

The sectional programs with their recorders will include the following:

- A. "Gene and Chromosome Theory": H. J. Muller, Edinburgh.
- B. "Cytology": C. D. Darlington, Merton Park.
- C. "Physiological Genetics": B. Ephrussi, Paris.
- D. "Animal Breeding in the Light of Genetics": A. D. Buchanan Smith, Edinburgh.
- E. "Plant Breeding in the Light of Genetics": K. Mather, Merton Park.
- F. "Human Genetics": G. Dahlberg, Uppsala.
- G. "Genetics in Relation to Evolution and Systematics": J. S. Huxley, London.
- H. "Statistical Genetics": R. A. Fisher, London.
- I. "Genetical Aspects of Growth, Normal and Abnormal": C. C. Little, Bar Harbor.

A pre-congress tour from London to Edinburgh by motor bus has been arranged. The party will meet in London on Tuesday, August 15. Wednesday and Thursday will be spent in visiting various university departments and research institutions. On Friday the party will go to Cambridge by motor coach, there to spend the afternoon and the whole of Saturday in visiting the university departments, colleges and research institutions. On Sunday the party will leave for Chester, traveling through typical English scenery to reach this city steeped in historic associations. On Monday the journey will end at Windermere, the center of the English lake district. On Tuesday the party will cross the border at Carlisle, travel through the border hills, and reach Edinburgh in the late afternoon.

Several post-congress tours have also been arranged. These comprise three-, four-, five- and six-day tours in the lake regions of Scotland.

During the week of the congress a number of social functions have been arranged; *e.g.*, reception by the city of Edinburgh; congress banquet in the library hall of the university; visits to art galleries, museums and places of historic interest, etc.

Approximately sixty American geneticists have signified their intention to attend the congress. The Genetics Society of America is aiding in travel ar-

rangements for their members and guests. (General travel information may be had from the secretary, E. W. Lindstrom, of the Iowa State College, Ames, Iowa.) Members planning to ship exhibit material requiring customs or quarantine inspection should write the representative of the society, Dr. M. M. Rhoades, Arlington Farm, U. S. Department of Agriculture, Arlington, Va.

#### RECENT DEATHS

DR. DAVID TODD, emeritus professor of astronomy and navigation and director of the observatory of Amherst College, died on June 1. He was eighty-four years old.

DR. EDWIN LINTON, professor emeritus of biology of Washington and Jefferson College, died on May 5 at the age of eighty-four years.

DR. JOSEPH GRINNELL, professor of zoology and director of the Museum of Vertebrate Zoology at the University of California, died on May 29 at the age of sixty-two years.

DR. CHARLES FREDERICK LORENZ, consulting engineer, from 1910 until his retirement in 1930 a member of the departments of physics of the Nela and the Westinghouse Research Laboratories, died on May 30 at the age of sixty-four years.

DR. ALFRED FRIEDLANDER, professor of medicine and dean of the College of Medicine of the University of Cincinnati, died on May 28 at the age of sixty-seven years.

DR. E. ROSS FAULKNER, for sixteen years surgical director of the Manhattan Eye, Ear and Throat Hospital, died on May 29 at the age of sixty-three years.

A CORRESPONDENT writes: "Alfred W. Anthony, ornithologist, died in San Diego, Calif., on May 14 at the age of seventy-three years. He was one of the pioneer field naturalists of the West, his collections being preserved in several museums. Between 1920 and 1923 he served as director and as curator of vertebrates on the staff of the San Diego Natural History Museum."

## SCIENTIFIC NOTES AND NEWS

THE autumn meeting of the National Academy of Sciences will be held at Brown University on October 23, 24 and 25. The address of welcome will be made by Dr. Henry Merritt Wriston, president of the university, and the response will be made by Dr. Frank B. Jewett, president of the Bell Telephone Laboratories, who was elected president of the academy at the spring meeting. Members of the committee on arrangements are: W. S. Hunter, *chairman*, P. H. Mitchell, R. B. Lindsay, C. A. Kraus, R. G. D. Richardson, W. H. Snell and F. E. Wright (*ex-officio*).

At the commencement exercises of the Case School of Applied Science the doctorate of science was conferred on Dr. Clement C. Williams, president of Lehigh University, formerly dean of engineering at the University of Iowa, who gave the principal address, and on Dr. Otto Struve, director of the Yerkes and McDonald Observatories. The doctorate of engineering was conferred on M. Y. Seaton, chief engineer of the California Chemical Corporation.

DR. W. G. CROCKETT, professor of pharmacy at the Medical College of Virginia, was awarded the hon-

orary degree of doctor of science by Hampden-Sydney College at the final exercises of that institution on June 6.

DR. THOMAS S. ROBERTS, professor of ornithology and director of the Museum of Natural History of the University of Minnesota, has been awarded the Brewster Medal by the American Ornithological Union "for the most meritorious work on American birds." The medal was presented to Dr. Roberts in Washington, D. C., for the second edition of his "The Birds of Minnesota."

THE council of the Royal Society of Tropical Medicine and Hygiene at its last meeting awarded the Chalmers Gold Medal for 1939 to Dr. Max Theiler, of the International Health Division of the Rockefeller Foundation, New York, "in recognition of research of outstanding merit contributing to the knowledge of tropical medicine or tropical hygiene, particularly in reference to yellow fever and the possibility of producing the vaccine by the use of attenuated virus." The medal will be presented at the annual general meeting of the society at Manson House, London, on June 15.

THE following were elected honorary fellows of the Royal Society of Medicine on May 16: *British Honorary Fellows*: Professor William Bulloch and Sir Cuthbert Wallace. *Foreign Honorary Fellows*: Dr. Alexis Carrel, New York; Professor C. G. Jung, Zurich; Professor Charles Laubry, Paris; Dr. Max Neuburger, Vienna, and Professor J. Schoemaker, The Hague.

THE Anna Fuller Memorial Prize of \$7,500 for cancer research has been awarded for the first time to a group of five scientific men of the Research Institute of the Royal Cancer Hospital, London. It will be shared equally by Ernest Laurence Kennaway, director of the institute; James Wilfrid Cook, Colin Leslie Hewett and Izrael Hieger, chemists; and William Valentine Mayneord, physicist. The award is made upon the recommendation of the president of the American Medical Association, Dr. Irvin Abell; the dean of the Johns Hopkins Medical School, Dr. Alan M. Chesney; and the dean of the Harvard Medical School, Dr. C. Sidney Burwell.

PROFESSORS J. P. MOORE and P. P. Calvert, of the department of zoology of the University of Pennsylvania, will retire at the end of the present academic year. On the evening of May 31, their present and former students and associates held a dinner in their honor at the Hotel Normandie, in Philadelphia. Dr. Josiah H. Penniman, who retires this month as provost of the university, presided, and Dr. Edwin G. Conklin, executive vice-president of the American Philosophical Society, gave the principal address. More than a hun-

dred guests were in attendance. Professor Moore was presented with a microscope and Professor Calvert with special equipment for his microscope. A large portrait photograph of each, suitably framed, was presented to the university to be hung in the Zoological Laboratory.

DR. WORTLEY F. RUDD, dean of the school of pharmacy of the Medical College of Virginia, was made president-elect of the Virginia Academy of Science at its annual meeting, which was held in Danville from May 4 to 6.

AT the annual meeting of the American Society of Clinical Pathologists in St. Louis on May 12 Dr. L. W. Larson, Bismarck, N. D., was inducted into the office of president for the coming year. Officers were elected as follows: *President-elect*, Dr. A. V. St. George, New York; *Vice-president*, Dr. C. L. Klenk, St. Louis; *Secretary-treasurer*, Dr. A. S. Giordano, South Bend, Ind.; members of the *Executive Committee*, Dr. T. B. Magath, Rochester, Minn., and Dr. F. W. Konzelmann, Philadelphia; of the *Board of Censors*, Dr. F. B. Queen, Chicago, and Dr. W. R. Mathews, Shreveport, La.; and of the *Board of Registry*, Dr. A. H. Braden, Houston, Texas, and Dr. J. B. McNaught, San Francisco, Calif. The Ward Burdick award was presented to Dr. Harry Goldblatt, Cleveland, for his work on Arterial Hypertension; the scroll for meritorious service was awarded to Dr. Philip Hillkowitz, of Denver, and the Gold Medal for excellence in the scientific exhibit was awarded to Drs. S. E. Ziffren, C. A. Owen, G. R. Hoffman and H. P. Smith, of Iowa City.

DR. JAMES MARSHALL HANNA ROWLAND, dean of the Medical School of the University of Maryland for the past twenty-four years, will retire with the title dean emeritus at the close of the present academic year.

DR. EMIL PETER SANDSTEN, director of the Agricultural Experiment Station and dean of agriculture of Colorado State College at Fort Collins, will retire with the title of emeritus on July 1. Dr. Sandsten will be succeeded by Dr. Charles H. Kick.

DR. OTTO DUNKEL, of the department of mathematics and astronomy of Washington University, St. Louis, will retire this June after having served as a member of the faculty for twenty-three years.

ANTOINE M. GAUDIN, research professor of mineral dressing at the Montana School of Mines at Butte, an authority on process metallurgy, has been appointed Richards professor of mineral dressing at the Massachusetts Institute of Technology.

DR. DONALD H. MENZEL, associate professor of astrophysics at Harvard University, has been promoted to a professorship.

CARL-G. A. ROSSBY, head of the department of meteorology of the Massachusetts Institute of Technology, has been appointed to the newly established position of assistant chief for research and education in the U. S. Weather Bureau. He has leave of absence from the institute for three years.

DR. A. A. BLAIR, who has been assistant fishery biologist at the Solomon's Island Marine Biological Laboratory, Maryland, has resigned to accept a post with the Government of Newfoundland, where he will take charge of fishery investigations.

THE Committee on Scientific Research of the American Medical Association has made a grant to Dr. Warren O. Nelson, professor of anatomy at Wayne University, for the continuation of studies on the thymus gland. The present grant extends the assistance which the committee has given during the past eighteen months.

DR. HENRY E. SIGERIST, professor of the history of medicine at the Johns Hopkins School of Medicine, sailed on May 30 for Europe and will later go to South Africa. He expects to return to Baltimore early in December. While in Europe Dr. Sigerist will attend an international conference on socialized medicine from June 23 to 25 at Liège, Belgium. In South Africa, from August until the middle of November, he will deliver a course of twenty-five lectures in each of ten institutions.

DR. E. A. ROVENSTINE, professor of anesthesia at the New York University College of Medicine and director of the Division of Anesthesia at Bellevue Hospital, sailed on June 1 for South America. He will present a series of demonstrations and lectures on anesthesia to medical schools in Santiago and Concepcion, Chile, and in Buenos Aires and Rosario, Argentina. He expects to return late in July.

DAVID LACK, leader of the Lack-Venables Expedition to the Galapagos Islands under the auspices of the Royal and London Zoological Societies, has arrived in San Francisco with thirty living specimens belonging to four species of endemic Galapagos finches. The original plan was to take these birds to London for experimental breeding studies. Having reached Panama, however, with the birds in only fair condition, Mr. Lack feared that they would not survive the trip to England. Accordingly, with the approval of Dr. Julian Huxley, arrangements were made by cable to transfer the whole problem to the California Academy of Sciences, where the breeding experiments will be conducted by Dr. Robert T. Orr, assistant curator of birds and mammals.

PROFESSOR AUBREY J. KEMPNER, on the recommendation of the Council on Research of the University of Colorado, gave the annual research lecture on May

15. He spoke on "What is the Nature of Mathematics, and in what Sense does Mathematics Explain a Science?" The lecture was given in Boulder, the fourth in the series of annual lectures established to honor research workers and give public recognition to the research activities of faculty members.

DR. OTIS W. CALDWELL, general secretary of the American Association for the Advancement of Science, gave the commencement address at the Medical College of Virginia, Richmond.

DR. OSCAR RIDDLE, of the research staff of the Station for Experimental Evolution of the Carnegie Institution at Cold Spring Harbor, N. Y., gave an address on May 8 before the Mayo Foundation, Rochester, Minn., on "Some Products and Performances of the Anterior Pituitary Gland."

THE last week of June at Stanford University will be devoted to meetings of the Pacific Division of the American Association for the Advancement of Science, including on Friday afternoon a symposium on x-rays and molecular structure. The Centenary Symposium on the Cell and Protoplasm is from June 30 to July 5. The last day, with addresses by O. L. Sponsler, L. V. Heilbrunn and J. D. Bernal, and a garden party at the home of Professor and Mrs. McBain, leads up to the National Colloid Symposium, which meets from July 6 to 8 with a program of twenty-eight papers. The guest of honor is J. D. Bernal, F.R.S., of the University of London.

THE University of Wisconsin Medical School will conduct an Institute for the Consideration of the Blood and Blood-Forming Organs from September 4 to 6. The program will include papers and round-table discussions by European and American workers in the field of hematology. In addition to the discussions a program of formal papers will be presented. The speakers will include: Dr. L. J. Witts, Oxford, England; Dr. Cecil J. Watson, Minneapolis; Dr. Cornelius P. Rhoads, New York; Dr. E. Meulengracht, Copenhagen, Denmark; Dr. Harry Eagle, Baltimore; Dr. George R. Minot, Boston; Dr. Russell L. Haden, Cleveland; Dr. Jacob Furth, New York; Dr. Claude E. Forkner, New York; Dr. Edward B. Krumbhaar, Philadelphia; Dr. Louis K. Diamond, Boston; Dr. Edwin E. Osgood, Portland; Dr. Charles A. Doan, Columbus; Professor Hal Downey, Minneapolis, and Dr. Paul Reznikoff, New York. A detailed program may be obtained by addressing Dr. Ovid O. Meyer, chairman of the Program Committee, University of Wisconsin Medical School, Madison, Wis.

A GROUP of courses will be given during the summer session of the University of Pittsburgh from July 6 to August 1 on the "Physics of Metals." An attempt will be made to understand the nature of the forces

which make pure metals and alloys hard or soft, ductile or brittle, good or bad conductors of electricity, etc. Courses will be offered by Dr. John C. Slater, head of the department of physics, the Massachusetts Institute of Technology; Dr. M. F. Manning, University of Pittsburgh; Dr. William Shockley, the Bell Telephone Laboratories; Dr. Frederick Seitz, University of Pennsylvania; Dr. Edward U. Condon, associate director, the Westinghouse Research Laboratory. A booklet describing these courses has been prepared, and may be obtained by writing to Professor E. Hutchisson, University of Pittsburgh.

SIGMA PI SIGMA, physics honor society, installed a new chapter at Wayne University, Detroit, on May 22. Dr. F. C. Blake, of the Ohio State University, national president; Dr. M. W. White, of the Pennsylvania State College, national executive secretary; and Dr. C. W. Chapman, of the Michigan State College, were the installing officers. Following the installation banquet an open meeting was held, which was addressed by Dr. P. E. Klopsteg, of the Central Scientific Company, Chicago, who spoke on "Scientific Aspects of Archery."

CORNELL UNIVERSITY announces the establishment at Ithaca of a Summer Research Station in Psychology. Beginning this summer, facilities will be available, without fees, for experimental research, library research and informal study, to investigators holding the doctor's degree. Information concerning laboratory facilities and living accommodations may be obtained from the Secretary of the Department of Psychology, Cornell University, Ithaca, N. Y.

THE University of Missouri has received a grant of \$80,000 for the erection of a building for the Laboratory of Genetics from the Division of Natural Sciences of the Rockefeller Foundation and an additional grant of \$20,000 for the continuation of research projects

now being carried on by Dr. L. J. Stadler, professor of field crops, and Dr. Barbara McClintock, assistant professor of botany, and their associates. Their work has hitherto been supported by the Rockefeller Foundation, the Missouri Agricultural Experiment Station, the U. S. Department of Agriculture and from general university funds.

THE National Foundation for Infantile Paralysis has approved a grant of \$161,350 for the establishment of an infantile paralysis center for Negroes at the Tuskegee Institute, Alabama. The money will be used to build, equip and maintain for one year a center of thirty-six beds. The construction of the building will be started without delay.

DR. STUART T. DANFORTH, formerly a professor at the College of Agriculture at Puerto Rico, has bequeathed to the Smithsonian Institution one of the most complete collections yet made of birds of the West Indies. It consists of more than 3,000 specimens. Dr. Danforth spent approximately thirteen years in gathering this collection, which contains not only all the common forms of the islands, but some of which there are only a few specimens in existence.

THE Institute for Advanced Study at Princeton has been declared exempt from taxation by the State Board of Tax Appeals. The property on which the institution is located was assessed for \$9,625 in 1937 and the Mercer County Tax Board denied a claim to exemption from taxation. The institute appealed to the state board to reverse the decision. In rendering this decision the state board pointed out that the institution makes no charge to students and, in some instances, subsidizes competent persons otherwise unable to take advantage of its resources, and that the property is used exclusively for non-profit-making, educational purposes.

## DISCUSSION

### MICRO-COPEPODA IN MARINE PHYTO-PLANKTON CATCHES<sup>1</sup>

IN 1938 the Scripps Institution of Oceanography made six cruises (February, April, June, August, October and December) off the coasts of California in pursuit of hydrographical, chemical and biological investigations. Thirty-one stations were worked on each cruise except for minor changes and except for omission of about half in April on account of bad weather. On each cruise five liter samples of water for phytoplankton researches were collected with the Allen closing bottle and filtered through the Allen

filtration net of No. 25 mill silk bolting cloth. Except for Cruise II (six levels only) collections were made at seven levels at each station (surface, 10, 20, 30, 40, 50, 60 meters).

While making routine microscopical studies of the phytoplankton I was struck by the constancy of representation of copepods less than two millimeters in length (most less than one millimeter). One female carrying twenty-five eggs was .85 mm long and one carrying fifteen eggs was .76 mm. Some of the nauplii were only about .15 mm long; surpassed in dimensions by a few of the diatoms and dinoflagellates with which they were associated.

By the time that I had studied about a thousand

<sup>1</sup> Contribution from the Scripps Institution of Oceanography, New Series, No. 56.