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Redescription of three cirolanid isopods (Crustacea: Peracarida) from Indonesia

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Abstract

Three species of Cirolanidae described by Nierstrasz in 1931 are redescribed from the type material: *Cirolana indica* Nierstrasz, 1931, with new material from Singapore and Lombok Island, Indonesia; *C. vanhoeffeni* Nierstrasz, 1931; and *C. stebbingi* Nierstrasz, 1931, which is here transferred to the genus *Politolana* Bruce, 1981 based on the elongate body, long peduncle of pleopod 1, narrow and slender frontal lamina, flat and robust carpus of pereopod 7, long and acute robust setae on merus–propodus pereopod 1, secondary unguis on dactylus, and antenna peduncle articles 1–2 shorter than the subequal articles 3–5.

Key words: *Cirolana,* Siboga Expedition, Nierstrasz, Singapore, Indonesia

Introduction

The Cirolanidae is a large and widespread family with a world-wide distribution (see Bruce 1986; Brusca *et al.* 1995; Schotte *et al.* 2008 onwards) and has high species richness in tropical regions, especially in coral-reef ecosystems. The Indo-Malaysian region is well known for the richness of its coral reef biota, but little known of the isopod diversity including the Cirolanidae (see Bruce & Wong 2015; Sidabalok 2013; Sidabalok & Bruce, 2015). Equally the Cirolanidae from continental shelf and deeper in tropical waters, including the Indo-Malaysian region remains little documented.

The landmark reports by Nierstrasz (1931a, b, 1941; Nierstrasz & Brender à Brandis 1923) remain the most comprehensive published review of the Indonesian marine isopod fauna, and also summarised the state of knowledge for the marine Isopoda of the world at that time. Nierstrasz (1931b) recorded 11 species of Cirolanidae from Indonesia including three new species, namely *Cirolana indica* Nierstrasz, 1931, *Cirolana vanhoeffeni* Nierstrasz, 1931 and *Cirolana stebbingi* Nierstrasz, 1931. *Cirolana indica* was collected from Labuan Bajo, off the island of Flores (Nierstrasz 1931b). There has been no subsequent record of any of these species until *C. indica* was recently found in Singapore (Bruce & Wong 2015) and now Indonesia. This new material allows for a comprehensive redescription to be given, based on adult males and females. No new material for *C. vanhoeffeni* Nierstrasz, 1931 and *C. stebbingi* Nierstrasz, 1931 has been collected and these two species are redescribed as far as possible without damaging the existing type material.

Materials and methods

Holotypes of *Cirolana indica* Nierstrasz, 1931 and *C. vanhoeffeni* Nierstrasz, 1931, and the syntypes of *C. stebbingi* Nierstrasz, 1931 were borrowed from Naturalis Biodiversity Center, Leiden. New material for *Cirolana indica* Nierstrasz, 1931 was collected from Singapore and Indonesia.

Baited traps were deployed to capture scavenging cirolanids (Keable 1995; Lowry & Smith 2003; Manning 1986)

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from various depths at sites in Singapore and Indonesia; some samples from Singapore were collected by dredge. Appendages were prepared from the new material and temporarily mounted in 85% lactic acid solution with lignin pink. A Leica MZ125 dissecting microscope and a Leica DM2500 compound microscope with *camera lucida* were used to draw the whole animal and appendages respectively. Digital drawings were 'inked' using Adobe Illustrator CS 4 with a Wacom Intuos 4 drawing tablet. Descriptions were prepared with DELTA (Coleman *et al.* 2010; Dallwitz 1980; Dallwitz *et al.* 1997; 2006) using Cirolanidae character set.

Abbreviations: MTQ—Queensland Museum, Museum of Tropical Queensland; MZB—Museum Zoologicum Bogoriense, Indonesia; CPS—circumplumose setae; PMS—plumose marginal setae; RS—robust setae; ZRC—Zoological Reference Collection–Lee Kong Chian Natural History Museum, Singapore; ZMA—Zoological Museum, Amsterdam.

Taxonomy

Suborder CYMOTHOIDA Wägele, 1989

Family CIROLANIDAE Dana, 1852

Genus *Cirolana* Leach, 1818

Restricted synonymy. Bruce 1986: 139.— Kensley & Schotte 1989: 132.— Brusca *et al.* 1995: 17.— Schotte & Kensley 2005: 1218.
Type species. *Cirolana cranchii* Leach, 1818; by monotypy (see Bruce & Ellis 1983).

Diagnosis. Diagnoses to *Cirolana* have been provided by Bruce (1986), Kensley & Schotte (1989), Brusca *et al.* (1995) and Schotte & Kensley (2005).

Remarks. *Cirolana* is the largest genus within the Cirolanidae with 128 species known to date (Schotte *et al.* 2008 onwards). New species have been and are being added over time (e.g. Schotte & Kensley 2005; Khalaji-Pirbalouty & Wägele 2011; Rodcharoen *et al*. 2014, in press) with 15 species described since 2005. Bruce (1986) proposed three species groups of *Cirolana* based on morphological similarities: the '*Cirolana parva* group', the '*Cirolana* tuberculate group' and the '*Cirolana* southern group', but many species remain unplaced (e.g. see Keable 2001). Furthermore, the relationship between species in those groups has not been tested using phylogenetic methods and it has been suggested that *Cirolana* is a paraphyletic genus (Moore & Brusca 2003, Riseman & Brusca 2002). Bruce (2004) gave a detailed diagnosis to the '*Cirolana parva* group'.

Cirolana is a predominantly marine genus with most species recorded from the intertidal to a depth of 200 metres, with a few species to 1200 metres (e.g. *Cirolana vanhoeffeni* Nierstrasz 1931). Bruce (1986) and Brusca *et al.* (1995) reviewed the genus and provided species lists.

Cirolana indica Nierstrasz, 1931
(Figs 1–5)

Cirolana indica Nierstrasz, 1931, figs 8–13.— Bruce, 1986: 220.— Brusca, Wetzer & France, 1995: 18.

Material examined. *Holotype* ♀ (11.5 mm), *Siboga* Expedition, Bajo Bay, Flores, Indonesia, Station 50, 40 m, 16–18 April 1899 (ZMA.CRUS.I.100605).

Non-type material. ***Singapore*** series: 1 ♂ (12.4 mm), St John's Island, between Tanjong Hakim and Tanjong Lokos, 01°13.127'N, 103°50.728'E, 6 March 2014, 36.4 m, overnight baited trap, coll. Helen Wong & party, OTC-0064 OTR 307 (ZRC.2015.0466). 1 ♀ (7.0 mm), same data as previous, OTC-0063 (MTQ W34356). 1 ♀ (11.3 mm), same data as previous, OTC-0070 (MTQ W34357). 3 ♀ (10.4, 10.9 [dissected], 11.5 mm), same data as previous OTC-0065 (ZRC.2015.0467). 1 ♀ (9.0 mm), same data as previous, OTC-0067 (ZRC.2015.06468). 1 ♀ (9.0 mm), same data as previous, OTC-0069 (ZRC.2015.06469). 1 ♂ (9.7 mm, dissected), St John's Island, 01°13.786'N, 103°46.893'E, 11 December 2013, dredge on mud and sand, 24.3–27.6 m, SEA 2023, DR239, CMBS Seabed, coll. Swee Cheng & party (ZRC.2015.06470). 1 ♂ (9.1 mm, dissected), off west Pulau Berka, 01°11.138'N, 103°44.612'E, 21 October 2013, 18 m, dredge on sand and shell, SEA 1524 CMBS, DR222, coll. Swee Cheng and party (ZRC.2015.06471). 2 ♀ (7.0, 10.2

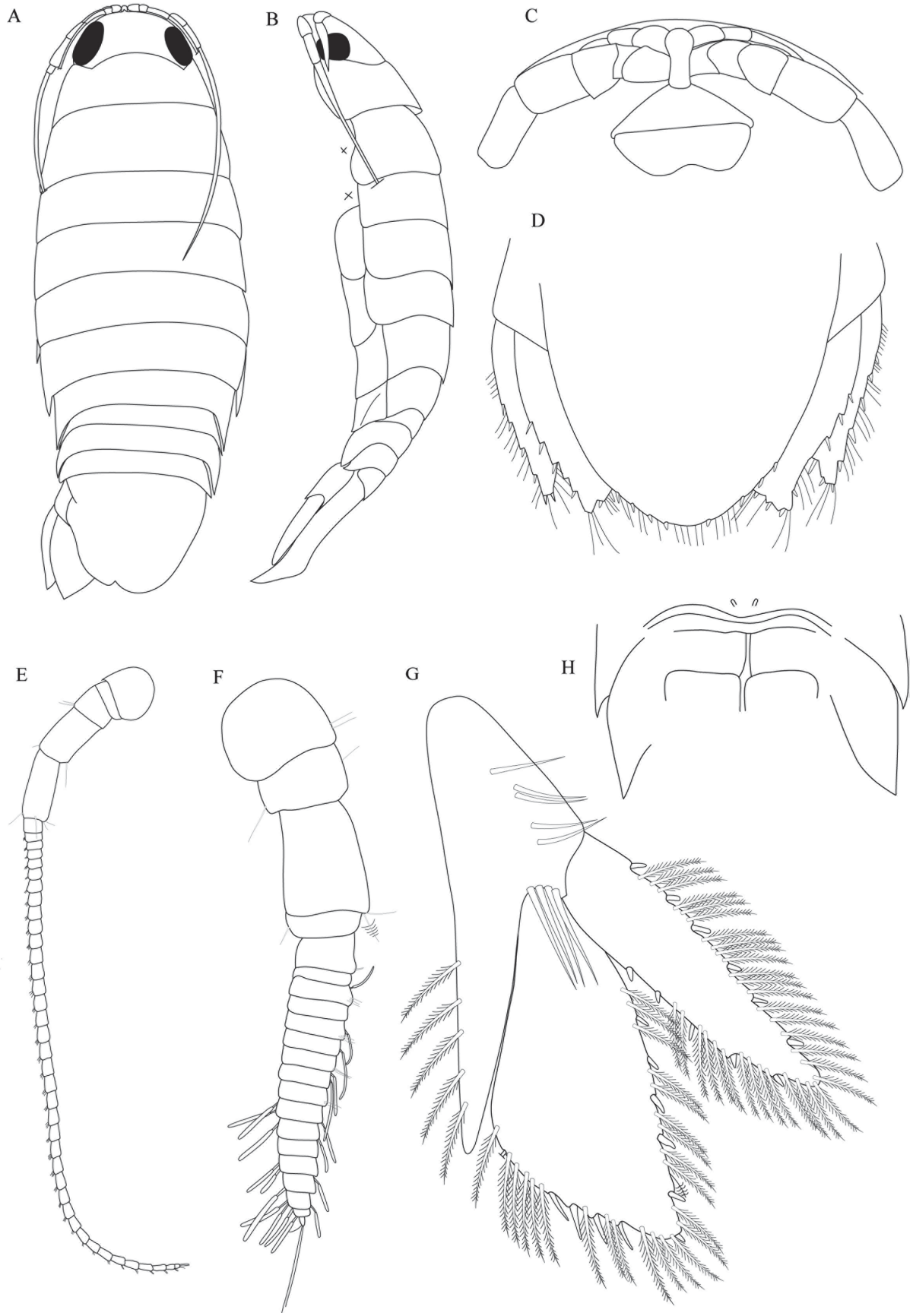

FIGURE 1. *Cirolana indica*, holotype (11.5 mm) (A–C); ♂ (12.4 mm, ZRC.2015.0466) (D, H); ♂ (9.1 mm, ZRC.2015.0471) (E, F, G). A, dorsal view; B, lateral view; C, frons; D, pleotelson; E, antenna; F, antennula; G, uropod; H, penial openings.

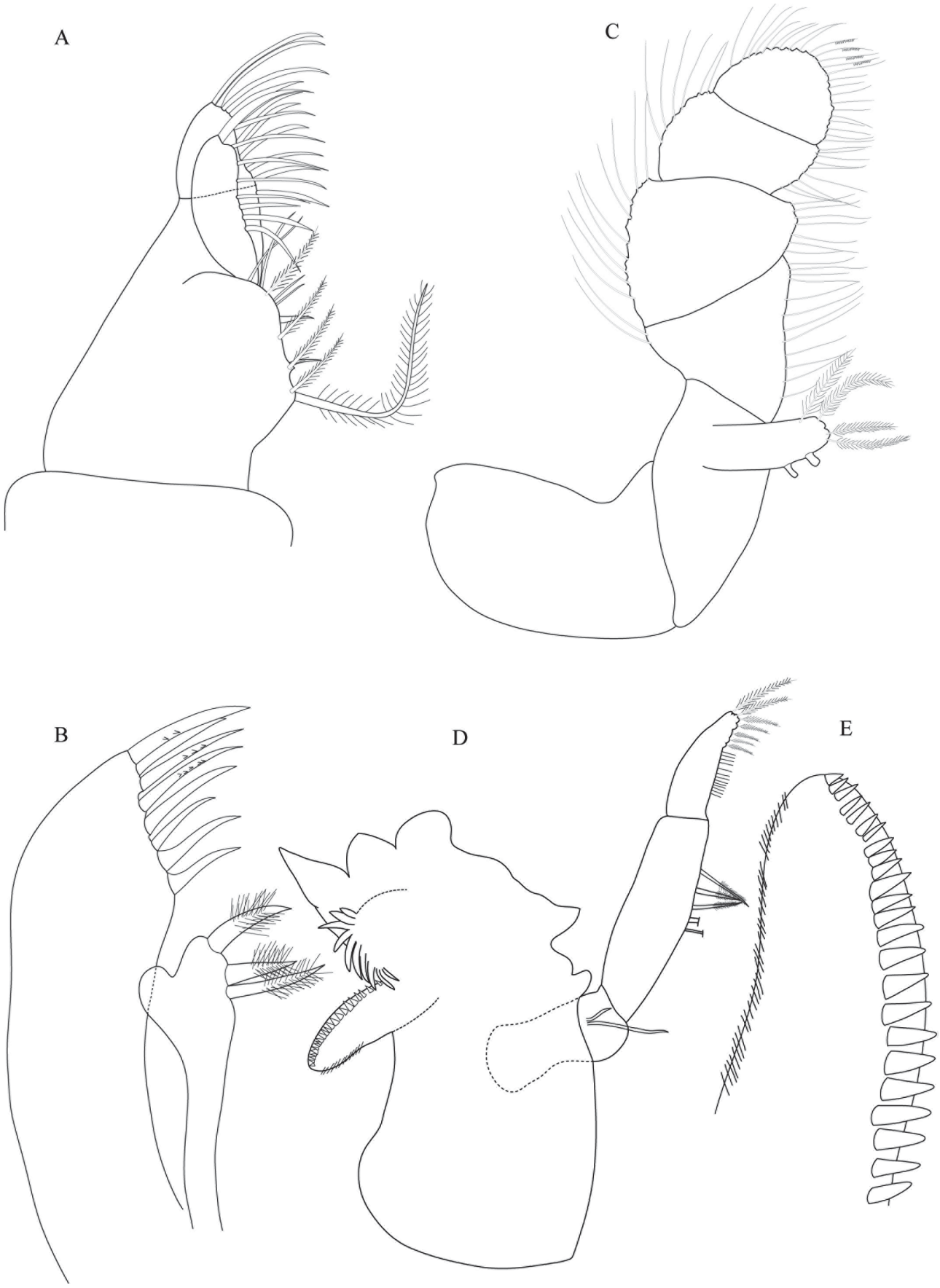

FIGURE 2. *Cirolana indica*, ♂ (9.7 mm, ZRC.2015.0470). A, maxilla; B, maxillula; C, maxilliped; D, right mandible; E, molar process of right mandible.

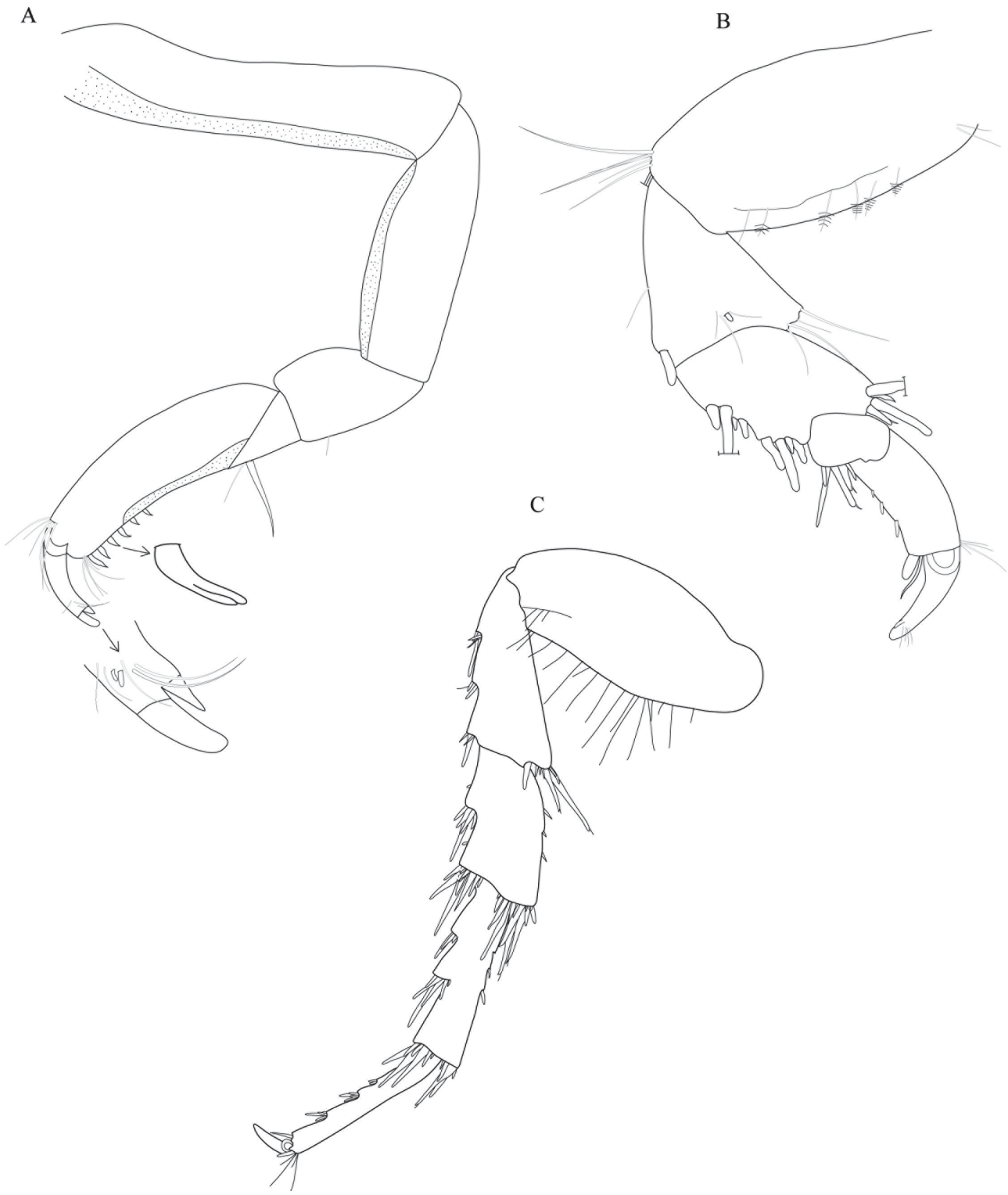

FIGURE 3. *Cirolana indica*, ♂ (9.7 mm, ZRC.2015.0470) (A, B); ♂ (9.1 mm, ZRC.2015.0471) (C). A, pereopod 1; B, pereopod 2; C, pereopod 6.

mm), between St John's and Lazarus Islands, 1.218718°N, 103.853968°E, 31 May 2013, stn SW 137, SS4940, overnight baited trap, 25 m coll. N.L. Bruce & J.K. Lowry (MTQ W34358). 1 manca (4.5 mm) between St John's and Lazarus Islands, 1.218718°N, 103.853968°E, 31 May 2013, stn SW 138, SS4941, overnight baited trap, 13.5 m, coll. N.L. Bruce & J.K. Lowry (ZRC.2015.0472). 1 ♀ (10.4 mm), off Raffles Lighthouse, 1°09'652"N, 103°44'908"E, 5 June 2013, SS 4248, stn DR 183, dredge, 42.1–39.7 m, coll. Tan Koh Siang and party, (ZRC.2015.06473).

Indonesia series: 1 ♂ (8.4 mm), 10 ♀ (6.9–10.9 mm, average 8.5 mm), 4 mancas (5.9, 6.0, 6.0, 6.5 mm), Teluk Nara, Lombok, 8°33'04.26"S, 116°04'26.52"E, trap 40 m, 13 August 2014, coll. C.M. Sidabalok and party (MZB Cru.Iso.045). 6 ♀ (9.3, 9.5, 9.7, 9.9, 10.8, 11.0 mm), Teluk Kodek, Lombok, 8°24'13.44"S, 116°04'19.02"E, trap 25 m, 7 August 2014, coll. C.M. Sidabalok and party (MZB Cru.Iso.046). 1 ♀ (10 mm), Teluk Mentigi, Lombok, 8°21'.26.94"S, 116°07'19.32"E, trap 50 m, 14 August 2014, coll. C.M. Sidabalok and party (MTQ W34359).

Description (male). *Body* 2.9 times as long as greatest width, dorsal surfaces smooth, widest at pereonite 4, lateral margins subparallel. Rostral point projecting anteriorly, not ventrally folded. Eye colour black, eyes separated by about 58 % width of head. *Pereonite 1 and coxae* 2–3 each with posteroventral angle rounded; coxae 5–7 without oblique carina; posterior margins of pereonites 5–7 smooth. *Pleon* with pleonite 1 visible in dorsal view; pleonites 3–5 posterior margin smooth; posterolateral angles of pleonite 2 forming acute point, not posteriorly produced; pleonite 3 with posterolateral margins extending clearly beyond posterior margins of pleonites 4 and 5, acute; posterolateral margin of pleonite 4 clearly extending beyond posterior margin of pleonite 5, acute. *Pleotelson* 0.8 times as long as anterior width, dorsal surface without longitudinal carina; lateral margins convex, margins smooth, posterior margin evenly rounded, without median point, with 10–14 robust setae.

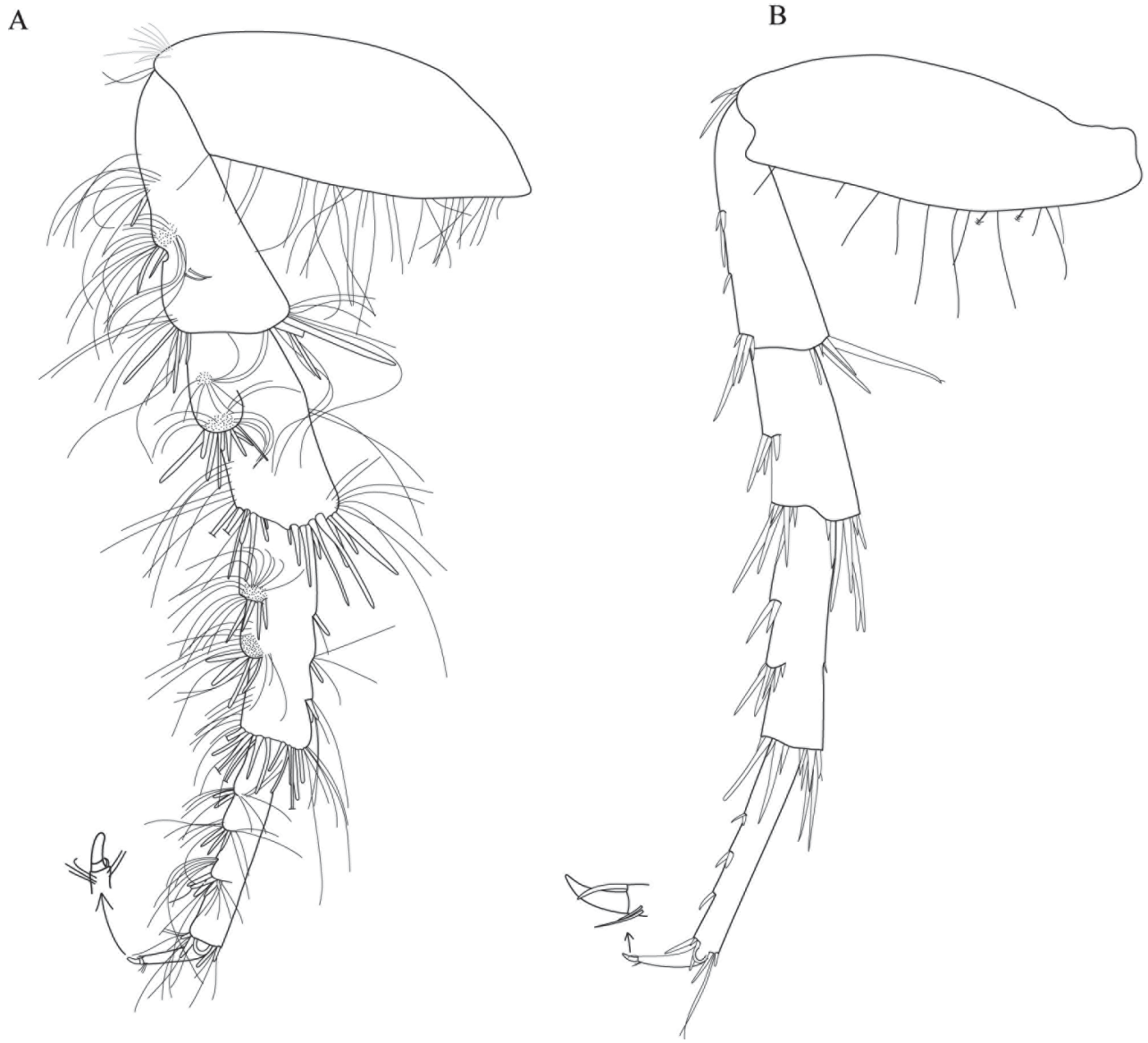

FIGURE 4. *Cirolana indica*, ♂ (9.7 mm, ZRC.2015.0470) (A); ♀ (10.9 mm, ZRC.2015.0467) (B). A and B, pereopod 7.

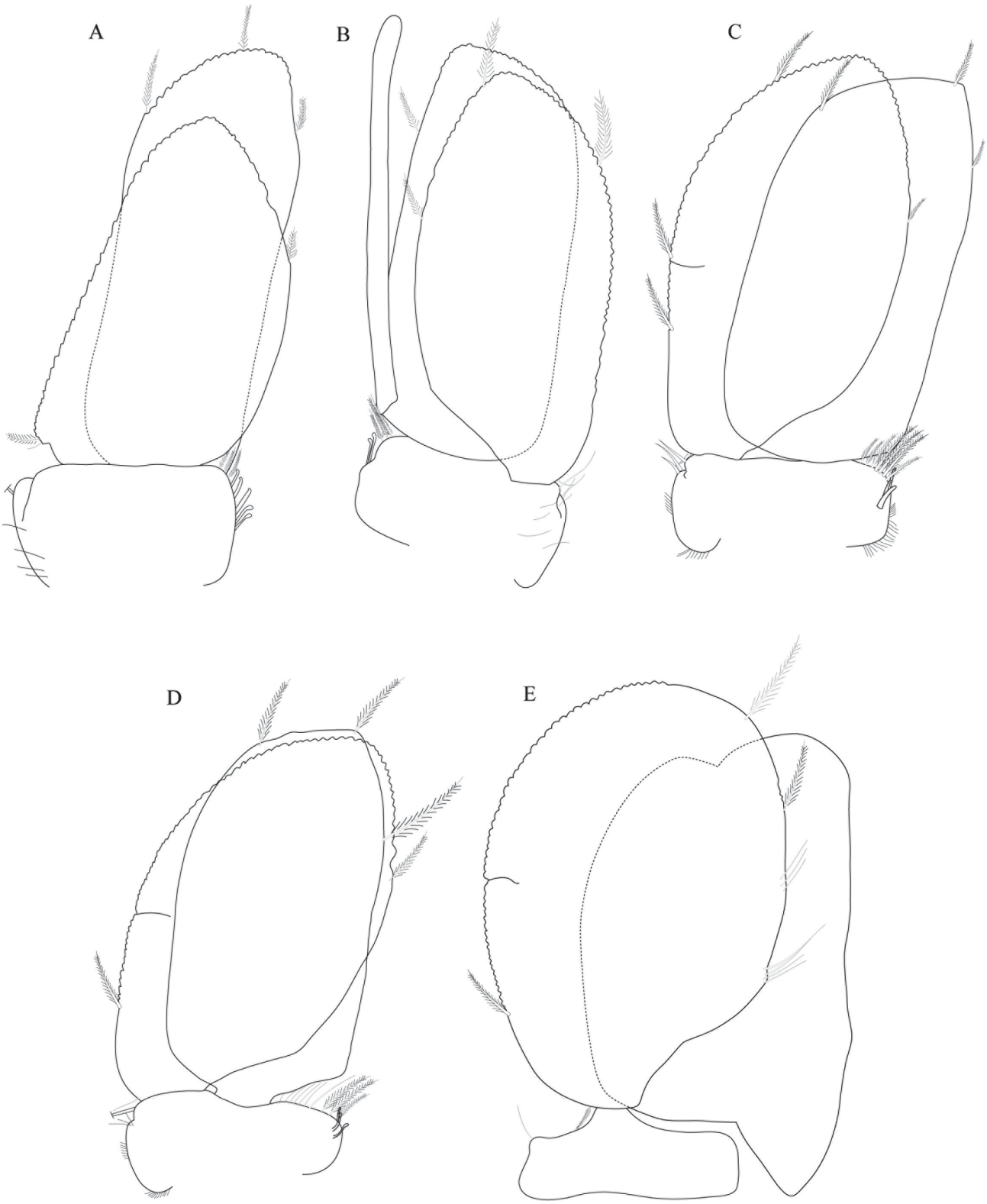

FIGURE 5. *Cirolana indica*, ♂ (9.7 mm, ZRC.2015.0470). A–E, pleopods 1–5 respectively.

Antennula peduncle articles 1 and 2 distinct, articulated; article 2 0.6 time as long as article 1, articles 3 and 4 as long as combined lengths of articles 1 and 2, article 3 1.3 times as long as wide; flagellum with 17 articles, extending to anterior of pereonite 1. *Antenna* peduncle article 4 1.5 times as long as wide, 2.3 times as long as article 3, inferior distal margin with 1 simple setae; article 5 1.2 times as long as article 4, 2.3 times as long as wide, anterodistal angle with cluster of 2 short simple setae and 2 long setae; flagellum with 38 articles, extending to middle of pereonite 4.

Frontal lamina posterior margin concave, longer than greatest width, lateral margins straight and parallel, anterior margin rounded, without small median point.

Mandible molar process anterior margin with 23 flat teeth; with proximal cluster of long simple setae; right mandible spine row composed of 10 spines, left mandible spine row with 10 spines; palp article 2 with 24 distolateral setae, palp article 3 with 7 robust biserrate setae. *Maxillula* mesial lobe with 3 large and circumplumose RS; lateral lobe with 8 RS. *Maxilla* lateral lobe with 4 long simple setae; middle lobe with 14 long simple setae; mesial lobe with 2 distal simple setae and 5 proximal simple and plumose setae. *Maxilliped palp* article 2 mesial margin with 12 slender setae, lateral margin distally with 2 slender setae; article 3 mesial margin with 9 slender setae, lateral margin with 9 slender setae; article 4 mesial margin with 9 slender setae, lateral margin with 6 slender setae; article 5 distal margin 13 setae, lateral margin with 7 setae; endite with 4 long CPS, and 2 coupling setae.

Pereopod 1 basis 4.7 times as long as greatest width; ischium 0.7 time as long as basis,; merus inferior distal margin with 1 simple setae; carpus inferior distal margin with 2 simple setae; propodus 3.3 times as long as wide, inferior margin with 6 acute RS and 4 simple setae, superior distal with 4 simple setae; dactylus 0.4 as long as propodus. *Pereopod 2* ischium inferior margin with 1 1 simple seta, inferior distal margin with 1 RS, superior distal margin with 4 long simple setae; merus inferior margin with 4 stout RS, set as single row, inferior distal margin with 4 stout RS, superior distal margin with 2 acute RS and 3 stout RS; carpus inferior distal margin with 4 RS; propodus 1.8 as long as wide, inferior margin with 3 clusters of acute RS (set as 1, 1, 1), inferior distal margin with 1 long RS and 1 simple seta. Dactylus as long as propodus. *Pereopod 3* similar to pereopod 2. *Pereopod 6* similar to pereopod 7, only lack of the setae. *Pereopod 7* basis 2.2 times as long as greatest width, superior margin weakly convex; ischium 0.7 as long as basis, inferior margin with 3 RS (set as 1 and 2), superior distal angle with 3 long RS, inferior distal angle with 3 long RS; merus 0.9 as long as ischium, 1.8 times as long as wide, inferior margin with 9 RS (single cluster), superior distal angle with 11 RS, inferior distal angle with 7 RS; carpus 1.1 as long as ischium, 2.8 times as long as wide, inferior margin with 9 RS (set as 5 and 4), superior distal angle with 6 RS, inferior distal angle with 6 RS; propodus as long as ischium, 5.5 times as long as wide, inferior margin with 3 clusters of RS (set as 2, 3 and 3), superior distal angle with 3 slender setae, inferior distal angle with 3 RS; dactylus 0.4 as long as propodus.

Penes separated by 10% sternal width, flat lobes.

Pleopod 1 exopod 1.8 times as long as wide, lateral margin straight, distally narrowly rounded with strongly oblique medial margin, mesial margin strongly convex, with ~53 PMS from distal half; endopod 2.5 times as long as wide, distally narrowly rounded, lateral margin straight with PMS from distal one-third, mesial margin with PMS from distal one-third, endopod with ~32 PMS; peduncle 1.8 times as wide as long; mesial margin with 5 coupling setae. *Pleopod 2* exopod with ~77 PMS, endopod with ~33 PMS; appendix masculina with parallel margins as long as endopod, distally bluntly rounded. *Pleopod 3* exopod with ~92 PMS, endopod with ~29 PMS. *Pleopod 4* exopod with ~90 PMS, endopod with ~24 PMS. *Pleopod 5* exopod with ~109 PMS. Pleopods 2–5 peduncle distolateral margin with prominent acute RS, 3–5 endopods with distomesial serrate scales.

Uropod peduncle ventrolateral margin without RS, lateral margin without medial short acute robust seta, posterior lobe about two-thirds as long as endopod; rami extending beyond pleotelson, marginal setae in single tier, apices narrowly rounded. *Endopod* apically not bifid; lateral margin straight, proximal lateral margin with 4 RS; distal lateral margin with 2 RS, mesial margin straight, with 6 RS. *Exopod* not extending to end of endopod, 4 times as long as greatest width, apically not bifid; lateral margin straight, with 6 RS; mesial margin straight, with 5 RS.

Female. No ovigerous females present in the collected material. Non-ovigerous females have a similar morphology to males except for the sexual characters and the lack of setae on pereopod 7; body size is slightly smaller.

Size. Adult males 8.4–12.4 mm, mean 9.9 mm (n = 4); adult females 6.9–11.5 mm, mean 9.2 mm (n = 27).

Variation. Number of RS on pleotelson margin varies (n = 31), 10 RS (53%), 12 RS (44%) and 14 RS (3%).

Distribution. From Singapore to central Indonesia at depths of 18 to 50 metres.

Remarks. *Cirolana indica* can be readily recognized by the unique morphology of pereopod 1, which is slender in comparison to other species of *Cirolana*, with a distinctive row of apically curved robust setae on the distal margin of the propodal palm, and also lacks the typical molariform robust setae on the inferior margin of the merus. The two male specimens from Singapore have abundant long setae on pereopod 7, an apparently unique form of sexual dimorphism otherwise not know in the *Cirolana*. Sexual dimorphism on pereopod 1 is well known in *Cirolana*, with a dimorphic pereopod 1 being commonly found in some species of the "*Cirolana parva* group" such as *Cirolana arafurae* Bruce, 1986, *Cirolana erodiae* Bruce, 1986, *Cirolana mekista* Bruce, 1986 and *Cirolana reprigrata* Bruce, 1994. Other generic characters such as shape of the frontal lamina, morphology of pereopods 2, 6 and 7, proportion of the peduncular articles of the antennula and antenna, shape of the pleopod 1 peduncle and rami and the basal attachment of the appendix masculina all conform to the genus *Cirolana*.

Cirolana vanhoeffeni Nierstrasz, 1931
(Fig. 6)

Cirolana vanhöffeni Nierstrasz, 1931: 153, figs 16–23.
Cirolana vanhoeffeni.—Bruce, 1986: 200.
Cirolana vanhoffeni.—Brusca, Wetzer & France, 1995: 18.
Not *Cirolana vanhöffeni*.—Nierstrasz, 1931, figs 26–29 [= *Politolana stebbingi* (Nierstrasz, 1931), present study].

Material examined. *Holotype* ♂ (10.0 mm), Siboga Expedition, 1°58.5'N, 125°0.5'E, station 122, 1155–1264 m, 17 June 1899 (ZMA.CRUS.I.100606).

Supplementary description (male). *Body* 3.5 times as long as greatest width, dorsal surfaces smooth, widest at pereonite 4, lateral margins subparallel. *Rostral point* absent. *Pereonite 1 and coxae* 2–3 each with posteroventral angle rounded; coxae 5–7 with entire oblique carina; posterior margins of pereonites 5–7 smooth. *Pleon* with pleonite 1 visible in dorsal view; pleonites 3–5 posterior margin smooth; posterolateral angles of pleonite 2 rounded, not posteriorly produced; pleonite 3 with posterolateral margins not extending to posterior margin of pleonite 5, acute; posterolateral margin of pleonite 4 rounded, clearly extending beyond posterior margin of pleonite 5. *Pleotelson* 1.4 times as long as anterior width, dorsal surface without longitudinal carina; lateral margins straight, margins smooth, posterior margin subtruncate, without median point, with 8 RS.

Antennula peduncle articles 1 and 2 not fused, article 3 being longest, flagellum extending to posterior margin of eye. *Antenna* peduncle articles 1–3 shortest, articles 4 and 5 are subequal in length, flagellum extending to posterior of pereonite 2.

Frontal lamina pentagonal, longer than greatest width, lateral margins straight, diverging slightly towards anterior, anterior margin rounded, without small median point.

Penes low tubercles.

Uropod rami not extending beyond pleotelson, marginal setae in single tier, apices broadly rounded. *Endopod* apically not bifid; lateral margin straight; mesial margin strongly convex. *Exopod* not extending to end of endopod, apically not bifid; lateral margin straight; mesial margin convex.

Female. No female specimens available.

Distribution. Known only from the type locality.

Remarks. *Cirolana vanhoeffeni* superficially resembles *Cirolana lata* Haswell, 1882 in lacking eyes, but differs by having a more elongate body, the presence of fine tubercles on the lateral margins of pleonites 2–3, pleonite 4 with a rounded posterolateral margin , pleonite 3 with a less extended posterolateral margin and a pentagonal frontal lamina. *Cirolana vanhoeffeni* accords with the generic diagnoses for *Cirolana*, including the lack of a process on the ischium and merus of the inferodistal margin pereopod 1, unflattened pereopod 7, the morphology of antennula and antenna peduncles, low tubercle-like penes and basal attachment of the appendix masculina. The rounded posterolateral margin of pleonite 4 and the weakly extended posterolateral margin of pleonite 3 (not reaching end of pleonite 5) indicates a possible affinity of *Cirolana vanhoeffeni* to the '*Cirolana* tuberculate group', but another distinguishing character for that group, the arrangement of robust setae on the lateral margin of exopod, cannot be determined as all the robust setae are missing and the margins of the rami heavily rubbed. The pleopods and mouthparts are not described as they had been previously dissected from the holotype and were not with the specimen.

Genus *Politolana* Bruce, 1981

Politolana Bruce 1981: 958.—Wetzer, Delaney & Brusca 1987: 1.—Kensley & Schotte, 1989: 140.—Riseman & Brusca 2002: 57.—Frutos & Sorbe, 2010: 20.
Type species. *Aega polita* Stimpson, 1853; by original designation (Bruce 1981).

Remarks. *Politolana* Bruce, 1981 was established to accommodate six species formerly placed in *Cirolana*. Riseman & Brusca (2002) described a further two species when revising the genus together with a phylogenetic analysis, concluding that *Politolana* is paraphyletic and suggested that three species be removed from the genus as they lacked the synapomorphies for *Politolana* s. str., these being *Politolana crosnieri* Bruce, 1996, *Politolana dasyprion* Bruce, 1991 and *Politolana obtusispina* (Kensley, 1975); these three species were regarded as *incertae sedis* within the genus *sensu lato*. The genus now has 14 species (Schotte *et al.* 2008 onwards) including *Politolana stebbingi* (Nierstrasz, 1931) **comb. nov.** The known species distribution is largely antitropical, i.e. Atlantic, Gulf of Mexico, Gulf of California, south Pacific and South Africa (Riseman & Brusca 2002), however *Politolona stebbingi* expands the range into the equatorial central Indo-West Pacific region.

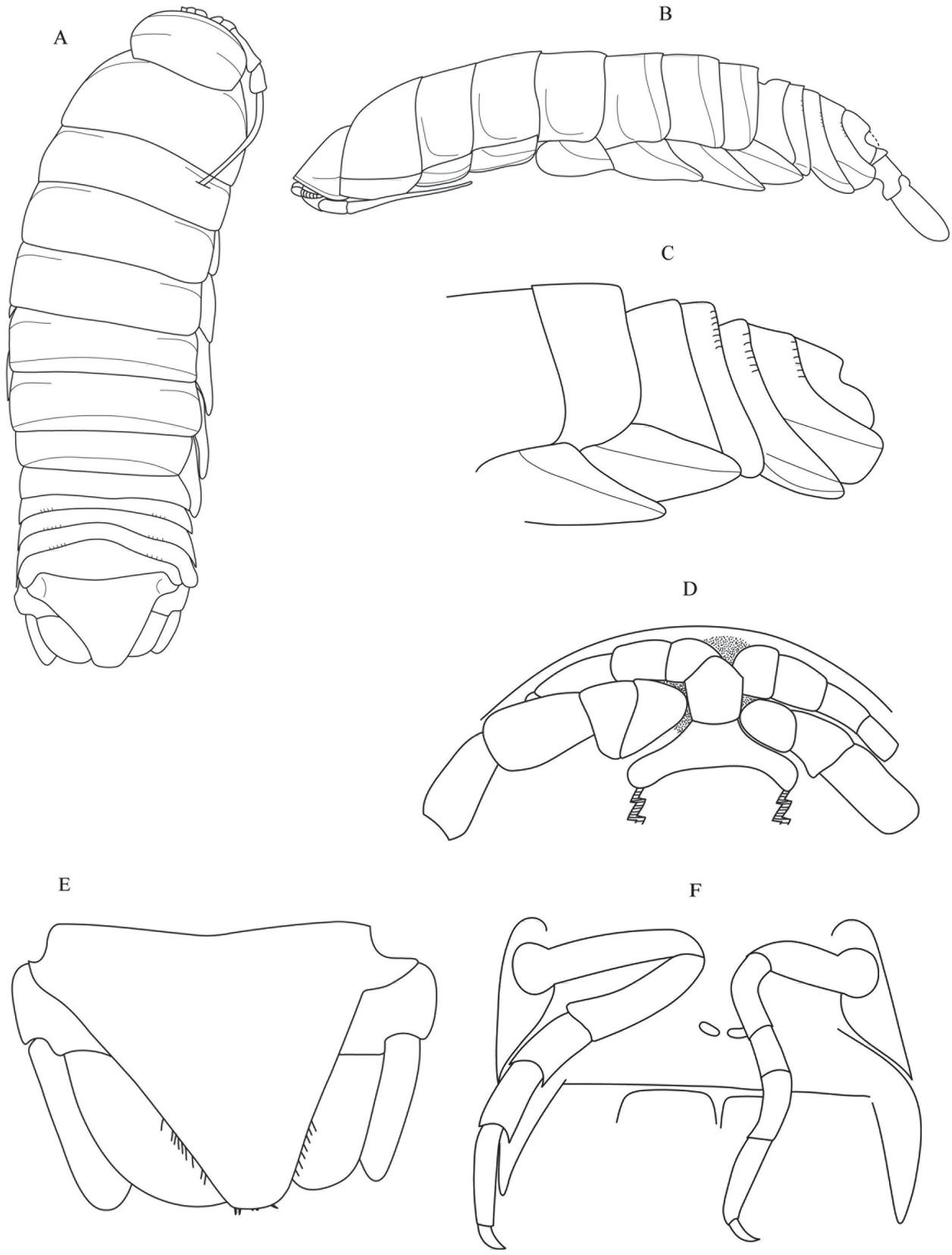

FIGURE 6. *Cirolana vanhoeffeni*, holotype (10 mm). A, dorsal view; B, lateral view; C, pleonites; D, frons; E, pleotelson and uropods; F, penial openings.

Politolana is distinguished from other cirolanid genera by the elongate body (2–3 times as long as greatest width), narrow and slender frontal lamina, small eyes, antenna peduncle articles 1–2 the shortest and articles 3–5

subequal in length, ischium-merus of pereopod 1 anterodistally produced, pleopod 1 peduncle subquadrate, and the apomorphic characters—lateral margins of pleonites 2–4 with a ventral fringe of setae, produced posterolateral margin on the posterior of pleonites 1–4 or on 1 and 4 only and the absence of carina on the coxae of pereonite 7 (Riseman & Brusca 2002).

Politolana stebbingi (Nierstrasz, 1931) comb. nov.

(Fig. 7)

Cirolana stebbingi Nierstrasz, 1931: 154, figs 24–29.— Bruce, 1986: 143, 223.— Brusca, Wetzer & France, 1995: 18.

Material examined. *Lectotype* ♂ (11.4 mm) and *paralectotype* ♂ (15 mm) here designated, Siboga Expedition, Bajo Bay, Flores, 0°34.6'N, 119°8.5'E. Station 88, 1301 m. 20 June 1899 (ZMA.CRUS.I.100607).

Supplementary description (male). Body 3.5 times as long as greatest width, dorsal surfaces smooth, widest at pereonite 5, lateral margins subparallel. Pereonite 1 and coxae 2–3 each with posteroventral angle rounded; coxae 5–7 with entire oblique carina; posterior margins of pereonites 5–7 smooth. Pleon with pleonite 1 visible in dorsal view; pleonites 3–5 posterior margin smooth; posterolateral angles of pleonite 2 forming acute point, not posteriorly produced; pleonite 3 with posterolateral margins extending to but not beyond posterior margin of pleonite 5, acute; posterolateral margin of pleonite 4 narrowly rounded, not extending beyond posterior margin of pleonite 5. Pleotelson 1.8 times as long as anterior width, dorsal surface without longitudinal carina; lateral margins straight, margins smooth, posterior margin evenly rounded, without median point, with 6 RS.

Antennula flagellum extending to posterior margin of eye. *Antenna* peduncle article 4 1.5 times as long as wide, as long as article 3; article 5 1.1 times as long as article 4, 1.9 times as long as wide; extending to middle of pereonite 2.

Frontal lamina narrow and slender, longer than greatest width, lateral margins straight, diverging slightly towards anterior, anterior margin rounded, without small median point.

Pereopod 1 basis 2.0 times as long as greatest width, superior distal angle with 1 acute seta; ischium 0.7 time as long as basis, superior distal margin with 5 acute RS; merus superior distal angle with 4 setae and 3 acute RS; carpus inferior margin with 1 small acute RS, superior distal margin with 1 large RS; propodus 1.9 times as long as wide, inferior margin with 5 acute RS, superior distal with 4 simple setae and 1 RS; dactylus 0.9 as long as propodus; inferior margin lacking setal fringe. *Pereopod 6* similar to pereopod 7. *Pereopod 7* basis 1.6 times as long as greatest width, superior margin weakly convex; ischium 0.8 as long as basis, inferior margin with 2 acute RS, superior distal angle with 6 RS (long), inferior distal angle with 4 RS (long); merus as long as ischium, 1.8 times as long as wide, inferior margin with 1 RS (single cluster), superior margin with 3 long slender setae, superior distal angle with 4 RS, inferior distal angle with 5 RS; carpus as long as ischium, 6.0 times as long as wide, inferior margin with 2 acute RS, superior distal angle with 4 RS, inferior distal angle with 4 RS; propodus 4.7 times as long as wide, inferior margin with 2 clusters of RS (sets as 1 and 2), superior distal angle with 2 slender setae, inferior distal angle with 1 slender seta.

Uropod rami not extending beyond pleotelson, marginal setae in single tier, apices acute. *Endopod* apically not bifid; lateral margin distally concave; mesial margin strongly convex. *Exopod* not extending to end of endopod, apically not bifid; lateral margin convex; mesial margin convex.

Female. No female specimens available.

Size. Size of the male lectotype is 15.0 mm and paralectotype is 11.4 mm.

Distribution. Known only from the type locality, Bajo Bay, Flores.

Remarks. The type material of *Politolana stebbingi* (Nierstrasz, 1931) consists of two syntypes. We here designate the more intact specimen as lectotype. The age of the specimens and previous dissection meant that several characters could not be described, including the penial processes. *Politolana stebbingi* has a number of characters that do not conform with the diagnostic characters for *Cirolana*, such as the more elongate body, antenna peduncle articles 3 and 4 longest (vs 4 and 5 longest in *Cirolana*) and long and narrow frontal lamina (vs pentagonal, subquadrate or anteriorly round in *Cirolana*) (Bruce, 1986; Brusca *et al.* 1995). Most of the diagnostic characters of *Politolana* listed by Bruce (1981), Wetzer *et al.* (1987) and Riseman & Brusca (2002), are present in *P. stebbingi*: the elongate body, long peduncle of pleopod 1 (also shared with *Plakolana* and *Odysseylana*), long, narrow and slender frontal lamina, flat and robust carpus of pereopod 7, long and acute robust setae on merus-propodus pereopod 1, small secondary unguis on dactylus of pereopods 1–3, short articles 1–2 of antenna peduncle and articles 3–5 longest and subequal, the presence of interocular furrow and produced posterolateral margin on pleonites 1 and 4.

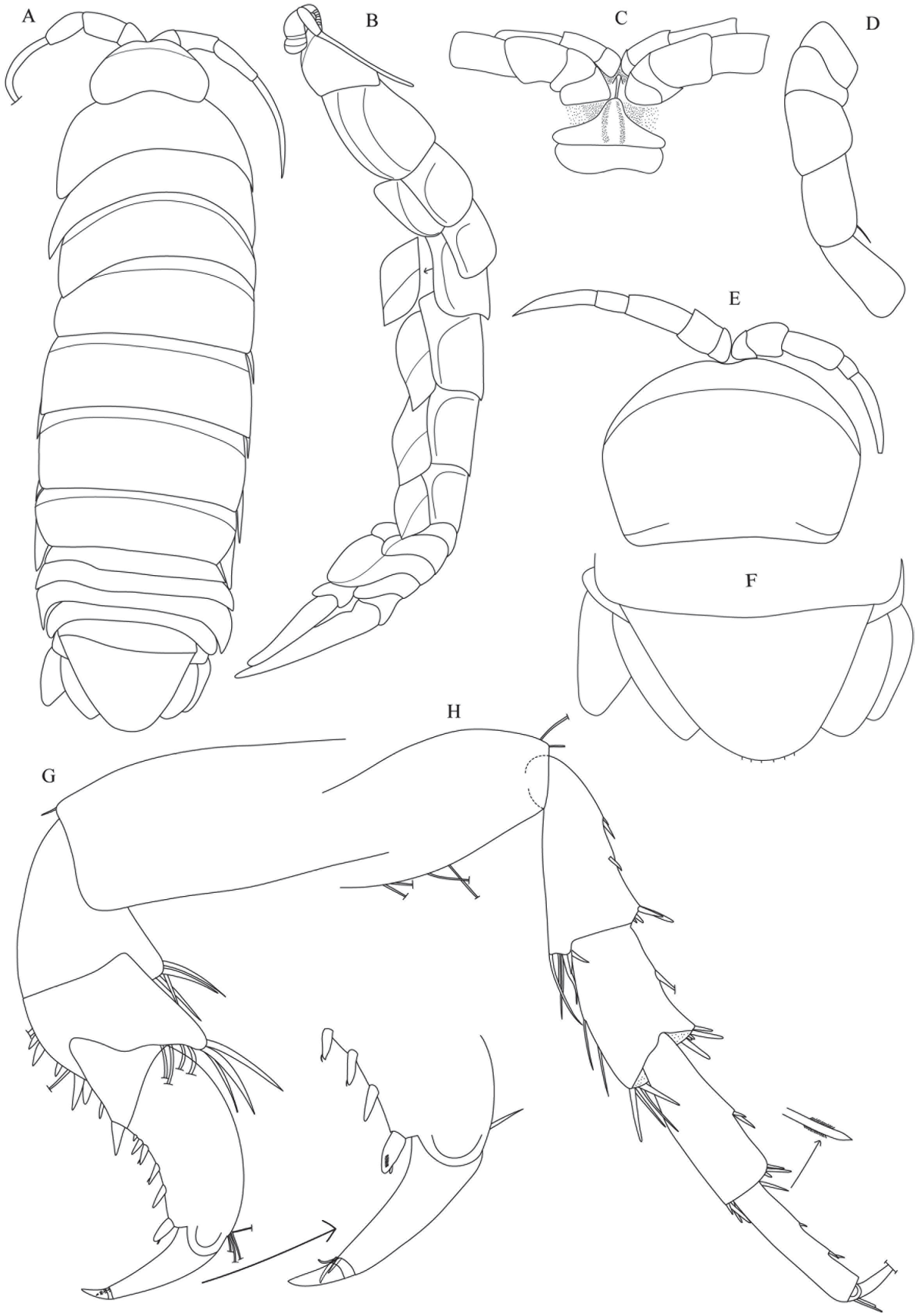

FIGURE 7. *Politolana stebbingi*, comb. nov., lectotype (15 mm) (A–F); paralectotype (G–H). A, dorsal view; B, lateral view; C, frons; D, antennal peduncle; E, head, dorsal view; F, pleotelson and uropods; G, pereopod 1; H, pereopod 7.

Several characters such as the less produced uropod peduncle medial margin, the absence of fringe of setae on the lateral margins of pleonites 2–4 and the presence of carina on pereonite 7 coxae separate *P. stebbingi* from *Politolana sensu stricto*. Further, pereopod 1 of *P. stebbingi* differs from that of *Politolana* by not having the superodistal margin of the carpus as produced and in being less setose. Similarly, pereopod 7 differs by being less flat and the absence of dense setae. Overall, *Politolana stebbingi* shares more diagnostic characters with *Politolana* than *Cirolana*, therefore *Cirolana stebbingi* is considered as *Politolana sensu lato*.

The captions for figures 26–29 on the original publication (Nierstrasz, 1931b) were incorrectly given as *Cirolana vanhöffeni*.

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