Remarks.—Gray instituted a new family, Xenospongiadæ, and a new order, Arenospongia, for the special reception of this sponge; Carter included it as a genus of his subfamily Donatina, of the family Suberitida; later, while retaining it in the Suberitida he removed it from the Donatina and proposed a new subfamily, Xenospongina, to receive it.

Vosmaer thinks it not impossible that Xenospongia patelliformis, Gray, is, if not identical with Polymastia hemispherica (Sars), Vosmaer, yet at all events very nearly related to it. It is certainly not identical, and the presence of asters would seem to preclude any very close connection; if the two sponges should prove to be more nearly related than we at present think, an additional argument would be furnished for the Spintharophorous character of the Suberitidæ.

The sponge is no doubt very remarkable and aberrant, but till we know more of its structure, particularly of the cortex, its position must remain more or less doubtful; in the meantime I place it with the Tethyidæ, to which its spiculation appears to ally it.

LIST OF STATIONS AT WHICH SPINTHAROPHOROUS MONAXONID SPONGES WERE OBTAINED, WITH THE SPECIES FROM EACH.

St. Iago, Porto Praya, Cape Verde Islands; August, 1873; depth, 100 to 128 fathoms.

*Astropeplus pulcher.

Bahia.

Scolopes moseleyi.

STATION 162. Off East Moncœur Island, April 2, 1874; lat. 39° 10′ 30″ S., long. 146° 37′ 0″ E.; depth, 38 fathoms; bottom, sand and shells. Dredged.

Tethya ingalli, Bowerbank.

Port Jackson; depth, 6 to 15 fathoms.

Tethya ingalli.

STATION 186. Flinders Passage, September 18, 1874; lat. 10° 30′ S., long. 142° 18′ E.; depth, 8 fathoms; bottom, coral mud. Dredged.

Tethya seychellensis, E. P. Wright.

¹ Bronn's Klass. u. Ord. d. Thierreichs, Porifera, p. 238.