

most part of the ray may bear a single pedicellaria, but along the ray they are either naked or bear only small cilia-like, but invested, spinelets.

The madreporiform body is hidden by paxillæ.

Colour in alcohol, a bleached ashy or yellowish white.

Young Phase.—A small example was obtained at Station 188 in company with a larger specimen, which seems to me in every way identical with the type form. About the small example, however, which has a radial measurement of 18 mm., I feel much doubt as to whether it belongs to this species or to a new one. The actinal characters conform closely enough with those of *Luidia forficifer*, but on the abactinal surface the paxillæ are furnished with a robust central papilliform granule or incipient spinelet, of which no trace is found in the adult forms above described. Without more material to furnish a clue as to the intermediate stages (if such really exist), I am unable to express a definite opinion on the young example under notice.

Localities.—Station 187. Booby Island, Torres Strait. September 9, 1874. Lat. 10° 36' 0" S., long. 141° 55' 0" E. Depth 6 fathoms. Coral mud. Surface temperature 77°·7 Fahr.

Station 188. In the Arafura Sea, near the entrance to Torres Strait. September 10, 1874. Lat. 9° 59' 0" S., long. 139° 42' 0" E. Depth 28 fathoms. Green mud. Surface temperature 78°·5 Fahr.

Remarks.—This species may be distinguished by the form of the rays, by the character of the paxillæ, and by the armature of the adambulacral and infero-marginal plates.

Family PENTAGONASTERIDÆ, Perrier, 1884.

The family Goniasteridæ, as defined by M. Perrier¹ in 1875, has been recently divided by him² into four families, the Pentagonasteridæ, Pentacerotidæ, Antheneidæ, and Gymnasteriidæ. With this step I entirely concur, reserving only some doubt about the validity of the Antheneidæ as a group worthy of family rank, its credentials appearing to me to be more or less artificial.

The limits of the genera included in the Pentagonasteridæ have been critically and justly discussed by Perrier.³ I have, however, ventured to differ from him in that I have limited the term *Astrogonium* to those species for which he has proposed to restore the generic name of *Stephanaster*.⁴ The reasons for this step, which seems to me unavoidable, are discussed on p. 285. I have furthermore felt obliged to separate a small group of species distinguished by definite structural characters from the other Pentagonasteridæ, for

¹ Révis. Stell. Mus., p. 25 (*Archives de Zool. expér.*, 1875, t. iv. p. 289).

² *Nouv. Archives Mus. Hist. Nat.*, 2e Série, 1884, t. vi. p. 165.

³ Révis. Stell. Mus., p. 100, *et seq.* (*Archives de Zool. expér.*, 1876, t. v., p. 6, *et seq.*)

⁴ *Comptes rendus*, 1885, t. ci. p. 885; *Ann. Sci. Nat. (Zool.)*, 1885, t. xix., Art. No. 8, p. 30.