

to recognize subgenera between which, by convention, intermediate forms are not regarded as forbidden. In practice, the history of classification usually shows that a succeeding generation of taxonomists discards the inconvenient trinomial nomenclature which subgenera require, and subgenera are soon treated as genera. Thus *Amphioplus*, *Amphiodia* and *Amphipholis* were all treated by Koehler initially as "sections" of *Amphiura* (Koehler, 1904, 1905); and subsequently he regarded them as genera. For the foregoing reasons, in reviewing some 350 species of amphiuroids, it has seemed preferable to propose new genera with full generic status, even where the included species are relatively few; we may be sure that the number of species will increase steadily, despite the elimination from time to time of nominal species which prove to be invalid. Further, by increasing the number of genera in this way we can bring groups of related species into sharper relief, thus facilitating the recognition of synonyms.

One unfortunate result of the great extension of the genera during the past half-century has been that the original concept of a genus has tended to drift. It is recognized that stability of genera is promoted if one of the species first assigned to a genus be kept in view as the so-called type species, and that no species be admitted to a genus if its characters differ markedly from these of the type. In the following review the major genera of Amphiuroidae are taken one by one, and the species nominally assigned to them are compared individually with the type species. Only those which agree in the major features of disc-structure and tentacle-scales are admitted to the genus, which is therefore restricted accordingly, and the other species are regrouped in smaller new genera. In the first part of the paper the major genera are taken in the sense in which they are used in the current literature. In the second part the old genera are redefined and restricted, and new genera proposed. A short key is given to the new genera together with those of the older genera to which they are more directly related. As a key to the other genera of Amphiuroidae has recently been published (Fell, 1960), it is not necessary to repeat those parts of it which are unaffected by the present study.

Ophionephthys Lütken, 1869

Twelve species appear in the current literature under this genus, but there is great disagreement as to its validity. Matsumoto (1815, 1917), and Koehler (1922), have rejected it as indistinguishable from *Amphiura*; on the other hand H. L. Clark (1946) and Mortensen (1936, 1940) consider it at least sufficiently well-defined to warrant assigning new species to it, as Balinsky (1957) has recently had occasion to do. The cause of the disagreement between these authors is immediately apparent if a tabulated analysis of the characters of the included species is prepared. It is then evident that the genus at present comprises in fact two quite different assemblages of species, which are probably not even closely related. Both assemblages agree in the severe reduction of calcified structures on the dorsal and ventral surfaces of the disc, the conspicuous areas of unscaled dermis serving to give all the species a marked superficial resemblance. Apart from this, the two groups differ widely. The type of the genus is *Ophionephthys limicola* Lütken, 1869 from the Caribbean region. It has a large infradental papilla, and a series of 3 other, smaller oral papillae, and thus falls in the *Amphioplus* group of Amphiuroidae. The tentacle-pores are large, but not naked, for all except the first pair of pores carry a distinct, though small, tentacle-scale on the inner margin. Two other species, *O. stewartensis* of New Zealand, and *O. magellanica* from southern Chile present similar characters. Further, three nominal species of *Amphioplus* (namely, *seminudus* Mrtsn., *cyrtacanthus* H. L. C., and *lucidus* Klr., from Persian Gulf, Philippines and Indonesia respectively), exhibit the same characters and must be considered congeneric. The whole assemblage therefore constitutes *Ophionephthys* sensu stricto.