

these experiments were planned and started by Professor Castle. They were handed over to the writer in the fall of 1909. Crosses were made between rabbits of large and small body size; the offspring were crossed back to the parents to produce a back-cross generation. Based upon the statistical study of bone measurements and body weight as estimated from growth curves, it was found that the back-cross was more variable in size than the first generation. This was shown by standard deviations as well as by classifications of the actual measurements in relation to the parents. Certain measurements from the back-cross rabbits reached and exceeded the parental extremes. The means of both generations were very close to the mid-parentals in both generations. All these facts would be expected if the multiple-factor hypothesis be used to construct a mechanism to account for size inheritance. The increased variability would be due to a segregation of size factors.

CASWELL GRAVE,
Secretary

(To be continued)

THE ENTOMOLOGICAL SOCIETY OF AMERICA

THE eighth annual meeting of the Entomological Society of America was held at the Atlanta Medical College, Atlanta, Ga., December 30 and 31, in affiliation with the American Association for the Advancement of Science. In the absence of President Bethune, the meetings were presided over by Dr. Philip P. Calvert. The meetings were all well attended, there were about fifty members and fellows in attendance.

The following papers were presented:

"The Structure of the Hind Intestine of *Corydalis*," by J. T. Lloyd.

"Observations on the Habits and Life-history of *Hydromyza confluenta* Loew.," by Paul S. Welch. (Read by title.)

"New Characters in the Classification of Microlepidopterous Larvæ," by Stanley B. Fracker.

"The Poison Glands of *Euproctis chrysorrhæa* Linn.," by Cornelia F. Kephart. (Presented by W. A. Riley.)

"The Tracheation of the Anal Area of the Wings of the Lepidoptera and the Homology of the Veins," by N. L. Partridge. (Read by title.)

"The Box-elder Bug in Ohio," by Herbert Osborn.

"The Elytral Tracheation of the Subfamilies and Genera of Cicindelidæ," by V. E. Shelford.

"Some Interesting Structures in the Pupæ of Lepidoptera," by Edna Mosher.

"Some Sources of Error in the Interpretation of Insect Tissue," by W. A. Riley.

"*Conventzia hageni* Banks, Life-history Notes and Variations in Wing Venation," by J. S. Houser.

"Notes on the Head Structures of Thysanoptera," by Alvah Peterson. (Read by title.)

"The Desirability of a Biographical Dictionary of Entomologists," by Philip P. Calvert.

The afternoon of the thirtieth was devoted to a joint session of Section F of the American Association for the Advancement of Science and the Entomological Society of America, at which the following papers were presented:

"Note on the Present Status of the Gipsy Moth Parasites in New England," by L. O. Howard.

"Some Notes Regarding the Natural History of the Mole Cricket," by E. L. Worsham.

"Notes on Some Old European Collections," by H. T. Fernald.

"Studies on the Snowy Tree-cricket, *Oecanthus niveus*, with References to Apple Bark Diseases," by P. J. Parrott, W. O. Gloyer and B. B. Fulton. (Presented by P. J. Parrott.)

"Collecting Insects in the Okefenoke Swamp," by J. Chester Bradley. (Presented by J. G. Needham.)

"Studies on the Geographical Distribution of Leaf-hoppers, Especially of Maine," by Herbert Osborn.

"The Fauna of Epiphytic Bromeliads in Costa Rica," by Philip P. Calvert.

The morning of the thirty-first was devoted to the presentation of the report of the executive committee, at which was reported the election of fifty-four new members and the election of Dr. C. Gordon Hewitt and Dr. William Barnes as fellows; the presentation of the reports of standing committees; the election of officers; the adoption of the report of the committee to hold a summer meeting in 1915 on the Pacific coast; the appointment of a committee to consider the desirability of starting the publication of a series of special works on entomology like that of the Ray Society, and the reading of the following papers:

"The Dispersal of *Musca domestica*," by James Zetek. (Presented by S. B. Fracker.)

"A Comparison of the Enemies of *Toxoptera graminum* in South Africa and the United States," by William Moore. (Presented by F. L. Washburn.)

"Life-history Notes on *Psephenus lecontei* and *Hydroporus septentrionalis*," by Robert Matheson. (Read by title.)

"The Sequence of Color Changes During Ontogeny in *Cicindela*," by V. E. Shelford.

"Notes on the External Anatomy of Some Pentatomidæ," by R. W. Leiby.

"The Biology of *Gelechia gallæsolidaginis* with Some Reference to Some of Its Parasites," by L. S. Barber.

"A Little Known Wire-worm, *Horistonotus uhleri*," by A. F. Conradi.

"The Life-history of a Species of Psychodidæ," by Leonard Hazeman. (Read by title.)

"The Structure of the Thorax in Generalized Insects," by A. D. MacGillivray.

"Behavior of *Anopheles tarsimaculata* Goldi," by James Zetek. (Read by title.)

"Life-history of *Elophila magnificalis*, an Aquatic Lepidopteron," by J. T. Lloyd. (Read by title.)

The following officers were elected for 1914:

President—Dr. Philip P. Calvert, University of Pennsylvania.

First Vice-president—Dr. James G. Needham, Cornell University.

Second Vice-president—Dr. C. Gordon Hewitt, Dominion Entomologist.

Secretary-treasurer—Dr. Alex. D. MacGillivray, University of Illinois.

Additional Members of the Executive Committee—Professor Herbert Osborn, Ohio State University; Dr. W. M. Wheeler, Harvard University; Professor Vernon L. Kellogg, Leland Stanford Junior University; Mr. Nathan Banks, United States National Museum; Dr. E. P. Felt, State Entomologist of New York, and Professor J. M. Aldrich, United States Bureau of Entomology.

Member of Committee on Nomenclature—Professor T. D. A. Cockerell, University of Colorado.

The next meeting will be held in Philadelphia, Pa., in affiliation with the American Association for the Advancement of Science.

ALEX. D. MACGILLIVRAY,
Secretary

SOCIETIES AND ACADEMIES

THE AMERICAN MATHEMATICAL SOCIETY

THE one hundred and sixty-eighth regular meeting of the society was held at Columbia University on Saturday, February 28. The attendance at the two sessions included forty-two members. Vice-president L. P. Eisenhart occupied the chair.

The following new members were elected: Mr. E. W. Castle, Princeton University; Professor P. J. Daniell, Rice Institute; Mr. L. R. Ford, Harvard University; Mr. G. M. Hill, State Normal School, Springfield, Mo.; Dr. R. A. Johnson, Adelbert College; Dr. L. M. Kells, Columbia University; Dr. W. W. Küstermann, Pennsylvania State College; Professor J. F. Reilly, State University of Iowa; Professor F. B. Williams, Clark University. Nine applications for membership were received.

An amendment of the constitution was adopted by which the secretary of the Chicago Section becomes *ex officio* a member of the council.

The following papers were read at this meeting:

H. S. Vandiver: "Note on Fermat's last theorem."

G. M. Green: "One-parameter families of space curves, and conjugate nets on a curved surface."

G. M. Conwell: "Brachistochrones under the action of gravity and friction."

R. D. Beetle: "A formula in the theory of surfaces."

C. A. Fischer: "The Legendre condition for a minimum of a double integral, with an isoperimetric condition."

A. R. Schweitzer: "A generalization of functional equations."

A. R. Schweitzer: "Some critical remarks on analytic realism."

E. V. Huntington: "A graphical solution of a problem in geology."

H. Galajikian: "A relation between a certain non-linear Fredholm equation and a linear equation of the first kind."

Dunham Jackson: "Note on rational functions of several complex variables."

E. B. Wilson: "Infinite regions in geometry."

H. Bateman: "The structure of the aether."

F. R. Sharpe and Virgil Snyder: "Birational transformations of certain quartic surfaces."

F. R. Sharpe and C. F. Craig: "An application of Severi's theory of a basis to the Kummer and Weddle surfaces."

B. E. Mitchell: "Complex conics and their real representation."

W. H. Roever: "Analytic derivation of formulas for the deviation of falling bodies."

The next meetings of the society will be held at Chicago, April 10-11, and at New York, April 25.

F. N. COLE,
Secretary