

and deeply staining, but it is not simply a granular mass, but a complex of discrete parts, each of which in a manner simulates the structure of a cell. Thus in many cases we may readily discern fine darkly-stained fibrils radiating through the protoplasm towards the periphery of the cell, and in fortunate cases these can be traced in continuity with small columnar or stellate bodies, within which an oval vesicular space containing a small deeply stained granule can be distinguished. In other cases oval vesicles with a distinct wall, and not merely vesicular spaces, can be distinguished, and within these granular material with one granule larger than the rest is to be seen. In fig. 21, Pl. IV., numerous columnar pseudocells are shown with their bases adjacent to the nucleus and their filamentous extremities directed peripherally. The structures shown in this figure are those which it was found possible to trace with a camera; the rest of the cell left blank presented similar appearances, but hardly sharply defined enough to be traced. Small deeply stained amoeboid cells, about 0.03 mm. in diameter, also occur in the choanosome, and appear to be young forms of the cells just described. If so, the latter are in all probability ova.

*Parasitism.* — 1. *Ophiurids.* Each cloaca in all four specimens of the sponge harbours an individual belonging to some species of Ophiurid. This Ophiurid, though small compared with some other species, is large compared with the size of the cloaca, which it nearly fills. Its disc is 5 mm. in diameter, and its arms when uncoiled 45 mm. long; they are recurved over the aboral surface of the disc, leaving the mouth exposed and the teeth projecting. Its position within the cloaca is rather to one side of it, within a faintly marked recess. The oscule of the chamber is large enough to allow of the egress of the tenant, but the rat-trap-like arrangement of the fringing spicules would seem to preclude return, and, as the Ophiurid does not feed on the sponge itself, it becomes a curious problem to discover by what means it obtains its food.

2. *Worms.* Numerous encysted worm-like parasites in various stages of development are common on the choanosome.

### *Cinachyra*,<sup>1</sup> n. gen.

The cortex is not excavated by subdermal cavities; oxeate spicules traverse it radiately. The incurrent and excurrent openings are confined to special flask-shaped recesses. The mesoderm of the choanosome is a collenchyma; the chamber system is eurypylous.

#### *Cinachyra barbata*, Sollas (Pls. III., XXXIX.).

*Cinachyra barbata*, Sollas, Prelim. Account, Sci. Proc. Roy. Dubl. Soc., vol. v. p. 183, 1886.

*Sponge* (Pl. III. fig. 1) a subspherical or subcylindrical body seated on a dense mass of tangled spicules. Oscules large and numerous, with a conspicuous sphinctral margin,

<sup>1</sup> κιν-αχύρα, ἡ, a kind of bag or sieve for bolting flour.