A REVISION OF THE STILIPEDIDAE (AMPHIPODA)

BY

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INTRODUCTION

As defined by J. L. Barnard (1969) the Stilipedidae were a small family of amphipods, containing only two genera (Alexandrella Chevreux and Stilipes Holmes) and 4 known species. During our studies of the Amphipoda from the "Scotia Arc" (Watling & Holman 1980; 1981; in press) we encountered specimens attributable to the genera Alexandrella and Bathypanoploea. The latter was of particular interest since J. L. Barnard (1969) had suggested it to be an acanthonotozomatid with transitional characters to the Paramphithoidae and presumably caused a union of the two families in Karaman & Barnard (1979). We found, in fact, that the specimens on which the genus Bathypanoploea was based actually represented the two afore-mentioned genera. In the present paper we show Alexandrella and Bathypanoploea to be members of a new subfamily, the Alexandrellinae, thus removing the ambiguity between the acanthonotozomatids and the paramphithoids. The Stilipedidae are further revised to include the Astyridae.

STILIPEDIDAE Holmes, 1908

Stilipedidae Holmes, 1908: 535.

Diagnosis. — Slight carina always present on urosomite 1; coxa 1 expanded anterodistally; coxa 2 slender, often proximally expanded; antenna 1 shorter than antenna 2; antennae 1 peduncle short, accessory flagellum rudimentary to absent, at most uniarticulate; mandible without crushing molar, palp 3-articulate; maxilla 2 inner and outer plates setose, usually expanded medially; gnathopods similar, simple to weakly subchelate, never feeble nor exhibiting sexual dimorphism; uropods biramous; uropod 3 peduncle short with at least one ramus 3-4 times length of peduncle; telson only slightly longer than wide but exceeding uropod 3 peduncle.

Subfamily Stilipedinae, Holmes, 1908 (new rank)

Diagnosis. — Coxa 1-4 long relative to corresponding pereonites, coxae 1-3 longer than coxa 4; eyes present (contrary to Holmes, 1908: 536); accessory
flagellum absent; upper lip asymmetrically lobed, left lobe longer than right; mandible incisor wide, smooth, with lacinia mobilis on left side only, lacking setal row and molar; lower lip without inner lobes, outer lobes acute distally; maxilla 1 palp article 2 broadly expanded distally, outer plate broad and flap-like with up to 25 short spines in a single row along distal margin, inner plate small with few setae; maxilla 2 plates circularly expanded, with short setae along outer, distal, and medial margins; maxilliped outer plate not overlapping inner, palp much longer than outer plate, article 4 without small teeth on inner margin; gnathopods simple, each with carpus slightly expanded, dactyls without small teeth on posterior margin.

Component species: Stilipes distincta Holmes, 1908; S. lacteus (Barnard, 1932); S. sanguineus (Hurley, 1954).

Subfamily Astyrinae Pirlot, 1934 (new rank)

Diagnosis. — Pereonites 1-4 equal to or deeper than corresponding coxae; coxa 4 as long as or longer than coxae 1-3; eyes absent; upper lip entire to emarginate; mandible incisor strongly toothed, twisted relative to rest of mandible body, nontriturative molar and setal row present; lower lip with or without inner lobes, outer lobes widely spaced; maxilla 1 palp not expanded, inner plate moderately to widely expanded; maxilla 2 plates usually somewhat expanded medially, with setae of moderate length on distal and medial margins; maxilliped outer plate shorter than 4-articulate palp and overlapping inner plate, article 4 of palp with small teeth on inner margin; gnathopods simple to weakly subchelate, small teeth on posterior margin of dactyls.

Component species: Astyra abyssi Boeck, 1871, (see Sars, 1895); A. zenkevitchi Birstein & Vinogradov, 1955; A. bogorovi Birstein & Vinogradov, 1955; A. longipes Stephensen, 1933; A. gardineri (Walker, 1909) (see Pirlot, 1934; = Parastyra longidactyla).

Subfamily Alexandrellinae new subfamily

Diagnosis. — Body variably carinate; pereonites deeper than corresponding coxae, coxa 4 as long as or longer than coxae 1-3; eyes absent; accessory flagellum uniaxarticate; upper lip asymmetrically lobed, right side longer than left; mandible incisor broad, toothed or not, lacinia mobilis and setal row present on both left and right sides, molar absent; maxilla 1 palp expanded distally, inner plate well-developed, setose along distal and medial margins as well as on inner face; maxilla 2 inner and outer plates expanded medially but not rounded, heavily setose; maxilliped outer plate exceeds palp and overlaps inner plate, palp 4-articulate, article 4 with small teeth along inner margin; gnathopods 1 and 2 simple or weakly subchelate, gnathopod 1 slightly more robust.