

XVI. POLYZOA.

By R. KIRKPATRICK.

THE Polyzoa obtained from the Antarctic region comprise eight species and one variety, one species being new. The seven known species have all been found before in the Southern hemisphere, either off Australia, Kerguelen Island, or Cape Horn. The specimens encrust seaweed and tubes of *Spirorbis antarctica*. The list of species is as follows:—

1. *Porella hyadesi*, Jullien.
2. *Inversiula nutrix*, Jullien.
3. *Schizoporella hyalina* (Linn.), normal form.
- 3A. " " " var. *discreta*, Busk.
4. " *eatonii*, Busk.
5. *Smittia landsborovii*, Johnston.
6. *Idmonea organizans*, d'Orbigny.
7. *Lichenopora canaliculata*, Busk.
8. *Alcyonidium flabelliforme*, sp. n.

PORELLA HYADESI.

1888. *Porella hyadesi*, Jullien, 'Mission Scientifique Cap Horn.' Zoologie. Tom. VI., 'Bryozoaires,' p. 56, Pl. III., fig. 5.

The two specimens in the present collection differ from the description and figure by Jullien in having a wall-like prolongation on each side of the orifice; but this feature is much more pronounced in one specimen than in the other; in oocial cells the lateral walls fuse with the mucronate avicularian cell and with the oecia to form a square secondary orifice. There is a specimen from Port Phillip in the Busk Collection labelled (wrongly, I think) *Porella rostrata* (Hincks), which differs from Jullien's type only in having minute rounded mammillae on the surface.

Locality.—Cape Adare, 8 fathoms, encrusting seaweed.

Distribution.—Port Phillip, Victoria; Tierra del Fuego; Cape Adare.

INVERSIULA NUTRIX.

1888. *Inversiula nutrix*, Jullien, 'Mission Scientifique Cap Horn.' Zoologie. Tom. VI., 'Bryozoaires,' p. 44, Pl. IV., fig. 8.

The single example of this species encrusts the coils of a specimen of *Spirobrhis antarctica*. The median pore differs slightly from that of the specimens from Cape Horn figured by Jullien (Bryozoa, Cape Horn, p. 44, Pl. IV., fig. 8) in being orbicular rather than semi-lunar, and in having three or four denticles instead of only two. The operculum (0.192 mm. in long. diameter) has a thickened rim and a shagreened surface.

The bosses are probably degenerate avicularia; incineration reveals oval depressions for mandibles. No oecia are present.

Locality.—Cape Adare, 10 fathoms.

Distribution.—Cape Horn; Cape Adare.

SCHIZOPORELLA HYALINA.

1766. *Cellepora hyalina*, Linnaeus, Syst. Nat., Ed. XII., p. 1286.

1880. *Schizoporella hyalina*, Hincks, Brit. Mar. Pol., p. 271.

Several patches occur, encrusting seaweed.

Locality.—Cape Adare, 8 fathoms.

Distribution.—Cosmopolitan.

SCHIZOPORELLA HYALINA, var. *discreta*.

1854. *Lepralia discreta*, Busk, Brit. Mus. Cat., p. 85, Pl. CI., figs. 3, 4.

1879. *Lepralia hyalina*, var. *discreta*, Busk. Phil. Trans., Vol. CLXVIII. p. 197.

1889. *Schizoporella hyalina*, var. *discreta*, Jelly, 'Syn. Cat. Bryozoa,' p. 228.

Patches encrust seaweed.

Locality.—Cape Adare, 8 fathoms.

Distribution.—Falkland Islands; Fuegia; New Zealand (Brit. Mus. Coll.); Swain's Bay, Kerguelen; Cape Adare; California.

SCHIZOPORELLA EATONI.

1879. *Lepralia eatoni*, Busk. Phil. Trans., Vol. CLXVIII., p. 196, Pl. X., figs. 7, 8.

1889. *Schizoporella eatoni*, Jelly, Syn. Cat. Mar. Bryozoa, p. 226.

A prominent umbo is present on the front surface of each zoecium, and at a little distance from the umbo is a double row of pores separated by a sharp line. A well-marked shield-like area is marked off on the front of each cell. The pores are semi-circular and sharp-edged in the younger, but square and with crenulated edges in older cells; the pores are not continued round the orifice, but stop short at the ends of the proximal edge; a row of pores is present, however, round the base of the oecium.

The stout oral spines, usually four in number, are articulated at the base.

The double row of pores is present in the type specimen from Kerguelen, but they are not nearly so apparent or well defined.

Locality.—Cape Adare, 8 fathoms, on seaweed.

Distribution.—Kerguelen Island; Cape Adare.

SMITTIA LANDSBOROVI.

1849. *Lepralia landsborovii*, Johnston, Brit. Zooph., Ed. II., p. 310.

1880. *Smittia landsborovii*, Hincks, Brit. Mar. Pol., p. 341.

A small avicularium with spatulate mandible is sunk deep in the peristome, the secondary orifice of which is clithridiate and flush with the front surface of the zoecium. An umbo is present on each cell just below the orifice, and also on the oecia.

Locality.—Cape Adare, 18 fathoms, encrusting *Spirorbis antarctica*.

Distribution.—Arctic Regions, Kara Sea, Jan Mayen, East Greenland; Norway; Great Britain; Florida; Australia; Falkland Islands; Cape Adare.

IDMONEA ORGANIZANS.

1839. *Tubulipora organizans*, d'Orbigny, Voy. Amér. Mèrid., Vol. V., Part IV., p. 19, Pl. IX., figs. 1-3.

1879. *Tubulipora organizans*, Busk. Phil. Trans., Vol. CLXVIII., p. 198, Pl. X., figs. 20-25.

This species is represented by a minute fragment of a colony encrusting seaweed. The zoecia are arranged here, as in the Kerguelen specimen, in regular alternating series, with about four to eight zoecia in each row.

Locality.—Cape Adare, 8 fathoms, on seaweed.

Distribution.—Kerguelen Island; Falkland Islands; Cape Adare.

LICHENOPORA CANALICULATA.

1879. *Discoporella canaliculata*, Busk. Phil. Trans., Vol. CLXVIII., p. 199, Pl. X., figs. 12-14.

1889. *Lichenopora canaliculata*, Jelly, Syn. Cat. Mar. Bryozoa, p. 134.

The specimen forms a circular disc, 3·25 mm. in diameter. In the centre is a space clear of zoecia and with the cancelli closed, but with a thin walled expanded funicular spout—the orifice of the oecium.

The orifice in complete cells is bi-denticulate, and the fillet, which is a well-marked feature on the type specimen from Kerguelen, is here often reduced to a mere ridge.

Locality.—Cape Adare, 8 fathoms, encrusting seaweed.

Distribution.—Kerguelen Island; Cape Adare.

ALCYONIDIUM FLABELLIFORME.

Zoarium forming a flabelliform bilaminate expansion, spreading out from a short sub-cylindrical stem. Colour olive-brown. Texture soft and fleshy; surface smooth. Zoecia polygonal, about $0\cdot75 \times 0\cdot55$ mm., in circular groups, each group being composed of six or seven zoecia arranged concentrically round a small central zoecium 0·2 mm. in diameter.

Locality.—Cape Adare; washed up on the beach.

The new species is nearly related to *A. flustroides* (Busk), obtained by the 'Challenger' from Station 142, south of Cape of Good Hope, 150 fathoms. In both species the zoarium is bilaminate, but the form of the colony in each case is very different; again, in Busk's species the zoecia are much more elongated and are arranged in irregular longitudinal lines.

The solitary specimen is 14 cm. in height, 12 cm. in breadth, and 1 to 1·5 mm. in thickness. The stalk is 1 cm. in height and 0·9 cm. in diameter. The surface, which is probably quite smooth in the living animal, is much wrinkled by the action of alcohol. The margin is rounded, but deeply incised in three places, thus giving rise to two smaller laminae growing in nearly the same plane as, and partly apposed to, the main lamina. On holding the specimen up to the light the zoecia and "brown bodies" are clearly visible. The orifices of the zoecia are flush with the general surface, and barely distinguishable. The tentacles appear to be about fourteen in number.