

New Genera and Species of Ophiuroidea from Antarctica

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Abstract

Glaciacantha jason n.g., n.sp. (Ophiacanthidae), *Euvondrea floretta* n.g., n.sp. (Ophiuridae), and *Ophiosteira bullivanti* n.sp. (Ophiuridae) are described from the Ross Sea.

IN the course of the present Ross Sea oceanographic survey, collections of Ophiuroidea totalling 2,800 specimens from 38 stations have been assembled by the New Zealand Oceanographic Institute. The new genera and species here diagnosed will be more fully described with photographic figures in the official report at present in preparation. I gladly acknowledge the co-operation of the Department of Biological Sciences, Stanford University, and wish especially to thank Mr. John S. Dearborn.

Family OPHIACANTHIDAE

GLACIACANTHA genus novum

Radial shields and other disc-plates conspicuous, naked, bordered by marginal spinules or granules; 2-4 flattened, oval, leaf-like tentacle-scales at the base of the arm, a single tentacle-scale beyond; inner oral papillae elongate, spiniform, forming an apical cluster; outer oral papillae flattened, leaf-like, confluent with the papillae of the oral tentacle-pore.

TYPE SPECIES. *Glaciacantha jason* n.sp.

Glaciacantha jason n.sp. (Figs. 4, 5, 6)

Upper arm-plates fan-shaped, broadly contiguous at the arm-base where they are as broad as long, becoming longer than broad distally; lateral arm-plates narrowly contiguous below, each bearing a distal, flaring, marginal crest which carries a fan of 9-10 erect, slender, tapering arm-spines; arm-spines increasing in size from the lowest to the uppermost, the longest spine equal in length to 1.5 or 2 arm-joints; lower arm-plates broadly fan-shaped, only the first two being contiguous.

TYPE LOCALITY. Stanford University Station GLD-15 (equals U.S.S. *Glacier* Deep Freeze IV Oceanographic Station GL-16), Ross Sea, December 1, 1958, 75° 58.5' S., 168° 29' E., 365 m, coll. H. De Witt, J. Dearborn, U.S.S. *Glacier* Oceanographic Team.

HOLOTYPE. The property of Stanford University Department of Biological Sciences, but the ultimate repository will be the United States National Museum. R ca. 35 mm, r 4.5 mm. Colour in spirit, white.

REMARKS. *Glaciacantha jason* is evidently related to *Ophiomedea* Koehler, 1906, which differs in having the oral papillae differentiated in the opposite sense, namely, the outer ones spiniform, the inner ones leaf-like. To draw attention to this relationship I propose the specific name commemorating Medea's companion. The generic name refers to the U.S.S. *Glacier*.

Family OPHIURIDAE

EUVONDREA genus novum

Disc clothed above by imbricating, naked scales which resemble petals, since the distal margins are upturned; centrodorsal and primary radials in the form of a 5-petalled Tudor rose, surrounded by three circlets of petal-like plates, the outer circlet comprising the broad radial shields, together with a single strap-shaped plate in each interradius; the plates of

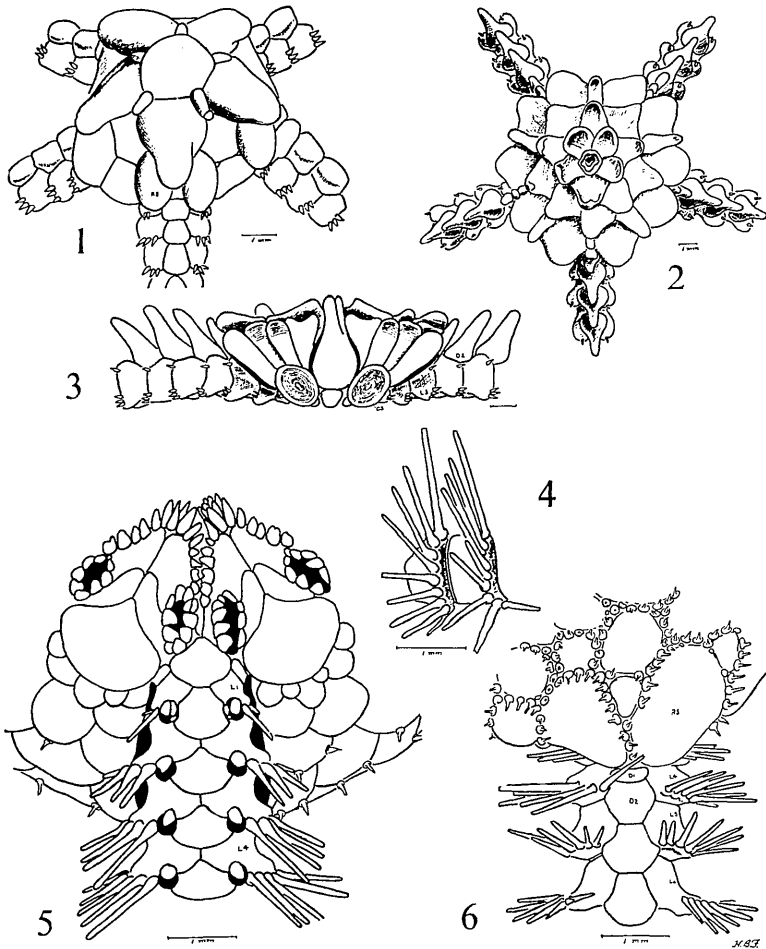


FIG. 1.—*Ophiosteira bullivanti* n.sp., seen obliquely from above. Figs. 2, 3, *Euwandrea floretta* n.g., n.sp., disc and basal arm-joints in dorsal aspect (Fig. 2) and lateral aspect (Fig. 3). Figs. 4, 5, 6, *Glaciacantha jason* n.g., n.sp., in dorsal view (Fig. 6), ventral view (Fig. 5), and lateral aspect of basal arm-joints (Fig. 4). All illustrations are to the scale indicated individually.

the outer circling project well beyond the margin of the disc, which appears thus to bear a flet on its upper surface; interradial areas below covered each by four parallel, imbricating, strap-like plates, inclined obliquely outwards and upwards, each extending from the oral shield to the margin; genital clefts very narrow, extending from the oral shield to the margin; oral shield sub-circular, concave, patterned with a series of concentric circular grooves; jaw small, deeply sunken, bearing thick oral papillae which are confluent with

the scales of the oral tentacle-pore; no arm-comb; upper arm-plates tumid, contiguous, each bearing a conspicuous, erect, conical tubercle; arm-spines minute; no tentacle-pores; no distal arm-hooklet.

TYPE SPECIES. *Euvondrea floretta* n.sp.

***Euvondrea floretta* n.sp. (Figs. 2, 3)**

Oral papillae 4; no genital scales; upper arm-plates twice as high as long; lateral arm-plates broadly contiguous below, but not above, each bearing 4 short, conical arm-spines on the distal, tumid margin, one placed alone, high on the plate, the other three together lower down; lower arm-plates twice as broad as long, triangular, with a distal base and an obtuse proximal apex, widely separated.

TYPE LOCALITY. N.Z. Oceanographic Institute Station A523, 5/2/1960, 73° 34' S., 175° 47' W. to 73° 31' S., 175° 34' W., 1,375 m, Pennell Bank, Ross Sea, J. S. Bullivant.

HOLOTYPE. In the collection of the N.Z. Oceanographic Institute, Wellington, R ca. 20 mm, r 4.5 mm. Colour in spirit, brown.

REMARKS. The extraordinary structure of the disc of this beautiful ophiuroid sets it apart from any known genus. The character of the arms, however, recalls two other Antarctic genera, *Ophiurolepis* and *Ophiosteira*. A similarity to *Ophiurolepis tumescens* Koehler is evident in the young stages of *Euvondrea*; these will be described in the official report of the expeditions. The name *Euvondrea*, which is to be treated as a feminine noun of the first declension, is formed by anagram from the name of the H.M.N.Z.S. *Endeavour*, by which all specimens were obtained.

OPHIOSTEIRA Bell, 1902

TYPE SPECIES. *O. antarctica* Bell, 1902.

***Ophiosteira bullivanti* n.sp. (Fig. 1)**

Disc high, hemispherical, covered mainly by the six primary plates, of which the radial plates almost cover and obscure the radial shields; each radial plate broadly contiguous with the large, pentagonal centrodorsal, and separated from the adjoining radials by only one small interradial platelet on either side; the primaries are extremely high and tumid, and collectively resemble a small starfish resting on the disc; oral shield small, pentagonal, with an acute angle proximad; ca. 4 flat, rounded oral papillae, confluent with the tentacle-scales of the oral tentacle-pore; 2 scales on either side of oral tentacle-pore; succeeding pore with 3-4 scales on the proximal margin, and 2-3 on the distal margin; distally the number of scales progressively less, till none remain; upper arm-plates broadly contiguous, each with a high median crest (which becomes more like a tubercle on distal plates); lateral plates broadly contiguous below, each bearing three small conical arm-spines on the lower distal margin; lower arm-plates lozenge-shaped, small, widely separated; genital clefts conspicuous, extending to the margin, with papillae on the interradial border.

TYPE LOCALITY. N.Z. Oceanographic Institute Station A526, 7/2/1960, 74° 07' S., 177° 41' W., 461-465 m, Pennell Bank, Ross Sea, J. S. Bullivant.

HOLOTYPE. In the collection of the N.Z. Oceanographic Institute, Wellington. R 11 mm, r 2 mm. Colour in spirit, dull grey.

REMARKS. This species, when first taken, was assumed to be the juvenile stage of *Ophiosteira rotundata* Koehler. However, it was subsequently found at other stations, on each occasion represented by a form of the same size and appearance as the one selected as holotype, with the genital clefts fully developed, and in no case was it associated with specimens of *O. rotundata*. It is therefore to be considered as a distinct species, differing from all known species of *Ophiosteira* in the relatively small body-size; and the relatively massive, broad, tumid primary plates.

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