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A Revision of the Major Genera of Amphiurid Ophiuroidea

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Abstract

THE major genera of Amphiuridae are reviewed. On the basis of their type species, restricted diagnoses are proposed for *Ophionephthys*, *Amphiura*, *Amphiodia*, *Amphipholis* and *Amphioplus*. To accommodate some of the species excluded from these genera, *Ophiopeltis* Dübén & Koren, and *Hemilepis* Ljungman are removed from the synonymy of *Amphiura* and redefined on the basis of their type species. The remaining species are grouped to form twelve new genera. In all, 344 species are allocated among 19 genera, which are defined and keyed.

HISTORICAL REVIEW

The genus *Amphiura* was established by Forbes in 1842 to accommodate ophiuroids in which the proximal part of the jaw carries a pair of similar infra-dental oral papillae, one on either side of the midline, beneath the vertical column of teeth at the jaw-apex. During the next 25 years four genera were segregated from *Amphiura* to contain various species with spines on the disc; these genera (*Ophiocentrus*, *Ophiostigma*, *Ophiocnida*, and *Ophiophragmus*), and some others subsequently defined, are not discussed in the present paper. For the species of *Amphiura* in which no spines occur on the disc, five genera were differentiated during the period 1842–1871. Two of them were based on forms with a naked disc, and parallel contiguous radial shields; these are *Ophionephthys* and *Ophionema*, the former having well-developed external oral papillae, the latter having only vestigial external papillae. Both genera are regarded as valid. The other three genera were *Amphipholis*, *Ophiopeltis* and *Hemilepis*. Ljungman (1871) was able to express the differences between these as follows:—

A. Papillae ambulacrales binae vel singulae adsunt.

Squamulae disci spinulis destitutae, nudaae	.....	.....	.....	.....	.....	<i>Amphiura</i> s.s.
Discus subtus maxima parte nudus . . .	Papillae ambulacrales binae	.....	.....	.....	.....	<i>Hemilepis</i>
minutissimae (interdum rudimentariae)	.....	.....	.....	.....	.....	
Discus subtus maxima parte nudus . . .	Papillae ambulacrales plane	.....	.....	.....	.....	<i>Ophiopelte</i>
desunt	.....	.....	.....	.....	.....	

(*Amphipholis* had already been differentiated by Ljungman on the basis of the type *Amphiura squamata* D. Chiaje, with 3 oral papillae, the outermost largest, and was not included in the key.)