

recognized by its large conical shell, which measures about $4\frac{1}{2}$ inches in length and is marked with more or less confused longitudinal chocolate stripes.

N. ANNANDALE.

POLYZOA.

STATOBLASTS FROM THE SURFACE OF A HIMALAYAN POND.—During a recent visit (in April and May) to the Simla district in the Western Himalayas I made a careful examination of the surface of all ponds, wells and streams I came across, in the hope of finding floating sponge gemmules or polyzoon statoblasts. So much dust is blown up from the plains of the Punjab into the hills that I rather expected to find these bodies on the water, even if the organisms which produce them did not occur. In almost every case but one, however, my search was fruitless, although at first sight I took for gemmules certain bodies which were probably the egg-shells of the Phyllopod Crustacean *Branchinecta orientalis*, Sars. On the horse-pond at Theog, a village situated at an altitude of 8,000 feet about seventeen miles beyond the town of Simla, I found in a scum of animal and vegetable debris numerous statoblasts agreeing in every respect with those of the typical *Plumatella emarginata*, and although I was unable to find living colonies of this animal, it is possible that they existed on certain stones near the centre of the pond that I was unable to reach. Together with the statoblasts were certain other bodies which may be those of some unknown species. Each contained two brownish capsules, which were approximately circular in outline and were enclosed in a mass of air-cells. One edge of the whole structure was straight while the other was curved. I know of no species to which they can belong. Similar bodies were also found on the surface of a small pond above the village of Phagu, at a point about five hundred feet higher than Theog and five miles nearer Simla.

N. ANNANDALE.

NOTES ON *Hislopia lacustris*, CARTER.—Through the kindness of Dr. N. Annandale, I have recently had the opportunity of comparing a specimen of *Hislopia lacustris* from Calcutta with the same species as it occurs in the United Provinces at Bulandshahr. Dr. Annandale has so fully described this Polyzoon as met with in Calcutta (*Journ. Asiat. Soc. Bengal*, vol. ii, No. 3, March 1906, and *id.*, vol. iii, No. 2, February 1907), that I shall content myself with pointing out in what respects specimens from the United Provinces of India differ from those found, some 700 miles further east, at Calcutta.

Dr. Annandale's observations were made in January and February (*i.e.*, in the "cold weather") at Calcutta, and mine were made in April and May (*i.e.*, at the beginning of the "hot weather") at Bulandshahr; but Dr. Annandale tells me that he has recently examined specimens taken in Calcutta in June and that they do not differ from those taken in February in the same tank.

In Calcutta the species has only been found on the leaves of *Valisneria spiralis*.

In describing the form of the colonies, Dr. Annandale says that, in Calcutta "the linear arrangement is far commoner than any other, but occasionally several zoëcia are adjacent to one another in a transverse series" A somewhat similar arrangement to this "linear" one also occurs at Bulandshahr, though it is much rarer than that next to be described. I have found a few small colonies, of perhaps twenty to thirty zoëcia growing in this way on slender submerged leaves and twigs, where the colony has not room to extend much laterally. But in this part of India (the United Provinces) *Hislopi*a is far more frequently found in the form of a flattened encrusting sheath on the outer surface of the shells of *Paludina* and at least one other freshwater Gastropod. This was the condition described originally by Carter (*Ann. Mag. Nat. Hist.* (3), i, page 169).

The colony consists of a single layer of zoëcia, and completely covers the whole surface of the shell with the exception of the narrow surface which lies in contact with the upper part of the protruded "foot" of the Mollusc. Almost every *Paludina* that I have examined carries *Hislopi*a about with it, and as *Paludina* occurs very abundantly, *Hislopi*a is by far the commonest of the Polyzoa met with in this part of India.

The zoëcium of the encrusting form is of a darker brown colour than the other; in both varieties the colour is most marked at the margin of the orifice.

Carter describes the shape of the zoëcium as "irregularly ovate." This oval shape is decidedly more marked in the encrusting than in the linear form. The orifice always occurs nearer the broad than the narrow end of the oval, and projects further above the surface of the zoëcium in the encrusting form. Very few of my specimens show spines at the orifice, and those that do bear spines have them in a more or less rudimentary condition. As this occurs in large zoëcia, which contain eggs, I cannot think that the absence of spines is a sign of immaturity.

I fully agree with Dr. Annandale's remarks about the nature of the "valves," and my observations do not confirm the statement made by Carter (quoted by Annandale, *loc. cit.*) that the posterior "valve" is larger than the others.

As noticed by Carter and Dr. Annandale, the "collar" is a very conspicuous part of the polypide.

Although when reduced to writing, the differences between the two forms of *Hislopi*a do not appear to be very great, I think that if only the dried colonies were available for examination, there would be a strong tendency to regard them as distinct species at least. But the living polypides appear to be identical in form, and there is little doubt that the two quite distinct phases in which *Hislopi*a occurs are merely another example of that variability which is well known to occur in other Polyzoa, such as *Plumatella*.

H. J. WALTON, *Capt., I.M.S.*