

adequate explanation of the fact that hydrochloric acid solutions do not obey Henry's law. Book and journal reviews.

March. 'The Equilibria of Stereoisomers:' by WILDER D. BANCROFT. A study of substances having variable melting points. 'Acetaldoxime:' by HECTOR R. CARVETH. A study of its variable melting points. 'Naphthalene and Aqueous Acetone:' by HAMILTON P. CADY. 'Indicators:' by JOHN WADDELL. The effect of organic solvents in discharging the colors of indicators. 'Normal Elements:' by D. MCINTOSH. Book and journal reviews.

Mention should be made of the excellent style and typography of the *Journal*.

THE articles in the current number of *The American Naturalist* commemorate the fiftieth anniversary of the beginning of Agassiz's instruction in Harvard University, marking, as is said in an editorial article, an era in the history of zoology in America. An unsigned article reviews the life of Agassiz, with special reference to his activity as a teacher. Then follow articles on The Philosophical Views of Agassiz, by Professor A. S. Packard; Agassiz and the Ice Age, by Professor G. Frederick Wright; Agassiz on Recent Fishes, by President David Starr Jordan; Agassiz's Work on Fossil Fishes, by Professor Charles R. Eastman; Agassiz's Work on the Embryology of the Turtle, by Mrs. Gertrude C. Davenport, and Agassiz at Penikese, by Professor Burt. G. Wilder.

#### SOCIETIES AND ACADEMIES.

##### BOSTON SOCIETY OF NATURAL HISTORY.

AT the general meeting, February 2d, sixty-four persons were present.

Mr. William C. Bates showed a series of lantern views illustrating the natural features of Jamaica and the Jamaicans. He gave a brief historical account of the island and spoke of the advantages due to its accessibility and climate and to many of the interesting characteristics judged from a natural history standpoint. Mr. Bates closed with a series of proverbs and riddles showing that the legends and beliefs of the Jamaicans have many similarities to those of other countries.

A general meeting was held February 16th, with twenty-four persons present.

Mr. John Murdoch read a paper on the animals known to the Eskimos of northwestern Alaska. The climate and natural features of the country near Point Barrow were briefly described, and the behavior of the ice noted. In the capture of animals the bow has been superseded by the rifle. The Eskimos depend upon the walrus, the seals and the whales; the ring seal (*Phoca foetida*) is the most important animal, the reindeer being next in importance. The polar bears are not common and avoid encounters with men and dogs. The wolf is not found in the vicinity of Point Barrow, but is abundant in the reindeer country; they chase the deer in packs. The tail of the wolverine is especially valued for decorative purposes. The Arctic fox is the most abundant animal found at Point Barrow; it is very shy and so well protected that it is seldom seen. The habits of many birds, the various eiders and gulls, the snow bunting, Lapland longspur, snowy owl and ptarmigan were noted. The Eskimos do not pay much attention to birds.

The Society met March 2d, seventy-one persons present.

Mr. Hollis Webster spoke of some common mushrooms, edible and poisonous, describing in detail the principal characteristics of the common mushroom, *Agaricus campestris*, and of the deadliest member of the group, *Amanita phalloides*. Mr. Webster mentioned the popular interest in the group, its value as food, and noted briefly the classification and method of growth of the fungi. He also described, with the aid of a series of lantern slides, many forms of *Boleti*, *Russula*, *Lepiota*, etc.

At the general meeting held March 16th there were one hundred and fifty-two persons present.

Professor William Libbey read a paper on Cuba, which was illustrated by lantern slides. Professor Libbey's account was based upon personal observation and gave a brief sketch of the country, with special reference to the physical features and to the customs and characteristics of the Cubans.

SAMUEL HENSHAW,  
Secretary.

ZOOLOGICAL CLUB, UNIVERSITY OF CHICAGO—  
FEBRUARY AND MARCH, 1898.

THE PRONEPHROS IN TESTUDINATA.

WIEDERSHEIM, in his paper, 'Über die Entwicklung des Urogenital apparatus bei Crocodilen und Schildkröten,' 1890, states that he has been entirely unable to distinguish between pronephros and mesonephros. A study of the earlier development explains his position.

From some very young embryos of *Aromochelys* and *Platypeltis* it has been possible to determine the origin and extent of the pronephros. It arises as segmental outgrowths from the posterior somatic region of the somites and is very marked, bridging over the fissure from one somite to the next. The tips overlap and fuse with the following outgrowth. In a very young series the fusion is so complete that a prominent and quite even ridge or welt is formed, extending from the sixth to the tenth somite. Stretching from the end of the pronephros we find the pronephric duct at first close to the somites, further back free, and at its tip at least in some cases fused with the ectoderm. Mitsukuri says he has proved this fusion beyond the possibility of a doubt.

As we proceed to the later stages, however, a new factor comes in which greatly modifies these conditions. Before there is more than a hint of the lumen in the pronephric tubules; we see in some of the same somites (from the second pronephric tubule, on) as well as further back, at the point where they pass in the middle plate, a thickening and occasionally a small bubble-like lumen. These are the Anlagen of the mesonephric tubules. They become more and more distinct. In some series we find the funnel of the pronephric tubule and that of this mesonephric rudiment, opening side by side into the body cavity, but further posterior, and in older embryos we find the pronephric funnels opening into these rudiments of the mesonephros and through them into the body cavity.

There is no break between the pronephros and mesonephros. The first purely mesonephric tubule is in the next somite to the last one which shows the fusion of pronephric and mesonephric elements. Thus it becomes clear that although the pronephros is distinct in

origin, it arises as segmental outgrowths from the somites and extends over but few segments; the mesonephros arising from the middle plate extends almost as far anterior as the pronephros, and the two are so fused in the later stages that the parts cannot be distinguished without a study of their development.

The glomus is not seen in any of the stages described, except as a cluster of cells resembling blood corpuscles may be very rarely found alongside of the aorta. Its origin and development will be discussed later with the further development of the excretory system.

E. R. GREGORY.

Titles of other papers read during the two months: 'The Maturation, Fertilization and Early Cleavage of *Myzostoma*,' Dr. W. M. Wheeler; 'The Germinal Vesicle in *Amphibia*' (Carnoy), F. L. Charles; 'Dr. Mead on Annelid Cytogeny,' W. L. Treadwell; 'The Stage of Synapsis in the Squid-egg,' Miss M. M. Sturges; 'The Photospheria of *Nyctiphanes* with Remarks on the Origin of Luminous Organs,' Dr. S. Watase; 'A Comparative Study of Cell Lineage,' S. J. Holmes; 'Notes on a new *Peripatus* from Mexico,' Dr. W. M. Wheeler; 'A New Pigeon Hybrid,' Dr. C. O. Whitman; 'Carnoy on the Fertilization of *Ascaris*,' W. H. Packard.

NEW BOOKS.

*Fossil Plants.* A. C. SEWARD. Cambridge, The University Press. 1898. Vol. I. Pp. xviii + 452. 12s.

*A Text-Book of Botany.* E. STRASBURGER, F. NOLL, H. SCHENCK, A. F. W. SCHIMPER; translated from the German by H. C. PORTER, PH.D. London and New York, The Macmillan Company. 1898. Pp. ix + 632. \$4.50.

*Methods for the Analysis of Ores, Pig Iron and Steel.* Easton, Pa., Chemical Publishing Co. 1898. Pp. 130. Paper, 75c.; cloth, \$1.00.

*The Meaning of Education and other Essays and Addresses.* NICHOLAS MURRAY BUTLER. New York and London, The Macmillan Co. 1898. Pp. xi + 230. \$1.00.

*Erratum:* On page 468, lines 10 and 11 from the bottom of column 1 the words neurite and dendrite should be transferred.