

TWO NEW ANOMURAN CRUSTACEA (DECAPODA: ANOMURA) FROM NORTH-WEST AUSTRALIA

KEIJI BABA

Biological Laboratory, Faculty of Education,
Kumamoto University, Kumamoto 860, Japan.

14 APR 1987

ABSTRACT

A new chirostylid, *Uroptychus brucei* sp. nov. and a new galatheid *Munida soelae* sp. nov. are described and illustrated from specimens collected from Northwest Australia. Their affinities to the closely related species are discussed.

KEYWORDS: Crustacea, Anomura, Chirostylidae, Galatheidae, *Uroptychus*, *Munida*, new species, North-West Australia.

INTRODUCTION

The new anomurans described below were found in the collection of the R.V. "Soela" (CSIRO) survey to the North West Shelf of Australia recently received for identification from Dr A.J. Bruce of the Northern Territory Museum, Darwin, Australia. One of the two new species belongs to the genus *Uroptychus* Henderson of Chirostylidae, and the other to the genus *Munida* Leach of Galatheidae. The types are deposited in the Northern Territory Museum (NTM).

SYSTEMATICS

Uroptychus brucei sp. nov.

(Figs. 1,2)

Type Material. HOLOTYPE - ♂, NTM Cr. 000604, Station NWS-33, 17°59.4'S 118°18.4'E, 406-416 m, deepsea lobster trawl, 28 January 1984. PARATYPES - 2 ♂, NTM Cr. 000598, Station NWS-38; 18°52.2'S, 116°11.1'E, 456-458 m, deepsea lobster trawl, 30 January 1984.

Description of holotype. Carapace (Figs. 1, 2a and b) excluding rostrum as long as wide, widest at $\frac{1}{3}$ of length from posterior end. Dorsal surface glabrous, covered with very fine granules discernible only under high magnification; gastric, cardiac and branchial regions somewhat convex and delimited by shallow indistinct grooves; lateral margin convex, minutely denticulate, distinctly ridged along posterior $\frac{1}{4}$ of length, anterolateral angle with strong spine. Outer orbital angle produced and spiniform.

Rostrum broadly triangular, 0.4 as long as remaining carapace, somewhat deflexed, and deeply concave dorsally.

Eyes relatively small, elongate, overreaching midlength of rostrum, cornea $\frac{1}{3}$ as long as remaining eyestalk.

Abdominal segments glabrous and spineless.

Outer terminal process of basal antennular segment simple but well developed. Ultimate segment of antennal peduncle (Fig. 2c) twice as long as penultimate when measured at midline, with indistinct process at outer distal margin; penultimate segment with blunt but distinct outer distal marginal spine; antennal scale fully twice as wide as, and overreaching, midlength of ultimate peduncular segment.

Third maxilliped unarmed on merus and carpus, ischium with about 30 closely placed denticles on inner toothed ridge.

Third thoracic sternum (Fig. 2d) strongly depressed below level of following sternal segments, anterior margin concave, sharply V-shaped medially, with 2 strong median spines, anterolateral angle distinctly produced inward. Following sternum mesially grooved, anterolateral angle roundly produced, anterolateral margin distinctly convex.

Chelipeds (Fig. 1) dissimilar, right one larger and longer. Right cheliped about 4 times as long as carapace including rostrum, relatively massive, glabrous except for fingers; basis with small but distinct distodorsal spine; ischium with strong distodorsal and moderate-sized distoventral spines. Merus and carpus subcylindrical, somewhat tuberculate ventrally; merus with several more pronounced tubercles near inner margin, distoventral margin with distinct spine; palm as long as carpus, fully 2.5 times as long as wide;



Fig. 1. *Uroptychus brucei* holotype ♂.

massive but depressed; lateral margins somewhat convex, distinctly ridged; fingers (Fig. 2e) barely half as long as palm, setose especially distally, opposable margins with low processes and tubercles, as figured, distally curving inward and crossing. Left cheliped shorter and slenderer, possibly because of regeneration; about 3 times as long as carapace; opposable margins of fingers bearing fewer processes (Fig. 2f).

Walking legs slender, spineless on anterior margin, distal 2 segments setose. Propodus of first walking leg (Fig. 2g) 6 times as long as wide, posterior margin with 19 spinelets in whole length, bearing long coarse setae on distal half; dactylus curving, with 12 spinelets, proximal 3 somewhat smaller, others subequal, outer margin very thickly setose. Second and third walking legs similar to first, propodus of second walking leg with 17 posterior marginal spinelets on distal $\frac{2}{3}$ of length, that of third leg with 12 spinelets on distal half.

Variation. In two males from Station NWS-38, the ultimate segment of the antennal peduncle bears a distinct terminal spine; and propodi of the first walking legs bear 10-12 spinelets on distal $\frac{2}{3}$ of the posterior margin; on the second and third legs the propodal spinelets are 8-11 in number, restricted to distal half.

Measurements of holotype. Length of carapace 21.8 mm; width of carapace 15.7 mm; length of cheliped 69.2 mm (left), 86.8 mm (right); length of palm 17.8 mm (left), 25.3 mm (right); length of movable finger 11.0 mm (left), 13.3 mm (right).

Measurements of paratypes. Carapace lengths of males, 18.0-19.5 mm.

Remarks. The carapace, having finely denticulate lateral margins, the chelipeds being glabrous, smooth and relatively massive, and the dactyli of walking legs bearing subequal-sized spinelets on the posterior margins, suggest a relationship with *U. nitidus occidentalis* Faxon, previously known from both the eastern and western Pacific (Faxon 1895; Baba 1973). However, they differ in the following: 1) the dorsal surface of the rostrum is flattish in *U. n. occidentalis*, while it is deeply excavated in *U. brucei*; the dorsal surface of the carapace is entirely smooth in *U. n. occidentalis*, while in *U. brucei* it is covered with very fine granules that are discernible only under high magnification; and 3) the distal two segments of the antennal peduncle are unarmed in *U. n. occidentalis*, whereas in *U. brucei* the penultimate segment bears a distinct inner terminal spine.

It is a pleasure to dedicate this species to A.J. Bruce, who collected these specimens.

Munida soelae sp. nov.

(Fig. 3)

Type Material. HOLOTYPE - ♀, NTM Cr. 000655, Station NWS-37, 18°52.2'S 116°09.4'E, 501-502 m, deepsea lobster trawl, 30 January 1984. PARATYPES - 1 ♂, 1 ovig. ♀, Station NWS-91, 16°07.2'S 120°20.0'E, 544-550 m, lobster trawl.

Description of holotype. Carapace (Fig. 3a) as long as wide when measured between front margin behind eye and posterior margin. Gastric region weakly convex, cervical groove shallow; pair of epigastric spines well developed; another pair directly behind it smaller. Hepatic region squamate. Anterior branchial region with 2 oblique ridges. Posterior half of carapace with interrupted transverse ridges. Postcervical spines strong. Cardiac region with 2 spines on elevated anterior ridge. Small but distinct spine on branchiocardiac boundary directly laterad of cardiac spines. Posterior transverse ridge with 6 spines, median 2 stouter. Lateral margin con-

vex, widest at midlength, bearing 6 spines on anterior half, 2 of them in front of cervical groove and remaining 4 behind it.

Rostrum spiniform, straight, but directed slightly upward, about $\frac{1}{3}$ as long as remaining carapace. Supraocular spines subparallel, considerably remote from rostrum, overreaching midlength of rostral spine.

Second through fourth abdominal segments with 4 acute spines on anterior ridge; posterior ridge of fourth segment with strong median spine. Pleura of second abdominal segment rounded, those of third and fourth segments tapering.

Eyes dilated, not strongly depressed, eyelashes short.

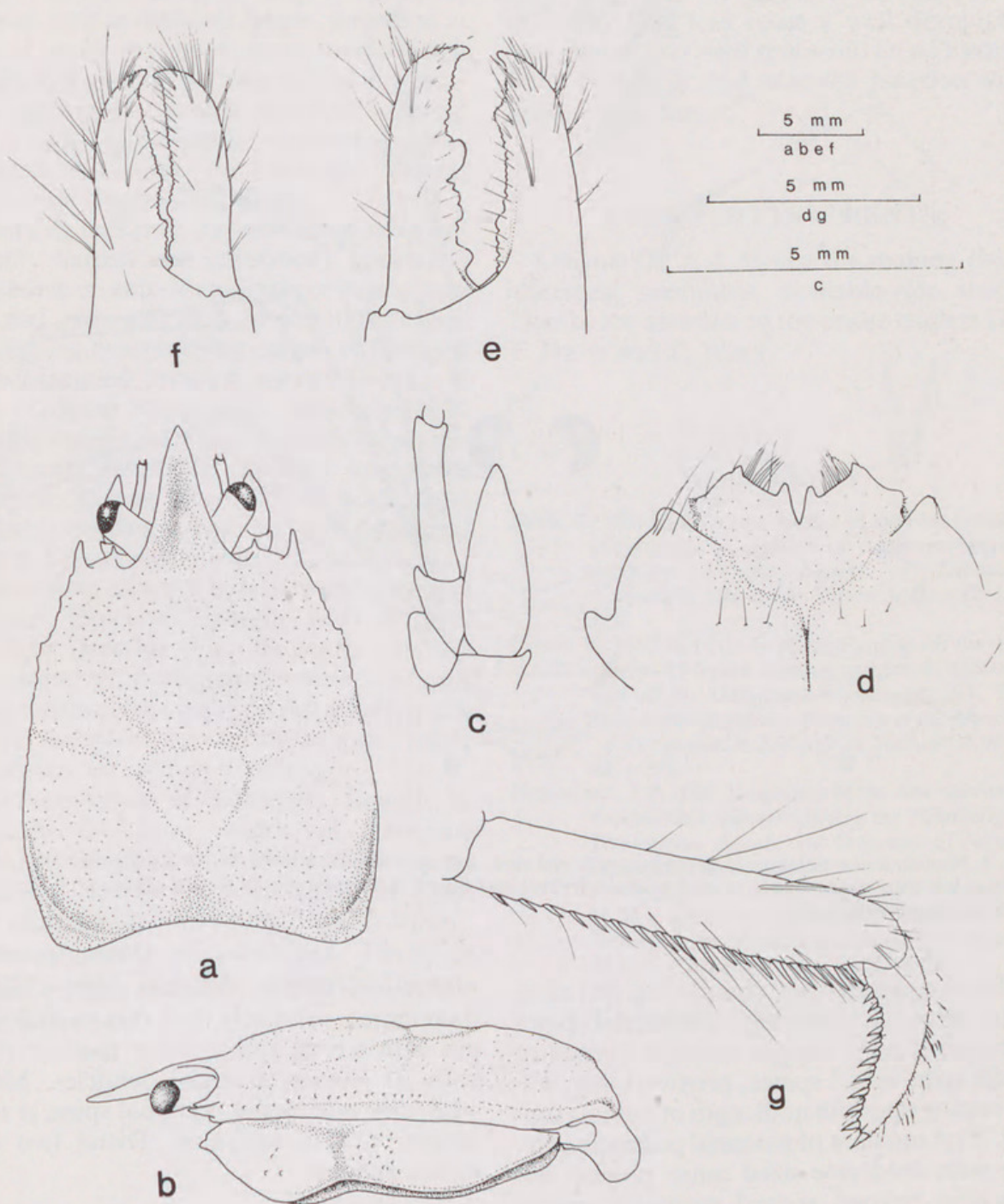


Fig. 2. *Uroptychus brucei* holotype ♂: **a**, carapace, in dorsal view; **b**, same, in lateral view; **c**, left antennal peduncle; **d**, anterior part of sternal segments; **e**, fingers of right chela; **f**, same of left chela; **g**, distal two segments of right first walking leg.

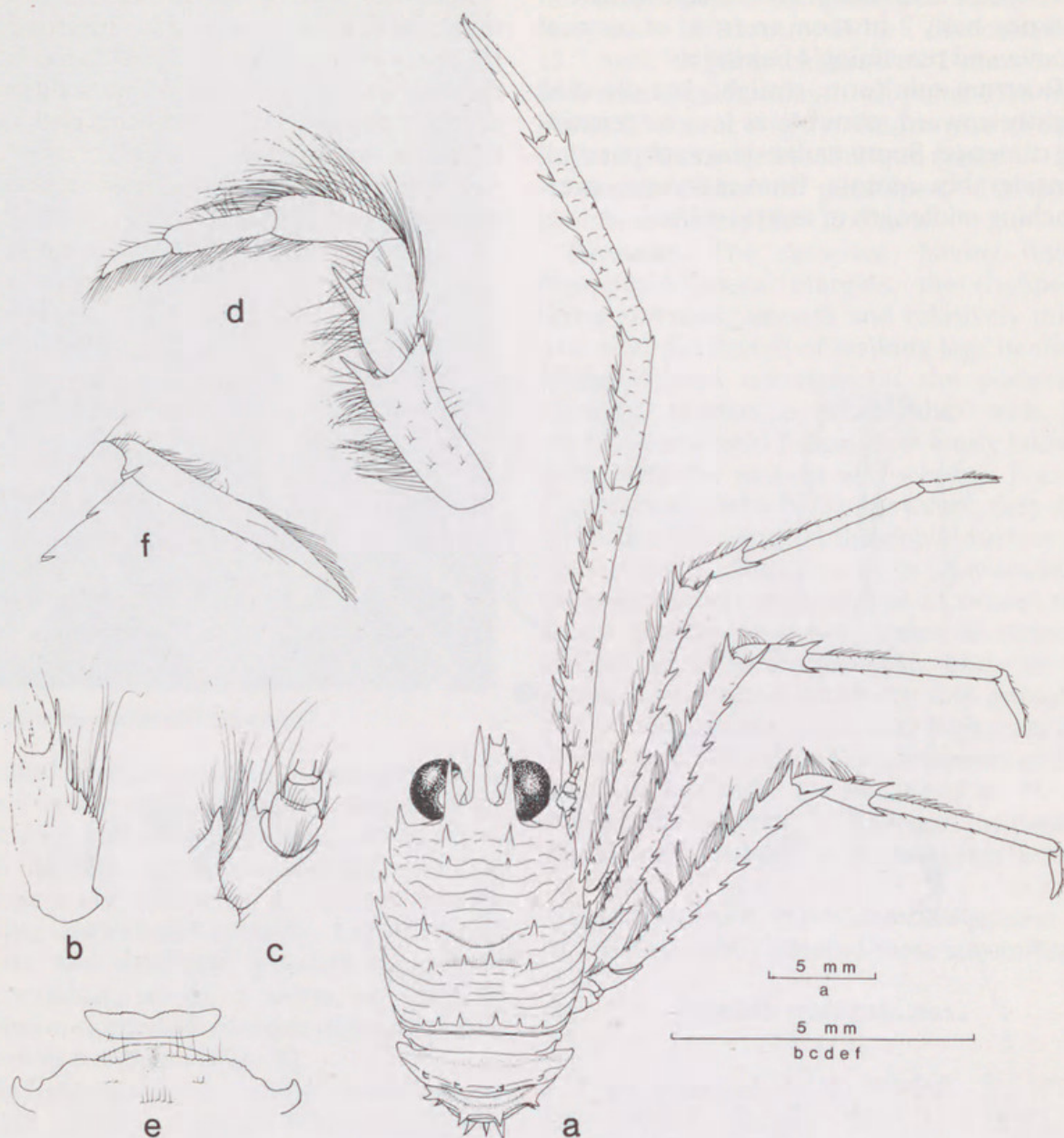


Fig. 3. *Munida soelae* holotype ♀: **a**, animal in dorsal view, left appendages omitted; **b**, basal segment of left antennule; **c**, left antennal peduncle; **d**, endopod of left third maxilliped; **e**, anterior part of sternal segments; **f**, distal part of right second walking leg.

Basal segment of antennule (Fig. 3b) elongate, setose in distal half; 2 terminal spines subequal; outer margin strongly convex at midlength, with 2 spines, proximal tiny, distal ending opposite midlength of outer terminal. First segment of antennal peduncle (Fig. 3c) with moderate-sized inner process not reaching beyond second segment; second segment produced on both distal margins, third segment unarmed.

Third maxilliped (Fig. 3d) setose, especially thick and long on lateral margins of

merus and carpus. Ischium slightly longer than merus, relatively thin, distomesial margin with strong spine, inner toothed ridge with 10 minute, vestigial denticles. Merus with only one mesial marginal spine at midlength. Carpus unarmed. Distal two segments slender.

Anterior sternal segments as figured (Fig. 3e); comparatively short and wide. Third thoracic sternum 5.6 times as wide as long; barely half as wide as, and not contiguous to,

following sternum; anterior margin minutely dentate, weakly undulating.

Left cheliped missing. Right cheliped (Fig. 3a) weakly squamate dorsally, slender, subcylindrical, 3 times as long as carapace including rostrum, moderately setose on inner margin. Merus with 4 rows of spines, ventral row consisting of tiny spines. Carpus as long as movable finger, with 2 rows of spines and 1 short outer distal marginal spine. Palm 8.9 times as long as wide, 1.6 times as long as movable finger, spination as figured; inner marginal spines pronounced. Fingers not gaping, curving inward and crossing, opposable margins minutely tuberculate, with equidistant, somewhat pronounced tubercles on movable finger; immovable finger bifid distally.

Walking legs (Fig. 3a) slender, depressed, dorsally flattish and indistinctly squamate, and setose on anterior margins of merus, carpus and proximal part of propodus. First walking leg overreaching carpus of cheliped when extended forward; merus as long as total of distal 3 segments, armed with 11 anterior marginal and 7 or 8 posterior marginal spines, distalmost of both marginals strongest; carpus produced on both distal margins, bearing small anterior marginal spine at $\frac{1}{3}$ from distal end; propodus fully 12 times as long as wide, barely twice as long as dactylus, posterior margin with 6 or 7 spinelets; dactylus (Fig. 3f) gently curving, depressed, proportionately wide, anterior margin setose, especially on distal half, indistinctly crenulate, posterior margin finely denticulate on median $\frac{1}{3}$ of length.

Measurements of holotype. Length of carapace 14.1 mm; width of carapace 10.4 mm; length of right cheliped 43.2 mm; length of carpus 6.8 mm; length of palm 10.5 mm; length of movable finger 6.6 mm.

Measurements of paratypes. Carapace lengths: male 28.2 mm, ovigerous female 28.0 mm.

Remarks. This species seems to be closely related to *Munida normani* Henderson, only originally known from the Fiji Islands (Henderson 1885; 1888), from which it differs in the following respects: 1) the carapace bears additional two spines behind the epigastric pair, only two spines on the branchiocardiac boundary, two well developed spines on the cardiac transverse ridge, and more numerous spines, 6 in number, on the posterior transverse ridge; 2) the palm of the cheliped is relatively long and bears a well developed outer distal marginal spine and an additional spine that is located near the junction with the movable finger.

ACKNOWLEDGEMENTS

I thank Dr A.J. Bruce for making these interesting specimens available for study. Thanks are also due to the cruise leaders Drs T. Davis and T. Ward.

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Accepted 16 September 1985



Baba, Keiji. 1986. "Two new anomuran Crustacea (Decapoda: Anomura) from North-West Australia." *The Beagle : Records of the Museums and Art Galleries of the Northern Territory* 3(1), 1–5. <https://doi.org/10.5962/p.260869>.

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DOI: <https://doi.org/10.5962/p.260869>

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