

Ophiolepis gracillima Stimpson, and of many of the others, and may therefore be the basis of the genus in a restricted sense. However there still remain some other nominal species of the genus which must be disposed of. Of these, *Amphipholis instructa* Koehler has spines on the disc, and therefore must be transferred to *Ophiostigma* Lütken. Nielsen (1932) who has examined the type specimen of *A. microdiscus* records that it is completely decalcified and the species is unrecognizable. He also considers that *violacea* is better placed in *Amphiodia* (s.l.) than in *Amphipholis*. We are thus left with a few species which fall into two groups according to the presence or absence of a scale at the tentacle-pore. Each of these groups is comparable with corresponding groups in other genera considered, and each is accordingly here raised to generic status. The names proposed (p. —) are intended to indicate their relationship to *Amphipholis* s.s. It is interesting to note that no species of the *Amphipholis* group has any part of the disc naked. The same is true of the *Amphiodia* group, after the exclusion of *ascia* and *joubini* (= *destinata*), as proposed in the foregoing section. Thus *Amphiodia* and *Amphipholis* (both sensu lato) appear to form related categories of taxa, with similar mouth-parts and similar disc-clothing.

Amphioplus Verrill, 1899

This is another major genus requiring dismemberment. At present it comprises about a hundred nominal species. In the sense of Verrill, 1899, the genus is characterized by having 4 or more oral papillae. Those species with spines on the disc, or with the outermost papilla enlarged, have already been removed to form separate genera by Matsumoto (1917) and Mortensen (1940). The type of *Amphioplus* is *Amphiura tumida* Lyman, in which the disc is fully scaled above and below, and 2 tentacle-scales are present. These characters may be taken as diagnostic of *Amphioplus* in a restricted sense. Most of the species fall in this category, and at present it is not apparent how the assemblage can be further subdivided. Of the remaining species, two further categories emerge, containing those which have no tentacle-scale, and those in which a single tentacle-scale occurs; each of these may be raised to generic status. A fourth generic category is represented by species *archeri* A. M. Clark, *personatus* Koehler, *coniortodes* H. L. Clark, and *echinulatus* Mrtns., in which there are 2 tentacle-scales and the ventral surface of the disc is more or less naked. Of the remaining species for which data are available to me, *Amphiura stearnsi* is based on juvenile *Ophionereis*, and is to be rejected; *spinulosa*, with marginal spines, must be transferred to *Amphicantha*; and *duplicatus* falls in *Ophiactis*.

SYSTEMATICS

The foregoing notes indicate the general plan upon which the dismemberment of the major genera of Amphiuridae could be carried out. It will be noted that to a large extent the subdivision has been based on tentacle-scalation and the scalation of the disc. These characters have been used for a long time as a basis for defining species, as well as groupings of species, and have proved reliable. The same could not be said of the characters of the arm-spines, the radial shields, the primary plates of the disc, viviparity versus oviparity, and various other characters which might seem available. It is now intended to give formal standing to the new genera which seem desirable. Under each is given a list of species included, but the lists are not complete, as not all species have been reviewed. Sufficient information, however, is given to enable the disposition of the remaining species to be determined as occasion arises.