

A New species of Terrestrial Isopoda, *Papuasoniscus lutaoensis*, from Taiwan (Oniscidea, Platyarthridae)

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ABSTRACT

Papuasoniscus lutaoensis, n. sp. is described from Taiwan. The genus *Papuasoniscus* is redefined.

Key words: Crustacea, Isopoda, Oniscidea, *Papuasoniscus lutaoensis*, n. sp. Taiwan.

INTRODUCTION

The genus *Papuasoniscus* Vandel, 1973 comprises 2 species described from the tropical Australian region: *P. holthuisi* Vandel from New Guinea, Bismark, Solomon, and Togian I. (Sulawesi) (Vandel, 1973; Taiti, Ferrara and Kwon, 1992), and *P. golovatchi* Dalens from Tonga and Samoa Archipelagos (Dalens, 1988).

This contribution gives the description of the third species collected from Taiwan. The discovery of the *Papuasoniscus*-species from Taiwan is very interesting, because it is the first record of the genus from the Oriental region.

Genus *Papuasoniscus* Vandel, 1973

Papuasoniscus Vandel, 1973, p. 25.

Type species. *Papuasoniscus holthuisi* Vandel, 1973, by original designation and monotypy.

Diagnosis. Body elliptical, not conglobating. Cephalon with an anteromedian depression formed by submedian elevations; median lobe triangular; anterolateral lobes quadrangular, well developed. Frontal line not continuous and bent downwards in the middle. No supraantennal line. Dorsum covered with numerous scale spines. No gland pores. Noduli laterales on pereonites 1-7 inserted progressively nearer to posterior margin on posterior pereonites, while more or less at the same

distance from lateral margins. Antennule of 3 segments. Antenna with 2-articulated flagellum. Mandible with molar penicil of a single unbranched plumose seta. Maxillular endopod with 2 penicils and an outerdistal point. Maxilliped with endite bearing a small simple penicil on distal margin; palp reduced, of 2 segments with 2 lobes on inner margin of distal segment. Pereopod 1 with setulose area on rostral surface of carpus; pereopods 2-7 similar in shape. Pleopodal exopods without lung. Telson with oblique sides distinctly concave, apex rounded. Uropodal protopod with groove on outer margin; endopod inserted much proximally to exopod.

Pereopods of male without sexual modification. Pleopod 1 endopod of male with enlarged proximal part. Pleopod 2 exopod of male with distal part folded laterally.

Remarks. Because Vandel (1973) gave only the differences between *Papuasoniscus* and *Dubioniscus* Vandel, 1952 when he instituted the genus *Papuasoniscus*, here we prepared the diagnosis of the genus on the basis of the present new species and the previous literatures mentioned in the introduction.

***Papuasoniscus lutaensis*, n. sp. (Figs. 1-3)**

Holotype. ♂, body length 2.3 mm, TAIWAN: Taitung Hsian, Lutao I., 23 Mar. 1994, leg. D.H. Kwon & C.-H. Wang (Muséum d'Histoire Naturelle, Genève).

Paratypes. 1 ♀ (dissected), 1 juv., same data as holotype (IJB: Department of Biology, Inje University, Kimhae); 1 ♀, same data (Taiwan Meseum, Taipei); 1 ♂ (dissected), same locality, 20 Apr. 1992, leg. I.K. Jang (IJB).

Description. Maximum length of male 2.6 mm, of female 2.8 mm. Color pale yellow; cephalon dark brown with usual pale muscle spots; pereon and pleon usually with a pair of dark brown paramedian stripes; pereonal epimera light brown. Dorsum covered with numerous scale spines (Fig. 1C) topped on granules. Gland pores absent. Each pereonite with a nodulus lateralis per side; noduli laterales on posterior pereonites inserted progressively nearer to posterior margin, while more or less at same distance from lateral margins (Fig. 1B). Eye with 10 ommatidia. Cephalon (Fig. 1D-F) with a deep anteromedian depression; quadrangular anterolateral lobes well developed, bearing 1 anterior and 2 posterior submedian bosses and 2 lateral ones on each side of vertex. All pereonites dorsally convex with epimera recurved outwards; pereonite 1 with 2 pairs of low bosses, pereonites 2-6 with a pair (Fig. 1A & F); pereonites 2-4 (Fig. 1G & H) each with a suture line on either side between tergite and epimera; epimera of pereonites each with a socket-like depression on ventral surface (Fig. 1G) fitting anterior margin of base of adjoining pereonal epimeron. Telson (Fig. 1I) triangular with abruptly concave sides and rounded apex. Antennule (Fig. 2A) three-articulated, distal article bearing 3 aesthetascs apically. Antenna (Fig. 2B) with article 5 of peduncle 1.4 times as long as flagellum; ratio of flagellar articles 2:5. Mandible (Fig. 2C & D) with molar penicil consisting of a single plumose seta; right mandible with 2 penicils and left one with 3 between incisor process and molar penicil. Maxillule with exopod (Fig. 2E) bearing 8 (4 simple + 4 cleft apically) teeth; endopod bearing 2 unequal penicils and an acute outerdistal point. Maxilla (Fig. 2F) three-lobed, with endopod (innermost lobe) bearing 2 rows of setules; both lobes of exopod without marginal setae with inner lobe much smaller than outer one. Maxillipedal endite (Fig. 2G) with a small simple penicil on distal margin; palp reduced, two-segmented with distal segment bearing 2 lobes on inner margin. Pereopod 1 (Fig. 3A) carpus slightly enlarged with setulose area on rostral surface. Pereopods 2-7 (Fig. 3B)

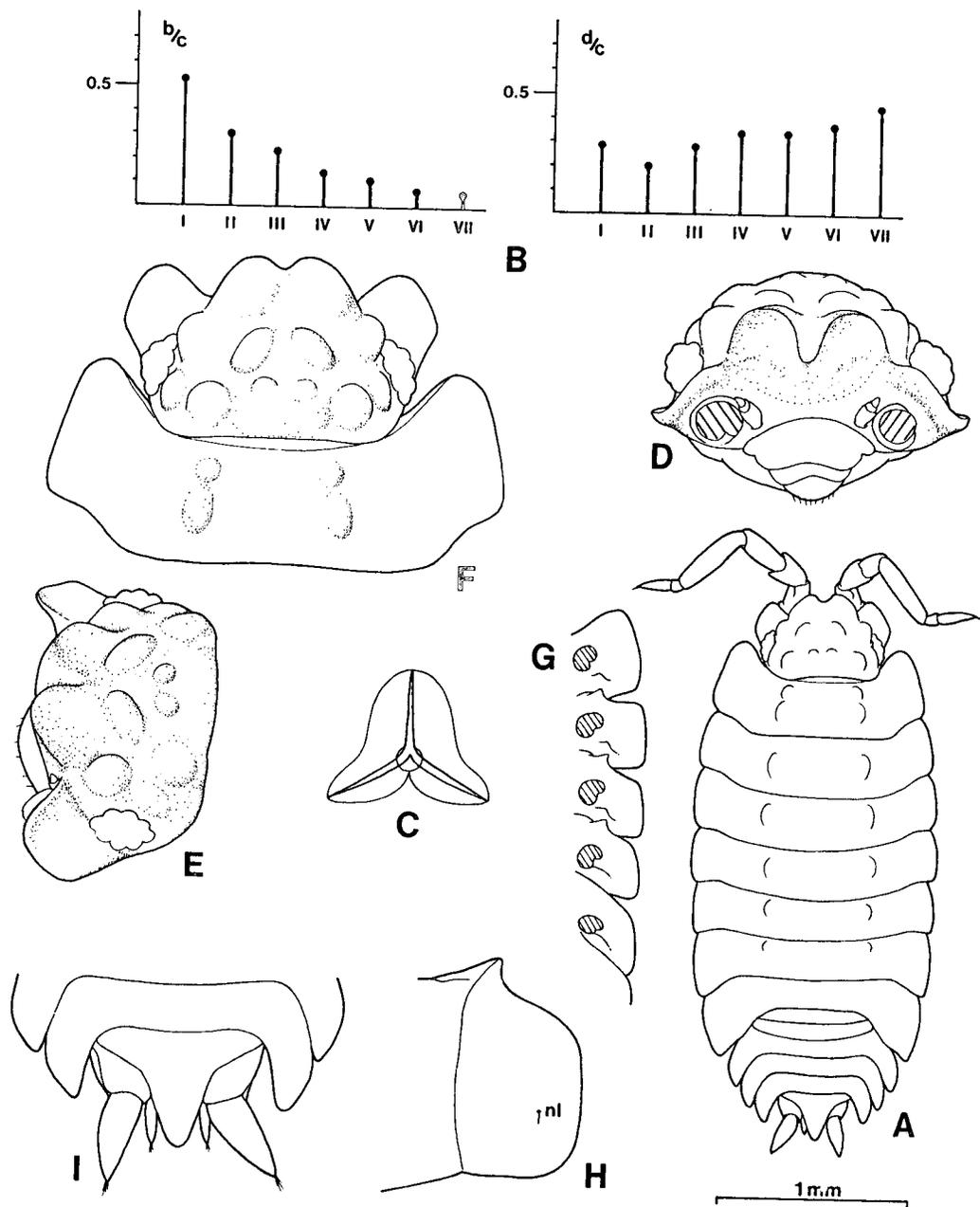


Fig. 1. *Papuasoniscus lutaensis*, n. sp.: A, habitus; B, co-ordinates of noduli laterales on pereonites; C, scale spine; D, cephalon, frontal view; E, cephalon, oblique view; F, cephalon and pereonite 1; G, left epimera of pereonites 1-5, ventral view; H, right epimeron of pereonite 2, dorsal view (nl, nodulus lateralis); I, pleonites 4-5, telson and uropods.

similar in shape, length and ratio of respective articles. All pleopodal exopods without lung. Uropodal protopod (Fig. 3I) grooved on outer margin; exopod 1.5 times as long as endopod; insertion of endopod much proximal to that of exopod.

Male. All pereopods without sexual modification. Pleopod 1 (Fig. 3C & D) exopod triangular,

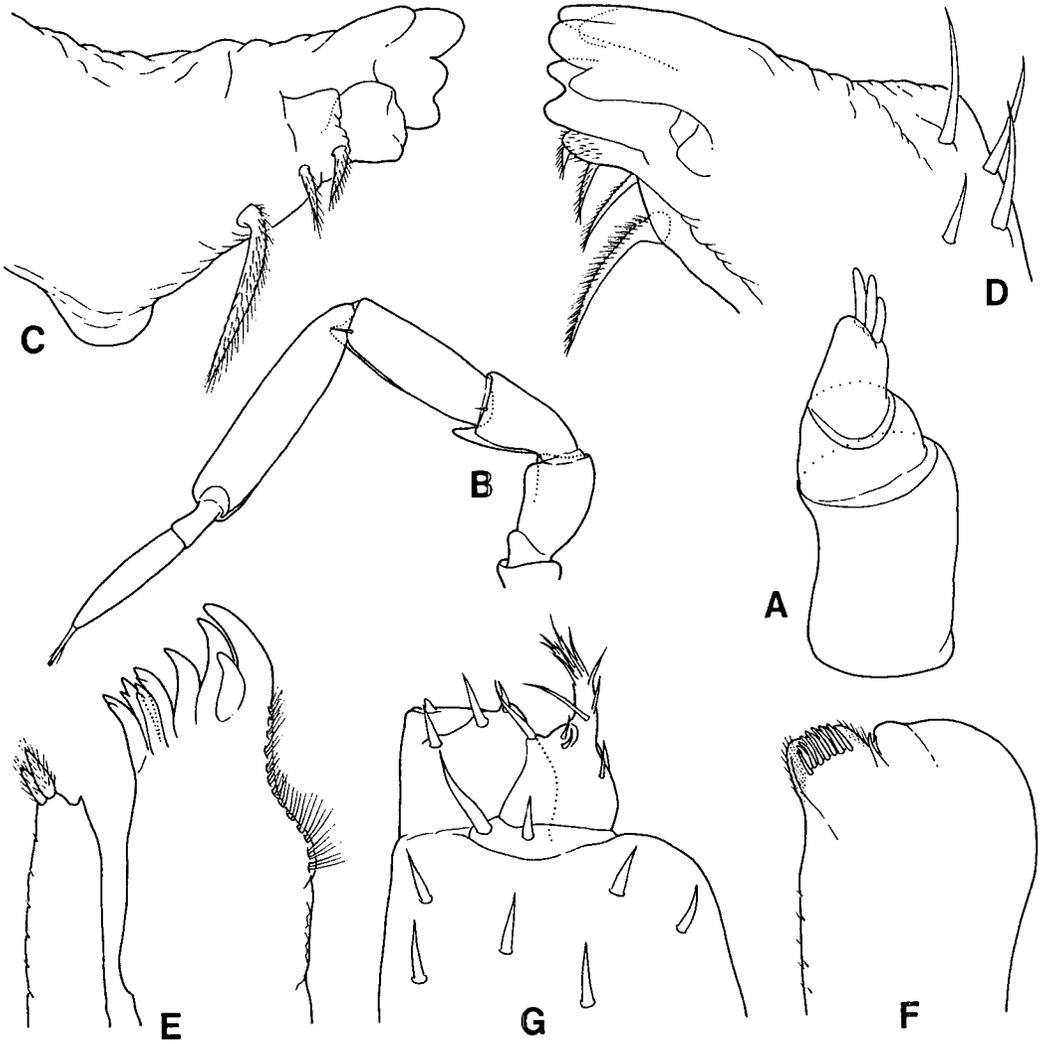


Fig. 2. *Papuasoniscus lutaoensis*, n. sp.: A, antennule; B, antenna; C, right mandible; D, left mandible; E, maxillule; F, maxilla; G, maxilliped.

bearing no marginal setae; endopod with proximal part enlarged, distal part tapering with acute apex and recurved, and apical part equipped with a row of 5 setules on outer margin. Pleopod 2 (Fig. 3E) exopod much longer than wide with pointed apex, apical part folded laterally; endopod styliform, as long as exopod. Pleopodal exopods 3-5 as in Fig. 3F-H.

Remarks. *Papuasoniscus lutaoensis*, n. sp. is readily distinguished from the other species of the genus by the deeper depression and presence of tergal bosses. Furthermore it differs in male pleopod 1 endopod: from *P. holthuisi* by acute apical part, and from *P. golovatchi* by the less setules on outer margin of apical part.

Ethymology. The specific name refers to Lutao Island, the type locality of the new species.

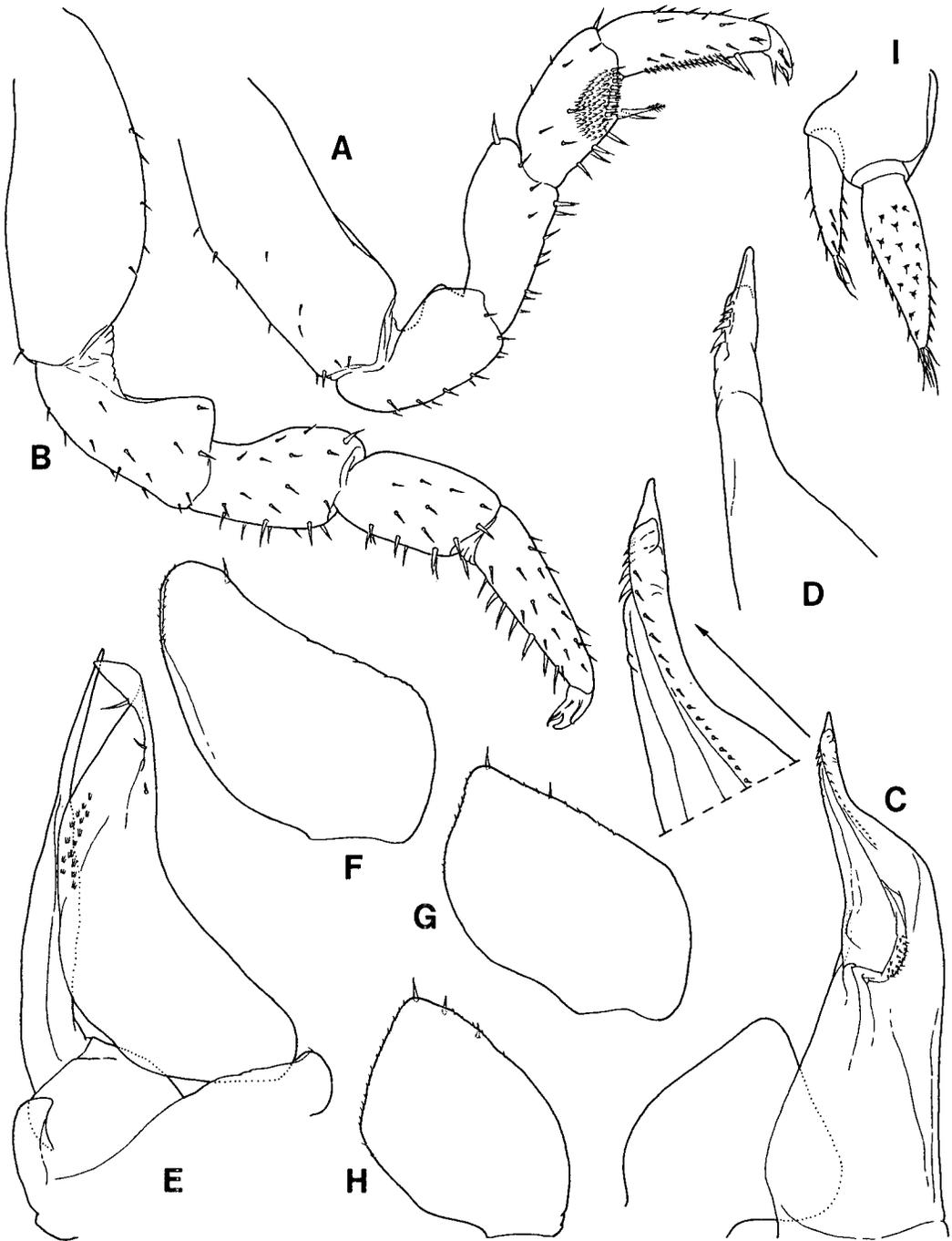


Fig. 3. *Papuasoniscus lutoensis*, n. sp., male: A, pereopod 1; B, pereopod 7; C, pleopod 1; D, apex of pleopod 1 endopod, caudal surface; E, pleopod 2; F, pleopod 3 exopod; G, pleopod 4 exopod; H, pleopod 5 exopod; I, uropod, dorsal view.

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REFERENCES

- Dalens, H., 1988. Isopodes terrestres (Crustacea, Isopoda, Oniscoidea) des archipels des Tonga et des Samoa occidentales. Bull. Soc. Hist. Nat., Toulouse., **124**: 197-211.
- Taiti, S., F. Ferrara and D.H. Kwon, 1992. Terrestrial Isopoda (Crustacea) from the Togian Islands, Sulawesi, Indonesia. Invertebr. Taxon., **6**(3): 787-842.
- Vandel, A., 1973. Les Isopodes terrestres (Oniscoidea) de la Mélanésie. Zool. Verh., **125**: 1-160.

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臺灣産 쥐머느리 1新種 *Papuasoniscus lutaensis*(甲殼類, 等脚目)

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要約

臺灣産 쥐머느리 1新種을 *Papuasoniscus lutaensis*로命名하고記載하였다. *Papuasoniscus*屬을再記載하였다.