

Family ECHINASTERIDÆ, Verrill, 1871 (1867), *emend.*

The family Echinasteridæ established by Verrill¹ comprised the genera *Echinaster*, *Acanthaster*, *Mithrodia*, and *Ferdina*. In 1875 Perrier² added to this group *Solaster* (including *Crossaster*), *Cribrella*, and *Valvaster*, and removed the genus *Ferdina* to the family Linckiidæ. In 1878 Viguier³ maintained the family as thus constituted, but divided the genera into four "tribus," the Echinasterinæ, Mithodiinæ, Valvasterinæ, and Solasterinæ, the last embracing the genera *Solaster* and *Acanthaster*. In 1884 Perrier⁴ removed *Solaster* (recognising the independent genera *Solaster*, *Crossaster*, and *Lophaster*), which he placed in a distinct family Solasteridæ, and *Mithrodia*, which he also ranked in a separate family. With the latter step I am unable to agree, and I have therefore replaced the Mithrodiinæ as a subfamily of Echinasteridæ. With this exception I maintain the generic constitution of the family as last amended by Perrier.

I have added two new genera to the family—*Perknaster*, a form allied to *Cribrella*, and *Plectaster*, a genus established for the reception of the remarkable species described by Müller and Troschel⁵ under the name of *Echinaster decanus*, which has since been erroneously referred by Perrier⁶ to the genus *Solaster*. I have recently had the gratification of identifying the species in some examples sent to the British Museum from Port Jackson and Port Phillip, respecting which Prof. Jeffrey Bell⁷ has subsequently published a brief note recording the new occurrence of this interesting type. *Plectaster*, n. gen., is characterised by the wide-meshed reticulate arrangement of the abactinal plates, which leave enormous papular areas occupied by numerous papulæ (fifty or more may be counted in a large mesh, and the surrounding margin of the membrane perforated by the papula is often papillate); by the abactinal plates bearing compact groups of short, equal, upright spinelets imbedded in a membranous mass; by the presence of actinal intermediate and infero-marginal plates (the latter slightly larger) similarly armed with short, equal, upright spinelets invested in a sacculate membranous bag, which in spirit specimens has the appearance of being deeply invaginated or perforated in the centre; by the armature of the adambulacral plates, consisting of two parallel semicircular series of short, equal, cylindrical spinelets, four or five in each series, standing upright and palisade-like. *Plectaster decanus* has a remarkable facies unlike that of any other form with which I am acquainted.

¹ *Trans. Conn. Acad. Arts and Sci.*, 1871 (1867), vol. i. part 2, p. 343.

² *Révis. Stell. Mus.*, p. 35 (*Archives de Zool. expér.*, 1875, t. iv. p. 299).

³ *Archives de Zool. expér.*, 1878, t. vii. p. 93.

⁴ *Nouv. Archives Mus. Hist. Nat.*, 2e Série, 1884, t. vi. p. 164.

⁵ *Archiv f. Naturgesch.*, 1843, Jahrg. ix. Bd. i. p. 114.

⁶ *Nouv. Archives Mus. Hist. Nat.*, 2e Série, 1884, t. vi. p. 78.

⁷ *Zoologischer Anzeiger*, March 1888, Jahrg. xi. p. 121.