

bivalents. I have found a somewhat similar condition in the coreid *Pachylis*, though the coupling is here less constant. The most significant fact, emphasized by McClung, is that in *Hesperotettix* the odd chromosome always couples with a particular bivalent that can be distinguished from the others by its size. Such a phenomenon is evidently to a certain extent of the same type as the secondary coupling surmised above as the possible explanation of the facts in *Abraxas*; and it would be most interesting to attempt crossing experiments with these grasshoppers from the point of view that is thus suggested.

Professor Castle's tempting suggestion that the Y-element in the ordinary forms of insects may be the vehicle for the transmission of secondary male characters that are not represented in the female interests me because I had considered an identical view but withheld it for two reasons. One was that in forms like *Pachylis*, *Archimerus*, etc., where the Y-element is wanting, the male secondary characters are as well developed and characteristic as in forms where the Y-element is present. The other is given by the facts in *Metapodius* (since published in the fifth of my "Studies on Chromosomes"). In this case the evidence is nearly if not quite conclusive that the "supernumerary" chromosomes are duplicates of the Y-element; and they are found indifferently in either sex. The closest scrutiny of the original specimens (now in my cabinet) fails to show any trace of the male secondary characters in those females that possess supernumeraries. Since these characters are very conspicuous in *Metapodius* a decisive negative seems to be given to Castle's suggestion, as far at least as three species of this genus are concerned. The Y-element still remains a puzzle; and until it has been satisfactorily accounted for our cytological view of the problem will remain defective.

EDMUND B. WILSON

THE NATIONAL ACADEMY OF SCIENCES

THE National Academy of Sciences held its annual meeting at Washington on April 20, 21 and 22. The members in attendance were:

Henry L. Abbot, Alexander Agassiz, J. A. Allen,

George F. Becker, John S. Billings, Franz Boas, William H. Brewer, George J. Brush, J. McK. Cattell, Charles F. Chandler, Russell H. Chittenden, W. B. Clark, George C. Comstock, E. G. Conklin, James M. Crafts, Whitman Cross, William H. Dall, W. M. Davis, W. L. Elkin, S. F. Emmons, W. G. Farlow, Edwin B. Frost, Theo. Gill, Arnold Hague, William F. Hillebrand, William H. Holmes, Joseph P. Iddings, C. Hart Merriam, S. Weir Mitchell, Edward W. Morley, Edward S. Morse, Edward L. Nichols, H. F. Osborn, Michael I. Pupin, Ira Remsen, W. B. Scott, Charles D. Walcott, Arthur G. Webster, William H. Welch, Charles A. White, Edmund B. Wilson, Robert S. Woodward.

The program of scientific papers was as follows:

"The Nature and Possible Origin of the Milky Way," G. C. Comstock.

"Determinations of Stellar Parallax from Photographs made by Arthur R. Hincks and the writer," H. N. Russel (introduced by G. C. Comstock).

"Strange Ceremonial Costumes of California Indians" (with lantern slides), C. Hart Merriam.

"Archeological Problems of the Titicacan Plateau" (with lantern slides), W. H. Holmes.

"Discovery of a Complete Skeleton of *Tyrannosaurus* in the Upper Cretaceous" (with lantern slides), H. F. Osborn.

"An Iguanodont Dinosaur (*Trachodon*) with the Epidermis Preserved" (with lantern slides), H. F. Osborn.

"Stratigraphic Relations and Paleontology of the Lower Member of the Fort Union Formation," F. H. Knowlton (introduced by Whitman Cross).

"The Deep-sea Bottom of the Eastern Tropical Pacific, from Observations on the *Albatross* Expedition," Sir John Murray (communicated by A. Agassiz).

"The Medusæ of the Eastern Tropical Pacific, from Observations on the *Albatross* Expedition," H. B. Bigelow (communicated by A. Agassiz).

"Mythology of the Mewan Indians of California," C. Hart Merriam.

"The Radiation from Gases heated by Sudden Compression," E. F. Nichols and G. P. Pegram.

"Biographical Memoir of Elliott Coues," J. A. Allen.

"Biographical Memoir of Ogden N. Rood," E. L. Nichols.

"The Electrolytic Separation of the Chlorides of Barium and Radium," Edgar F. Smith.

"The Orders of Teleostomous Fishes (Pisces)," Theo. Gill.

"Biographical Memoir of Chas. A. Schott," Cleveland Abbe.

"The Distribution of the Recent Crinoids," Austin H. Clark (introduced by Theo. Gill).

"On the Distribution of Energy in the Spectrum of the Light from Fluorescent Substances," E. L. Nichols and Ernest Merritt.

"A Geographical Excursion in Northern Italy," W. M. Davis.

THE AMERICAN SOCIETY OF NATURALISTS

THE annual meeting of the American Society of Naturalists was held in the auditorium of the Physiological Building, Johns Hopkins Medical School, Baltimore, Md., December 31, 1908. Fifty-five members were present.

On vote of the society the address of the retiring president, Professor D. P. Penhallow, in his absence, was read by the chairman, Professor T. H. Morgan. It is printed herewith.

A discussion of the functions and relations of the society followed, participated in by delegates from some of the affiliated societies and by Professors Minot, Davenport, Baldwin and Cattell. This resulted in an emphatic vote in favor of preserving the integrity of the society and of establishing a more effective cooperation between its sections. Professor C. B. Davenport offered a motion that the constitution be amended so that the executive committee of the Naturalists be composed of the secretaries of Sections F, G and K of the American Association and of the secretaries of the technical biological societies affiliated with the Naturalists, the same to form a program committee for the arrangement of papers, times and places of meeting, etc. This motion was referred to the executive committee with power to act.

Professor T. H. Morgan, on behalf of the executive committee, moved first that the study of evolution be the general policy of the society for the ensuing year; second, that the program consist of original contributions on the subject of evolution and of reports, demonstrations, etc., of important recent work in this field. The society voted to adopt this program for the current year. Members from the affiliated societies are accordingly requested to reserve contributions bearing on this topic for presentation before the Naturalists at the next annual meeting.

The place and time of the next meeting was referred to the executive committee.

Eleven new members were elected; they are: D. S. Johnson, Johns Hopkins University; R. C.

Osburn, Barnard College; G. G. Scott, College of City of New York; A. H. Clark, National Museum; L. L. Woodruff, Yale University; N. E. Kellicott, Woman's College of Baltimore, Md.; R. P. Cowles, Johns Hopkins University; J. F. McClendon, University of Missouri; F. B. Sumner, Woods Hole; A. A. Budington, Oberlin College; R. Retzer, Johns Hopkins Medical School.

At an adjourned meeting in the evening the following officers were elected for this year:

President—Professor T. H. Morgan, of Columbia University.

Vice-president and Chairman of the Eastern Section—Professor W. H. Howell, Johns Hopkins University.

Additional Members of the Council—Dr. D. T. MacDougall and Professor Charles H. Judd.

Treasurer—Dr. Herman von Schrenck.

Secretary—Dr. H. McE. Knower.

Professor R. A. Harper, University of Wisconsin, is vice-president and chairman of the Central Branch of the society, and Professor J. G. Lee, University of Minnesota, is secretary of the Central Branch.

H. McE. KNOWER,
Secretary

REPORT OF THE BALTIMORE MEETING OF THE AMERICAN FEDERATION OF TEACHERS OF THE MATHEMATICAL AND THE NATURAL SCIENCES

THE council of the federation met in Baltimore, Md., on Monday, December 28, at 3 p.m. Of the thirty-three members of the council, nineteen were present either in person or by proxies. The report of the executive committee, presented by Mr. J. T. Rorer, outlined the work of the year in connection with organization, the appointment of a special committee on the bibliography of science teaching, the issue of the November *Bulletin*, and preparations for the council meeting in Baltimore. It pointed out some of the specific questions which might naturally engage the attention of the officers of the federation during the coming year; emphasizing, however, the dependence of successful work on increased financial resources.

The treasurer reported a balance of \$20.20 from last year, as shown in the printed statement in the *Bulletin*. The printing and mailing of the *Bulletin* had cost \$53.00, leaving \$32.80 chargeable to this year's account. Dues from the federated associations for this year had not yet been collected. An auditing committee, consisting of Messrs. L. S. Hulbert and C. H. Smith, was ap-