

THE VOYAGE OF H.M.S. CHALLENGER.

- n. Abactinal skeleton tessellate, arranged in more or less regular longitudinal series. With intra- and infra-marginal papulæ. Primary apical plates persistent in the adult. Marginal plates well developed and always contingent.
- a. Superambulacral plates usually present. Tegumentary developments granulate. Pedicellariæ (rarely present) excavate LINCKIIDÆ.
- b. No superambulacral plates. Tegumentary developments spinulate. Pedicellariæ (forcipulate) pedunculate.
- α. Adambulacral plates unequal, alternate plates with prominent ridges. Adambulacral armature complex, polyacanthid. Pedicellariæ (forcipulate) pedunculate ZOROASTERIDÆ.
- β. Adambulacral plates small, equal, compressed, with no ridges. Adambulacral armature simple, diplacanthid. Pedicellariæ forcipiform and forciform STICHASTERIDÆ.
- b. Abactinal skeleton reticulate, more or less irregular. With or without intra- and infra-marginal papulæ. Primary apical plates aborted in the adult. Marginal plates feebly developed and often separated by intermediate plates.
- a. With no intra-marginal papulæ. Adambulacral armature pectinate. Abactinal skeleton with a more or less highly developed composite spinulation (subpaxilliform).
- α. With actinal intermediate plates more or less developed. Interbrachial septa present. No supradorsal membrane SOLASTERIDÆ.
- β. No actinal intermediate plates. No interbrachial septa. With a supradorsal membrane forming a more or less perfect nidamental cavity PTERASTERIDÆ.
- b. With intra-marginal papulæ. Adambulacral armature isolate or grouped, not pectinate. Abactinal skeleton with spinelets isolated or grouped, but never composite or paxilliform.
- α. With double interbrachial septa HELIASTERIDÆ.
- β. With single interbrachial septa.
- i. Actinostomial ring with adambulacral plates prominent. Ambulacral tube-feet biserial.
1. Pedicellariæ rarely present, never forcipiform. Abactinal skeleton forming an irregular meshwork ECHINASTERIDÆ.
2. With forcipiform pedicellariæ. Abactinal skeleton forming a regular quadrangular meshwork PEDICELLASTERIDÆ.
- ii. Actinostomial ring with ambulacral plates prominent. Ambulacral tube-feet quadriserial ASTERIIDÆ.
- B. Marginal plates in part aborted altogether, elsewhere represented only by microscopic rudiments. Abactinal skeleton aborted, or present only on the disk and ovarian regions. Parambulacral and intermediate actinal plates altogether absent. No interbrachial septa. Spinelets in sheaths clothed with pedicellariæ BRISINGIDÆ.