

Granular cells somewhat resembling the chromatocytes of *Craniella carteri*, and occurring both in isolation and in rounded aggregates, are characteristic of most species of *Pilochrota* (p. 125, Pl. XX. figs. 9, 11, 13; p. 130, Pl. XIV. fig. 15; p. 132, Pl. XIV. fig. 37; p. 133, Pl. XIV. fig. 21; p. 122, Pl. XXXIX. figs. 24–26). The function of these cells is unknown, but they have much the appearance of being pigment-cells without pigment. In *Pilochrota gigas* they occur in the fibrous processes by which the sponge attaches itself to foreign bodies, frequently running in rows between the fusiform cells of the fibrous tissue, and then reminding one of the appearance of fat-cells in some longitudinal sections of muscle in the higher animals. Granule-cells of unknown function also occur in *Pæcillastra schulzii* (p. 81, Pl. IX. fig. 29).

In many species of *Myriastræ* and *Anthastræ* oval clusters resembling pigment-cells occur, but are really as I imagine groups of some Bacterial organism (*vide* Pl. XII. fig. 25).

Inocytes.—Fusiform connective-tissue cells or inocytes were first described as muscle-cells in my account of *Dragmastra (Stelletta) normani*,¹ but discovering that this was an error I pointed out their true nature in a succeeding paper on *Geodia barretti*.

They may be most readily studied in fresh specimens of *Tethya lyncurium* (in which they form the densely fibrous inner half of the cortex), by treatment with gold chloride and formic acid, subsequent dissociation in 30 per cent. alcohol, and staining with borax carmine.

When teased out they present themselves, as described in my account of *Dragmastra normani*, as long, fusiform cells, consisting of a clear, transparent, outer wall, which does not stain with reagents and readily splits on teasing into fibrillæ, and a long axial thread which is fusiform, homogeneous, faintly bluish in colour, and highly refringent. Acetic acid renders the axial thread somewhat more distinct, nitric acid acts in the same way, but more vigorously; caustic potash in a 5 per cent. solution causes the cell to swell up and renders the axial thread invisible; strong nitric acid applied to the fibrous tissue destroys the outlines of the individual cells, producing an apparently homogeneous matrix, in which the axial threads remain sharply defined; on adding magenta the latter stain deeply, but not the matrix.

The axial thread bears much the same relations to the hyaline sheath that a collencyte does to the surrounding gelatinous matrix; and though apparently structureless in *Stelletta normani*, in *Tethya lyncurium* it always presents a finely granular character, and encloses in the middle a small oval nucleus, with the long axis lying in the same direction as that of the thread; within the nucleus is a small spherical nucleolus.

The inocytes are arranged with overlapping ends in parallel rows forming fibrous strands, these run parallel along the sides of the spicular fibres, along the course of the

¹ *Ann. and Mag. Nat. Hist.*, ser. 5, vol. v. p. 136.