PROCEEDINGS

OF THE

Boston Society of Natural History.

VOL. IX.

1862, 1863.

BOSTON:
PRINTED FOR THE SOCIETY.
WILLIAM WOOD & CO., 61 WALKER STREET, NEW YORK.
TRÜBNER & CO., 60 PATERNOSTER ROW, LONDON.
1865.

The base is of black walnut, supporting an upright flat portion of the same wood, with two crotches in which the somewhat heavily-loaded tube rests, inclined at an angle of thirty degrees from the horizontal. The adjustment is by rotation of the large shade disc, a pin projecting from which rests against the slightly-inclined extremity of the upright support, and is according to the general plan long employed by him. The stage is of iron, eight inches long, and rests against the flat ends of a horse-shoe magnet. It turns on an edge a little to the left (or right, if preferred) of the middle, so that the up and down motion is a radial one, while the lateral motion is sliding. An achromatic condenser and diaphragm of the simplest construction are brought close to the stage. The direct light of a kerosene lamp, which is brought as near as possible to the achromatic condenser, is preferred for illumination. When daylight is used the following is the arrangement: A plano-convex lens is mounted in a deep, open frame, and may be thus used as a magnifier or a bull's-eye. When a reflector is wanted, two round pieces of plane mirror, fastened back to back, are placed in the frame, so that one of them shall lie against the plane side of the lens. This contrivance gives us a plane mirror on one side, and a combination practically equivalent to a concave mirror on the other. The instrument is so arranged as to be very easily packed and handled. Dr. Holmes claims that it is perfectly solid, simple in management, gives a brilliant and readily adjusted illumination, especially with artificial light, has no machinery which can get out of order, and can be constructed very cheaply. The idea of the magnetic stage is not original, but the arrangement of it is new, embodying the radial movement first used, he believes, by himself, in a microscopic stage. He has for some years used instruments of his contrivance resembling this in many points, with satisfaction, but presents this model as more simple than and as effective as those he has previously employed. It is specially adapted for the higher magnifying powers.

November 19, 1862.

The President in the chair.

Mr. A. E. Verrill presented a paper entitled, "Review of the Polyps of the Eastern Coast of the United States, with descriptions of new and imperfectly known species."

Dr. J. Wyman gave an account of recent observations on *Penta-*

stoma (Linguatula, Rudolphi) armillata, Wyman, which infests the lungs of the *Python Sebæ*, of Africa. This species of Entozoon was first described in the Journal of the Boston Society of Natural History, Vol. v., p. 294. To the description there given, the following particulars are added: —

The number of individuals found in the lungs of the specimen of Python here noticed was six, all but one of which were females, and the longest measuring six inches in length. The form of the females is cylindrical, somewhat flattened on the under side, and gradually diminishing from the middle backwards. The tegumentary rings are large, prominent, and fleshy, widely separated, and placed a little obliquely on the body; eighteen of them are well defined; four more are contained in the head, and scarcely to be distinguished from each other. The hooks, four in number, are arranged in a curved line which is concave upwards, the mouth being in the middle of the line; and above it, on the foremost part of the head, are two prominent papillæ, slightly separated from each other. The muscular system consists of bands of longitudinal fibres, separated by narrow intervals, except on the middle line beneath, where there is a wide space without such fibres, and through which the viscera are easily seen. The genital orifice is in front of the anal.

The *male* was much smaller, only 1.84 inch in length, of an elongated conical shape, regularly tapering to a point from the head backwards. There are only fourteen distinct fleshy rings, and four more in the head but imperfectly defined. Besides the two papillæ on the top of the head, as seen in the female, there are two others on each side, one over each of the hooks.

Van Beneden, in his description* of *P. proboscidea*, describes the testis as being *beneath* the intestine; — in *P. armillata* both ovary and testis are *above*, or on the dorsal side of, the intestine. In the female the spermatheca is of a spherical shape, instead of being cylindrical, and ending in an oval pouch as in *P. proboscidea*. Van Beneden has given the embryology of this genus, and shown its affinities with the Lerneans.

Mr. A. Agassiz exhibited drawings of a new genus of *Physophoræ*. It is closely allied to *Halistemma* Huxl. and *Agalmopsis* Sars. The swimming bells are arranged in two rows; in the largest perfect specimens found there were not more than four on each side; they resemble those of Agalmopsis. The tentacles are of three kinds — clusters of long, slender threads, which they throw about in every possible direction, having club-shaped appendages without filiform terminations; the second kind are clusters of short, corkscrew-shaped

* Mem. Acad. Roy. des Sc. Belges, T. xv. p. 188.

tentacles, covered with a pavement of lasso-cells for their whole length, as in the club of the long tentacles; and the third kind of tentacle, which is always found at the base of the Hydrocysts, as Huxley calls them, are perfectly simple, thread-like appendages, with an occasional cluster of lasso-cells like small warts. From the observations Mr. Agassiz had made about the development of this genus, he was inclined to believe that the Hydrocysts became separated, — that a float was formed at the extremity which was formerly attached. Below this float, swimming bells, deckstücke, tentacles, Hydræ, soon made their appearance, and thus young were formed, precisely in the same way as those which were developed from the eggs. Although he had never seen them separate, yet he had frequently found Hydrocysts still attached with strong constrictions at the base, in which an oil bubble had become separated into a distinct cavity by the folding of the walls. These Hydrocysts, thus attached, could in no way be distinguished from young specimens which were found floating about, and which afterwards developed in confinement to adult specimens. Hence strong probability that by the separation of these Hydrocysts we have in Physophoridæ a mode of development similar to the budding of some genera of Hydroids, in addition to the development by sexual reproduction. In jars in which adult specimens had been placed these Hydrocysts were frequently found after they had separated. On account of their small size they may however have escaped notice at first, and been introduced with the adults. This species is quite small, never growing to more than two or three inches. Specimens of that size had the reproductive organs quite well developed. This species appears to be nocturnal, as not a single specimen was ever taken during the daytime: scarcely a night passed while fishing for them without finding several. He would propose for this species the name of *Nanomia cara*. It is found at Nahant during the summer and fall. This is the first free Hydroid found north of Cape Cod, and, if we except the occasional washing ashore on the Cape of specimens of *Physalia arethusa* Til., brought by the gulf stream, the only species known to inhabit the coast of New England. A more detailed account of this interesting Hydroid, with figures and its embryology, will shortly be published.

On motion of Dr. A. A. Gould it was voted that the names of all persons who have contributed toward the erection of the new building the sum of one hundred dollars and upwards, be entered on the Records of the Society as Patrons.

Mr. Thomas MacFarlane, of Acton Vale, C. E., was elected Corresponding Member.