

- Three pairs of secondary mouth-spines, free and independent . . . . . *Calyptroaster*.
- b. Armature of the adambulacral plates not forming transverse combs.  
Spines independent and not united by web.
- a. Nidamental cavity spacious. Supradorsal membrane well-developed. Muscular fibres present. Spiracula present. Spinelets of paxillæ short, not protruding through, but supporting the membrane . . . . . *Hymenaster*.
- b. Nidamental cavity aborted. Supradorsal membrane rudimentary. No muscular fibres. No spiracula. Spinelets of paxillæ fascicular, protruding a great portion of their length naked through the membrane . . . . . *Benthaster*.
- B. No supradorsal membrane present. No actino-lateral spines. No segmental apertures. Form stellate, rays greatly produced, attenuate and cylindrical. Abactinal spines short, in sheathed fascicules, not forming pedicellate paxillæ . . . . . PYTHONASTERINÆ.
- a. A single genus . . . . . *Pythonaster*.

### Subfamily PTERASTERINÆ, Sladen, 1888.

#### Genus *Pteraster*, Müller and Troschel.

*Pteraster*, Müller and Troschel, System der Asteriden, 1842, p. 128.

With the exception of two Atlantic species, *Pteraster caribbæus* and *Pteraster sordidus*, all the members of this genus are confined to the colder temperate and frigid zones. Notwithstanding its wide range of distribution the genus appears to show only a comparatively small amount of morphological plasticity.

#### Chorology of the Genus *Pteraster*.

##### a. Geographical distribution:—

ATLANTIC: Five species between the parallels of 80° N. and 60° S.

\**Pteraster militaris*, off the Norwegian, British, and North American coasts, extending up Smith's Sound as far as Dobbin Bay, and south to Cape Cod, off Spitzbergen and Nova Zembla, and in the Kara Sea. *Pteraster pulvillus*, off the Norwegian and North American coasts, as far south as Chesapeake Bay (2021 fathoms, *vide* Verrill), off Nova Zembla and the Murman coast. *Pteraster caribbæus*, from the West Indian area. *Pteraster danæ*, off the east coast of Patagonia (or (?) Rio Janeiro). *Pteraster sordidus* is an Atlantic species mentioned by Perrier by name only, but of which no description is published.