

Genus 3. *Astrella*, Sollas.

The cortex is well developed, consisting of a thick outer layer of collenchyma, sharply defined from a thick inner layer of fibrous tissue: the collenchyma passes into a thin fibrous layer beneath the investing epithelium. Pores in sieves. Chones completely differentiated, consisting of a main canal lying in the collenchymatous layer, proximally constricted into a narrow tube which passes through the inner fibrous layer, distally subdivided into several branches, each of which underlies a pore-sieve. The microsclere is a pycnaster.

*Astrella vosmaeri*, Sollas (Pl. XVI. figs. 1-5; and Pl. XL. fig. 8).

*Astrella vosmaeri*, Sollas, Prelim. Account, Sci. Proc. Roy. Dubl. Soc., vol. v. p. 193, 1886.

*Sponge* (Pl. XVI. fig. 1), irregularly prolately ellipsoidal, or compressed cylindrical, with rounded edges; serving as a basis of attachment to *Stelletta phrissens*. Surface hispid, where the spicules are worn away regularly embossed. Oscules not distinguishable from the pores. Pores comparatively large, in sieves, generally distributed. Chones large, much branched towards the exterior.

*Spicules*.—I. Megascleres. 1. *Oxea*, stout, fusiform, not sharply pointed, 3·138 by 0·0592 mm.

2. *Dichotriæne* (Pl. XVI. fig. 2); rhabdome conical, terminating proximally in a rounded end about 0·015 mm. thick; protocladi projecting outwards and forwards, deuterocladi conical, usually rounded off near the ends, horizontal. Rhabdome 3·02 by 0·0789 mm., protocladi 0·0876 mm., deuterocladi 0·238 mm. long, chord 0·636 mm.

3. *Anatriæne* (Pl. XVI. fig. 3); rhabdome somewhat fusiform, rounded off at the proximal end when about 0·006 mm. thick; cladi diverging outwards and only slightly backwards for about the first fifth of their course, backwards and only slightly outwards for the remaining four-fifths. Rhabdome 3·61 mm. long, 0·0237 mm. thick below the cladome, then diminishing to 0·0197 mm., increasing to 0·0276 mm., and finally attenuating to a rounded end about 0·001 mm. in diameter; cladi 0·0395 mm. long, chord 0·0395 mm., sagitta 0·0395 mm.

II. Microsclere. 4. *Pycnaster* (Pl. XVI. fig. 4), a small centrum passing into short, thick, obtusely truncated conical actines, from 0·0118 to 0·0158 mm. in diameter.

*Colour*.—Purplish-grey, darker on the upper exposed surface than underneath.

*Habitat*.—Station 308, off Tom Bay, Patagonia, January 5, 1876; lat. 50° 8' 30" S., long. 74° 41' 0" W.; depth, 175 fathoms; bottom, blue mud. Trawled.

*Remarks*.—Two specimens of this sponge were trawled, bearing attached to them a specimen of *Stelletta phrissens*, which in the one case is much larger than its support (Pl. XVI. fig. 1), and in the other much smaller. The larger of the two specimens of