California); use of hybrid vigor in plant improvement (G. W. Burton, Coastal Plain Experiment Station, Tifton, Georgia, and G. F. Sprague, U.S. Department of

Agriculture, Beltsville, Md.; 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). Discussant: R. E. Comstock (University of Minnesota).

Part IV, "New Approaches to Plant and Animal Improvement"; A. E. Bell, Purdue University, presiding. Papers will be presented on contributions of laboratory animals to research in livestock improvement (A. B. Chapman, University of Wisconsin); immunogenetics and its application to livestock improvement (M. R. Irwin, University of Wisconsin); using germ plasm for new products (Quentin Jones, U.S. Department of Agriculture, Beltsville, Md., and Ivan Wolf, U.S. Department of Agriculture, Peoria, Ill.; irradiation and plant improvement (R. S. Caldecott, University of Minnesota); possibilities for genetic improvement of useful insects (Reece I. Sailer, U.S. Department of Agriculture, Beltsville, Md.). Discussant: W. V. Lambert (University of Nebraska).

Part V, "Perpetuation and Protection of Breeding Stocks"; Roy Magruder, U.S. Department of Agriculture, Washington, D.C., presiding. Papers will be presented on 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). Discussion will be presented by T. C. Byerly, U.S. Department of Agriculture, Washington, D.C.

There will be two biological papers given at the AAAS General Symposium. On 26 Dec., Sidney W. Fox (Florida State University) will speak on "How Did Life Begin?" and on 27 Dec., Wendell M. Stanley (University of California) will speak on "Genes, Viruses, and Cancer."

The AAAS Popular Lecture will be "The World into Which Darwin Led Us," by George Gaylord Simpson, Museum of Comparative Zoology, Harvard University, with Chauncey D. Leake, Ohio State University and President Elect of the AAAS, presiding.

Many biologists will be interested in the programs of Sections I—Psychology, N—Medical Sciences, American Physiological Society, and American Psychiatric Association which will appear in a later issue.

Meetings

Mechanisms Involved in Conception

The ever-increasing multiplication of the human species has ceased to be an issue which the more complacent among us were wont to regard as a scare that had been needlessly generated by overenthusiastic neo-Malthusians. The pendulum has swung the other way. Everywhere we now find responsible people agreeing that sharp decreases in mortality rates, with corresponding increases in rates of population growth—both resulting from the widespread application of modern medical knowledge—are now threatening to nullify many carefully planned efforts to speed up social and economic progress in the underdeveloped areas of the world, and by so doing to help frustrate the wave of nation building which is now spreading across the globe. At the same time there is a general sense that the miracle pill which was going to prevent all this from happening is as far beyond the reach of the bulk of humanity as is space travel. As conviction grows that this is so, and with the realization of the political implications of the continuing disparity between rates of capital development and of population growth, there has been a widespread call for a realistic assessment of what we know about the processes of reproduction, and about the ways in which they can be controlled. To fill this need the Population Council and the Planned Parenthood Federation of America recently convened, at West Point, New York, a conference under the general title "Physiological Mechanisms Concerned with Conception," to which participants were invited from far and wide, including countries as distant as India, Japan, and Australia.

The preparation of the conference was entrusted to a central committee under the joint chairmanship of Carl G. Hartman and Warren O. Nelson, as well as to the chairmen of the six sections into which the subject matter of the conference was subdivided and to each of which about 12 members of the conference were assigned. The sectional agenda were carefully prepared over a period of months, through correspondence between the participants, and were then discussed in detail during the first 2 days of the meeting. On the following 3 days the results of these sectional deliberations were presented for further discussion before 6 plenary sessions, which were attended not only by the members of the separate sections but also by about twice as many other interested scientists. The proceedings