

AUGUST 5.

Mr. EDW. POTTS in the chair.

Eleven persons present.

*On Paludicella erecta.*—Mr. EDWARD POTTS desired to have a preliminary record made of his recent discovery or identification of a new species of *Paludicella*, for which he proposes the name *Paludicella erecta*.

This genus of fresh-water polyps has heretofore contained only the single clearly defined species *P. Ehrenbergi*, Van Beneden (*Alcyonella articulata*, Ehrenberg), the other two names, *P. procumbens* and *P. elongata*, suggested by Mr. Albany Hancock and Prof. Leidy, being considered by Prof. Allman as identical with the original type. The present form is strikingly different from the old one, both in the number of its ciliated tentacles and in the character of the cœnœcial cells. The doubt which has lingered in the mind of the speaker has not been as to the species, but whether, in view of the difficult determination of the characteristic septæ between the cells, amounting in fact to an apparent absence of them, a new genus might not be required to accommodate it.

It was first noticed in Tacony Creek, a small stream in Montgomery County, Pennsylvania, at that place perhaps fifty feet above tide-water. A few days after it was also gathered within tidal limits in both the Delaware and Schuylkill Rivers, near Philadelphia. In the first-named locality it was found most abundantly in the pools amongst the rapids of the stream, frequently covering the upper surface of stones, at the depth of a foot or more, to the extent of many square inches. The erect portions of the cœnœcial cells in the denser parts of the colonies are about a line in height and, standing very closely, suggest a comparison with the surface of a chestnut-burr. In the rivers they were found penetrating the mass of encrusting sponges, particularly *Meyenia Leidyi*.

These upright tubules are chitinous prolongations of very irregularly inflated cells, resting in compact disorder upon the supporting surface, crossed and connected in some manner not yet intelligible, by meandering cylindrical rhizomes, sometimes of great relative length. These are mostly terminal and simple, but are sometimes branched and frequently originate in an indifferent lateral portion of a cell. The tubular prolongations are, of course, always single; the invaginated polyp retiring within the inflated portion of the cell. Septæ were, in a few instances, discovered in the rhizomes near their insertion or connection with the inflated portion of the cells. The upright

portions of those cells which seemed to be least matured were longer than those of their older neighbors, subclavate or spindle-shaped and rounded at the extremities. The others are cylindrical or slightly widening downwards and shorter than the former by the invagination of the terminal portion of the ectocyst. This has the effect of producing the angular appearance of the orifice, so familiar in the older species; but while that is generally quadrangular, this has frequently five or more sides. The younger cells are nearly transparent, but they darken with age and become somewhat encrusted with adherent particles and overgrown by commensal parasites, *Limnias*, *Pyricola*, and the like.

The polypides are shy, but fond of the light, and when otherwise undisturbed will remain for a long time protruded in the full glare of microscopic illumination. It can then be seen that the lophophore is circular, without epistome, supporting ordinarily twenty tentacles, taking the shape of a claret glass and opening upwards. (Nineteen and twenty-one tentacles have been doubtfully counted, while the above-mentioned number is frequent; *P. Ehrenbergi* is universally stated to have but sixteen). A peculiarity of the tentacles is the presence upon the outer median line of each, of a rather sparsely filled series of quiescent setæ, in strong contrast with the rapidly moving cilia around them.

The development of this polyp from the ovum, of which interesting hints have been obtained, and its internal structural peculiarities, are reserved for further study, and if satisfactory results shall have been attained, they will be treated of in a later paper. The nearly simultaneous observation of this species in three distinct localities, and its abundance in each, indicates that it is probably not uncommon, and excites surprise that it does not appear to have been previously noticed.

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AUGUST 12.

Mr. THOMAS MEEHAN, Vice-President, in the chair.

Fifteen persons present.

*A Large Zircon.*—Dr. A. E. FOOTE recorded the discovery of the largest crystal of zircon ever known. It is  $9\frac{1}{2}$  inches high, 4 inches on one face and  $3\frac{3}{8}$  inches on the other. It undoubtedly originally weighed twelve pounds, but owing to a small portion being lost by fracturing it now weighs but eleven and three-quarter pounds. The largest crystal ever known before weighed less than three pounds. The crystal is doubly terminated, and, though somewhat broken in taking out nearly all the pieces were saved. At one end there are two terminations and one of these