

- b. Adambulacral armature with three spines in the second series.  
 With an aboral line of spinelets on the infero-marginal plates.  
 Actinal spinulation spatulate, obtusely rounded or pointed.  
 Lateral spines cylindrical or slightly flattened . . . . . *irregularis*.
- b. Four or five lateral spines in diagonal line. Outer spines of the adambulacral armature short, not broad nor flaring, placed diagonally. An aboral line of spinelets on the infero-marginal plates . . . . . *pontoporeus*.
- D. With no spinelets on the supero-marginal plates, excepting in some species a very small one on the first or first four or five plates in the interbrachial arc.
- a. With small spinelets on the first four or five plates.
- a. With four or five spinelets. A well-developed series of pseudo-pedicellariæ . . . . . *zebra*.
- b. With one spine only, on the first plate. No pedicellariæ . . . . . *velitaria*.
- b. With no spines whatever on the supero-marginal plates.
- a. One lateral spine.
- a. With two or three spines in the second series of the adambulacral armature.
- i. Supero-marginal plates broad, with small granules.  
 Paxillæ with five to eight granules (or spinelets) on the central tabulum . . . . . *granulatus*
- ii. Supero-marginal plates narrow, with large granules.  
 Paxillæ with one granule on the central tabulum . . . . . *monacanthus*.
- b. Lateral spines two, side by side. Infero-marginal plates covered with squamules. An aboral line of spinelets present. Lateral spines taper and pointed. Supero-marginal plates very broad . . . . . *cingulatus*.
- c. Lateral spines four, in an oblique line. Spines of the adambulacral armature all cylindrical and taper. Infero-marginal plates with papilliform spinelets rather than squamules. No aboral line of spinelets. Supero-marginal plates not very broad . . . . . *mesactus*.

### Chorology of the Genus *Astropecten*.

#### a. Geographical distribution:—

ATLANTIC: Twenty-two species between the parallels of 70° N. and 40° S.

On the eastern side: *Astropecten irregularis*, off the coasts of Scandinavia and Britain; and in the Mediterranean (*vide* Marion). *Astropecten serratus*, off the west coast of France (this species is also reputed to be a Mediterranean form, but its claim to be so considered appears to be doubtful). *Astropecten aurantiacus*, *Astropecten bispinosus*, *Astropecten jonstoni* (= *Astropecten squamatus*, M. and T.), *Astropecten pentacanthus*, *Astropecten platyacanthus*, and *Astropecten spinulosus*, in the Mediterranean. *Astropecten aurantiacus* also extends to the Canary Islands. *Astropecten hermatophilus*, off the