

# 琉球大学学術リポジトリ

珍奇なカニ・ゲツメンカルイシコブシ (新称)

Oreotlos pala Tan & Ng, 1996

(甲殻亜門十脚目コブシガニ科) の再記載

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## Redescription of a bizarre crab, *Oreotlos pala* Tan & Ng, 1996 (Decapoda: Brachyura: Leucosiidae)

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**Abstract.** A bizarre crab of the family Leucosiidae, *Oreotlos pala* Tan & Ng, 1996 is redescribed on the basis of four specimens, including three males and one female, collected from the Ryukyu Islands. This species was known only by the female holotype from Guam, the Mariana Islands. Our material from the Ryukyus enable us to describe the morphology of taxonomically important male characters (abdomen, telson, and gonopods) of this poorly known species for the first time. The assignment of the species to *Oreotlos* is fully confirmed.

### Introduction

A bizarre leucosiid crab, *Oreotlos pala* Tan & Ng, 1996, was originally described on the basis of a unique female specimen collected from Guam, the Mariana Islands. Although the holotype of *O. pala* lacks all the chelipeds and ambulatory legs, this species can be immediately distinguishable from the congeners on account of the considerably wide carapace, characteristic arrangement of depressions on the dorsal surface of lateral expansions of the carapace, and the position of the buccal cavern (Tan & Ng 1996).

In the field guidebook dealing with decapod crustaceans found in Kume-jima Island, Ryukyu Islands, Kawamoto & Okuno (2003) briefly reported *O. pala* with underwater photographs but did not provide further taxonomic information. The present article redescribes both male and female characters of the species based on material from Kume-jima Island and Irabu-jima Island, Ryukyu Islands.

Measurements provided are of carapace length (CL) × carapace width (CW) in millimeters. The abbreviations G1 and G2 were used for male first and second gonopods, respectively. The specimens examined in this study are deposited in the Coastal Branch of Natural History Museum and Institute, Chiba (CMNH), Japan.

### Taxonomic account

#### *Oreotlos pala* Tan & Ng, 1996

[New Japanese name: **Getsumen-karuishikobushi**]

(Figs. 1–4)

*Oreotlos pala* Tan & Ng, 1996: 156, fig. 24, pl. 15B–D; Kawamoto & Okuno, 2003: 110, unnumbered figs. in color; Paulay et al., 2003: 496 (list); Ng et al., 2008: 92 (list).

**Material examined.** CMNH-ZC 00912, 1♀, 5.3 × 10.7 mm, "Shadow cave", submarine cave off Kume-jima Island, 15 m, 30 March 2002; CMNH-ZC 01060, 1♂, 4.6 × 8.4 mm, same locality as CMNH-ZC 00912, 4 February 2002; CMNH-ZC 01272, 1♂, 4.5 × 8.1 mm, Imazuni, Kume-jima Island, 15 m, 8 July 2002; CMNH-ZC 01778, 1♂, 4.6 × 8.7 mm, "W-arch", submarine cave off Irabu-jima Island, Miyako Group, 10 m, 1 August 2004.

**Description.** Carapace (Fig. 1A) transversely oval in out line, CW 1.8–2.0 times CL (n=4, mean 1.88), low. Dorsal surface (Fig. 1) convex longitudinally in posterior two-thirds and transversely, metagastric region with groups of granules separated from each other by shallow grooves; three large, deep depressions each on both sides of carapace; anterior depression on post-hepatic region, rather oblong, oblique, medially narrowed; second depression on lateral expansion, semicircular, demarcated from anterior, posterior depressions by complete ridges that are on same level with dorsal surface of carapace; posterior depression on post-branchial region, semicircular, smaller than second depression; intestinal and cardiac regions laterally demarcated by deep grooves. Front roundly truncate and weakly bilobed with shallow median sulcus, not upturned, anterior margin of front placed in same level or slightly posterior to anterior margin of buccal cavern

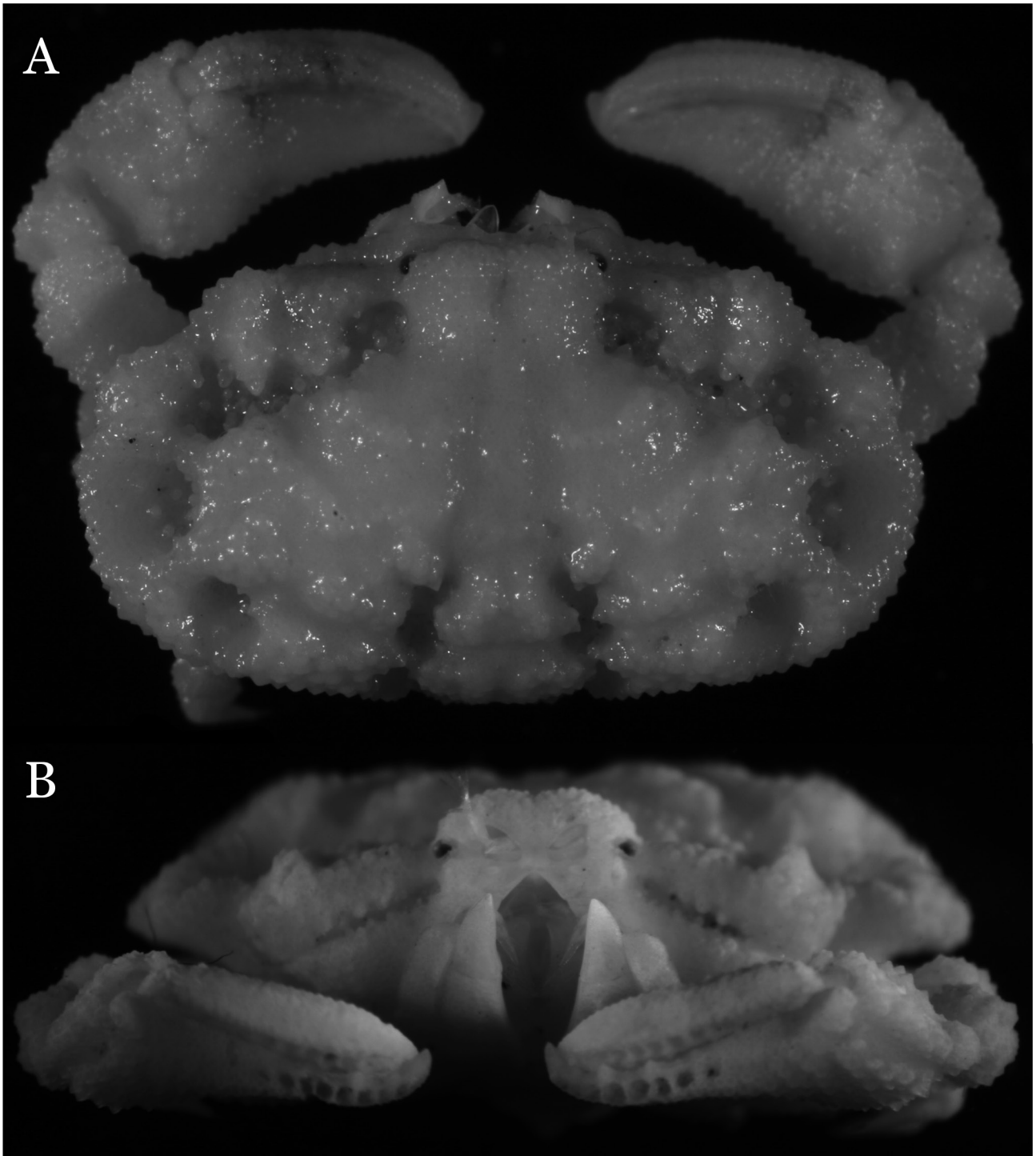


Fig. 1. *Oreatlos pala* Tan & Ng, 1996. CMNH-ZC 01060, male, 4.6 × 8.4 mm. A, overall, dorsal view; B, cephalothorax, anterior view.

図1. ゲツメンカルイシコブシ. CMNH-ZC 01060, 雄, 4.6 × 8.4 mm. A, 全体, 背面; B, 頭胸甲, 前面.

(Fig. 1A).

Basal segment of antennule occupying half of fossa when closed (Fig. 1B).

Third maxilliped (Fig. 2A, B) ischium oblong, length about 2 times that of merus; merus elongated triangular; exopod stout, slightly exceeding proximal half of merus.

Male thoracic cavity narrow, long, distally

connected to buccal cavern (Fig. 2).

Chelipeds symmetrical both in male and female (Figs. 1, 3, 4), no size differences between sexes; chela longer than merus; palm granular, thick; palm and immovable finger flattened on their lower portions, obliquely sloping postero-inferiorly when cheliped folded (Figs. 1B, 3); dactylus flattened dorso-ventrally, widened subdistally in upper view;

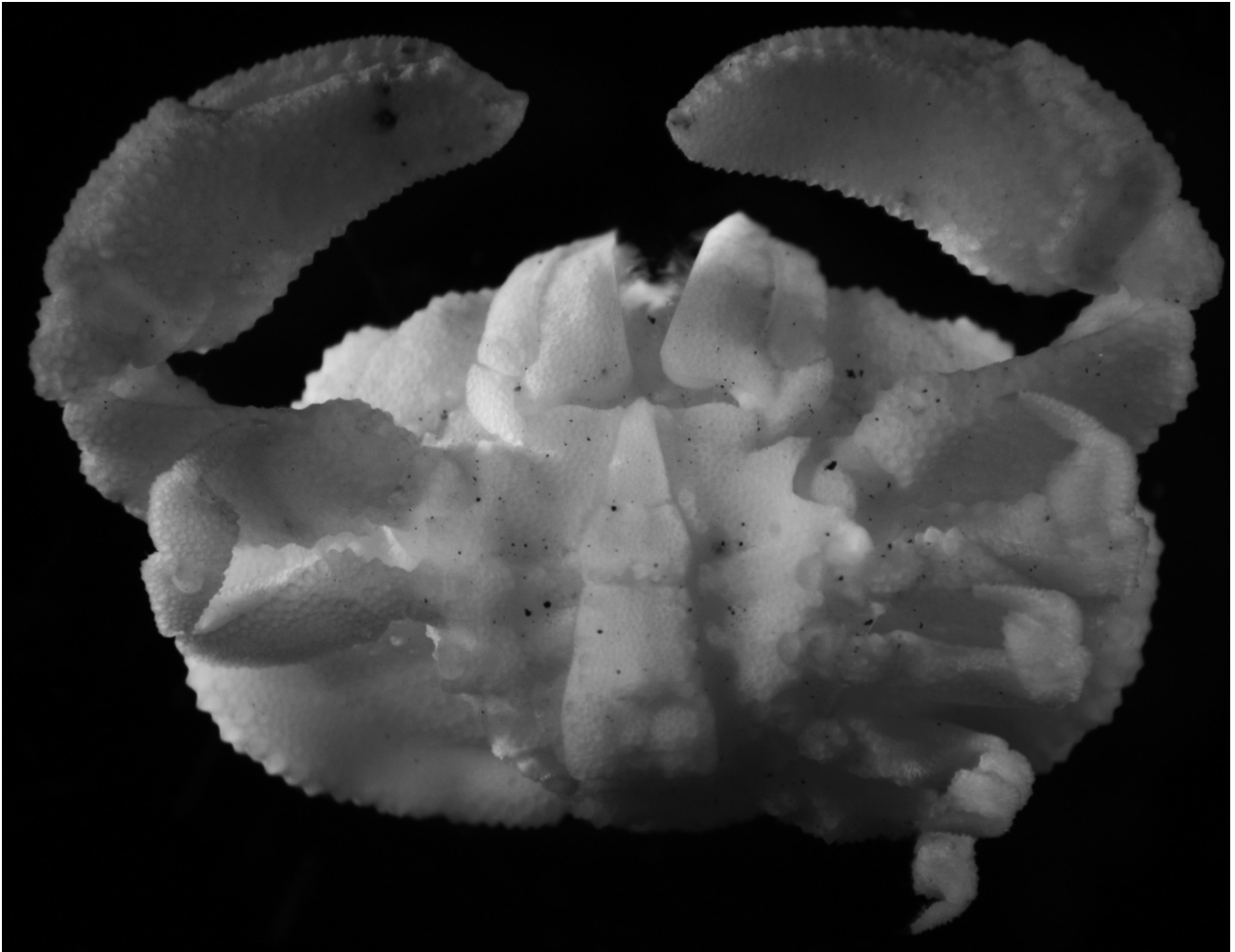


Fig. 2. *Oreotlos pala* Tan & Ng, 1996, male, ventral views. CMNH-ZC 01060, male, 4.6 × 8.4 mm.  
図2. ゲツメンカルイシコブシの雄の腹面. CMNH-ZC 01060, 雄, 4.6 × 8.4 mm.

fingers not forming gape when closed (Fig. 1B), with small triangular teeth on outer portions of occulsal margins, outer surface each with a row of large holes.

Ambulatory legs short, similar in form but decreasing in size posteriorly.

Male pleon (Fig. 2C) narrow, triangular, long, third to fifth somites fused. Fused somites medially with short, transverse lobe on proximal two-fifths (fourth somite in situ), lobe raised ventrally; top of lobe lined with a few granules. Sixth somite with lateral margins convex; proximal margin forming ventrally raised, horizontal lobe; lobe lined with several granules. Telson slightly longer than sixth somite. G1 (Fig. 2D, E) long, slender, slightly sinuous, opening terminal, distal quarter with scattered short strong setae; G1 length about 2.4 times that of G2 (Fig. 2F).

**Distribution.** Type locality: Asan, west of Camel Rock, Guam, Mariana Islands (Tan & Ng 1996). Also known only from the Ryukyu Islands

(Kawamoto & Okuno, 2003; present study).

**Habitat.** The specimens from Kume-jima Island were found from underneath cobbles and dead corals in coral reefs (Kawamoto & Okuno 2003).

**Remarks.** Ihle (1918) established *Oreotlos* Ihle, 1918, as a subgenus of *Oreophorus* Rüppell, 1830, and later, Tan & Ng (1992) elevated it to a generic rank. To date, *Oreotlos* consists of 12 species from the Indo-West Pacific (Tan & Ng 1996; Ng et al. 2008). Tan & Ng (1992: 157) mentioned that *O. pala* is the most unusual species in the genus “in terms of the relatively low carapace, the protrusion of the frontal edge of the buccal cavern beyond the level of the frontal margin, the short and level rather than upturned condition of the front, the presence of large depressions on the lateral expansions of the carapace and the very wide carapace (relative to the length)”. Since no morphological information of males was available, Tan & Ng (1992) left its generic placement for future study.

*Oreotlos pala* from Kume-jima Island (two males

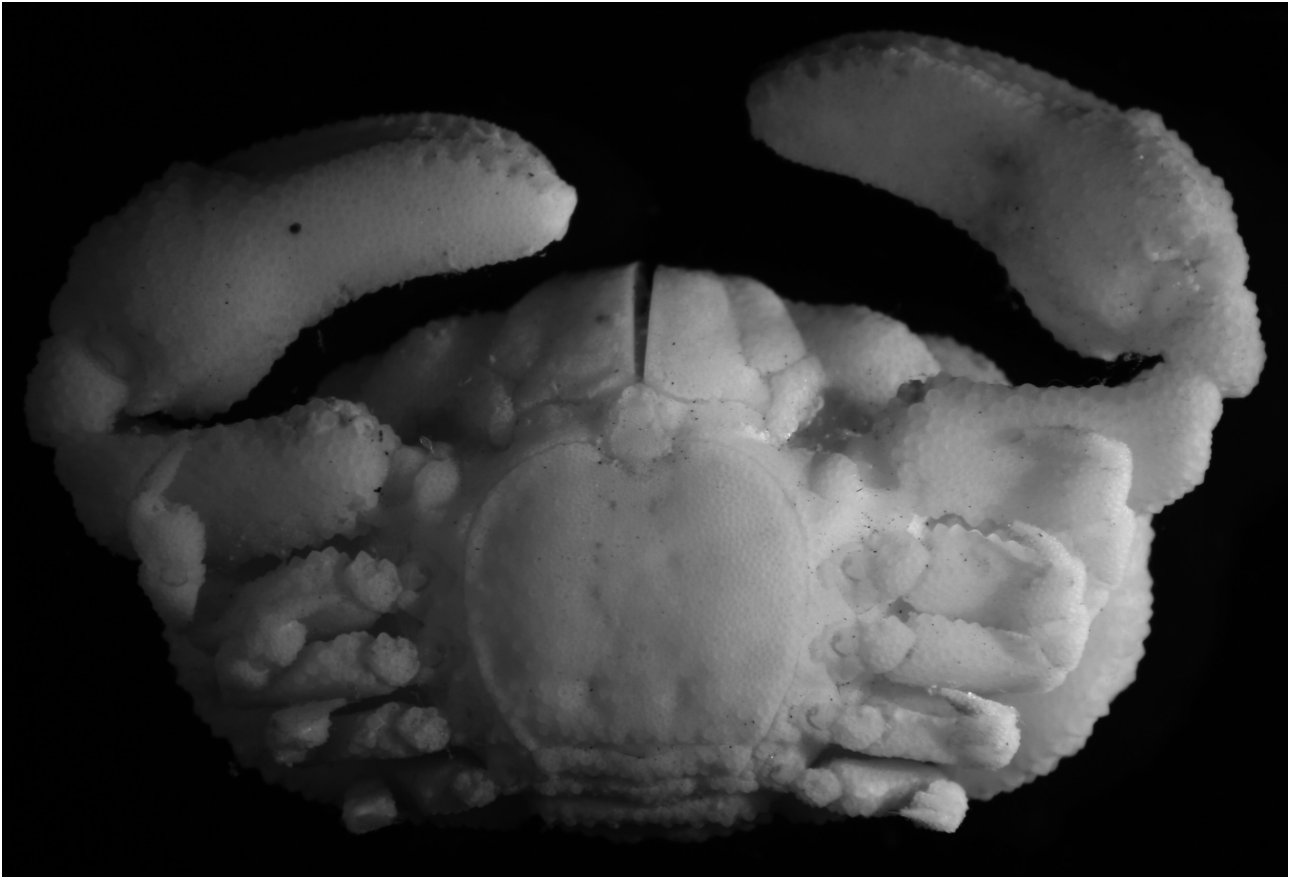


Fig. 3. *Oreotlos pala* Tan & Ng, 1996, female, ventral views. CMNH-ZC 00912, female, 5.3 × 10.7 mm.  
 図3. ゲツメンカルイシコブシの雌の腹面。CMNH-ZC 00912, 雌, 5.3 × 10.7 mm.

and one female) examined in the present study were first obtained during the investigation to prepare the field guidebook by Kawamoto & Okuno (2003). They provided the underwater photographs of two individuals: the upper and lower photographs in p. 110 corresponds to CMNH-ZC 1060 and CMNH-ZC 912, respectively. The specimens examined here are identified with *Oreotlos pala* without hesitation on account of the general form of the carapace, and the arrangement of the depressions on the dorsal surface of the carapace (Fig. 1A). The male pleon (Fig. 2C) and G1 (Fig. 2D, E) agree well with the diagnosis of *Oreotlos*, i.e. large central raised granule on pleonal somite 4 and G1 2.1–2.4 times longer than G2 (see Tan & Ng 1996: 140). Although *O. pala* possesses depressions on the lateral portions of the dorsal surface of the carapace (Fig. 1A), those depressions are structurally different from deep fossae seen in species of *Oreophorus*, in that the depressions are relatively shallower and margins of the depressions are granulated (versus the fossae are much deeper and margins of the concavities are sharp in the species of *Oreophorus*).

Other than *O. pala*, five *Oreotlos* species have

been recorded from Japan: *O. lagarodes* Tan & Ng, 1996, and *O. latus* (Borradaile, 1903) from Kuroshima Island, Yaeyama Islands (Nagai & Nomura 1988; Marumura & Kosaka 2003); *O. angulatus* (Rathbun, 1906) from Wakayama (Marumura & Kosaka 2003); *O. havelocki* (Laurie, 1906) from Sagami Bay and Wakayama (Sakai 1965; Marumura & Kosaka 2003); and *O. heuretosi* Tan & Ng, 1996, from Ogasawara and Wakayama (Takeda 1977; Marumura & Kosaka 2003).

The date of publication of Tan & Ng (1996) has often been regarded as 1995, which is probably due to the notation at the footnote in P. 101. However, since the book (Les Fonds Meubles des Lagons de Nouvelle-Calédonie (Sédimentologie, Benthos) Volume II) that compile the paper is consistently indicated as 1996, and the legal deposit of the book is January 1996, we considered 1996 as the date of publication.

**Standard Japanese name.** A new standard Japanese name, “Getsumen-karuishi-kobushi” is proposed. A male specimen, CMNH-ZC 01060, is designated as a standard specimen of the Japanese name.

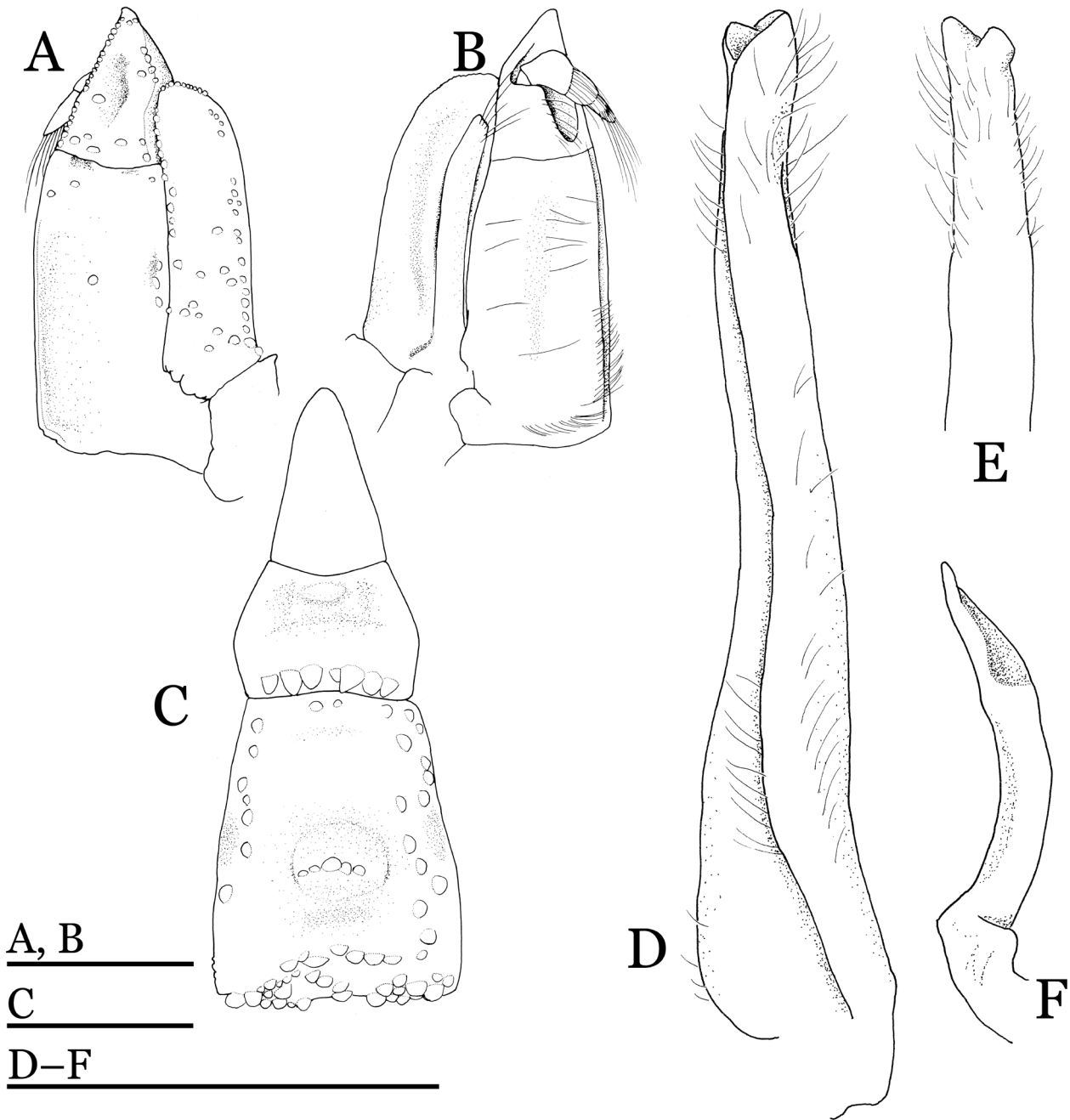


Fig. 4. *Oreatlos pala* Tan & Ng, 1996. CMNH-ZC 01060, male, 4.6 × 8.4 mm. A, third maxilliped, left, outer view; B, third maxilliped, left, inner view; C, pleonal somites 3 to 6 and telson, outer view; D, G1, left, ventral view; E, distal portion of G1, left, dorsal view; F, G2, left, ventral view. Scale = 1 mm.

図4. ゲツメンカルイシコブシ. CMNH-ZC 01060, 雄, 4.6 × 8.4 mm. A, 第三顎脚, 左, 外面; B, 第三顎脚, 左, 内面; C, 第3–6腹節と尾節; D, 第1腹肢, 左, 腹面; E, 第1腹肢先端部, 左, 背面; F, 第2腹肢, 左, 腹面. スケール = 1 mm.

#### Acknowledgements

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珍奇なカニ・ゲツメンカルイシコブシ (新称) *Oreotlos pala* Tan & Ng, 1996 (甲殻亜門十脚目コブシガニ科) の再記載

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**要約** . 久米島および宮古群島の伊良部島より採集された4個体の標本に基づき、コブシガニ科ツノカルイシコブシ属 *Oreotlos* Ihle, 1918 の *Oreotlos pala* Tan & Ng, 1996 を再記載した。本種は、マリアナ諸島グアム島で採集された雌1個体に基づいて記載され、その後、川本・奥野(2003)による一般向けのガイドブックに久米島で撮影された個体の水中写真が掲載されているにすぎない稀種であった。本種の雄の形態はこれまで知られておらず、またホロタイプは鉗脚と歩脚を欠いているが、本研究の検討標本は原記載にも示されている頭胸甲背面の肝域後方、側方突出部、鰓域後方にそれぞれ1個大きく深いくぼみを有することにより、同種であると判断した。本種には標準和名が与えられていなかったため、頭胸甲背面に月面のクレーターを彷彿させる顕著なくぼみを有することから、ゲツメンカルイシコブシの新称を提唱する。

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