

conditions under which particular forms have been evolved. In the case of *Psammastra* we have seen that somewhat similar cladoxeas are exceptionally met with in *Ecionema pyriformis* where they are associated with an unusually dense skeleton, consisting of massive spicules closely packed together into fibres. In *Psammastra murrayi* these spicules are associated with an exceptional character in the cortex, the abundant presence of angular quartz grains, and in both cases the deviation from the average triæne type would thus appear to be due to secondary pressures and tensions, due in the one case to the close packing of the spicules, and in the other to the presence of opposing sand grains.

It is possible that the unusual forms produced under these circumstances may afterwards become preserved by inheritance, and we may thus explain the presence of cladoxeas in the choanosome, where the pressures due to the presence of sand grains do not exist.

In concluding these remarks on the cladoxeas one may mention that they are present in greater variety than is described under the heading of spicules, and that the axial fibre in the vicinity of the cladal origin frequently gives rise to more numerous branches than those which enter the cladi. In some cases, just below the cladal origin, three fibres passing off backwards and outwards from the main axis into the substance of the rhabdome have been observed. These accessory branches have no effect whatever on the external form of the rhabdome.

The microstrongyles are scattered through both choanosome and cortex, though they are more abundant in the latter, and immediately beneath its investing epithelium they occur in a single layer, arranged as closely as possible together without actually touching. The asters occur in the inner part of the cortex, but are chiefly distributed through the choanosome.

APPENDIX TO THE EUASTROSA.

Family EPIPOLASIDÆ.¹

Euastrosa (?) without triænes, possessing oxeas and one or more forms of aster. The oxeas arranged partly in radiating fibres, partly scattered loosely in the choanosome; in the ectosome they lie tangentially. The chamber system (so far as investigated) diplodal.

Genus *Amphius*,² n. gen.

Possessing but one form of microsclere, an amphiaster. Chamber system diplodal.

¹ ἐπιπολάζω, to lie on the surface, in allusion to the tangential position of the ectosomal oxeas.

² Ἀμφίος, a Homeric hero, II., ii. 830.