

7. *P. echinata* M. Sars, 1835. Synonym of *P. cernua* (see Hincks, 1880).
8. *P. glabra* Dalyell, 1848. Considered to be a glabrous form of *P. cernua* (see Hincks, 1880).
9. *P. hirsuta* Jullien, 1891. Little information is given in Jullien's description other than that both stalk and calyx are hispid and that tentacles number 24–36.

Distribution: Tierra del Fuego.

Marcus (1941) considered that some specimens from Brazil could be referred to this species. They had 24 tentacles (as in *cernua*), but the colony was characterized by its compact growth and the absence of interzoidal segments in the stolon. Its conspecificity with Jullien's *hirsuta* seems dubious.

Johnston and Angel (1940) described some material from Sydney as *P. hirsuta*, quoting *P. whiteleggii* Johnston and Walker (1917) as a synonym (see *P. whiteleggii*).

10. *P. ichikawai* Yamada, 1956. Synonym of *P. choanata* O'Donoghue (see above).
11. *P. nannoda* Marcus, 1937. Small species of 600–650 μ in height; 8–10 tentacles; with a series of large downward-directed spines running down the anal side of the calyx and stalk.

Distribution: Santos, Brazil.

12. *P. nutans* Dalyell, 1848 [Fig. 3]. Generally a rather small species about 1mm in height, with calyces 200–300 μ high bearing 12–15 (mostly 14) tentacles. Some colonies are larger (Ryland, 1961) reaching a height of 2mm, with calyces 400–500 μ high bearing up to 17 tentacles. Stalks glabrous, tapering, their diameter at the calyx about half that at the base. The latter measurement is about 160 μ in a stalk 1.5mm high, and 100 μ in one 0.6mm high. Stolons septate, diameter 60–100 μ , mainly about 70 μ . Calyces only slightly asymmetric, with a large globular stomach and the rectum turned horizontally.

Distribution: West European seas.

For discussion of *P. nutans* Prenant and Bobin (1956) *non* Dalyell see p. 200.

13. *P. whiteleggii* Johnston and Walker, 1917. First recorded as *P. cernua* by Whitelegge (1889) from Sydney Harbour, later elevated to specific rank by Johnston and Walker on account of the broad bases to the cuticular spines. Redescribed by Johnston and Angel (1940), and referred to *P. hirsuta* Jullien; but from their account and figures the material seems to belong to *P. cernua*.

None of the four New Zealand species examined was referable to any of the above, and each is therefore described as a new species. Two, *P. grandis* and *P. pyriformis*, are strikingly distinct forms; but the remaining two, *P. hispida* and *P. pernae*, have to be rather carefully distinguished from *P. cernua* and *P. nutans*, illustrated descriptions of which have therefore been given above.

SPECIES OF *PEDICELLINA* FROM NEW ZEALAND

The new species of *Pedicellina* described in this paper were collected on the shores of the Otago Peninsula, near Dunedin, South Island, a region just falling within the cold temperate zone. Two species were obtained from shores inside the land-locked Otago Harbour, while the other two were found in the very different environment of the outer side of the Peninsula. The contrasting ecological conditions may be of importance to the entoprocts, and a brief description of the habitats will now be given. A map showing localities mentioned will be found in Batham (1958, Text-fig. 1).

P. pernae and *P. pyriformis* were collected at Little Papanui. The shore here, which has been described by Batham (1958), is situated on the outermost tip of the Otago Peninsula. The locality is very exposed, and subjected to continuous pounding from Pacific rollers. The bay itself consists of a sandy beach bounded each end by cliffs. Rocks and boulders occur below the cliffs, those at the south end being somewhat sheltered from southerly storms by the cliffs. A rocky outcrop, the Northern Reef, extends to below low water mark at the north end of the beach (Batham, 1958, Text-fig. 2).