of fibres; each fasciculus is twisted together near its centre; these, some of them being larger than others, star the structure thickly, and still more plentifully where the white excrescences appear.

I am not prepared to state that this case was built by the animal, and some have suggested that it may be one of the *Medusæ;* but the microscopic structure appears to negative this latter idea.

That it is the nest in which the animal dwelt appears certain, but how it was constructed we have no information to guide us; still it is not at all improbable that there are many processes in the lower forms of life that have not yet been made known, some of which may be even more astonishing than the supposed fact, that an animal whose constant habit is to dwell within the protecting walls of another, can, upon being expelled by accident from its usual abode, secrete a substance that will protect it from external injury, and, as far as may be, fulfil the conditions of its normal position.

EXPLANATION OF PLATE VIII.

Fig. 1. Case of *Siphonocetus typicus*, enlarged (after Kröyer).
Fig. 2. Tubes of *Siphonocetus crassicornis* on *Antennularia*, enlarged.
Fig. 3. Nests of *Podocerus pulchellus* on *Laomedea*, enlarged.
Fig. 4. Nests of *Podocerus fucicola*? on *Ulva* and *Tubularia*.
Fig. 5. Nests of *Amphitoë rubricata* at the root of *Laminaria*.
Fig. 5 *a*. Microscopic structure of the same.
Fig. 6. Supposed nest of *Phronima*.
Fig. 6 *a*. Microscopic structure of the same.

XVII.—*Description of a Lacustrine Bryozoon allied to* Flustra.

By H. J. Carter, Esq., H.C.S. Bombay.

[With a Plate.]

The following is a description of a polypidom which was sent to me by the Rev. S. Hislop, who found it for the first time in April last, growing plentifully on *Paludina Bengalensis* and the stems of aquatic plants, in a freshwater tank and adjoining well at Nagpoor, in Central India. So far as I am aware, it will form the first on record of a freshwater species of this kind of Bryozoon; and being encrusting and without calcareous matter in the skeleton, it will also afford the type of a new genus at least, for which I propose the name *Hislopia*, in honour of the reverend gentleman above mentioned, to whose acute observation and intelligence we are indebted not only for its discovery, but, in conjunction with his late colleague, the Rev. R. Hunter, for

those of fossil remains as yet unparalleled in interest and number in Indian geological research.

It differs from *Flustra* in the form and arrangement of the cells, and in not being erect; and from *Membranipora* and *Lepralia* in not being calcareous; but it agrees with *Flustra* in the latter character, and with *Lepralia* in being decumbent,—especially with that subdivision which has oral spines without other external appendages.

Fortunately the wet specimens that have reached me have arrived in a condition sufficiently preserved to admit of my describing, with the polypary or skeleton, the animal also, which, under the designation of *lacustris*, will stand as follows:—

Hislopia lacustris, H. J. C., n. sp. Pl. VII. figs. 1–3.

Polypary kerato-membranous, without admixture of calcareous matter. Cells irregularly ovate, compressed, spreading in aggregation over smooth surfaces, sometimes linearly, but for the most part with no definite arrangement. Aperture subquadrangular, supported on a circular neck, closed by four triangular valves, of which the posterior is the largest, and partially overlaps the rest; surrounded by a horny raised border, from the angles of which respectively four spines project; posterior border less prominent than the rest, which permits of an almost uninterrupted continuation between the larger valve or lip and the membranous portion of the cell. Margin of the cell horny, pierced by 2–4 stoloniferous holes. Average greatest length and breadth of the cell 1-29th and 1-38th of an inch respectively.

Hab. Freshwater tanks which are never dry, on *Paludina bengalensis* and the stems of aquatic plants.

Loc. Nagpoor in Central India.

Animal.—Contained in a membranous sac, which lines the cell, and communicates with 2–4 adjoining cells by stolons through the holes mentioned: viz. posteriorly with the mother-, and anteriorly and antero-laterally with 1–3 daughter-cells. Mouth triangular, bordered by the valves mentioned, leading into a delicate, transparent, buccal sheath, plaited anteriorly, at the bottom of which (when inverted) is the orifice of the throat surrounded by 16 (?) tentacula. Pharynx pyriform, presenting a layer of cells or follicles internally, extending to the commencement of the œsophagus, which is narrow, long, and bent upon itself. Œsophagus followed by a dilated, globular portion, called the 'gizzard,' which is thick-coated, presenting two linear, horny bodies internally, and opening

by a wide mouth into the pyloric half of a large irregularly ovoid stomach. Stomach lined or surrounded (?) throughout with a layer of hepatic (?) cells, and contracted towards its pyloric end, where it is in continuation with the small intestine. Small intestine short, followed by a globular, sometimes elliptically dilated, portion (corresponding to the large intestine of higher animals (?)), also lined or surrounded with cells, but differing in appearance from those of the stomach; terminating in a contracted, rectal portion, which opens into the buccal sheath (when inverted). Retractor muscle attached to the posterior extremity of the cell, and around the posterior part of the buccal sheath (when inverted).

Obs.—Besides the retractor muscle, there are of course many others which pass from the lining membrane of the cell, and probably the cell itself, to the different visceral organs; but the torn state of these, from the contracting effect of the spirit in which the polypidom was preserved, prevents my describing and delineating them accurately. The peritoneal cavity, too, in most instances contained bunches of globular cells of different sizes, and some fusiform bodies, which might have been procreative elements; but not having observed them in their living state, I am unable to add more respecting them. I could discover neither testicle nor ovary; nor have I been able to make out the exact number of the tentacula, for the same reason. The latter, however, with their delicate buccal sheath, being in different degrees of extrusion in several of the cells respectively, it was easy to see that the plaited part preceded the extension of the tentacula, as in the other freshwater Bryozoa, and in *Bowerbankia*, to which latter the organology generally, as well as closely, corresponds.

EXPLANATION OF PLATE VII.

Fig. 1. *Hislopia lacustris*, polypary, proportionally magnified. Natural size of cells 1-29th of an inch long.

Fig. 2. Ditto, ditto, with animal, ditto, showing *a*, *a*, *a*, *a*, margins of cell; *b*, aperture closed by three valves, supported on a circular neck, surrounded by a horny border bearing four spines; *c*, lining membrane; *d*, *d*, *d*, *d*, stolons passing through their respective holes; *e*, buccal sheath enclosing tentacula; *f*, pharynx; *g*, œsophagus; *h*, gizzard; *i*, stomach; *k*, small intestine; *k'*, large intestine; *l*, rectum; *m*, retractor muscle; *n*,*n*,*n*, other muscles; *s*, spherical and fusiform cells.

Fig. 3. Ditto, ditto, ditto, with tentacula and buccal sheath partly extruded: *a*, buccal sheath, showing the plaited portion; *b*, visceral organs drawn up towards the aperture; *c*, retractor muscle, also extended.

Bombay, 9th Jan. 1858.

Fig. 1.