Scientific Meetings

Biological Societies

This year has been Michigan State University's centennial year. As part of the yearlong celebration, the American Institute of Biological Sciences planned its annual meeting of biological societies on that campus. Three thousand members of 25 professional societies met 5–9 September; 1145 papers were read, a score of symposia were presented, and eight field trips were organized to precede or follow the meeting sessions.

The societies that met at East Lansing were as follows: American Bryological Society, American Fern Society, American Microscopical Society, American Society for Horticultural Science, American Society of Human Genetics, American Society of Limnology and Oceanography, American Society of Naturalists, American Society of Plant Physiologists, American Society of Plant Taxonomists, American Society of Zoologists, Beta Beta Beta, Biometric Society (ENAR), Botanical Society of America, Ecological Society of America, Genetics Society of America, Mycological Society of America, National Association of Biology Teachers, Nature Conservancy, Phycological Society of America, Potato Association of America, Society for Industrial Microbiology, Society of Protozoologists, Society for the Study of Evolution, Society of Systematic Zoology, and the Animal Welfare Institute.

One of the highlights of the meeting was the general address delivered on 6 September by George W. Beadle (California Institute of Technology) on "What is a gene?" Beadle traced the recent discoveries in biology and chemistry that have greatly increased our knowledge of gene structure and discussed the hypotheses that now quite plausibly explain the structure, function, replication, and mutation of genetic material.

A special symposium, organized and sponsored by six societies, "The taxonomy of cultivated plants," was dedicated to Liberty Hyde Bailey. Another symposium, "Sewall Wright's contributions to population genetics," was held in honor of one of America's outstanding geneticists.

Other prominent symposia were "Antibiotics in agriculture" by the Society for Industrial Microbiology; the presidential symposium of the American Society of Zoologists, "Problems of morphogenesis"; the annual symposium of the American Society of Naturalists, "Modern approaches to problems of differentiation"; "Arctic and alpine tundras" by the Ecological Society of America; and "Respiration in plants" by the American Society of Plant Physiologists. A few of the interesting papers presented by the members of various societies are summarized in the following paragraphs.

The role of hybrids in agricultural advance has grown in importance in recent years. Bees have now joined the ranks of animals that display hybrid vigor. G. H. Cale (Dadant and Sons) and J. W. Gowen (Iowa State College) analyzed the results of controlled hybridity on egg and honey production. They found that productivity increased 135 percent for eggs and 116 percent for honey and that the hybrids were larger than random country-wide stock by 117 to 124 percent.

A new method for separating the proteins of human blood serum has been devised by O. Smithies and N. F. Walker (University of Toronto). Individual variations were found to exist and to fall into three groups, I, II_A, and II_B. Family studies have shown that the serum protein groups are inherited but that they are not correlated with the well-known blood groups, A, B, AB, and O. This information may prove very useful in medicolegal cases of disputed parentage.

C. E. Wildon and C. L. Hamner (Michigan State University) reported that Tiba, 2-3-5-triodo-benzoic acid, hastens flowering in certain floricultural crops. Petunias and zinnias treated with the compound flowered 10 to 20 days ahead of untreated plants. So far, pineapple is the only commercial crop on which Tiba has been used. As a result, pineapple growers are now able to regulate the harvesting date, thereby making better use of labor and machine canners.

Irene Uchida (Hospital for Sick Children, Toronto) told of the high incidence of similar dermal patterns in children with congenital heart disease. It has been known for some time that mongoloid imbeciles have definite patterns on the fingers, palms, and soles. It is believed that mongolism is the result of disturbed fetal development and, since heart defects often accompany mongolism, a similar prenatal disturbance may be common to both.

True genetic females can now be dispensed with in toads, according to E. Witschi and C. U. Chang (State University of Iowa). Using the clawed toad, *Xenopus,* Witschi and Chang found that male embryos placed under the influence of estradiol developed into egg-producing behavioristic females while their male hereditary constitutions remained unchanged. The eggs, when fertilized by a normal male, produce only males. The estradiol was added to the aquarium water and 1 week's treatment sufficed.

Ruth Sager (Rockefeller Institute for Medical Research) reported on a form of cytoplasmic inheritance in *Chlamydomonas.* One *Chlamydomonas* cell in a million was found to be resistant to large doses of streptomycin. When such streptomycin-resistant cells were mated sexually with streptomycin-sensitive cells, all offspring were found to be streptomycin resistant. Further study showed that the hereditary factor was a particle in the cytoplasm; the chemical identification of these particles is now being investigated.

Two McGill University scientists, C. M. Wilson and I. K. Ross, presented cytological proof of meiosis in the myxomycetes. It was found that reduction divisions of chromosomes took place during the formation of the sporangia but before the production of spores.

As a result of cultivating aquatic actinomycetes on an artificial medium, J. K. G. Silvey (North Texas State College) discovered that these organisms produced many of the tastes and odors commonly attributed to algae blooms. Further investigation showed that the actinomycetes grew on algae, higher aquatic plants, and organic debris, and that they were present in a wide variety of aquatic habitats. Silvey claims that they are responsible for the fishy, marshy, potato-bin, woody, musty, earthy, and manurial smells and tastes that are sometimes found in water. The presence of actinomycetes in sources of drinking water is of economic importance and deserves prompt control research.

M. W. Jennison (Syracuse University) outlined useful applications of wood-rotting basidiomycetes. Many species can be grown under controlled conditions in an aerated, liquid culture, utilizing such inexpensive waste materials as spent brewers' grains, sulfite waste liquor, cannery wastes, food-processing wastes, molasses fermentation residues, and corncobs. The fermentation products are chiefly organic acids. In addition to using such fungi for disposing of plant wastes and for producing useful fermentation products, the re-

sulting mycelium itself may be valuable as an animal-feed supplement. Mycelium was found to contain 35 percent of protein and some 18 amino acids, including the ten amino acids that are essential in animal nutrition.

After the discovery in 1950 that crude extracts of dehydrated *Boletus edulis* retarded the growth of implanted mouse tumors, E. G. Lucas and J. A. Stevens (Michigan State University), in collaboration with the Sloan-Kettering Institute, tested a wide range of other basidiomycetes. The genera that were found to contain tumor-retarding properties in fresh-plant preparations are *Calvatia, Clitopilus, Collybia, Cortinellus, Hydnum, Leiota,* and *Polyporus.* Laboratory cultures of *Boletus, Collybia,* and *Clitopilus* have also shown active principles.

Chemical defoliation of plants has been practiced for several years. R. H. Biggs and A. C. Leopold (Purdue University) have been able to bring about complete abscission of leaf petioles with auxin concentrations 100 to 10,000 times more dilute than solutions of other chemicals. A correlation was found, however, between the age of the leaves and the success of the auxin defoliating reaction.

Leaf analysis has developed rapidly in recent years as a means of evaluating the nutritive needs of plants and the effectiveness of various types of fertilizers. A. L. Kenworthy reported on a leaf-analysis service, recently established in Michigan, that is one of the first in the country.

Robert C. Bay (Salt Lake City) was awarded the Albert Schweitzer medal for his contributions to the proper care of laboratory animals. The medal and a cash prize of $500 were awarded for the first time during the East Lansing meetings by the Animal Welfare Institute of New York City.

The Eminent Ecologist citation of the Ecological Society of America was made to A. H. Wright (Cornell University) and the George Mercer award for an outstanding paper in ecology was received by Shelby D. Gerking (Indiana University).

The 1955 awards made by the American Society for Horticultural Science were the Alex Laurie award in floriculture and ornamental horticulture, Henry M. Cathey (Cornell University); the Leonard H. Vaughan award in floriculture, Lennart B. Johnson (University of California); the Charles G. Woodbury award in raw products research, Otmar Silberstein (Westfield, N.Y.); the Leonard H. Vaughan award in vegetable crops, C. M. Geraldson (Bradenton, Fla.); and the J. H. Gourley award in pomology, E. L. Proebsting, Jr. (Prosser, Wash.) and A. L. Kenworthy (Michigan State University).

ILEEN E. STEWART

Washington, D.C.

Meeting Notes

■ A conference sponsored by the New York Academy of Sciences on Calcium and Phosphorus Metabolism in Man and Animals with Special Reference to Pregnancy and Lactation will take place in New York, 10–11 Jan. Topics covered will include calcium balance and turnover studies, parathyroid hormone, problems of parturient paresis in dairy cows, calcium complexing agents, and special aspects of calcium metabolism.

Franklin C. McLean of the University of Chicago is general chairman. Participants include: C. L. Comar, Oak Ridge Institute of Nuclear Studies; Max Kleiber, University of California; Genevieve Stearns, University of Iowa; Felix Bronner, Rockefeller Institute; Roy V. Talmage, Rice Institute; Paul L. Munson, Svein U. Toverud, and Roy O. Greep, Harvard School of Dental Medicine; Gerald M. Ward, Colorado Agricultural and Mechanical College; H. H. Cole and J. M. Boda, University of California; J. W. Hibbs and William Pounden, Ohio Agricultural Experiment Station; T. H. Blosser, State College of Washington; Martin Rubin, Georgetown University; Philip H. Henneman, Evan Calkins, David Kahn, Wilma Canada, John D. Crawford, Allan M. Butler, Harvard Medical School; I. Snapper, Beth-El Hospital; W. D. Malherbe, Onderstepoort, South Africa; Joseph Pincus, Isaac Gittleman, and Albert E. Sobel, Jewish Hospital of Brooklyn; Ann M. Budy and John H. Rust, University of Chicago; Gilbert Forbes, University of Rochester; Philip S. Calcagno, University of Buffalo; and H. H. Dukes, Cornell University. For further information write to Dr. R. R. Marshak, Springfield, Vt.

■ The fifth World Conference on Planned Parenthood, sponsored by the International Planned Parenthood Federation and organized by the Family Planning Federation of Japan, took place in Tokyo, 24–29 Oct. More than 100 delegates registered from Australia, Bermuda, Canada, Ceylon, Germany, Great Britain, Hawaii, Hong Kong, India, Israel, Japan, Korea, Pakistan, Sweden, Thailand, Union of South Africa, and the United States.

The conference agenda was devoted to the theme "Overpopulation and planned parenthood." Papers by physicians, sociologists, and population experts covered such fields as world population trends, natural resources, family planning methods, contraceptive research, and marriage guidance.

Major reports were given by Margaret Sanger, IPPF president, and a large U.S. delegation that included Mrs. Robert M. Ferguson, William Vogt, Abraham Stone, Lena Levine, and Thomas Griessemer. Among other American scientists who presented papers were Edward Ackerman, M. C. Chang, Clarence Gamble, Paul Henshaw, Nadina R. Kavinoky, Warren Nelson, Gregory Pincus, John Rock, J. B. Thiersch and Warren Thompson, and P. K. Whelpton.

■ To recognize 30 years of activity in the Institute of Child Welfare at the University of Minnesota, under the leadership of John E. Anderson, the university is sponsoring a conference on the Concept of Development, 8–10 Dec. Invited guests who will present papers are Viktor Hamburger, Washington University; Hyman Lippman, Amherst H. Wilder Child Guidance Clinic; Howard Meredith, University of Iowa; Ernest Nagel, Columbia University; Willard C. Olson, University of Michigan; T. C. Schneirla, American Museum of Natural History; J. P. Scott, Roscoe B. Jackson Memorial Laboratory; Robert R. Sears, Stanford University; and Heinz Werner, Clark University. For information write to Dr. Dale B. Harris, Director, Institute of Child Welfare, University of Minnesota, Minneapolis 14, Minn.

Forthcoming Events

December

26–29. Biometric Soc., Eastern N. American Region, New York, N.Y. (A. M. Dutton, Box 287, Station 3, Rochester 20, N.Y.)

26–31. American Assoc. for the Advancement of Science, Atlanta, Ga. (R. L. Taylor, AAAS, 1025 Connecticut Ave., NW, Washington 6.)

The following 32 meetings will be held in conjunction with the AAAS annual meeting.

26–27. American Assoc. of Clinical Chemists, Atlanta, Ga. (A. E. Sobel, Dept. of Biochemistry, Jewish Hospital of Brooklyn, 555 Prospect Pl., Brooklyn 16, N.Y.)

26–30. American Nature Study Soc., Atlanta, Ga. (M. Trussell, School of Education, Florida State Univ., Tallahassee.)

26–30. National Assoc. of Biology Teachers, Atlanta, Ga. (J. P. Harrold, 110 E. Hines St., Midland, Mich.)

27. National Assoc. of Science Writers, Atlanta, Ga. (O. Fanning, Midwest Research Inst., Kansas City, Mo.)

27. National Speleological Soc., Atlanta, Ga. (Bro. G. Nicholas, F.S.C., 114 Hanover St., Cumberland, Md.)

27. Soc. for Research in Child Development, Atlanta, Ga. (W. C. Rhodes, Georgia Dept. of Public Health, Atlanta.)

27–28. American Psychiatric Assoc., Atlanta, Ga. (H. E. Himwich, Research Div., Galesburg State Research Hospital, Galesburg, Ill.)

27–28. Soc. for the Advancement of General Systems Theory, Atlanta, Ga. (L. von Bertalanffy, Psychosomatic Research Inst., Mt. Sinai Hospital, Los Angeles, Calif.)

27–29. American Geophysical Union, Atlanta, Ga. (W. Smith, 1530 P St., NW, Washington 5.)

27–29. American Meteorological Soc., Atlanta, Ga. (K. Spengler, 3 Joy St., Boston, Mass.)

27–29. Assoc. of Southeastern Biologists, Atlanta, Ga. (M. E. Gaulden, Biology Div., Oak Ridge National Lab., Oak Ridge, Tenn.)

27–29. International Geophysical Year, Atlanta, Ga. (H. Odishaw, National Research Council, Washington 25.)

27–29. Oak Ridge Inst. of Nuclear Studies, Atlanta, Ga. (C. L. Comar, ORINS, Oak Ridge, Tenn.)

27, 29. Soc. of the Sigma Xi, Atlanta, Ga. (T. T. Holme, 56 Hillhouse Ave., New Haven, Conn.)

27–30. American Phytopathological Soc., Atlanta, Ga. (G. S. Pound, Dept. of Plant Pathology, Univ. of Wisconsin, Madison.)

27–30. American Soc. of Parasitologists, Atlanta, Ga. (A. C. Walton, Dept. of Biology, Knox College, Galesburg, Ill.)

27–30. Botanical Soc. of America, Southeastern Section, Atlanta, Ga. (R. E. Shanks, University of Tennessee, Knoxville.)

27–30. Ecological Soc. of America, Atlanta, Ga. (E. P. Odum, Univ. of Georgia, Athens.)

27–30. National Science Teachers Assoc., Atlanta, Ga. (R. H. Carleton, NSTA, 1201 16 St., NW, Washington 6.)

27–30. Soc. of Systematic Zoology, Atlanta, Ga. (D. C. Scott, Dept. of Zoology, Univ. of Georgia, Athens.)

28. Alpha Epsilon Delta, Atlanta, Ga. (M. L. Moore, 7 Brookside Circle, Bronxville, N.Y.)

28. National Assoc. for Research in Science Teaching, Atlanta, Ga. (G. G. Mallinson, Western Michigan College of Education, Kalamazoo.)

28. Sigma Pi Sigma, Atlanta, Ga. (D. R. McMillan, Emory Univ., Emory University, Ga.)

28. Soc. of General Physiologists, Atlanta, Ga. (A. Shanes, National Institutes of Health, Bethesda 14, Md.)

28–29. American Soc. of Naturalists, Atlanta, Ga. (W. P. Spencer, Dept. of Genetics, Univ. of Texas, Austin 12.)

28–29. Conference on Scientific Editorial Problems, Atlanta, Ga. (R. W. Russell, 3518 University Ave., Los Angeles 7, Calif.)

28–29. Herpetologists League, Atlanta, Ga. (J. A. Fowler, Acad. of Natural Sciences, 19th and Parkway, Philadelphia 3, Pa.)

29. American Assoc. of Hospital Consultants, Atlanta, Ga. (J. Masur, Asst. Surgeon-General, USPHS, Washington 25.)

29. National Acad. of Economics and Political Science, Atlanta, Ga. (D. P. Ray, Hall of Government, George Washington Univ., Washington, D.C.)

29. National Geographic Soc., Atlanta, Ga. (W. R. Gray, NGS, 16 and M Sts., NW, Washington 6.)

29. Scientific Research Soc. of America, Atlanta, Ga. (D. B. Prentice, 54 Hillhouse Ave., New Haven, Conn.)

30. American Soc. of Plant Physiologists, Southern Section, Atlanta, Ga. (A. W. Naylor, Duke Univ., Durham, N.C.)

30. United Chapters of Phi Beta Kappa, Atlanta, Ga. (C. Billman, 1811 Q St., NW, Washington, D.C.)

27–29. American Mathematical Soc., 62nd annual, Houston, Tex. (J. H. Curtiss, AMS, 80 Waterman St., Providence 6, R.I.)

27–29. Archaeological Inst. of America, Chicago, Ill. (C. Boulter, 608, Univ. of Cincinnati Library, Cincinnati 21, Ohio.)

27–29. Assoc. for Symbolic Logic, Rochester, N.Y. (J. Barlaz, Rutgers Univ., New Brunswick, N.J.)

27–29. Linguistic Soc. of America, Chicago, Ill. (A. A. Hill, 1719 Massachusetts Ave., NW, Washington 6.)

27–30. American Statistical Assoc., New York, N.Y. (E. M. Bisgyer, 1757 K St., NW, Washington 6.)

27–30. Inst. of Mathematical Statistics, New York, N.Y. (K. J. Arnold, Dept. of Mathematics, Michigan State Univ., East Lansing.)

27–1. Phi Delta Kappa, 50th anniversary, Bloomington, Ind. (J. C. Whinnery, 324 N. Greenwood Ave., Montebello, Calif.)

28–29. Northwest Scientific Assoc., Spokane, Wash. (F. J. Schadegg, Eastern Washington College of Education, Cheney.)

(See 18 Nov. issue for comprehensive list)