

of suture. Their marginal armature has the appearance of forming three distinct fans, one at the inner extremity of the united pair of plates, and one on each plate laterally. The former is composed of the innermost five or six spines of each plate, which are robust, elongate, the one or two outer ones being smaller than the others, and they are united for about a third of their length by a membranous web, which extends uninterruptedly upon and covers the plate. The lateral combs are composed of about thirteen spinelets, which are shorter and very much more delicate than those in the buccal comb, and increase in size as they recede from the mouth, until near the outer extremity, when they again diminish in size. These spinelets are also webbed at the base like the buccal comb. On the flanks of the median keel there is a lineal series of four or five short conical spines on each plate, running parallel to the median suture, which diminish in size as they recede from the mouth. No other spines are borne on the mouth-plates. The actinostome is very large and widely open.

I have not been able to detect any supplementary intermediate plates in the inter-radial regions, in addition to those of the regular continuous longitudinal series above described.

The madreporiform body is rather small, transversely oval, slightly convex, and is situated near the margin. The striæ are remarkably fine and numerous.

The anal aperture is excentric and difficult to detect; two or three neighbouring paxillæ trend over the aperture, but are not modified in form in any way.

The ambulacral furrows are rather narrow in comparison to the size of the starfish. The tube-feet, which are arranged in two regular rows, have large, fleshy, centrally invaginated, terminal disks.

I have not detected the presence of pedicellariæ of any kind.

Colour in alcohol, a light yellowish brown, the paxillæ being a bleached ashy white.

Locality.—Station 188. In the Arafura Sea, between Cape York and Frederick Henry Island. September 10, 1874. Lat. 9° 59' 0" S., long. 139° 42' 0" E. Depth 28 fathoms. Green mud. Surface temperature 78°·5 Fahr.

Genus *Solaster*, Forbes.

Stellonia (pars), Agassiz, Mém. Soc. Sci. Nat. Neuchatel, 1835, t. i. p. 191.

Solaster, Forbes, Mem. Wern. Soc., 1839, vol. viii. p. 120.

Crossaster (pars), Müller and Troschel, Monatsber. d. k. preuss. Akad. d. Wiss. Berlin, 1840 (April), p. 103.

Solaster (subgenus *Endeca*), Gray, Ann. and Mag. Nat. Hist., 1840 (November), vol. vi. p. 183.

The genus *Solaster*, like *Crossaster* (with a single exception), was hitherto known only from the northern hemisphere. The new species obtained by the Challenger from the Pacific and Southern Oceans indicate a wide area of distribution. The bathymetrical range of *Solaster* is greater than that of the allied genus *Crossaster*. The discovery of