

arranged in simple or double alternating rows. The two dorsal ambulacra have conical, non-retractile processes in a zigzag row. The interambulacra naked. Deposits—small reticulate cups with very spinous rims; crowded symmetrically formed buttons, with as a rule four holes and about ten knobs; and larger scales resembling simple perforated plates with uneven surfaces. Colour in alcohol, brownish. Length about 25 mm.

Habitat.—Bahia, September 1873; depth, 7 to 20 fathoms; a single specimen.

The body of this small species is provided with sharp angles along the four ambulacra, and with a more obtuse angle along the odd ventral one. As noted in the diagnosis, the pedicels and processes are confined to the ambulacra, but, to judge from the only specimen I have seen, a tendency to spread over the odd dorsal interambulacrum may be observed, a few very minute processes being situated near its middle line.

There is no doubt that this species is nearly related to Ludwig's *Colochirus australis*, though it differs from it in several important characters. Thus, the scales in the perisome are especially distinct, those of *Colochirus australis* being much larger, thicker, and composed of several superposed layers, thus constituting true net-shaped scales, while the "scales" of *Colochirus pygmaeus* (Pl. IV. fig. 9a), composed of a single layer, resemble common, simple perforated plates, and do not exceed 0.5 mm. in length. These scales or plates are not crowded, but very scattered; they are mostly of an elongated form, several times longer than broad, and have the surfaces uneven from the presence of low knobs or elevations. The buttons (Pl. IV. fig. 9b) have a diameter of 0.08 mm., but often much smaller ones may be found; they do not seem to vary greatly in general appearance. The cups (Pl. IV. fig. 9c, d), which lie most externally in the perisome, are very minute, 0.028 mm. in diameter, and deeply hollowed; their free rim is provided with numerous processes or spines. The entire cups are built up of a strong \times -shaped body with the arms curved, sometimes slightly branched. The pedicels and processes are supported by transverse, perforated rods, mostly with a third arm at the middle (Pl. IV. fig. 9e).

From want of materials, I could not examine the internal organisation.

Genus *Actinocucumis*, Ludwig, 1875.

Actinocucumis typica, Ludwig, 1875 (Pl. XII. figs. 4, 5).

Habitat.—Station 186, September 8, 1874; lat. 10° 30' S., long. 142° 18' E.; depth, 8 fathoms; coral mud; a single specimen.

There is nothing to add to the description of Ludwig, excepting that I find some minute papillæ even on the ventral surface in the anterior and especially in the posterior parts. The pedicels seem to be rather stiff. According to Ludwig, the species has been previously obtained from Amoy (China) and Bowen (Australia).