

ate; afterwards the peristome becomes much thickened and raised (fig. 11*b*), so as to conceal the primary mouth. Three or four acute curved denticles within the peristome, which in this stage is unarmed. In other zoecia the labial sinus becomes fissural, and eventually converted more or less completely into a suboral pore, whilst in front the peristome forms a prominent tubercular eminence (fig. 11*c*), supporting on the side overlooking the fissure a large avicularium, with a rounded triangular mandible and toothed beak. A few interspersed avicularia (fig. 11*d,e*), on low horizontal eminences, with a spatulate retentive mandible often squarely truncated, and bifid beak. Oecia (fig. 11*f*), erect or subrecumbent, globose; surface finely granular. Opercula semicircular about $0''\cdot008 \times \cdot0035$.

Habitat.—Off Honoruru, Sandwich Islands, 20 to 40 fathoms.

§§ *β*. encrusting.

(10) *Cellepora apiculata*, n. sp. (Pl. XXIX. fig. 2, and Pl. XXXV. fig. 12).¹

Character.—Zoarium encrusting, or unilaminar and unattached. Zoecia (at the growing edge), ventricose or barrel-shaped, with a granular unpunctured surface. In the older portions deeply immersed and very confusedly disposed, varying much also in size. Primary orifice semicircular, with a straight entire lower border, and surmounted in the earliest stage by two, or more rarely three, long oral spines. Pre-oral rostrum very irregular in size and supporting usually on one side a large avicularium with an obtuse serrated beak, and a subacute lanceolate or triangular mandible, and usually produced beyond the avicularium into a longer or shorter, obtusely apiculate spine.

Habitat.—Station 163B, off Port Jackson, 35 fathoms, hard ground.

The extreme irregularity of growth and great diversity in the form and size of the pre-oral rostrum, which is sometimes very small, and at others developed into a very large avicularian process, render any definite description of this species very difficult. The chief points it presents are: 1. The semicircular orifice (about $0''\cdot07$ wide), with a straight entire lower lip; 2. The, at first, short and thick hollow rostrum, which afterwards becomes produced into an obtuse spine, and on the side of the wider portion, some distance above the base, supports on one side a large avicularium with a finely serrated beak and rather blunt but elongated mandible; 3. The presence on the youngest zoecia only of two or sometimes three long oral spines, like those in *Cellepora bispinata*, Busk, or *Cellepora albirostris*, Smitt.

(11) *Cellepora samboangensis*, n. sp. (Pl. XXX. fig. 7, and Pl. XXXV. fig. 10).

Character.—Zoarium expanded, thick, loosely adnate, surface uneven but not distinctly mamillated. Zoecia distinct, very confusedly disposed, obscurely punctured

¹ The figure has unfortunately been taken from a very bad specimen, and shows little of the real characters. The chitinous parts, however, suffice to distinguish it.