

The general distribution of all the recognised species of which the locality is known is given under the section on the chorology of the genus.

A number of forms which are structurally different have been at various times referred to the genus *Astropecten*, but it is unnecessary to recapitulate here the list of the erroneous references corrected by previous workers. The grounds for the removal of those forms with which the present Report is concerned will be found discussed in their proper place.

The following scheme will assist in showing the relative characters of the species obtained by the Challenger Expedition.

*Synopsis of the Species included in the Genus Astropecten herein described.*

- A. With two series of definite spines on the supero-marginal plates.
  - a. Three lateral spines. Adambulacral armature with three spines in the furrow series, and three also in the second series, the aboral largest . . . . . *brasiliensis.*
  - b. One lateral spine. Adambulacral armature with four or five spines in the furrow series; the actinal surface of the plate occupied by a group of papilliform and equal-sized spinelets . . . . . *brevispinus.*
- B. With one series of definite spines on the supero-marginal plates.
  - a. With large, prominent spines on the supero-marginal plates.
    - a. With large, well-developed spines on the infero-marginal plates. No naked spaces . . . . . *polyacanthus.*
  - b. With small spines on the supero-marginal plates.
    - a. The series of supero-marginal spines continuous throughout the ray.
      - α. Lateral spines four, in an oblique comb. Adambulacral armature in three series, with three spines in each . . . . . *pectinatus.*
      - β. One lateral spine, long and cylindrical, with two small companions close behind. Adambulacral armature with the spines of the second and third series frequently grouped, normally three in each. A spine on the infero-marginal plate near the adambulacral plates . . . . . *acanthifer.*
    - b. The series of supero-marginal spines not continuous throughout the ray.
      - α. Wanting in the interbrachial arc.
        - i. One lateral spine. Adambulacral armature in three series . . . . . *japonicus.*
      - β. Wanting on the outer half of the ray, but continuous in the interbrachial arc.
        - i. Three lateral spines. Adambulacral armature in two series . . . . . *imbellis.*
- C. With only an indefinite spinelet, or several enlarged granules, on the supero-marginal plates.
  - a. One lateral spine.
    - a. Adambulacral armature with usually two spines in the second series, very broad and flaring. No aboral line of spinelets on the infero-marginal plates. Actinal spinulation chisel-shaped and truncate. Lateral spines much flattened . . . . . *hermatophilus.*