style, a slow contraction invariably follows, and this would lead us to expect the presence of such cells, and in such positions, as those here described. The chones open into subcortical crypts, which extend horizontally beneath the cortex, and are continued inwards as the incurrent canals.

The mesoderm of the choanosome is a very distinct sarcenchyma, except where it forms the walls of the larger canals. It then becomes either collenchymatous or fibrous. The flagellated chambers (Pl. XXI. fig. 12) measure from 0·0276 to 0·03 mm. in breadth by 0·02 to 0·0276 mm. in length, the prosopyle is usually about 0·008 mm. in diameter, the apopyle 0·008 to 0·015 mm., the prosodus is usually very short, but in some instances is prolonged to a length of 0·02 mm.

The spicules of the spicular fibres traverse the cortex and extend for all distances up to 1·6 mm. beyond the surface (Pl. XXI. fig. 14); the hispidation thus produced may be regarded as a stage in the process of expulsion of the spicules.

It may be worth while finally to mention the occurrence of an abnormal form of dichotriæne, in which the deuterocladi have themselves become bifurcate, producing tritocladi. This appears to stand in correlation with the fact that the deuterocladi are not always extended tangentially, but point forwards as well as outwards, hence they are liable to bend at some distance from their origin into the tangential position not at first assumed; bending frequently results in branching, and such appears to have been the case in the trichotriæne here recorded.

Cydonium glariosus, Sollas (Pl. XX. figs. 14–21; Pl. XL. figs. 3, 4).

Cydonium glariosus, Sollas, Prelim. Account, Sci. Proc. Roy. Dubl. Soc., vol. v. p. 196, 1886.

Sponge (Pl. XX. fig. 14).—More or less spherical, attached. Oscules not distinguishable from the pores, which have the usual sieve-like arrangement. The collenchymatous layer, which lies beneath the external epithelium and its associated chiasters, is crowded with coarse grains of sand, and traversed by radiating pencils of short oxeas; and by the distal ends of the radiating somal megascleres, particularly of the protriænes, the cladomes of which frequently lie within it, but sometimes project beyond the outer surface to the exterior (Pl. XL. fig. 3).

Spicules.—I. Megascleres. 1. *Somal oxea*, fusiform, usually curved, somewhat abruptly pointed, more so at the distal than proximal end; 1·856 by 0·026 mm.

2. *Cortical oxea*, fusiform, abruptly pointed, 0·35 to 0·4 mm. by 0·0158 mm.

3. *Orthotriæne* (Pl. XX. fig. 15), rhabdome conical, attenuated to an excessively sharp point; cladi simple, diverging outwards, at first with a slight forwardly, and afterwards with a slightly backwards directed curve. Rhabdome 2·856 by 0·0516 mm., chord 0·464 mm.

4. *Protriæne* (Pl. XX. fig. 16), rhabdome longer and slenderer than in the preceding,