

## ***Compoceration garyi*, a new genus and species of Paramunnidae (Crustacea, Isopoda, Asellota), from south eastern Australia.**

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### **Abstract**

Just, J. 2009. *Compoceration garyi*, a new genus and species of Paramunnidae (Crustacea, Isopoda, Asellota), from south-eastern Australia. *Memoirs of Museum Victoria* 66: 81–84.

A new genus, *Compoceration*, in the asellote family Paramunnidae Vanhöffen, 1914 is diagnosed. The type species *Compoceration garyi* sp. nov. was collected from 220 m depth off southern New South Wales. The new species shares several characters with *Pentaceration* Just, 2009. It differs from the latter mainly in its unique head structures and a cylindrical, non-flared mandible molar.

### **Keywords**

Crustacea, Isopoda, Paramunnidae, *Compoceration garyi* new genus and species, Australia.

### **Introduction**

Asellote isopods of the family Paramunnidae from Australia and adjacent subantarctic islands have recently been the subject of major revisionary studies (Just & Wilson 2004, 2006, 2007, Just 2009). As a result, many new species of much morphological novelty have been described and new genera established, while several ‘old’ genera (primarily *Paramunna* Sars, 1866, *Austrimunna* Richardson, 1906, *Austrosignum* Hodgson, 1910, and *Munnogonium* George and Strömberg, 1968) have been redefined. Among the many paramunnids still to be studied from the area, a single female stands out immediately because of its unusual ornamentation on the cephalon. This new species is here made the type of a new genus as *Compoceration garyi* gen. et sp. nov.

Terminology and measurements follow those used in the suite of papers by Just and Wilson (see above) with additions in Just (2009). The single specimen to hand lacks parts of the antennae and most pereopods. To avoid destroying the holotype, some mouthparts only were drawn in situ.

### ***Compoceration* gen. nov.**

*Type species. Compoceration garyi* sp. nov. Here designated.

**Diagnosis.** Body generally tapering from pereonite 3. *Eyestalks* elongate, overreaching pereonite 1 lateral margins. *Frontal margin* of head with two lateral forward pointing spines and upright outgrowths at base of spines. *Pereonites* laterally extended into broad spines. *Coxae* hidden under extended tergites in dorsal view. *Pleotelson* lateral margins denticulate, posterior margin produced. *Antennula* article 1 length and width subequal to 2. *Antenna* article 3 tubular. *Mandible* palp

present, stubby, molar long, cylindrical throughout, with transverse grinding surface. *Pereopod I* carpus oval, with two straight robust setae on posterior margin; propodus narrowing distally to insertion of dactylus. *Female operculum* ovoid. *Uropods* on dorsal surface of pleotelson.

**Remarks.** It should be borne in mind that the diagnosis is based on the female of the species. Males should be identifiable on the shape and armature of the head, the eyestalks and the general shape of the body. Lateral pereonite 1 and spines on the remainder may be more strongly developed in males, though, and pereopod I may differ significantly, especially the shape of the carpus.

**Etymology.** The new genus name is composed of the Greek κομπος (kompos = knot or lump) and κέρατο (kerato = horn) with the diminutive ending –ion, thus a little horn with a knot, alluding to the complex head spines.

### ***Compoceration garyi* sp. nov.**

Figures 1–2

**Material examined.** Holotype, ovigerous female, 0.9 mm, Australia, New South Wales, off Eden 36°57.40'S 150°18.80'E, 220 m, muddy shell, WHOI epibenthic sled, 20 July 1986, Poore *et al.*, RV *Franklin*, stn SLOPE 21, Museum Victoria NMV J18982 (incl. 2 slides).

**Description.** Body widest between pereonites 2 and 3, width 0.42 length. *Head* length 0.25 width (including eyestalks); length posterior to eyestalks 0.63 anterior length. *Frontal margin* with low convex bulge in middle; lateral spines approximately 0.7 length of eyestalks, pointing forward at about 50° to head midline, length/width at base approximately

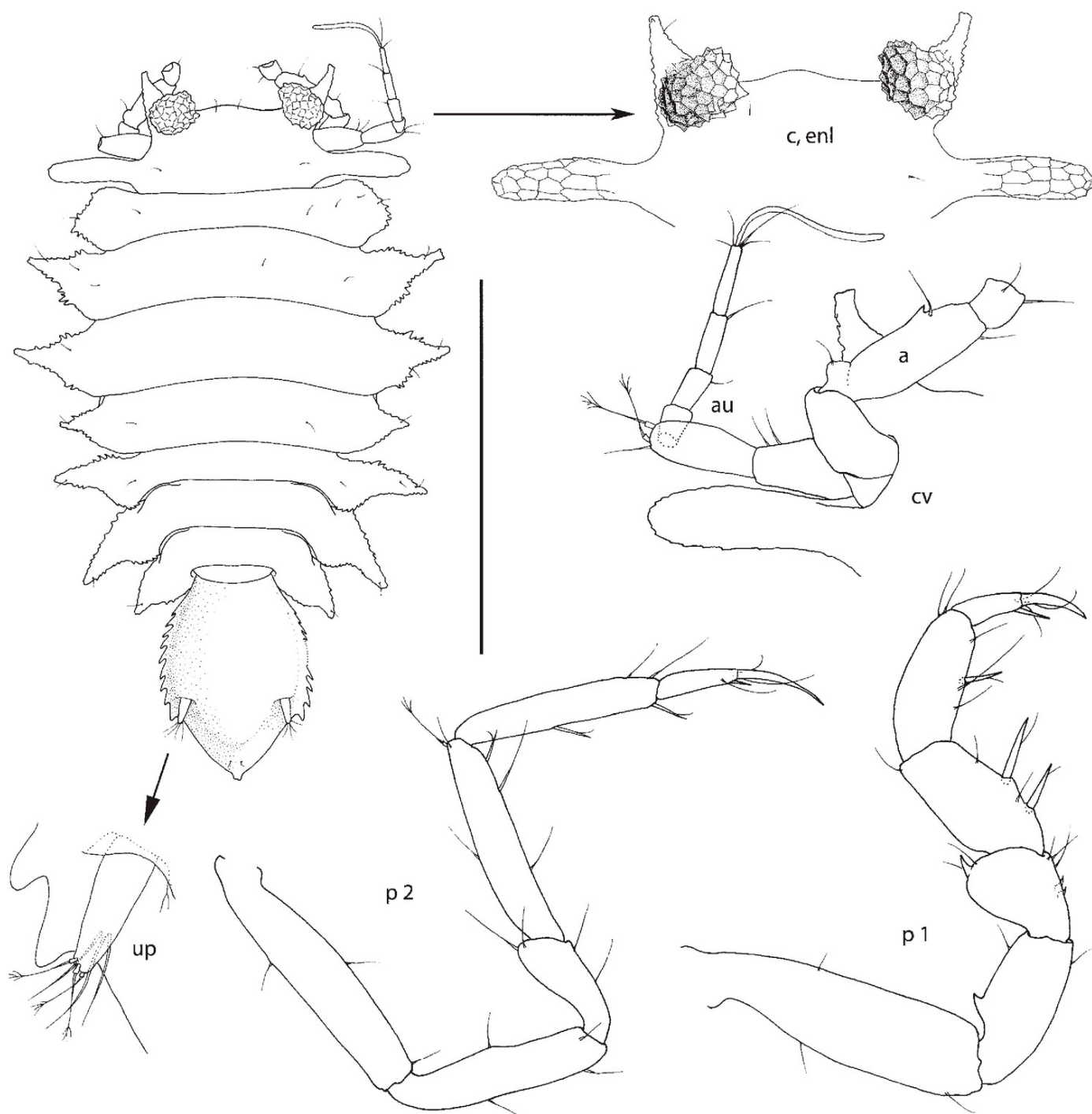


Figure 1. *Compoceration garyi* gen. et sp. nov. Holotype, ovigerous female. a, antenna; au, antennula; c, enl, dorsal view of head enlarged; cv, ventral view of head; p1 and 2, pereopods I and II; up, uropod. Scale bar for habitus: 0.5 mm.

1.4: dorsal outgrowth at base of spine spherical, diameter approximately 1.5 spine width at base, with heavily calcified sculptured surface. *Eyestalks* overreaching anterior lateral corner of pereonite 1 by about 1/2 their length, pointing laterad at 90° to head midline, anterior and posterior margins parallel, apex rounded, ocelli not observed.

*Pereonite* 1 length half midlength of pereonite 2, 3 1.5 length of pereonite 2, 4 length equalling pereonite 2, 5 length equals pereonite 1, 6 1.3 length of pereonite 5, 7 length equals pereonite 5. Pereonite 1 lateral margins irregularly rounded truncate, broadest at midpoint; pereonites 2–7 lateral margins extended into broad-based pointed spines with fine marginal denticles;



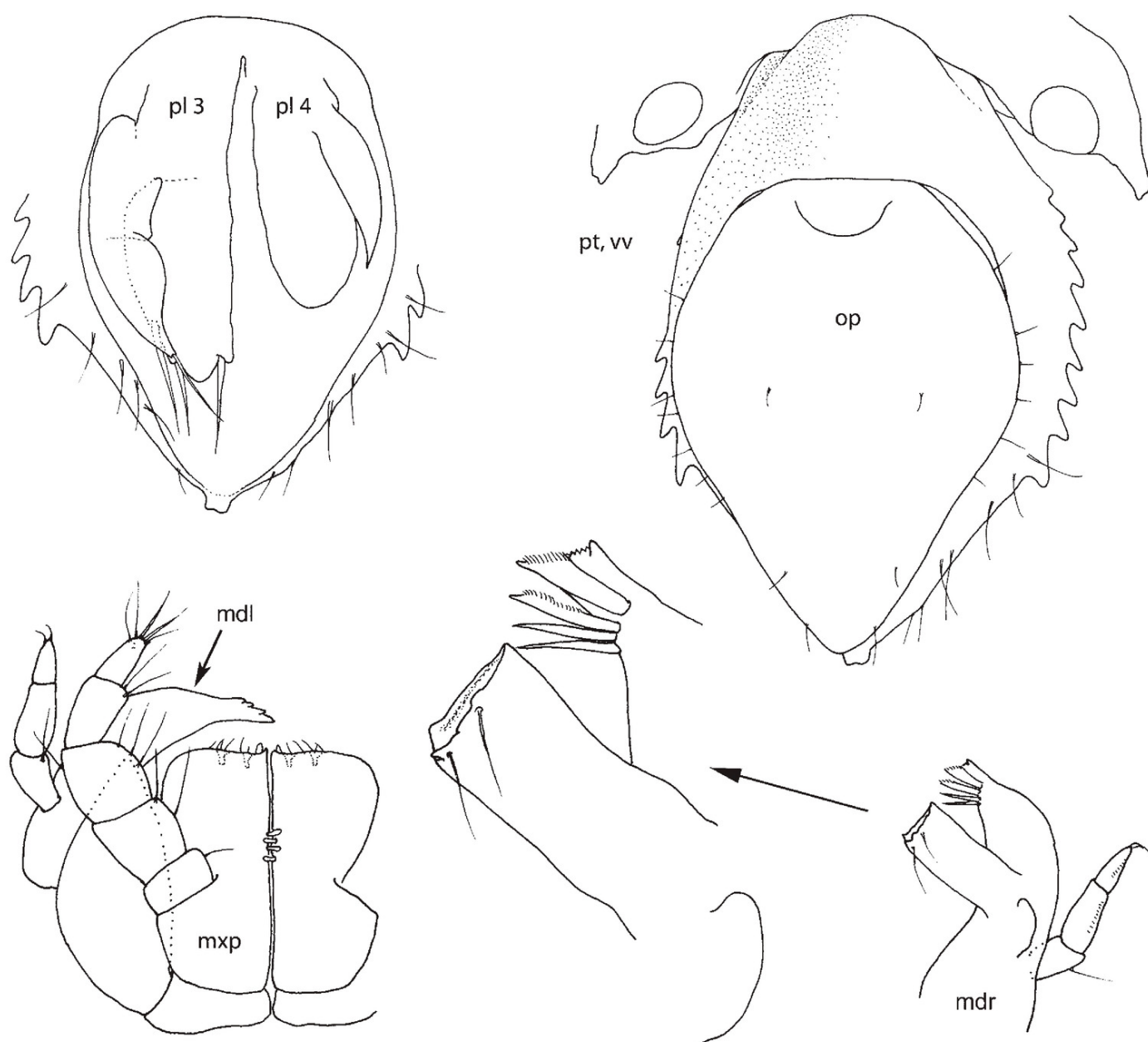


Figure 2. *Compoceration garyi* gen. et sp. nov. Holotype, ovigerous female. mdr, right mandible, with enlargement; mdl, left mandible; mxp, maxilliped; op, female operculum (pleopod II); pl3 and 4, pleopods III and IV; pt vv, pleotelson, ventral view.

pereonites 2 and 3 spines similar, approximately 0.3 length of pereonite width, spine on 4 reduced compared to 3 and 5, spine on 5 and 6 similar to 2 and 3, on 7 slightly shorter than 6; spines on 6 and 7 pointing backward at approximately 45 degrees.

*Pleon* length 1.4 width. *Pleonite 1* width 0.85 distance between uropods, length 0.2 width. *Pleotelson* without noticeable neck or shoulders, lateral margins evenly convex to level of uropods, with 9 denticles on left side (partly broken on right); posterior margin 0.33 length of entire pleotelson, broad, merging straight into lateral margin except for distal denticle of the latter, triangular at 85°, apex a tiny square knob.

*Antennula* articles 1 and 2 combined reaching apex of eyestalk; 3 and 4 of equal length, both 0.6 length of subequal 5 and 6.

*Antenna* article 1 in ventral view approximately 0.4 length of article 2 along lateral margin; article 3 width 0.3 length, with small denticle in distal half of lateral margin, narrowing in distal 1/3.

*Pereopod I* basis length 3.6 times width; ischium 0.5 length of basis, anterior margin with single acute spine in proximal half; merus with single acute spine on anterior margin; carpus margin distal to robust setae straight; propodus with single

robust seta on posterior margin. Pereopod II propodus with 2 slender robust setae on posterior margin.

*Pleopod II* (female operculum) distolateral margins nearly straight, width 0.72 length.

*Uropods* recessed into simple non-protruding cuticle pockets, with single ramus (endopod), length 3 times width.

**Etymology.** The species is named for Dr Gary Poore, Museum Victoria, Melbourne, Australia, in recognition of his contributions to many aspects of isopodology, and in gratitude for much help over decades.

**Discussion.** Among the paramunnids with dorsally covered coxae, especially on pereonites 5–7, the new genus *Compoceration* share several characteristics with *Pentaceration* Just, 2009: spines on the frontal margin of the head; elongate eyestalks; article 2 of the antennal peduncle about 3 times longer than 1; pereopod I carpus oval; pereonites 2–7 laterally extended into spines; pereonite 4 width reduced (although not as strongly as in *Pentaceration*). *Compoceration* differs from *Pentaceration* (character in parentheses) as follows: front margin of head with 2 lateral spines with dorsal outgrowth at their base (3 spines, 1 mid-frontal, 2 lateral, no basal outgrowth); eyestalks 4 times longer than wide (2–3 times); mandible molar cylindrical, not distally expanded (strongly expanded distally, ‘flared’). By analogy with *Pentaceration*, it is possible that these differences are more strongly expressed in the as yet unknown males of *Compoceration*.

Species in *Paramunna* also have head ornaments, but they are in the shape of 2 dorsomarginal broad, square or rounded lobes (small pointed lobes in one species) that do not appear to be homologous with the above mentioned frontal margin spines. Generally *Paramunna* species have ovoid bodies with rounded to truncate pereonite margins. Only in terminal males of *Paramunna bilobata* Sars, 1866 and the somewhat aberrant *P. walvisensis* Just and Wilson, 2004 are pereonites extended laterally into broad pointed laplets, especially on the last 3 pereonites. *Paramunna* species otherwise differ from

*Compoceration* in most other diagnostic characters: peduncle article 2 of antenna short, about as long as 1; eyestalks about as long as wide, not overreaching pereonite 1; mandible molar expanded distally, ‘trumpet-shaped’; pereopod I carpus triangular; pereonite 4 similar to 3 and 5; uropods inserted in pleotelson margin, not on dorsal surface, bi-ramous.

## Acknowledgements

I thank Dr. Jo Taylor, Museum Victoria, Melbourne, for the opportunity to contribute to this Festschrift in honour of Dr. Gary Poore, friend and colleague.

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<https://doi.org/10.24199/j.mmv.2009.66.10>.

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