

*Spicules*.—I. Megascleres. 1. *Oxea*, fusiform or cylindrical, sometimes tornote, 1·136 by 0·014 mm.

2. *Orthotriæne*, rhabdome oxeate or strongylate, cladi of variable and unequal length, usually strongylate, straight or reflexed. Rhabdome 0·75 mm. and over in length by 0·0135 mm., cladi from 0·009 to 0·045 mm. long.

II. Microscleres. 3. *Chiaster*, centrum small or absent, actines slender cylindrical, terminally truncate or minutely tylote, 0·0125 mm. in diameter.

4. *Microstrongyle*, cylindrical, entirely spined, spines small, conical, erect, 0·04 by 0·0042 mm. This spicule is traversed by a distinct axial canal.

*Colour*.—Yellowish-brown in the dried state. Size, 33 mm. high by 37 mm. in diameter.

*Habitat*.—Port Adelaide, Australia.

*Remarks*.—The ectosome is thin, about 0·5 mm. in thickness. The oxeas are partly aggregated into distinct fibres, which radiate to the surface, partly loosely scattered through the sponge. In the ectosome they lie tangentially. The triænes occur along with the oxeas of the fibres, lying parallel with them; from their comparative rarity and the variability and shortness of their cladi they appear to be undergoing a process of crowding out. The cladi are sometimes all three reduced to a length less than the diameter of the rhabdome, sometimes a cladus may attain a length of 0·045 mm., and the remaining two only half this, 0·023 mm.; sometimes one cladus may be absent altogether, only two remaining. When first I met with one of these spicules I imagined that it might be of extraneous origin, since the sponge has a habit of embedding foreign bodies, such as sand grains, in the ectosome; subsequent examination proved that this could not be the case; the triænes are too numerous, too fresh, and too exactly similar in position to the triænes which occur in undoubted triænose sponges for such an explanation to be tenable.

The discovery of triænes in a sponge where they had escaped the lynx-eyed acuteness of Carter, who founded a new genus on their supposed absence, may well impress us with the untrustworthy nature of negative evidence, and has led me to examine and re-examine afresh such sponges as *Asteropus*, in which I have myself stated their absence, and although I have not succeeded in finding them, it by no means follows that no one else will.

Although the definition given by Carter of the genus *Stellettinopsis* breaks down in its application to the typical species, yet there are other sponges to which it still applies good; and the question arises whether we are to retain the name of the genus in connection with the definition or in connection with the typical species. It would obviously be more convenient to adopt the former alternative; but there is a third course open, and that is to suppress the name altogether; indeed, from this I see no escape. The