

*Hermaphroditism in the Brook Lamprey*: PETER OKKELBERG. (Introduced by R. W. Hegner.)

In a study of the reproductive organs of the American brook lamprey, *Entosphenus wilderi*, it was found that a juvenile hermaphroditic condition occurs normally and that there were three kinds of individuals as regards sex, namely, true females, true males and hermaphrodites.

The sex glands of fifty larvæ, ranging from 7½ cm. to 20 cm. were studied and it was found that 46 per cent. were true females, 10 per cent. were true males and 44 per cent. hermaphrodites. In the adult condition males and females occur in practically equal numbers and the conclusion is reached that all the hermaphrodites develop into males. Out of 15 male specimens examined seven were found which contained undeveloped ova, —some a few and others a great number. These ova were similar in structure and size to those found in the larvæ.

The number of ova found in the mixed gland varied greatly. Sometimes only a single ovum was found and in other cases a large number of ova were present.

The hermaphroditic condition in the lamprey seems to be similar to that found in several of the other lower vertebrates such as *Myxine*, some Teleosts, and in some Amphibians.

#### EXHIBITS

During the meetings the following exhibits were made by members of the society in one of the rooms of the Zoological Laboratory of the University of Pennsylvania.

E. P. PHILLIPS AND GEORGE S. MUTH (Bureau of Entomology)—Instruments (Thermo-electric Outfit) (Special Scale), used in work on Behavior of the Honey Bee.

S. O. MAST (Johns Hopkins University)—Photographs and Autochromes showing changes in color and pattern in flounders.

ROBERT K. NABOURS (Kansas State Agricultural College)—Specimens and charts illustrating "Inheritance in Orthoptera."

M. F. GUYER (University of Wisconsin)—Demonstration of the X-element of Plymouth Rock Fowls.

J. E. ACKERT (Kansas Agricultural College)—Demonstration of the Innervation of the Integument of Chiroptera.

H. D. REED (Cornell University)—Model of the Pectoral and Axillary Glands in *Schilbeodes gyrinus*.

CASWELL GRAVE,  
Secretary

#### THE ASSOCIATION OF AMERICAN GEOGRAPHERS

THE tenth annual meeting of the Association of American Geographers was held at Princeton, January 1 and 2, 1914. About thirty-five members were present and the attendance of members and non-members ranged from twenty-five to sixty. Thirty-six titles appeared on the final program and twenty-eight papers were read.

The officers for 1914 are as follows:

*President*—Albert Perry Brigham.

*First Vice-president*—Charles R. Dryer.

*Second Vice-president*—C. F. Marbut.

*Secretary*—Isaiah Bowman.

*Treasurer*—Francois E. Matthes.

*Councilors*—Lawrence Martin, Robert DeC. Ward, Alfred H. Brooks.

*Editor*—Richard E. Dodge.

The nominating committee for officers for 1915 consists of C. F. Marbut, chairman, R. H. Whitbeck, H. H. Barrows.

One of the most important features of the meeting was the adoption by the Association of the plan of cooperation proposed by the American Geographical Society. The plan provides for (1) a joint research committee of the two organizations to administer a joint research fund, (2) a joint meeting in New York each spring, (3) the publication by the Association in collaboration with the American Geographical Society of the Annals of the Association, (4) an interchange of the publications of the two societies.

The research committee of the Association consists of: Alfred H. Brooks, chairman, Herbert E. Gregory, Robert DeC. Ward.

An increasingly large proportion of the papers read dealt with various phases of human geography. The first meetings of the Association (1904–1906) were naturally marked by a large number of physiographic papers. Then came a period (1907–1910) when physiography and anthropogeography were alternately ahead. In the last three programs anthropogeography has led, owing chiefly to the growing number of students devoted to the life side of the science. Future programs will probably show a still stronger tendency in this direction, judging by the livelier discussions evoked by the more strictly geographic papers.

The joint meeting in New York will be held April 3–4. The next annual meeting will be held at some point west of Pittsburgh.

ISAIAH BOWMAN,  
Secretary