

remarking that what a spicule gains in breadth it loses in length, I thought it might be worth while to calculate the volume of the two actines, on the assumption that the actinal origin in all cases is situated one-third the length of the rhabdome from the cladal origin, an assumption which so far is based on far too few observations to be of great weight. An orthotriæne was selected having the following dimensions:—Rhabdome 3·84 mm. in length by 0·0839 mm. in diameter just below the cladal origin, and 0·055 mm. in diameter at a distance one-third the length of the rhabdome from the cladal origin; average dimensions of the three cladi, each 0·318 by 0·0839 mm. A rough calculation gives 0·0196 cubic mm. for the volume of the cladal actine without the cladi, and 0·0081 c.mm. for that of the oxeate actine, so that, leaving the volume of the cladi out of consideration, the cladal actine without the cladi by itself has twice the volume of the other. The volume of the cladi is about 0·0074 c.mm., almost equal to that of the oxeate actine. In order in this case that the two actines should have equal volumes the actinal centre should be situated about one-sixth of the entire length of the rhabdome from the cladal origin. This is inconsistent with the assumption on which we started; but it is not altogether opposed to observation, since in some Stellettids the scleroblastic nucleus has been observed in a position almost corresponding to this.

#### Genus 7. *Disyringa*,<sup>1</sup> n. gen.

Sponge more or less spherical, produced at one pole into a special poral or incurrent tube, and at the other into a special cloacal or excurrent tube. The chief canals of both systems symmetrically arranged, alternating with each other on a tetragonal plan. The microscleres in addition to euasters are sanidasters and orthodragmas.

*Disyringa dissimilis* (Ridley) (Pl. XVIII.; Pl. XLI. figs. 1-4).

*Tethyopsis dissimilis*, Ridley, Voyage of the "Alert," p. 447, pl. xl. fig. H, and pl. xliii. figs. l-l'.

*Sponge* (Pl. XLI. figs. 1-3; Pl. XVIII. figs. 1-3), free, spherical, produced at one pole into a long cylindrical excurrent tube terminating in a thin, solid, obtusely conical disc, and at the opposite pole into a long, cylindrical, incurrent tube, the end of which is not preserved. Surface even, apparently smooth but rough to touch. Pores confined to the walls of the poral or incurrent tube.

*Spicules*.—I. Megascleres. 1. *Somal oxea* (Pl. XVIII. fig. 10), fusiform, straight, or more usually gently curved, variously pointed, sharply or obtusely, or pencil-like; 4·641 by 0·0592 mm.

2. *Cortical oxea*, similar to the preceding but smaller, 1·785 by 0·135 mm.

<sup>1</sup> *σφύριγγε*,—*σφύριγγε*, *σφύριγγε*, Pan's pipe hence anything in shape like a pipe.