News and Notes

Society of General Physiologists Annual Meeting—1951

THE annual meeting of the Society of General Physiologists was held in June at the Marine Biological Laboratory, Woods Hole, Mass. Twenty-three papers were presented by members and invited speakers.

A two-day symposium on "Cell Function in Relation to Structure" included the following: P. Weiss, E. S. G. Barron, A. Szent-Györgi, A. Rothstein, C. B. Anfinsen, T. Hayashi, S. Speigelman, H. Borei, H. Hermann, A. E. Mirsky, L. V. Heilbrunn, A. I. Lansing, T. Puck, and S. Inoué. Abstracts of these papers are published elsewhere in SCIENCE. The program was arranged by D. Mazia.

Following the symposium, a day was devoted to papers by members of the society. A. C. Giese discussed important effects of ozone in contrast to ultraviolet light on absorption spectra of serum proteins and representative amino acids. For shorter wavelengths (below 2500 A), ozone and U-V were found largely additive. However, at the 2800 A band, ozone and U-V were clearly antagonistic in their action.

New information on the gel state of living nerve axon protoplasm was presented by R. Chambers and C. Kao. It was evident that the axoplasm, quite different from most biocolloids, underwent liquefaction when microinjected with divalent cations such as calcium, but was preserved by salts of the monovalent cations. Of particular interest was the demonstration of longitudinally oriented micelles in the axon gel.

Dean Burk and his collaborators presented the mathematical equations for calculating the photosynthetic energy cycles of *Chlorella* (see SCIENTIFIC MONTHLY, 73, 213 [1951]). Analysis of extremely short intermittent light flashes with corresponding high intensities has provided information making possible attainment of the theoretical yields. Further data were given supporting a postulated relationship where *one* molecule of chlorophyll absorbs *one* quantum of light, with consumption of *one* molecule of CO_2, and production of *one* molecule of O_2.

R. Abrams reported studies on the RNA and DNA content of yeast cells, which yielded constant values for different strains regardless of their chromosome ploidy. There was no evidence that growing cells had higher RNA concentrations than nongrowing cells. In acenaphthene-treated yeasts harvested during logarithmic growth, the adenine-guanine ratio for DNA was greater than one, whereas in the stationary phase it was less than one. In contrast to the greater values usually found in more highly evolved plants and animals, the DNA content of a single yeast cell was calculated to be only 0.02×10^{-12} g.

C. A. Villee and his collaborators investigated the times of the first appearance of various enzymes in human embryos. It was found that most carbohydrate metabolism regulators are present by the eighth week. By 11.5 weeks the liver has developed glucose-6-phosphatase and is able to secrete glucose. After 24 weeks the fetal liver can secrete glycogen. Earlier, during the eighth week, the placenta is able to secrete glucose, but this ability is lost when the fetal liver takes over. On the other hand, the fetal kidney cannot secrete glucose until the sixteenth week. Therefore, the same enzymes do not appear simultaneously.

An analysis by W. R. Duryee of radio-phosphorus uptake in single amphibian eggs showed that the small yellow eggs in the ovary had approximately a threefold higher metabolic rate than the full-size black eggs. Consequently, from a cellular viewpoint it is necessary to study individual cells, rather than the composite statistical data from a ground-up tissue brei currently employed by many biochemists. It was also shown that visible effects of continuous β-ray bombardment could be completely suppressed by over 3 weeks by low temperature.

E. G. Ball and O. Cooper presented an analysis of the metabolic activity of the red gland of the fish swim bladder. It was found that this organ has a high glycolytic rate and also produces lactic acid, which in turn probably releases the O_2 from oxyhemoglobin and CO_2 from bicarbonate. Thus, we now have a good explanation of how gases can be secreted into the swim bladder, even at the great pressures of the ocean depths.

Ethel B. Harvey and G. I. Lavin presented a series of observations on *Arbacia* and *Chaetopterus* eggs photographed with infrared light. The high penetrating power outlined cell nuclei and internal structures of the embryos, which are otherwise difficult to observe in living specimens.

A motion picture by L. Chadwick, analyzing with high-speed photography the wing motions and muscular adaptations of insects in flight, concluded the program.

Special mention should be made of the hospitality of Robert Chambers (one of the society's founders) in entertaining the members on the lawn of his home. Elections of the following officers were announced at the business meeting: L. R. Blinks, president; H. B. Steinbach, vice-president; W. R. Duryee, secretary-treasurer; A. Chase, H. Hoagland, D. R. Goddard, E. G. Ball, council members; and H. F. Blum, representative to the AIBS. The next annual meeting will be held at Ithaca, N. Y., Sept. 9–10, 1952, in connection with the meeting of the American Institute of Biological Sciences.

WILLIAM R. DURYEE
Department of Terrestrial Magnetism
Carnegie Institution of Washington
Washington, D. C.

Scientists in the News

Francisco M. Fronda, secretary of the Standing Committee on Animal Improvement in the Pacific Area, has recently been appointed as expert on poultry production in connection with the technical assistance to be given through FAO of the United Nations to the government of Thailand. Dr. Fronda will advise and assist the government of Thailand in the breeding and management of poultry and in teaching poultry subjects and training personnel in this field. He will be on leave of absence from the University of the Philippines, where he is professor of poultry husbandry and secretary of the College of Agriculture.

Henry B. Hastie, research chemist at Norwich Pharmacal Co. for the past seven years, has established an organic chemicals business at Oneonta, N. Y.

Arthur Herbert, president of the Lutheran Memorial Hospital Association of Newark, N. J., has been given the Order of Finlay, highest scientific honor of the Republic of Cuba, in recognition of "outstanding merit," at a meeting of the Cuban Academy of Science in Havana. The order is named for the Cuban scientist Carlos Juan Finlay, who propounded the theory of the stegomyia mosquito transmission of yellow fever. This theory was proved by the sacrificial death in 1901 of Nurse Clara Louise Maass, who was graduated in 1895 from the Lutheran Memorial Hospital.

Alexander W. Kruger, one of three general medical superintendents of the Department of Hospitals, New York City, has joined the Department of Medicine and Surgery of the Veterans Administration in Washington. As general medical superintendent of the Hospitals Department, he was in charge of administration of the 11 municipal hospitals in the Bronx, Brooklyn, and Queens. He also directed the agency's Home Care Service.

Edwin B. McLean has joined Cutter Laboratories, Berkeley, Calif., as director of clinical investigation. During the war years, Dr. McLean was with the Navy and then joined the research staff of Smith, Kline & French Laboratories. In 1948, he became hematologist for St. Christopher's Hospital for Children.

Donald B. McMullen, professor of preventive medicine, University of Oklahoma School of Medicine, has returned to the U. S. from Japan, where he has been testing chemicals as molluscacides, using the local vector for schistosomiasis, a project supported by the Army Medical Research and Development Board. The work was done at the Yamanashi Medical Research Institute, Kofu. Dr. McMullen was recently made a member of the WHO Expert Advisory Panel on Parasitic Diseases.

Valy Menkin, of Temple University School of Medicine, Philadelphia, was the Claude Bernard Lecturer at the University of Montreal. At the termination of his lectures a medal was presented to him by the Institute of Medicine and Experimental Surgery. While in Montreal Dr. Menkin also gave a lecture at McGill University.

Benjamin Y. Morrison, who has been associated with the National Arboretum since its establishment, and who served for many years as its director, has retired from the U. S. Department of Agriculture. He will continue as a consultant on the staff of the arboretum, which is a 410-acre collection of native and foreign trees and shrubs at 28th and M Sts., N.E., in the District of Columbia. It is under the general supervision of the Bureau of Plant Industry, Soils, and Agricultural Engineering. Mr. Morrison's connection with the department dates from 1920. He served as head of the Division of Plant Exploration and Introduction from 1934 to 1948 and was in charge of the National Arboretum from 1937 until his retirement.

Robert A. O'Brien, research manager for the American Society of Mechanical Engineers, has been appointed assistant to the chairman of the mechanism and propulsion research department at Armour Research Foundation of Illinois Institute of Technology. Mr. O'Brien will assist G. A. Nothmann in coordinating the engineering and administrative problems on all projects in the department. He has been research manager for the ASME since November 1946.

The nineteenth E. Starr Judd Lecture will be given by **Thomas G. Orr,** professor of surgery, University of Kansas, Kansas City, Kans., on March 20, at the University of Minnesota Medical School. Dr. Orr's subject is "Some Observations on the Treatment of Carcinoma of the Pancreas." The late E. Starr Judd, an alumnus of the Medical School, established the annual lectureship in surgery a few years before his death.

Grant W. Pearcy has been appointed chief chemist for Kitchen Art Foods, Inc., Chicago. Mr. Pearcy has been assistant chief chemist for Flour Mills of America in Kansas City, Mo.

Desmond M. C. Reilly has joined the staff of Midwest Research Institute, coming from the Howard Smith Paper Mills, Ltd., Cornwall, Ontario, where he was a senior research chemist, specializing in studies directed toward commercial utilization of wood waste.

The National Hospital for Speech Disorders has named **David Ross** as its medical director. Dr. Ross, a psychiatrist and former head of the Seton Institute of Baltimore, replaces the late James S. Greene, speech specialist, who founded the hospital in 1916 and served as its chief until his death last year.

Among alumni of the College of the City of New York who received the Townsend Harris Medal at the Alumni Association's seventy-first annual dinner were **Peter Sammartino,** founder and president of Fairleigh Dickinson College in New Jersey; **A. J. Goldforb,**

professor emeritus of biology at City College and general secretary of the Society for Experimental Biology and Medicine; and **Jacob Feld,** engineer and author on technical subjects. The medal is awarded for distinguished postgraduate achievement in a "significant field of human endeavor."

Kenneth Savard, formerly of the Cleveland Clinic, is now at the Worcester Foundation for Experimental Biology, where he will be engaged in the study of various aspects of the metabolism of steroid hormones.

Lyndon Small is retiring as editor of the *Journal of Organic Chemistry* to devote more time to his new position as chief, Laboratory of Chemistry, National Institutes of Health. Dr. Small will continue to serve the *Journal* as a member of the Editorial Board and Executive Committee. The new editor, who will officially assume office on Jan. 1, is **George H. Coleman,** of the Department of Chemistry and the Kresge-Hooker Scientific Library of Wayne University, Detroit.

Nathan Raymond Smith, soil microbiologist in the U. S. Department of Agriculture for 40 years, has retired. Dr. Smith entered the Department in the Bureau of Plant Industry in 1911 as a collaborator and soon became scientific assistant under the late Karl F. Kellerman. Dr. Smith expects to continue work on the editorial board of the *Journal of Bacteriology* and to devote considerable time, as one of the three editors, to the publication of the 7th edition of *Bergey's Manual of Determinative Bacteriology.*

Kanematsu Sugiura, associate at the Sloan-Kettering Institute for Cancer Research, New York, has recently been elected a councilor of the Japanese Foundation for Cancer Research in recognition of his long service in this field.

Franklin E. Turton has been elected vice president of the Braden Copper Company, a subsidiary of the Kennecott Copper Corporation. Mr. Turton has been with Braden Copper in Chile 38 years, and for the past seven years he has been general manager. He has been a director since 1946.

Harold Vagtborg, president of Southwest Research Institute, is heading a scientific mission to Europe under sponsorship of the ECA, to survey the scientific research resources of France and to determine whether applied research laboratories should be established to serve small and medium-sized manufacturers of that country. In addition to Dr. Vagtborg, the French mission is composed of **Julian M. Avery,** research consultant; **Robert A. Bowman, Jr.,** of the U. S. Commerce Department's Office of Technical Services; **Trevor H. Clark,** division director for Southwest Research Institute; **Maurice Holland,** industrial research adviser; **Maubert St. Georges,** research consultant on laboratory product development; and **Calvin Williams,** executive secretary of Southwest's International Division.

Education

The Small Homes Council has built on the **University of Illinois** campus an experimental house so flexible that the entire house can be made larger or smaller in a few hours by two men using a hammer, a screwdriver, and a saw, and the kitchen and bathroom can be relocated. The "space use laboratory" will be used to test the way families live in different arrangements and sizes of rooms. It will be lived in by two representative families, each for a six-month period. Pedometers, photoelectric counters, and similar instruments will be used to trace traffic patterns within the house. University architects, home economists, and sociologists are participating in the study.

For the past four years the **University of Michigan** has sponsored a continuous program of anthropological and botanical field work in the Aleutians. The Office of Naval Research and the Michigan Memorial Phoenix Project have been cosponsors since 1948. Field investigations, under Theodore P. Bank, II, expedition field director, were undertaken on more than 20 islands and in 5 Aleut villages. Major archaeological excavations were completed at Agattu and Unalaska, and most of the known Aleut burial caves were revisited for excavations of levels below those sampled by Dall, Jochelson, and Hrdlicka. Phytoecological studies of prehistoric village sites indicate a close correlation between former Aleut plant uses and present-day vegetation, and ethnobotanical studies have shown the old native plant lore to be more extensive and important to Aleut culture than previously supposed. The expedition also completed ethnological studies in present-day villages and collected medical and economic data for a close analysis of the trends of Aleut acculturation. Materials collected on the 1951 expedition, which has recently returned to Ann Arbor, are being studied at the university and by specialists at other institutions. Ethnobotanical samples are being dated by the Michigan radiocarbon laboratory.

The **University of Wisconsin** Department of Sociology and Anthropology and the Bureau of Visual Instruction have established a nonprofit center for the reproduction and distribution of Kodachrome slides on anthropological subjects. Thus far 15 offers of sets available for copy have been received. They include mine sites in Guatemala; villages in Japan; Japanese, Peruvian, Venezuelan, and Caribbean archaeology; African art; West African Negro village life; and Hopewellian artifacts and other American subjects. Comments or suggestions may be addressed to David A. Baerreis, Sterling Hall, Madison.

Yale University School of Medicine has appointed Albert F. Wessen to the staff of its Department of Pediatrics, "to add to the effectiveness of medical care for children." The new position will actually be a special internship in pediatrics for a sociologist, the first such to be established at any school. It is supported by the Russell Sage Foundation and is for one year, but is renewable.

Grants and Fellowships

Carnegie Corporation of New York has made a five-year grant of $100,000 to Northwestern University for establishment of an African Study Center and continuation of the present African Area Program. The new center will be directed by the anthropologist Melville J. Herskovits, who has worked extensively in South America, West Africa, and the West Indies. A Committee on African Studies, with Dr. Herskovits as chairman, will be set up and will consist of faculty members from the departments of political science, economics, history, geography, and sociology. The interdepartmental African seminar, started in 1948, also with a Carnegie grant, will be continued.

Ethyl Corporation, 100 Park Ave., New York 17, is sponsoring graduate fellowships in chemistry and in chemical, petroleum refinery, and mechanical engineering at Caltech, MIT, and at the following universities: Illinois, Oklahoma, Princeton, Purdue, Rutgers, Texas, Tulsa, Wayne, Wisconsin, and Yale.

By means of a $30,000 **Guggenheim Memorial Foundation** grant, Farrington Daniels, president-elect of the American Chemical Society, will direct an expanded program in the field of solar energy utilization. Four main lines of research will be followed: biological, including continued study on the energy efficiency of photosynthesis; engineering—solar heating and solar engine development; electrochemical—production of electricity through solar energy; and investigation of heat storage.

The **Institute of Medicine of Chicago** has awarded the Jessie Horton Koessler Fellowship for 1951 to E. Russell Alexander, of the University of Chicago, for investigations in the pathogenicity, pathogenesis, and pathology for the laboratory mouse of various recently isolated strains of *Histoplasma capsulatum.*

Republic Steel Corporation has presented an unrestricted grant of $7,500 to Ohio State University to help support research studies of industrial waste disposal, to be conducted at the pilot plant now under construction on the Olentangy River. The work will be done by the Engineering Experiment Station.

Grants-in-aid and fellowships totaling more than $141,000 bring to a total of 124 the awards of the **Wenner-Gren Foundation for Anthropological Research** for the current fiscal year. Nineteen of the present grants were allocated to scholars in foreign countries, 12 will enable U. S. scholars to travel and conduct research in 14 foreign countries and U. S. possessions, and 4 grants will allow scholars from Japan, Yugoslavia, Spain, and England to come to this country for study.

Western Cartridge Company, of East Alton, Ill., has made available a fund of $2,500 to support a study of the structure of tetracene at the Illinois Institute of Technology. Seymour Patinkin, of Chicago, is the first fellow.

Miscellaneous

A **Committee on Highway Safety Research** has been set up by NRC on recommendation of the Advisory Group on Highway Safety Research of the President's Highway Safety Conference (1949). Emphasis will be on human capacities and attitudes, and behavior of drivers and pedestrians as related to physical characteristics of the vehicle and the highway. Chairman of the committee is E. R. Hilgard, of Stanford. Executive secretary is T. W. Forbes, on leave from the University of Hawaii; other members, who are at present largely ex officio, are Meredith P. Crawford, Rudolph F. King. W. M. Krogman, Chauncey D. Leake, H. C. Levinson, Colin M. MacLeod, Donald G. Marquis, R. A. Moyer, and Sidney W. Williams. First meeting was held last June in conjunction with the President's Highway Safety Conference.

The **Pacific Science Council** has announced the completion of plans for typhoon research to be conducted jointly by the Weather Bureau and Air Weather Service. One exploratory flight was made in August, and others are planned for the 1952 typhoon season, to determine the structure of tropical cyclones.

The **Picatinny Arsenal Scientific Advisory Council,** composed of 20 industrial and university scientists, held its second meeting at the arsenal last November. Appointment of the council was authorized by the Ordnance Corps to aid the Army's ammunition research and development. None of the work will be on nuclear weapons.

Scripps Institution of Oceanography and the **Air Force** have contributed, respectively, the schooner *Reverie* and a bomber to analyze wind stress on the sea surface. Aerial photographs of the sea surface are being correlated with direct observations and measurements of wind velocity by a crew of three, under the direction of Steacy D. Hicks, who man the *Reverie.* Walter Munk, of Scripps, is in general charge of the project.

The second annual convention of **United Cerebral Palsy,** held Nov. 2–4 in Philadelphia, began with a symposium at which prevention and important directions of research were discussed by George Anderson, James Hughes, Franc Ingraham, Leslie Hohman, Martin Palmer, Klaus R. Unna, Samuel Hicks, James Arey, Paul I. Yakovlev, Randolph Byers, and Frederick Mettler. At another symposium, the rights and needs of the parents of a cerebral palsied child and the rights and needs of such a child were examined by Ernest Fleischer and Virginia J. Cornwell.

Williams & Wilkins Company, medical publishers of Baltimore, Md., have purchased the medical book publishing business of Thomas Nelson & Sons, of New York. Going titles will be continued, with a gradual change to the Williams & Wilkins imprint as reprintings or new editions appear.