RAFFLES BULLETIN OF ZOOLOGY Supplement No. **36**: 119–161
Date of publication: 6 August 2021
DOI: 10.26107/RBZ-2021-0035
http://zoobank.org/urn:lsid:zoobank.org:pub:5466C9BA-ADC2-4D2E-BD60-433E66D7D29B

A list of shrimps and lobsters (Crustacea: Decapoda: Dendrobranchiata, Caridea, Stenopodidea, Polychelida, Astacidea, Achelata, Axiidea, Gebiidea) photographed during the SJADES 2018 biodiversity cruise

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Abstract. A list of the shrimps and lobsters ("macruran" decapods, in earlier classification), including the mud shrimps or lobsters (Axiidea and Gebiidea), collected by the SJADES 2018 expedition off southern Java in Indonesia is compiled. The list contains 130 species, amongst which 23 are new records for Indonesia with possibly seven undescribed species. Colour photographs are provided for all species listed.

Key words. deep-sea, shrimp, lobster, SJADES 2018

INTRODUCTION

Shrimps and lobsters were referred to as "macruran" decapods (Macrura Latreille, 1802) in the early classification of crustacean decapods with a well-developed abdomen. This group included major higher taxa such as the entire suborder Dendrobranchiata Bate, 1888, and the infraorders Stenopodidea Bate, 1888, Caridea Dana, 1852, Astacidea Latreille, 1802, Glypheidea Van Straelen, 1925, Achelata Scholtz & Richter, 1995, and Polychelida Scholtz & Richter, 1995, in the suborder Pleocyemata, following the modern classification (cf. De Grave et al., 2009; Poore, 2016). The mud shrimps or mud lobsters belonging to the infraorders Axiidea de Saint Laurent, 1979, and Gebiidea de Saint Laurent, 1979, both having been placed in Anomura in earlier classifications, are also included in the present list.

The shrimps and lobsters collected during the SJADES (South Java Deep-Sea) Biodiversity Expedition 2018 were immediately sorted after catch. The specimens were sorted to species and representatives of each species were photographed onboard before preservation using the method described in Chan et al. (2017b). The SJADES shrimp and lobster material was separated into two parts. All photographed material and a few non-photographed specimens were later shipped to the Lee Kong Chian Natural History Museum, National University of Singapore. The other part comprising the bulk of specimens is deposited in the Indonesian Institute of Sciences (LIPI) in Jakarta, Indonesia. The present shrimp and lobster list is exclusively based on the material deposited at the Lee Kong Chian Natural History Museum. Altogether 130 species of shrimps and lobsters were identified from the SJADES material. Other than four species already described based on expedition material (Komai et al., 2019, 2020; Chang et al., 2020a; Komai & Chan, 2020), seven more species may also be new to science. Moreover, 23 other species are new records for Indonesia. On the other hand, identification of several species remains tentative and awaits further studies. For example, the number of photophores on the lateral carapace in the present material identified with *Challengerosergia talismani* (Barnard, 1947) and *C. umitakae* (Hashizume & Omori, 1995) does not match well with those reported in Vereshchaka (2000), requiring the reassessment of using this character in diagnosing these species. The shape of the petasma and the number of rostral teeth in the SJADES specimens of *Metapenaeopsis philippii* (Bate, 1881) are somewhat different from those described in Crosnier (1987). The specimens identified as *Nematocarinus* aff. *chacei* Burukovsky, 2002, and *N.* aff. *richeri* Burukovsky, 2000b, have the rostrum and setal rows at the abdominal somite VI somewhat different from the typical forms of these species. The telson is distinctly shorter instead of longer than the abdominal somite VI in the present material identified as *Prionocrangon demani* Kim & Chan, 2005 (see Kim & Chan, 2005).

MATERIAL AND METHODS

The material is deposited in the Lee Kong Chian Natural History Museum, National University of Singapore, Republic of Singapore (ZRC), and Museum Zoologicum Bogoriense, Cibinong, Bogor, Indonesia (MZB). Detailed station data can be found in Chim et al. (2021, this volume). The measurements, given in millimetres, are of postorbital carapace length (cl), measured from the posterior margin of the orbit to the midpoint of the posterodorsal margin of the carapace,

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ISSN 2345-7600 (electronic) | ISSN 0217-2445 (print)

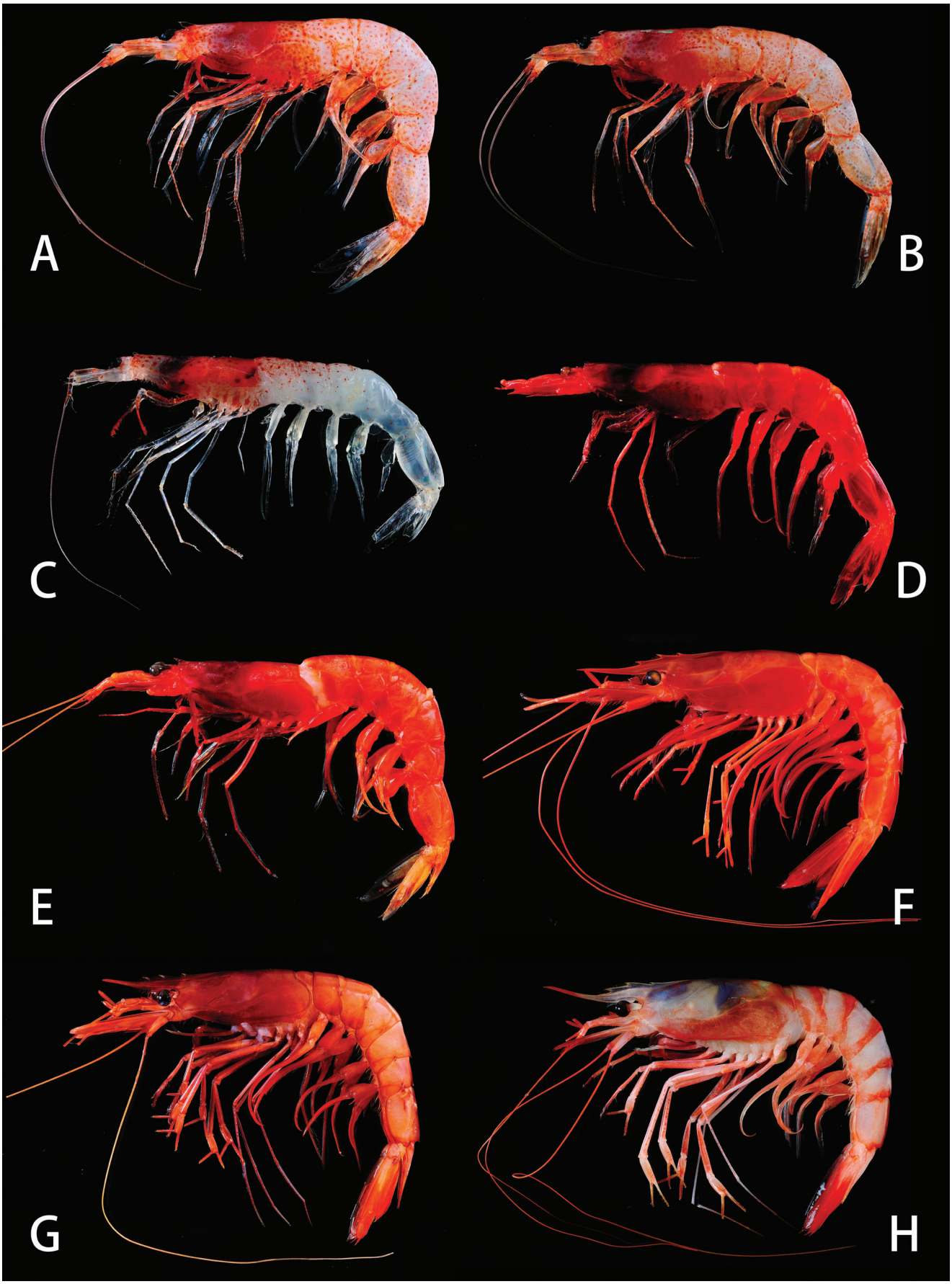

Fig. 1. A, *Challengerosergia talismani* (Barnard, 1947), stn CP53, male (cl 13.0 mm); B, *C. umitakae* (Hashizume & Omori, 1995), stn CP22, male (cl 19.0 mm); C, *Deosergestes seminudus* (Hansen, 1919), stn CP44, male (cl 12.1 mm); D, *Phorcosergia bisulcata* (Wood-Mason & Alcock, 1891a), stn CP44, male (cl 19.9 mm); E, *Robustosergia regalis* (Gordon, 1939), stn CP22, male (cl 13.3 mm); F, *Aristaeopsis edwardsiana* (Johnson, 1868), stn CP8, male (cl 46.1 mm); G, *Aristeus mabahissae* Ramadan, 1938, stn CP48, male (cl 27.9 mm); H, *A. semidentatus* (Bate, 1881), stn CP8, female (cl 38.5 mm).

except in Alpheidae, Polychelidae, and Scyllaridae where it is measured from the tip of rostrum. The classification scheme mainly follows De Grave et al. (2009), Chan (2019), and De Grave & Fransen (2011).

LIST OF SHRIMPS AND LOBSTERS FROM SJADES 2018

Suborder Dendrobranchiata Bate, 1888

Superfamily Sergestoidea Dana, 1852

Family Sergestidae Dana, 1852

***Challengerosergia talismani* (Barnard, 1947)**
(Fig. 1A)

Material examined. stn CP10, 1 female cl 10.1 mm; stn CP27, 2 males cl 12.1 & 13.0 mm; stn CP47, 2 males cl 12.5 & 13.2 mm; stn CP53, 1 male cl 13.0 mm.

Distribution. Widely distributed in the Indo-West Pacific and the Atlantic Ocean, at depths of 20–1,200 m (Vereshchaka, 2000). The present material was collected from 429–1,714 m deep.

Remarks. The identification is based on Vereshchaka (2000) and Vereshchaka et al. (2014). All the SJADES specimens have five instead of six photophores on the lateral surface of the carapace.

***Challengerosergia umitakae* (Hashizume & Omori, 1995)**
(Fig. 1B)

Material examined. stn CP22, 1 male cl 19.0 mm.

Distribution. Previously known only from the western Indian Ocean, at depths of 100–700 m (Vereshchaka, 2000). This species is reported for the first time in Indonesia and from slightly deeper depth of 864–870 m.

Remarks. The identification is based on Vereshchaka (2000) and Vereshchaka et al. (2014). The present specimen has seven, instead of four to five, photophores on the lateral surface of the carapace.

***Deosergestes seminudus* (Hansen, 1919)**
(Fig. 1C)

Material examined. stn CP28, 1 female cl 12.4 mm; stn CP44, 1 male cl 12.1 mm.

Distribution. Western Pacific and Eastern Indian Ocean from Japan to Indonesia and New Zealand; at depths of 20–1,330 m (Vereschaka, 2009).

Remarks. The identification is based on Vereshchaka (2009) and Vereshchaka et al. (2014).

***Phorcosergia bisulcata* (Wood-Mason & Alcock, 1891a)**
(Fig. 1D)

Material examined. stn CP44, 1 male cl 19.9 mm.

Distribution. Indo-West Pacific from India to Hawaii, at depths of 100–2,000 m (Vereshchaka, 2000).

Remarks. The identification is based on Vereshchaka (2009) and Vereshchaka et al. (2014).

***Robustosergia regalis* (Gordon, 1939)**
(Fig. 1E)

Material examined. stn CP13, 1 female cl 15.0 mm; stn CP22, 1 male cl 13.3 mm.

Distribution. World-wide circumtropical, at depths of 100–2,000 m (Vereshchaka, 2000).

Remarks. The identification is based on Vereshchaka (2000) and Vereshchaka et al. (2014).

Superfamily Penaeoidea Rafinesque, 1815

Family Aristeidae Wood-Mason in Wood-Mason & Alcock, 1891b

***Aristaeopsis edwardsiana* (Johnson, 1868)**
(Fig. 1F)

Material examined. stn CP8, 1 male cl 46.1 mm.

Distribution. Widely distributed in the Indo-West Pacific and Atlantic, at depths of 274–1,850 m (Holthuis, 1980; Pérez Farfante & Kensley, 1997).

Remarks. Only one species is known in the genus *Aristaeopsis* Wood-Mason in Wood-Mason & Alcock, 1891b (Pérez Farfante & Kensley, 1997).

***Aristeus mabahissae* Ramadan, 1938**
(Fig. 1G)

Material examined. stn CP35, 1 male cl 25.5 mm; stn CP48, 1 male cl 27.9 mm.

Distribution. Widely distributed in the Indo-West Pacific, at depths of 366–1,097 m (Crosnier, 1978; Pérez Farfante & Kensley, 1997).

Remarks. The present material was identified following Chan et al. (2017a).

***Aristeus semidentatus* (Bate, 1881)**
(Fig. 1H)

Material examined. stn CP7, 1 female cl 37.7 mm; stn CP8, 1 male cl 31.0 mm, 2 females cl 37.7 & 38.5 mm; stn CP51, 1 female cl 52.4 mm.

Distribution. Widely distributed in the Indo-West Pacific, at depths of 180–1,469 m (Crosnier, 1978; Holthuis, 1980; Pérez Farfante & Kensley, 1997).

Remarks. The identification is based on Chan et al. (2017a).

***Aristeus virilis* (Bate, 1881)**
(Fig. 2A)

Material examined. stn CP22, 1 male cl 33.0 mm; stn CP23, 1 female cl 55.7 mm.

Distribution. Widely distributed in the Indo-West Pacific, at depths of 238–900 m (Crosnier, 1978; Pérez Farfante & Kensley, 1997).

Remarks. The identification is based on Chan et al. (2017a).

***Parahepomadus vaubani* Crosnier, 1978**
(Fig. 2B)

Material examined. stn CP44, 1 female cl 66.1 mm.

Distribution. Indo-West Pacific, known from Madagascar, Indonesia, and the Philippines; at depths of 880–1,525 m (Crosnier, 1978; Pérez Farfante & Kensley, 1997).

Remarks. Only one species is known in the genus *Parahepomadus* Crosnier, 1978, and the SJADES specimen agrees well with the original description of the species given by Crosnier (1978).

***Pseudaristeus crassipes* (Wood-Mason in Wood-Mason & Alcock, 1891b)**
(Fig. 2C)

Material examined. stn CP13, 1 female cl 17.7 mm.

Distribution. Indo-West Pacific; known from the Gulf of Aden, India, Sri Lanka, Bay of Bengal, and Indonesia, at depths of 741–1,730 m (Pérez Farfante, 1987; Pérez Farfante & Kensley, 1997).

Remarks. The identification follows Pérez Farfante (1987). This small female specimen has no sign of a prominence at the antennular peduncle article III but the thelycum is moderately broad (maximum width 0.68 length). As there is a 6.4% COI sequence divergence between this specimen (Genbank accession no. MW558018) and the stn CP22 specimen (Genbank accession no. MW558019) identified here (see below) as *P. kathleenae* Pérez Farfante, 1987, it is determined that the present specimen belongs to a species different from *P. kathleenae.*

***Pseudaristeus kathleenae* Pérez Farfante, 1987**
(Fig. 2D)

Material examined. stn CP22, 1 female cl 38.9 mm.

Distribution. Indo-West Pacific from the Gulf of Aden to Indonesia and the Philippines, at depths of 549–1,225 m (Pérez Farfante, 1987; Pérez Farfante & Kensley, 1997).

Remarks. The identification follows Pérez Farfante (1987).

Family Benthesicymidae Wood-Mason in Wood-Mason & Alcock, 1891b

***Benthesicymus investigatoris* Alcock & Anderson, 1899**
(Fig. 2E)

Material examined. stn CP13, 1 male cl 11.1 mm; stn CP22, 1 female cl 14.1 mm; stn CP48, 1 female cl 23.4 mm.

Distribution. Widely distributed in the Indo-Pacific region, at depths of 400–1,650 m (Hayashi, 1992; Pérez Farfante & Kensley, 1997).

Remarks. The identification is based on Hayashi (1992).

***Gennadas bouvieri* Kemp, 1909**
(Fig. 2F)

Material examined. stn CP22, 1 female cl 8.8 mm; stn CP53, 1 female cl 8.8 mm.

Distribution. Indo-Pacific and eastern Atlantic, at depths of 250–855 m (Crosnier, 1978, 1994; Pérez Farfante & Kensley, 1997). The present material was collected from deeper water at 864–1,714 m depth.

Remarks. The identification is based on Hayashi (1992) and Vereshchaka et al. (2017).

Family Penaeidae Rafinesque, 1815

***Atypopenaeus dearmatus* De Man, 1907**
(Fig. 2G)

Material examined. stn CP56, 1 male cl 10.7 mm.

Distribution. Known only from the Philippines, Indonesia, and Australia, at depths of 200–274 m (De Man, 1907; Holthuis, 1955; Pérez Farfante & Kensley, 1997; Davie, 2002). The present specimen was collected from 183–255 m deep.

Remarks. The identification is based on Dall et al. (1990).

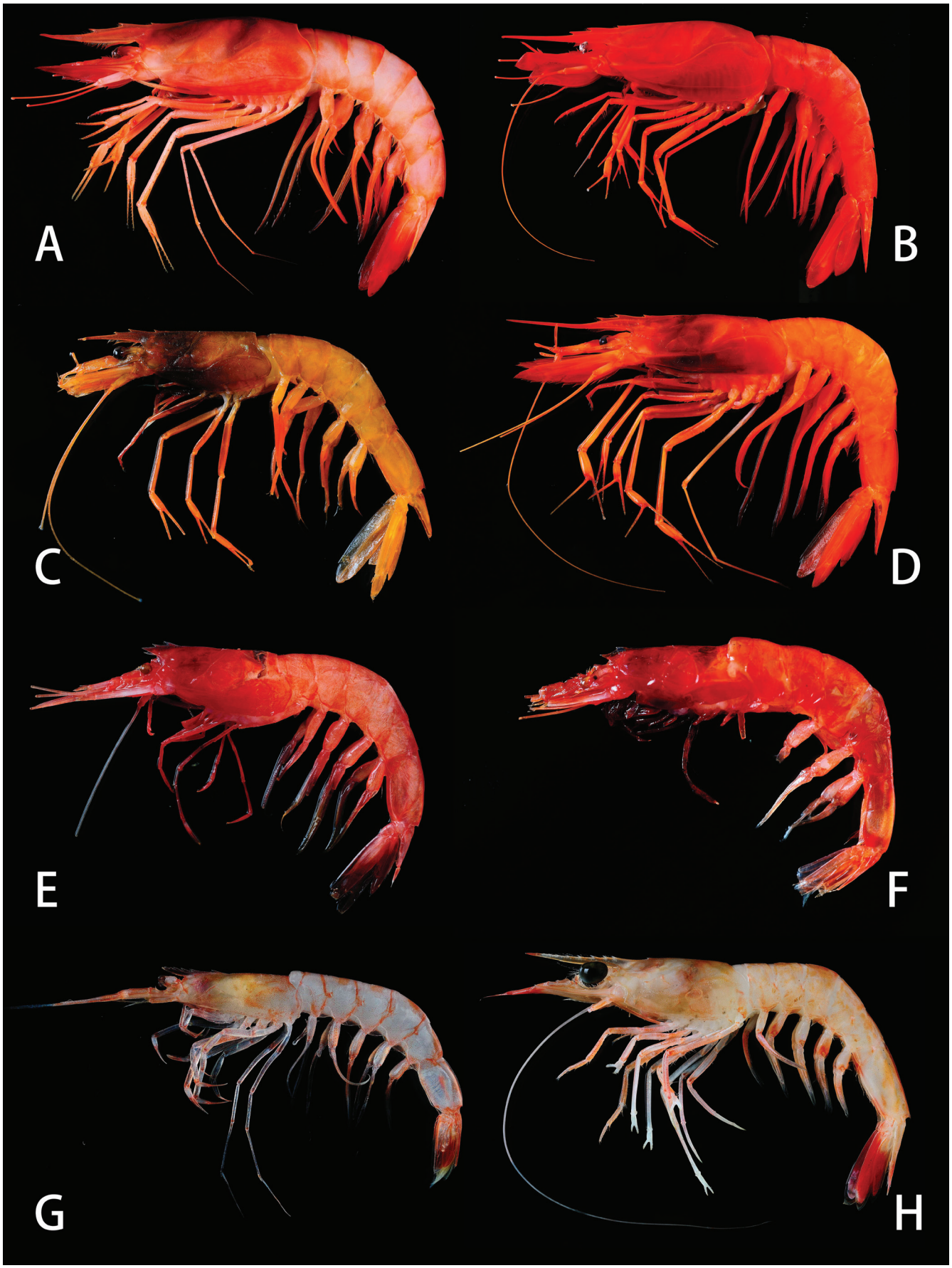

Fig. 2. A, *Aristeus virilis* (Bate, 1881), stn CP23, female (cl 55.7 mm); B, *Parahepomadus vaubani* Crosnier, 1978, stn CP44, female (cl 66.1 mm); C, *Pseudaristeus crassipes* (Wood-Mason in Wood-Mason & Alcock, 1891b), stn CP13, female (cl 17.7 mm); D, *P. kathleenae* Pérez Farfante, 1987, stn CP22, female (cl 38.9 mm); E, *Benthesicymus investigatoris* Alcock & Anderson, 1899, stn CP13, male (cl 11.1 mm); F, *Gennadas bouvieri* Kemp, 1909, stn CP53, female (cl 8.8 mm); G, *Atypopenaeus dearmatus* De Man, 1907, stn CP56, male (cl 10.7 mm); H, *Metapenaeopsis andamanensis* (Wood-Mason in Wood-Mason & Alcock, 1891b), stn CP34, female (cl 24.5 mm).

***Metapenaeopsis andamanensis* (Wood-Mason in Wood-Mason & Alcock, 1891b)**
(Fig. 2H)

Material examined. stn CP34, 1 male cl 21.9 mm, 1 female cl 24.5 mm.

Distribution. Indo-West Pacific from India to Malaysia, at depths of 102–420 m (Crosnier, 1987). Recorded from Indonesia for the first time.

Remarks. The identification follows Crosnier (1987).

***Metapenaeopsis* aff. *difficilis* Crosnier, 1991**
(Fig. 3A)

Material examined. stn DW16, 2 females cl 4.7 & 6.4 mm.

Distribution. *Metapenaeopsis difficilis* has been reported from Indonesia, Philippines, New Caledonia, Wallis and Futuna Islands, and the Marquesas Islands; at depths of 21–200 m (Crosnier, 1991; Pérez Farfante & Kensley, 1997).

Remarks. These two small and heavily damaged specimens can only be tentatively identified as *M. difficulis* by following Crosnier (1991).

***Metapenaeopsis philippii* (Bate, 1881)**
(Fig. 3B)

Material examined. stn CP2, 1 female cl 15.6 mm; stn CP7, 1 female cl 13.9 mm; stn CP20, 1 male cl 13.3 mm; stn CP34, 2 females cl 12.6 & 13.2 mm.

Distribution. Known from the Philippines, Indonesia, and Papua New Guinea; at depths of 150–275 m (Crosnier, 1987; Pérez Farfante & Kensley, 1997). The SJADES material was collected from 234–409 m deep.

Remarks. The identification is based on Crosnier (1987). The present specimens have 7–8 dorsal rostral teeth (excluding epigastric tooth), and the left distodorsal element of the petasma is not markedly pointed.

***Metapenaeopsis sibogae* (De Man, 1907)**
(Fig. 3C)

Material examined. stn CP56, 1 female cl 16.1 mm.

Distribution. Known from the Philippines, Indonesia, and Japan; at depths of 134–274 m (Crosnier, 1987; Pérez Farfante & Kensley, 1997; Ohtomi & Nagata, 2004).

Remarks. The identification is based on Crosnier (1987).

***Parapenaeus investigatoris* Alcock & Anderson, 1899**
(Fig. 3D)

Material examined. stn CP20, 1 female cl 20.2 mm; stn CP34, 1 male cl 14.5 mm, 1 female cl 23.8 mm; stn CP38, 1 female cl 19.9 mm.

Distribution. Widely distributed in the Indo-West Pacific, at depths of 176–400 perhaps to 766 m (Crosnier, 1986; Pérez Farfante & Kensley, 1997).

Remarks. The identification follows Crosnier (1986).

***Parapenaeus perezfarfante* Crosnier, 1986**
(Fig. 3E)

Material examined. stn CP37, 1 female cl 21.8 mm.

Distribution. Previously only known from the Philippines and Papua New Guinea, at depths of 176–251 m (Crosnier, 1986; Pérez Farfante & Kensley, 1997; Yang et al., 2015). Recorded for the first time in Indonesia. The SJADES specimen was collected at 163–166 m deep.

Remarks. The identification follows Crosnier (1986).

***Parapenaeus sextuberculatus* Kubo, 1949**
(Fig. 3F)

Material examined. stn CP37, 1 male cl 24.6 mm.

Distribution. Widely distributed in the Indo-West Pacific, at depths of 140–350 m (Crosnier, 1986; Pérez Farfante & Kensley, 1997).

Remarks. The identification follows Crosnier (1986).

***Penaeopsis rectacuta* (Bate, 1881)**
(Fig. 3G)

Material examined. stn CP20, 1 female cl 26.4 mm.

Distribution. Widely distributed in the Indo-West Pacific, at depths of 174–410 m (Pérez Farfante & Kensley, 1997; Chan, 1998).

Remarks. The identification is based on Pérez Farfante (1980).

Family Solenoceridae Wood-Mason in Wood-Mason & Alcock, 1891b

***Hadropenaeus lucasii* (Bate, 1881)**
(Fig. 3H)

Material examined. stn CP20, 1 female cl 11.0 mm; stn CP34, 1 female cl 10.8 mm.

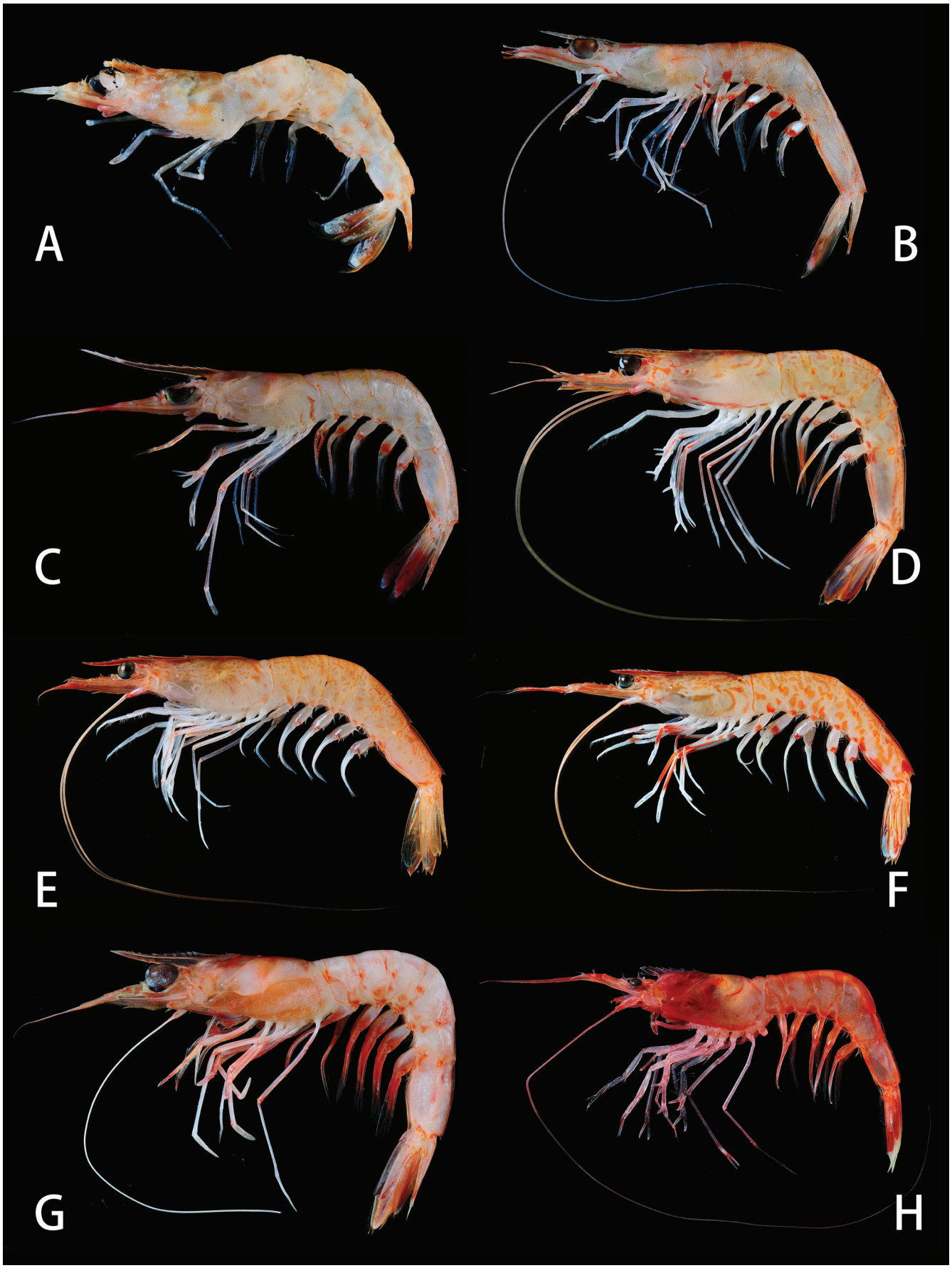

Fig. 3. A, *Metapenaeopsis* aff. *difficilis* Crosnier, 1991, stn DW16, females (cl 6.4 mm); B, *M. philippii* (Bate, 1881), CP20, male (cl 13.3 mm); C, *M. sibogae* (De Man, 1907), stn CP56, female (cl 16.1 mm); D, *Parapenaeus investigatoris* Alcock & Anderson, 1899, stn CP34, female (cl 23.8 mm); E, *P. perezfarfante* Crosnier, 1986, stn CP37, female (cl 21.8 mm); F, *P. sextuberculatus* Kubo, 1949, stn CP37, male (cl 24.6 mm); G, *Penaeopsis rectacuta* (Bate, 1881), stn CP20, female (cl 26.4 mm); H, *Hadropenaeus lucasii* (Bate, 1881), stn CP34, female (cl 10.8 mm).

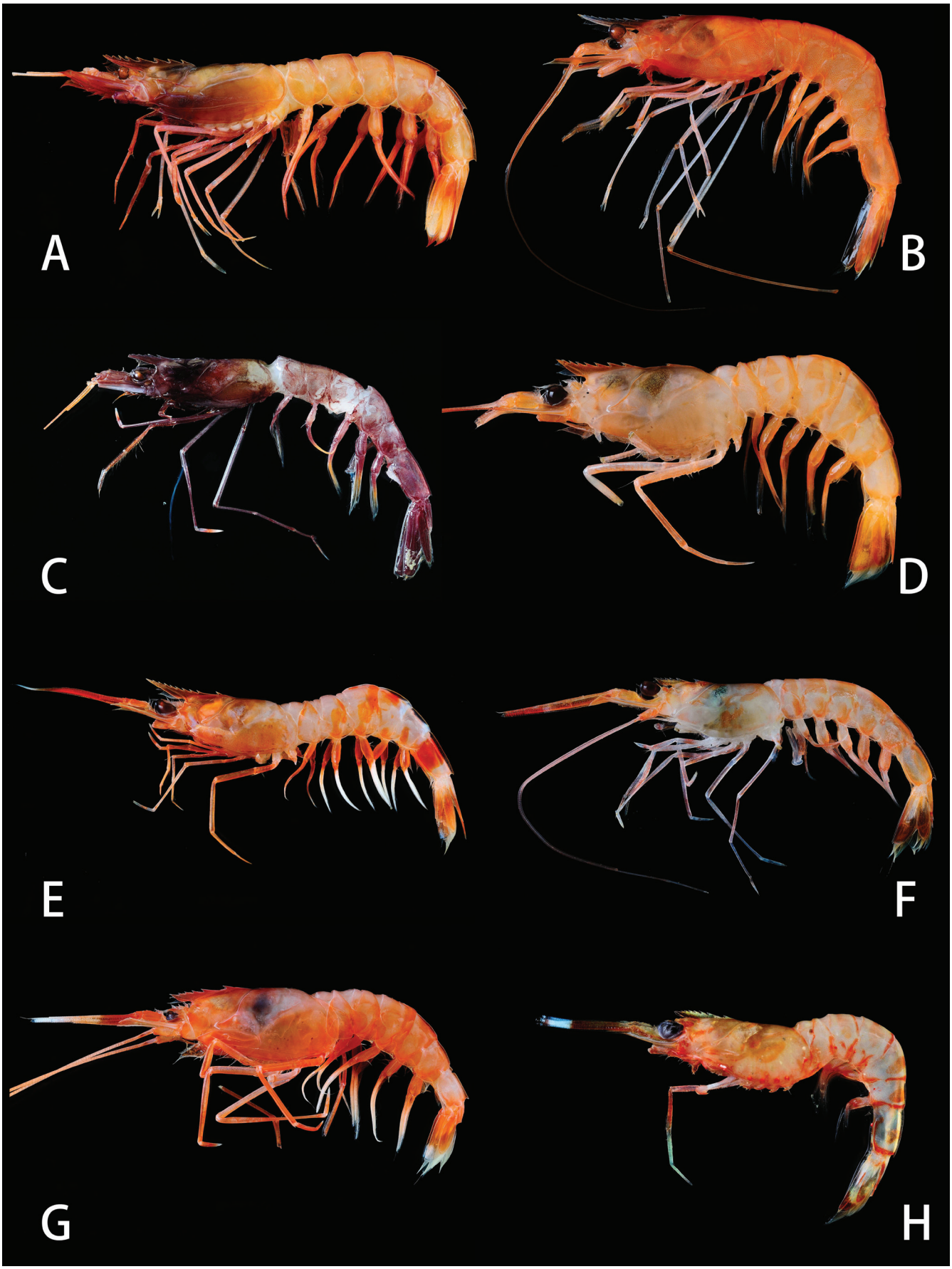

Fig. 4. A, *Haliporus taprobanensis* Alcock & Anderson, 1899, stn CP22, male (cl 31.5 mm); B, *Hymenopenaeus equalis* (Bate, 1888), stn CP8, female (cl 21.1 mm); C, *H. neptunus* (Bate, 1881), stn CP28, male (cl 11.8 mm); D, *Solenocera alfonsa* Pérez Farfante, 1981, stn CP34, female (cl 17.4 mm); E, *S. annectens* (Wood-Mason in Wood-Mason & Alcock, 1891b), stn CP50, female (cl 17.6 mm); F, *S. comata* Stebbing, 1915, stn CP38, male (cl 12.1 mm); G, *S. faxoni* De Man, 1907, stn CP38, female (cl 24.8 mm); H, *S. pectinulata* Kubo, 1949, stn DW16, female (cl 8.1 mm).

Distribution. Widely distributed in the Indo-West Pacific from Madagascar to Hawaii and Wallis and Futuna Islands; at depths of 180–600 m (Crosnier, 1989; Pérez Farfante & Kensley, 1997).

Remarks. The identification is based on Pérez Farfante (1977) and Crosnier (1978).

***Haliporus taprobanensis* Alcock & Anderson, 1899**
(Fig. 4A)

Material examined. stn CP22, 1 male cl 31.5 mm.

Distribution. Widely distributed in the Indo-West Pacific region from the eastern coast of South Africa to the Philippines, at depths of 520–1,650 m (Crosnier, 1988b; Pérez Farfante & Kensley, 1997).

Remarks. The identification is based on Crosnier (1988b).

***Hymenopenaeus equalis* (Bate, 1888)**
(Fig. 4B)

Material examined. stn CP7, 1 female cl 15.9 mm; stn CP8, 1 male cl 19.8 mm, 2 females cl 15.0 & 21.1 mm; stn CP20, 1 female cl 17.3 mm; stn CP27, 1 male cl 12.8 mm; stn CP28, 1 female cl 20.4 mm.

Distribution. Widely distributed in the Indo-West Pacific region from eastern coast of South Africa to Hawaii and Wallis and Futuna Islands, at depths of 300–610 m (Crosnier, 1989; Pérez Farfante & Kensley, 1997). The SJADES material was collected from depths of 325–1,022 m.

Remarks. Identification of the present material is based on Crosnier (1989).

***Hymenopenaeus neptunus* (Bate, 1881)**
(Fig. 4C)

Material examined. stn CP28, 1 male cl 11.8 mm.

Distribution. Indo-West Pacific from Bay of Bengal to the Wallis and Futuna Islands, at depths of 640–1,550 and perhaps 3,197 m (Crosnier, 1985, 1989; Pérez Farfante & Kensley, 1997).

Remarks. Identification of the present material is based on Crosnier (1989).

***Solenocera alfonsa* Pérez Farfante, 1981**
(Fig. 4D)

Material examined. stn CP34, 1 female cl 17.4 mm; stn CP37, 1 male cl 13.4 mm.

Distribution. Known only from the Philippines, Indonesia, and Australia; at depths of 90–550 m (Crosnier, 1985, 1989; Pérez Farfante & Kensley, 1997; Davie, 2002).

Remarks. The identification is based on Pérez Farfante (1981) and Crosnier (1985, 1989).

***Solenocera annectens* (Wood-Mason in Wood-Mason & Alcock, 1891b)**
(Fig. 4E)

Material examined. stn CP27, 1 male cl 14.6 mm; stn CP50, 1 female cl 17.6 mm.

Distribution. Known only from the Andaman Sea, Indonesia, Philippines, and Australia; at depths of 388–900 m (Crosnier, 1989; Pérez Farfante & Kensley, 1997; Davie, 2002). The present material was collected from depths of 383–557 m.

Remarks. The identification is based on Crosnier (1985).

***Solenocera comata* Stebbing, 1915**
(Fig. 4F)

Material examined. stn CP38, 1 male cl 12.1 mm.

Distribution. Widely distributed in the Indo-West Pacific from eastern coast of South Africa to New Zealand, at depths of 55–736 m (Crosnier, 1989; Pérez Farfante & Kensley, 1997).

Remarks. The identification is based on Crosnier (1978).

***Solenocera faxoni* De Man, 1907**
(Fig. 4G)

Material examined. stn CP38, 1 female cl 24.8 mm.

Distribution. Known from Indonesia, South China Sea, Japan, and Australia; at depths of 183–400 m (Crosnier, 1985, 1994; Hayashi, 1992; Pérez Farfante & Kensley, 1997; Davie, 2002).

Remarks. The specimen is identified according to Crosnier (1985, 1994).

***Solenocera pectinulata* Kubo, 1949**
(Fig. 4H)

Material examined. stn DW16, 1 female cl 8.1 mm.

Distribution. Widely distributed in the Indo-West Pacific from Kenya to Japan and Australia, at depths of 75–350 m (Crosnier, 1989; Hayashi, 1992; Pérez Farfante & Kensley, 1997; Davie, 2002).

Remarks. The identification is based on Crosnier (1978).

Family Sicyoniidae Ortmann, 1898

***Sicyonia inflexa* (Kubo, 1949)**
(Fig. 5A)

Material examined. stn CP33, 1 female cl 17.3 mm; stn CP50, 1 female cl 16.5 mm.

Distribution. Widely distributed in the Indo-West Pacific from the eastern coast of Africa to near the Wallis Islands, at depths of 260–936 m (Crosnier, 2003).

Remarks. The present material is identified according to Crosnier (2003).

***Sicyonia longicornis* Crosnier, 2003**
(Fig. 5B)

Material examined. stn CP47, 1 male cl 8.3 mm.

Distribution. Known only from Indonesia, at depths of 439–809 m (Crosnier, 2003). Previous records in Indonesia were from the Banda and Arafura Sea.

Remarks. The identification follows Crosnier (2003).

Infraorder Stenopodidea Bate, 1888

Family Spongicolidae Schram, 1986

***Spongicola andamanicus* Alcock, 1901**
(Fig. 5C)

Material examined. stn CP39, 1 ovig. female cl 4.2 mm.

Distribution. Widely distributed in the Indo-West Pacific, at depths of 124–815 m (Saito & Komai, 2008).

Remarks. The identification is based on Saito & Komai (2008).

Family Stenopodidae Claus, 1872

***Odontozona spongicola* (Alcock & Anderson, 1899)**
(Fig. 5D)

Material examined. stn CP23, 1 female cl 4.2 mm.

Distribution. Widely distributed in the Indo-Pacific from India to off California, but firstly recorded from Indonesia by the SJADES expedition; at depths of 392–900 m (Chen & Chan, 2021).

Remarks. The present material was previously reported in Chen & Chan (2021).

Infraorder Caridea Dana, 1852

Superfamily Pasiphaeoidea Dana, 1852

Family Pasiphaeidae Dana, 1852

***Glyphus marsupialis* Filhol, 1884**
(Fig. 5E)

Material examined. stn CP35, 1 ovig. female cl 57.5 mm.

Distribution. World-wide on both sides of Atlantic and Pacific Oceans, at depths of 400–1,200 m (Takeda & Prince Masahito, 1982; Hanamura & Evans, 1994; Hayashi, 2007). In the Indo-Pacific region, the species is previously known from India, Japan, Australia, and Chile. Recorded from Indonesia for the first time.

Remarks. There is only one species known in the genus *Glyphus* Filhol, 1884 and the identification is based on Crosnier & Forest (1973) and Takeda & Prince Masahito (1982).

***Pasiphaea debitusae* Hayashi, 1999**
(Fig. 5F)

Material examined. stn CP14, 1 ovig. female cl 12.5 mm.

Distribution. Known from Indonesia, Philippines, and Ryukyu Islands in Japan; at depths of 292–708 m (Hayashi, 1999; Komai et al., 2018). The present specimen represents a new record for the Indian Ocean and was collected from a depth of 1,528–1,539 m.

Remarks. The identification follows Hayashi (1999) and Komai et al. (2018).

***Pasiphaea gracilis* Hayashi, 1999**
(Fig. 5G)

Material examined. stn CP39, 1 male cl 12.8 mm.

Distribution. Known previously from the western Pacific in the Chesterfield Islands, New Caledonia, Wallis and Futuna Islands, Sulu Islands in the Philippines, and Ryukyu Islands in Japan; at depths of 508–1,300 m (Hayashi, 1999; Komai et al., 2018). Recorded for the first time in Indonesia and in the Indian Ocean.

Remarks. The identification follows Hayashi (1999) and Komai et al. (2018).

***Pasiphaea* sp.**
(Fig. 5H)

Material examined. stn CP23, 1 male cl 12.4 mm.

Remarks. This specimen represents a species of the *Pasiphaea sivado* Risso, 1816, species group as diagnosed by Hayashi (1999). It can be distinguished from the 10 known

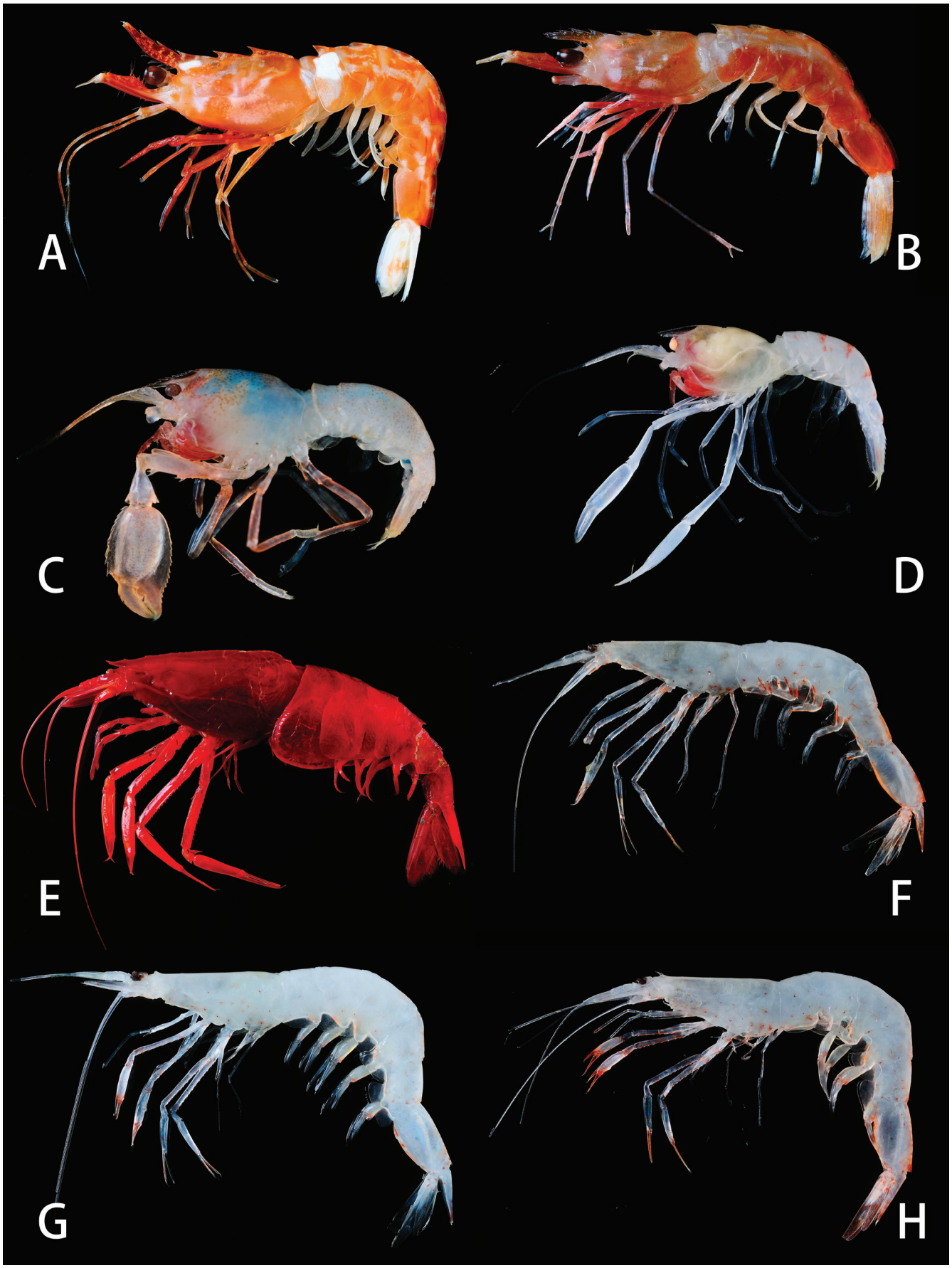

Fig. 5. A, *Sicyonia inflexa* (Kubo, 1949), stn CP50, female (cl 16.5 mm); B, *S. longicornis* Crosnier, 2003, stn CP47, male (cl 8.3 mm); C, *Spongicola andamanicus* Alcock, 1901, stn CP39, ovig. female (cl 4.2 mm); D, *Odontozona spongicola* (Alcock & Anderson, 1899), stn CP23, female (cl 4.2 mm); E, *Glyphus marsupialis* Filhol, 1884, stn CP35, ovig. female (cl 57.5 mm); F, *Pasiphaea debitusae* Hayashi, 1999, stn CP14, ovig. female (cl 12.5 mm); G, *P. gracilis* Hayashi, 1999, stn CP39, male (cl 12.8 mm); H, *P.* sp., stn CP23, male (cl 12.4 mm).

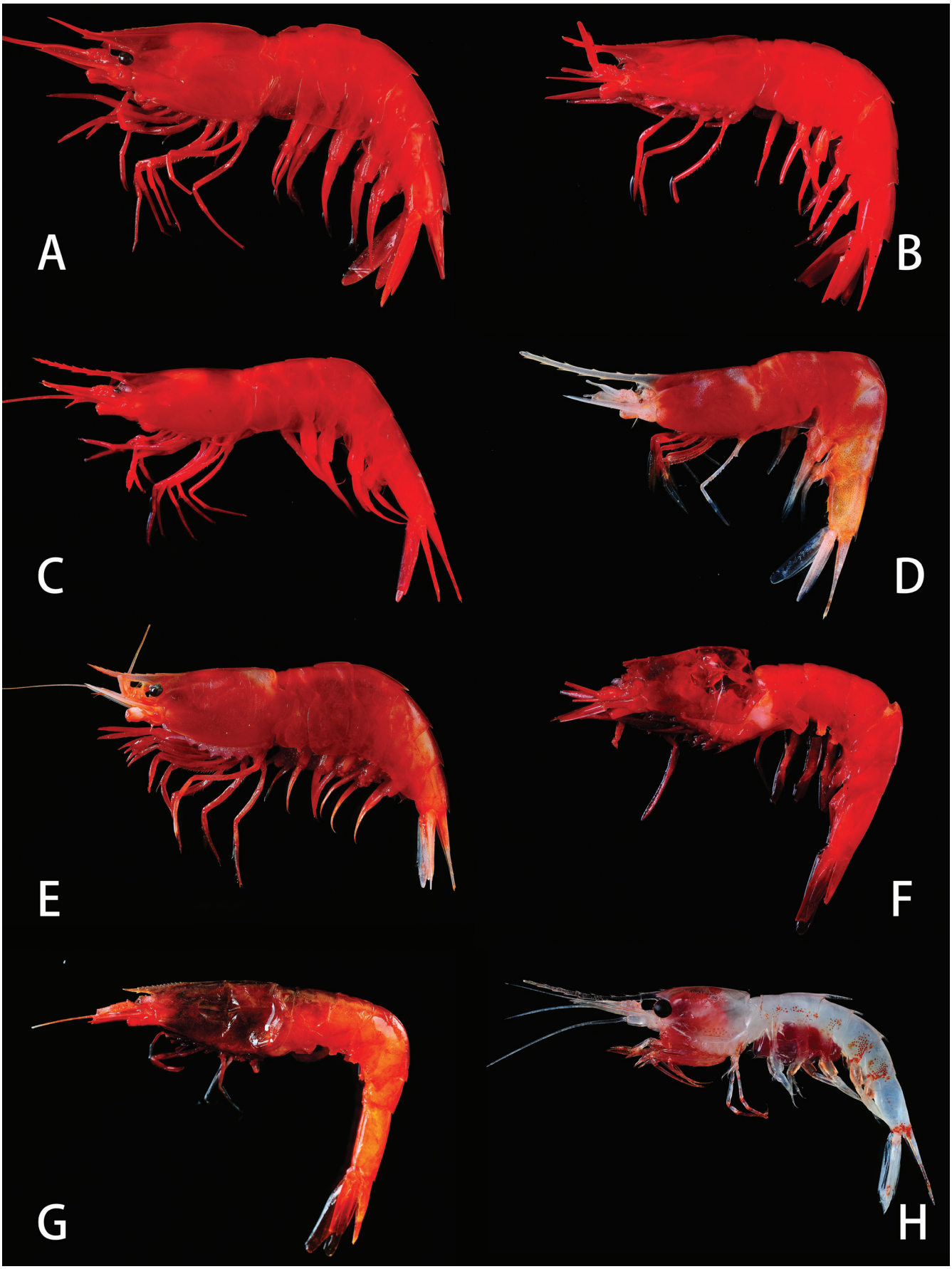

Fig. 6. A, *Acanthephyra carinata* Bate, 1888, stn CP12, male (cl 30.0 mm); B, *A. eximia* Smith, 1884, stn CP18, female (cl 23.7 mm); C, *A. quadrispinosa* Kemp, 1939, stn CP24, male (cl 16.2 mm); D, *A. sanguinea* Wood-Mason in Wood-Mason & Alcock, 1892, stn CP25, male (cl 9.5 mm); E, *A. smithi* Kemp, 1939, stn CP48, ovig. female (cl 21.5 mm); F, *Ephyrina* sp., stn CP18, ovig. female (cl 18.6 mm); G, *Meningodora vesca* (Smith, 1886), stn CP53, female (cl 10.0 mm); H, *Janicella spinicauda* (A. Milne-Edwards, 1883), stn CP40, ovig. female (cl 8.5 mm).

species in the group (Hayashi, 1999, 2006) by the moderately small rostrum, of which the apex reaches nearly to the frontal margin of the carapace and the presence of two spiniform setae on the lower margin of the pereiopod 2 ischium. It is likely that this SJADES specimen from 559–571 m depth represents an undescribed species.

Superfamily Oplophoroidea Dana, 1852

Family Acanthephyridae Bate, 1888

***Acanthephyra carinata* Bate, 1888**
(Fig. 6A)

Material examined. stn CP12, 1 male cl 30.0 mm.

Distribution. Indo-Pacific and known from Indonesia, the Philippines, and Chile; at depths of 313–1,469 m (Chace, 1986).

Remarks. The identification is based on Chace (1986).

***Acanthephyra eximia* Smith, 1884**
(Fig. 6B)

Material examined. stn CP5, 1 juvenile cl 10.8 mm; stn CP18, 1 female cl 23.7 mm; stn CP25, 1 juvenile cl 9.3 mm; stn CP28, 1 female cl 9.3 mm.

Distribution. World-wide, tropical to temperate seas, at depths of 200 to more than 4,700 m (Chace, 1986).

Remarks. The identification is based on Chace (1986).

***Acanthephyra quadrispinosa* Kemp, 1939**
(Fig. 6C)

Material examined. stn CP24, 1 male cl 16.2 mm.

Distribution. Widely distributed in the southern Atlantic and Indo-Pacific regions, at depths of 27–4,160 m (Chace, 1986; Davie, 2002).

Remarks. The identification is based on Chace (1986).

***Acanthephyra sanguinea* Wood-Mason in Wood-Mason & Alcock, 1892**
(Fig. 6D)

Material examined. stn CP25, 1 male cl 9.5 mm.

Distribution. Widely distributed in the Indo-West Pacific region, at depths of 567–3,197 m (Chace, 1986; Davie, 2002).

Remarks. The identification is based on Wood-Mason & Alcock (1892), Chace (1986) and Hayashi (2007).

***Acanthephyra smithi* Kemp, 1939**
(Fig. 6E)

Material examined. stn CP48, 1 ovig. female cl 21.5 mm.

Distribution. Widely distributed in the Indo-West Pacific region, at depths of 216–800 m (Chace, 1986; Davie, 2002).

Remarks. The identification is based on Chace (1986) and Hayashi (2007).

***Ephyrina* sp.**
(Fig. 6F)

Material examined. stn CP18, 1 ovig. female cl 18.6 mm.

Remarks. This badly damaged specimen can only be identified down to genus by referring to Chace (1986) and Lin & Chan (2001). The genus *Ephyrina* Smith, 1885, has a world-wide distribution and three species have been reported from Indonesia (Chace, 1986).

***Meningodora vesca* (Smith, 1886)**
(Fig. 6G)

Material examined. stn CP53, 1 female cl 10.0 mm.

Distribution. Atlantic and Indo-West Pacific, at depths of 400–5,400 m (Chace, 1986; Davie, 2002; Hayashi, 2007).

Remarks. The identification is based on Chace (1986) and Hayashi (2007).

Family Oplophoridae Dana, 1852

***Janicella spinicauda* (A. Milne-Edwards, 1883)**
(Fig. 6H)

Material examined. stn CP40, 1 ovig. female cl 8.5 mm.

Distribution. World-wide circumtropical except for extreme eastern Pacific off the American continents, at depths of 366–1,464 m (Chace, 1986; Davie, 2002).

Remarks. The identification is based on Chace (1986).

***Oplophorus gracilirostris* A. Milne-Edwards, 1881**
(Fig. 7A)

Material examined. stn CP7, 1 male cl 12.2 mm; stn CP8, 1 female cl 12.3 mm; stn CP35, 1 female cl 15.7 mm.

Distribution. Indo-West Pacific and western Atlantic, at depths of 274–2,305 m (Chace, 1986; Davie, 2002).

Remarks. Identification of the present material is based on Chace (1986).

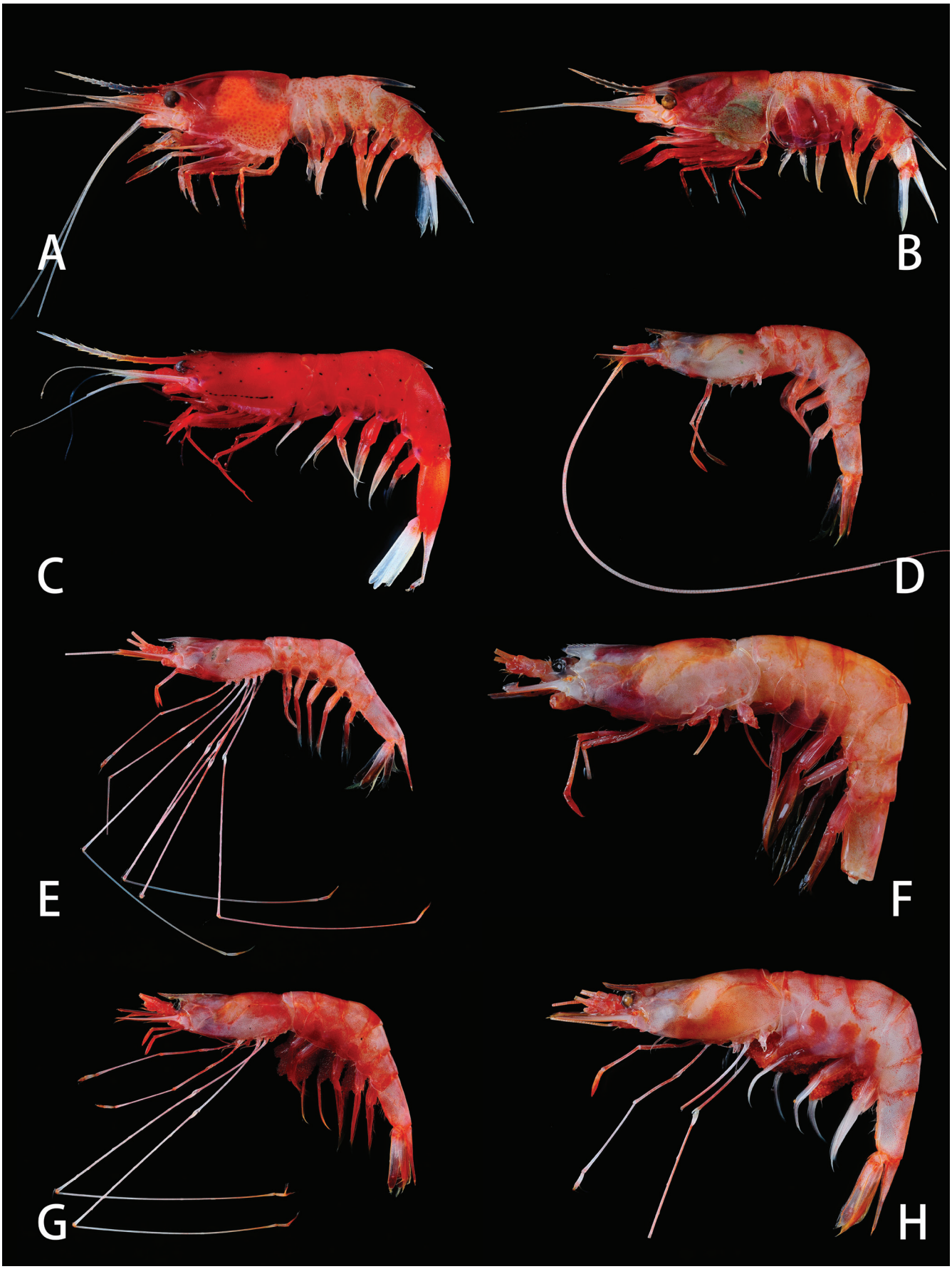

Fig. 7. A, *Oplophorus gracilirostris* A. Milne-Edwards, 1881, stn CP8, female (cl 12.3 mm); B, *O. typus* H. Milne Edwards, 1837, stn CP27, ovig. female (cl 13.5 mm); C, *Systellaspis debilis* (A. Milne-Edwards, 1881), stn CP25, male (cl 10.3 mm); D, *Nematocarcinus chacei* Burukovsky, 2002, stn CP10, female (cl 14.0 mm); E, *N.* aff. *chacei*, stn CP39, male (cl 14.6 mm); F, *N. gracilis* Bate, 1888, stn CP40, female (cl 23.7 mm); G, *N. nudirostris* Burukovsky, 1991, stn CP39, female (cl 24.0 mm); H, *N.* aff. *richeri* Burukovsky, 2000b, stn CP50, ovig. female (cl 20.6 mm).

***Oplophorus typus* H. Milne Edwards, 1837**
(Fig. 7B)

Material examined. stn CP27, 1 ovig. female cl 13.5 mm.

Distribution. Widely distributed in the Indo-West Pacific, at depths of 382–2,361 m (Chace, 1986; Davie, 2002).

Remarks. The identification is based on Chace (1986).

***Systellaspis debilis* (A. Milne-Edwards, 1881)**
(Fig. 7C)

Material examined. stn CP25, 1 male cl 10.3 mm; stn CP51, 1 male cl 12.9 mm.

Distribution. Widely distributed in the Atlantic and Indo-West Pacific, at depths of 25–3,000 m (Chace, 1986; Davie, 2002).

Remarks. The identification is based on Chace (1986).

Superfamily Nematocarcinoidea Smith, 1884

Family Nematocarcinidae A. Milne-Edwards, 1881

***Nematocarcinus chacei* Burukovsky, 2002**
(Fig. 7D)

Material examined. stn CP10, 1 female cl 14.0 mm.

Distribution. Indo-West Pacific, including Gulf of Aden, Andaman Sea, and Taiwan, at depths of 344–915 m (Burukovsky, 2002, 2013). Recorded for the first time in Indonesia, although within the known overall geographical range.

Remarks. The identification is based on Burukovsky (2013).

***Nematocarcinus* aff. *chacei* Burukovsky, 2002**
(Fig. 7E)

Material examined. stn CP39, 1 male cl 14.6 mm; stn CP48, 1 male cl 16.4 mm.

Remarks. These specimens agree with *Nematocarcinus chacei* in the short rostrum falling short of the article II of the antennular peduncle and the small posteroventral spine of the abdominal pleuron V, which is directed ventrally parallel to the posterolateral margin. However, it differs in the descending rostrum and the abdominal somite VI with setal rows extending onto the mesial sides of the posteroventral spots.

***Nematocarcinus gracilis* Bate, 1888**
(Fig. 7F)

Material examined. stn CP40, 1 female cl 23.7 mm.

Distribution. Previously known from the western Pacific in Japan, Taiwan, Philippines, Indonesia, Solomon Islands, New Caledonia, Wallis and Futuna Islands, Marquesas Islands, and Hawaii; at depths of 520–1,286 m (Burukovsky, 2013). This is the first record of this species in the Indian Ocean.

Remarks. The identification follows Burukovsky (2013). The specimen examined is fairly damaged. The distal part of the rostrum and telson are missing, and both sides of the abdominal pleura V are broken. Nevertheless, it can still be identified with *N. gracilis* because of the characteristic closely spaced postrostral spines, the moderately produced posterodorsal margin of the abdominal somite III, and the abdominal somite VI having oval posteroventral spots and setal rows extending onto the mesial margins of the posteroventral spots.

***Nematocarcinus nudirostris* Burukovsky, 1991**
(Fig. 7G)

Material examined. stn CP12, 1 ovig. female cl 18.6 mm; stn CP22, 1 ovig. female cl 25.1 mm; stn CP33, 1 ovig. female cl 24.1 mm; stn CP39, 1 female cl 24.0 mm, 2 ovig. female cl 21.0 & 27.0 mm; stn CP48, 1 male cl 18.4 mm, 1 ovig. female cl 21.1 mm.

Distribution. Known in the Indo-West Pacific from East Africa, Madagascar, Mozambique Channel, near Saya de Malha Bank, Sri Lanka, Indonesia, Philippines, and Taiwan, at depths of 567–1,112 m (Burukovsky, 2013). The SJADES material was collected from depths of 313–870 m.

Remarks. During the identification process, difficulties were encountered in discriminating between *Nematocarcinus nudirostris* and *N. combensis* Burukovsky, 2000a. Burukovsky (2012, 2013) differentiated these two taxa using only subtle differences of the shape of the ventral spots and extension of the setal rows on the ventral surface of the abdominal somite VI, but examination of the present specimens suggests that there is no clear distinction. In fact, Komai & Komatsu (2016) demonstrated substantial variation in these characters in *N. longirostris* Bate, 1888, and suggested that a careful assessment of these characters in species discrimination of *Nematocarcinus* A. Milne-Edwards, 1881, is required.

Burukovsky (2000a, 2003, 2004, 2012) regarded *N. rectirostris* Burukovsky, 1991, and *N. nudirostris* to be conspecific, giving priority to the name *N. nudirostris* over the name *N. rectirostris*. However, Burukovsky (2013) used the name *N. rectirostris* over *N. nudirostris* without comment. As Burukovsky (2000a) is the first reviser, the correct name used for the present speceis is *N. nudirostris* according ot the Article 24.2 of the International Code of Zoological Nomenclature (International Commission on Zoological Nomenclature, 1999).

***Nematocarcinus* aff. *richeri* Burukovsky, 2000b**
(Fig. 7H)

Material examined. stn CP27, 1 ovig. female cl 19.0 mm; stn CP50, 1 ovig. female cl 20.6 mm.

Distribution. *Nematocarcinus richeri* is known from Indonesia, Philippines, Taiwan, Solomon Islands, New Caledonia, Vanuatu, and Fiji; at depths of 395–1,300 m (Burukovsky, 2013). The SJADES material was collected from 383–557 m deep.

Remarks. The present specimens agree well with the illustrated paratype of *Nematocarcinus richeri* from Makassar Strait (Burukovsky, 2000b) and subsequently recorded specimens from Taiwan (Burukovsky, 2013) in the following features: short rostrum slightly ascending and upturned, armed with relatively few dorsal movable teeth (seven to nine, including three or four well spaced postrostral) and one small, subterminal ventral tooth; posterodorsal margin of abdominal somite III weakly produced; abdominal pleuron 5 with small posteroventral spine directed posteriorly; abdominal somite VI with narrowly separated, oval posteroventral spots and setal rows not extending onto posteroventral spots. In addition, the living colouration, i.e., the entire body being less intense red compared to its congeners, is also consistent. However, the holotype of *N. richeri*, collected from the Banda Sea, Indonesia, and illustrated in Burukovsky (2000b), differs from the SJADES specimens and the material from Taiwan (Burukovsky, 2013) in the following features: rostrum, with distal 0.4 unarmed, directed forward and bearing 11 dorsal teeth, including seven more closely spaced, in the holotype (versus ascending and upturned, bearing nine dorsal teeth over entire length, including postrostral four or five moderately spaced); posteroventral spine on abdominal pleuron V relatively stronger in the holotype; abdominal somite VI having more widely separated posterolateral spots and setal rows extending to midpoint of posteroventral spots along the mesial margins in the holotype (versus setal rows not extending to posteroventral spots). Considering these differences, it is questionable if the holotype and the other material identified as *N. richeri* are really conspecific.

Family Rhynchocinetidae Ortmann, 1890

***Rhynchocinetes brucei* Okuno, 1994**
(Fig. 8A)

Material examined. stn DW16, 1 female cl 6.8 mm.

Distribution. Previously known only from Hong Kong, Philippines, and Australia; at depths of 8–20 m (Chace, 1997; Davie, 2002). Recorded for the first time in Indonesia and from 92–103 m deep.

Remarks. The identification is based on Chace (1997).

Superfamily Psalidopodoidea Wood-Mason in Wood-Mason & Alcock, 1892

Family Psalidopodidae Wood-Mason in Wood-Mason & Alcock, 1892

***Psalidopus huxleyi* Wood-Mason in Wood-Mason & Alcock, 1892**
(Fig. 8B)

Material examined. stn CP48, 1 female cl 11.0 mm.

Distribution. Widely distributed in the Indo-West Pacific from India, to Japan and Australia; at depths of 446–1,100 m (Chace & Holthuis, 1978; Davie, 2002).

Remarks. The identification is based on Chace & Holthuis (1978) and Toriyama & Horikawa (1993).

Superfamily Stylodactyloidea Bate, 1888

Family Stylodactylidae Bate, 1888

***Parastylodactylus bimaxillaris* Bate, 1888**
(Fig. 8C)

Material examined. stn CP34, 1 ovig. female cl 7.3 mm; stn CP38, 1 ovig. female cl 6.4 mm.

Distribution. Widely distributed in the Indo-West Pacific from the eastern coast of South Africa to Fiji, at depths of 66–608 m (Cleva, 2008).

Remarks. The identification is based on Cleva (1990).

***Stylodactylus pubescens* Burukovsky, 1990**
(Fig. 8D)

Material examined. stn CP33, 1 female cl 14.5 mm.

Distribution. Known from Indonesia, Taiwan, New Caledonia, Tonga, Sala-y-Gomez and Nasca ridges; at depths of 500–1,183 m (Cleva, 2004). Previous record in Indonesia was from the Kai Islands. The present specimen was collected from southern Java in the Indian Ocean at depths of 312–525 m.

Remarks. The present material belongs to the form identified as "*Stylodactylus* sp. aff. *pubescens*" by Cleva (2004). This identification remains to be verified.

Superfamily Campylonotoidea Sollaud, 1913

Family Bathypalaemonellidae de Saint Laurent, 1985

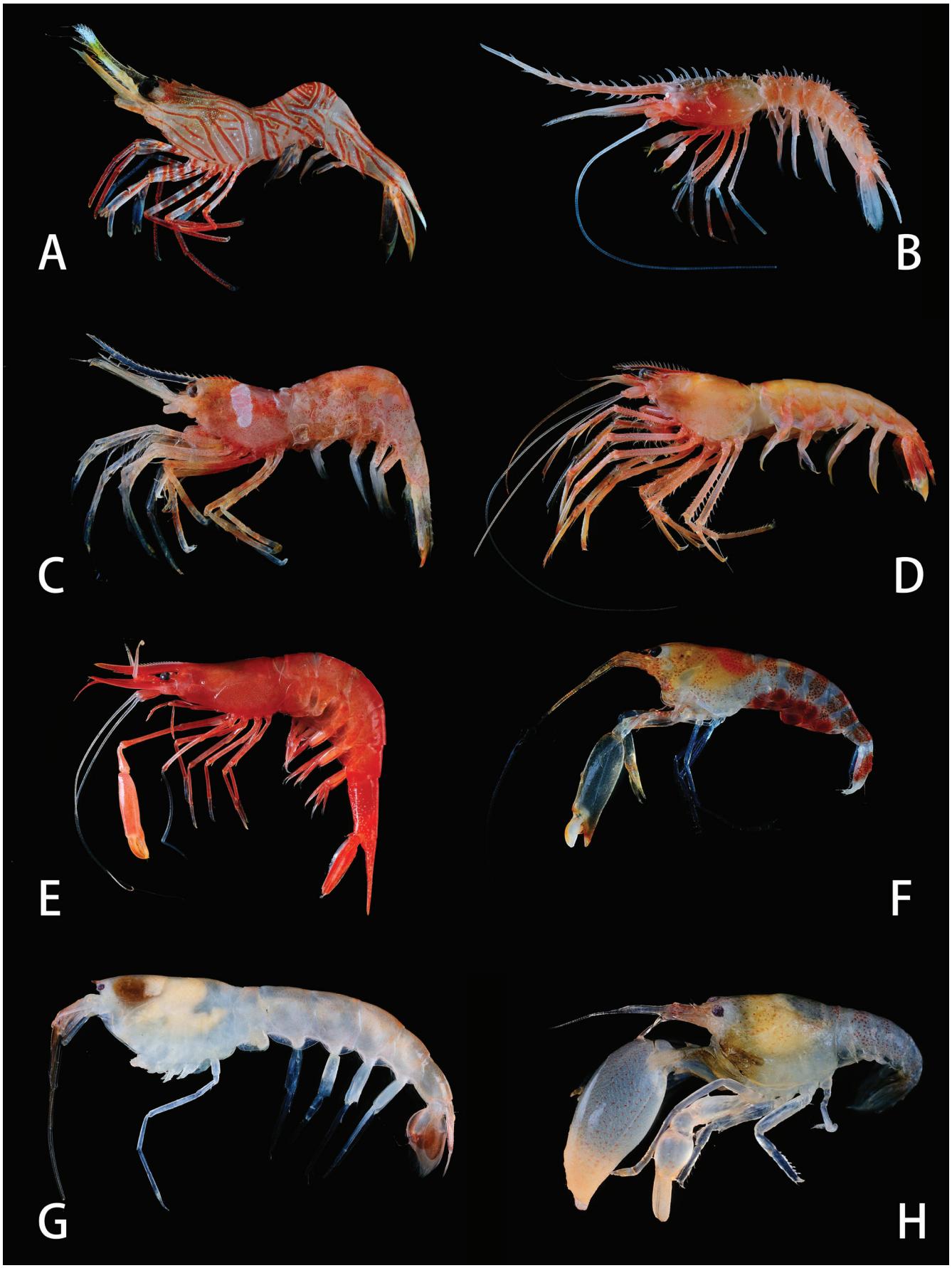

Fig. 8. A, *Rhynchocinetes brucei* Okuno, 1994, stn DW16, female (cl 6.8 mm); B, *Psalidopus huxleyi* Wood-Mason in Wood-Mason & Alcock, 1892, stn CP48, female (cl 11.0 mm); C, *Parastylodactylus bimaxillaris* Bate, 1888, stn CP38, ovig. female (cl 6.4 mm); D, *Stylodactylus pubescens* Burukovsky, 1990, stn CP33, female (cl 14.5 mm); E, *Bathypalaemonetes pilosipes* (Bruce, 1986), stn CP48, ovig. females (cl 11.6 mm); F, *Alpheus* aff. *alpheopsides* Coutière, 1905a, stn DW16, ovig. female (cl 3.6 mm); G, *A. compressus* Banner & Banner, 1981, stn DW19, male (cl 11.1 mm); H, *A.* aff. *eulimene* De Man, 1909, stn DW16, male (cl 3.3 mm).

***Bathypalaemonetes pilosipes* (Bruce, 1986)**
(Fig. 8E)

Material examined. stn CP48, 3 ovig. females cl 11.1–11.6 mm.

Distribution. Previously known in the western Pacific and the eastern Indian Ocean from Japan, Taiwan, Philippines, NW Australia, and New Caledonia; at depths of 350–852 m (Cleva, 2004). Recorded for the first time in Indonesia.

Remarks. The identification follows Cleva (2001, 2004).

Superfamily Alpheoidea Rafinesque, 1815

Family Alpheidae Rafinesque, 1815

***Alpheus* aff. *alpheopsides* Coutière, 1905a**
(Fig. 8F)

Material examined. stn DW16, 1 ovig. female cl 3.6 mm.

Distribution. Widely distributed in the Indo-West Pacific from the Red Sea to Micronesia and Samoa, lower intertidal to 160 m deep (Anker & De Grave, 2016). Although the taxonomy of *Alpheus alpheopsides* is still unclear (see below), this species and its closely related species *A. paracrinitus* Miers, 1881, have not been reported from Indonesia before (Banner & Banner, 1983; Anker & De Grave, 2016). Therefore, this species can be considered as a new record for Indonesia.

Remarks. Although the major cheliped was attached to the body in the photograph, it is now lost in the specimen examined. Below, features of the major cheliped are described from the photograph as far as possible.

The present specimen best agrees with the accounts under the name of *Alpheus paracrinitus* by Banner & Banner (1982) and Chace (1988), particularly in the following features: (1) cheliped meri each with prominent subdistal tooth-like spine on ventromesial margin; (2) major chela smooth, slightly compressed, without distinct constrictions or groove; (3) minor chela with finger subequal in length to palm; (4) first carpal sub-article of pereiopod II distinctly longer than second carpal sub-article; (5) pereiopod III merus unarmed. Anker & De Grave (2016) referred the account of *A. paracrinitus* from Australia by Banner & Banner (1982) to *A. alpheopsides*, which belongs to the *A. paracrinitus* species complex. They presented a colour photograph of a male specimen of *A. alpheopsides* (Anker & De Grave, 2016: fig. 1), with which the SJADES specimen agrees well in having six brown transverse bands on the abdomen and tinge of brown on the fixed finger of the major chela. The present specimen is provisionally identified with *A. alpheopsides* following Anker & De Grave (2016), although the taxonomy of the *A. paracrinitus* species complex remains to be revised.

***Alpheus compressus* Banner & Banner, 1981**
(Fig. 8G)

Material examined. stn DW19, 1 male cl 11.1 mm.

Distribution. Indo-West Pacific, recorded from Réunion, Andaman Sea, Indonesia, Philippines, South China Sea, and Japan, at depths of 14–280 m (Banner & Banner, 1981, 1983, 1985; Chace, 1988; Miya, 1995; Sha et al., 2019).

Remarks. The present specimen, in which all pereiopods but the left pereiopod V are missing, is referable to a species of *Alpheus* because of the well developed orbital hoods on the carapace and the possession of epipods on the anterior four pereiopods. The unusually compressed body and the prominent, rounded lateral lobe on the diaeresis of the uropodal exopod suggest that the specimen represents *A. compressus* (Banner & Banner, 1981). The SJADES specimen also has characteristic elongate, slender pleopods I–V, which are unusual for species of *Alpheus*, but these were not mentioned in the original description. Nevertheless, the images of the holotype and paratypes of *A. compressus* deposited in MNHN (https://commons.wikimedia.org/wiki/Category:Alpheus compressus) clearly show similarly developed pleopods.

***Alpheus* aff. *eulimene* De Man, 1909**
(Fig. 8H)

Material examined. stn DW16, 1 male cl 3.3 mm.

Distribution. *Alpheus eulimene* has been recorded widely in the Indo-West Pacific, from East Africa to Japan and Australia; reported from the shallow subtidal to 83 m depth (Anker & De Grave, 2016). The SJADES specimen was collected from depths of 92–103 m.

Remarks. The present specimen best agrees with *Alpheus eulimene* in the following features: (1) frontal margin of carapace projecting beyond orbital hoods; (2) abdominal pleuron I produced into hook-like projection, while pleura II–V angular but not projecting; (3) antennal scaphocerite with blade strongly reduced, not reaching distal margin of second article of antennular peduncle; (4) major chela ovoid, smooth, without constrictions or depressions; (5) minor cheliped with somewhat bulbous palm and fingers distinctly longer than palm; (6) first carpal sub-article of pereiopod II about half-length of second sub-article; (7) pereiopod III ischium unarmed and merus armed with ventrodistal spine (Banner & Banner, 1982; Anker & De Grave, 2016; Sha et al., 2019). Nevertheless, the SJADES specimen differs from previous descriptions of *A. eulimene* (Banner & Banner, 1982; Sha et al., 2019) in having a more pronounced rostrum and the presence of a conspicuous dorsodistal spine on the major cheliped merus. Comparing to the photograph provided in Anker & De Grave (2016: fig. 12), the size of the abdomen is more reduced in the SJADES specimen. Because of these differences, the present specimen is tentatively referred to *A. eulimene*. Anker & De Grave (2016) also noted that *A. eulimene* is in need of extensive revision.

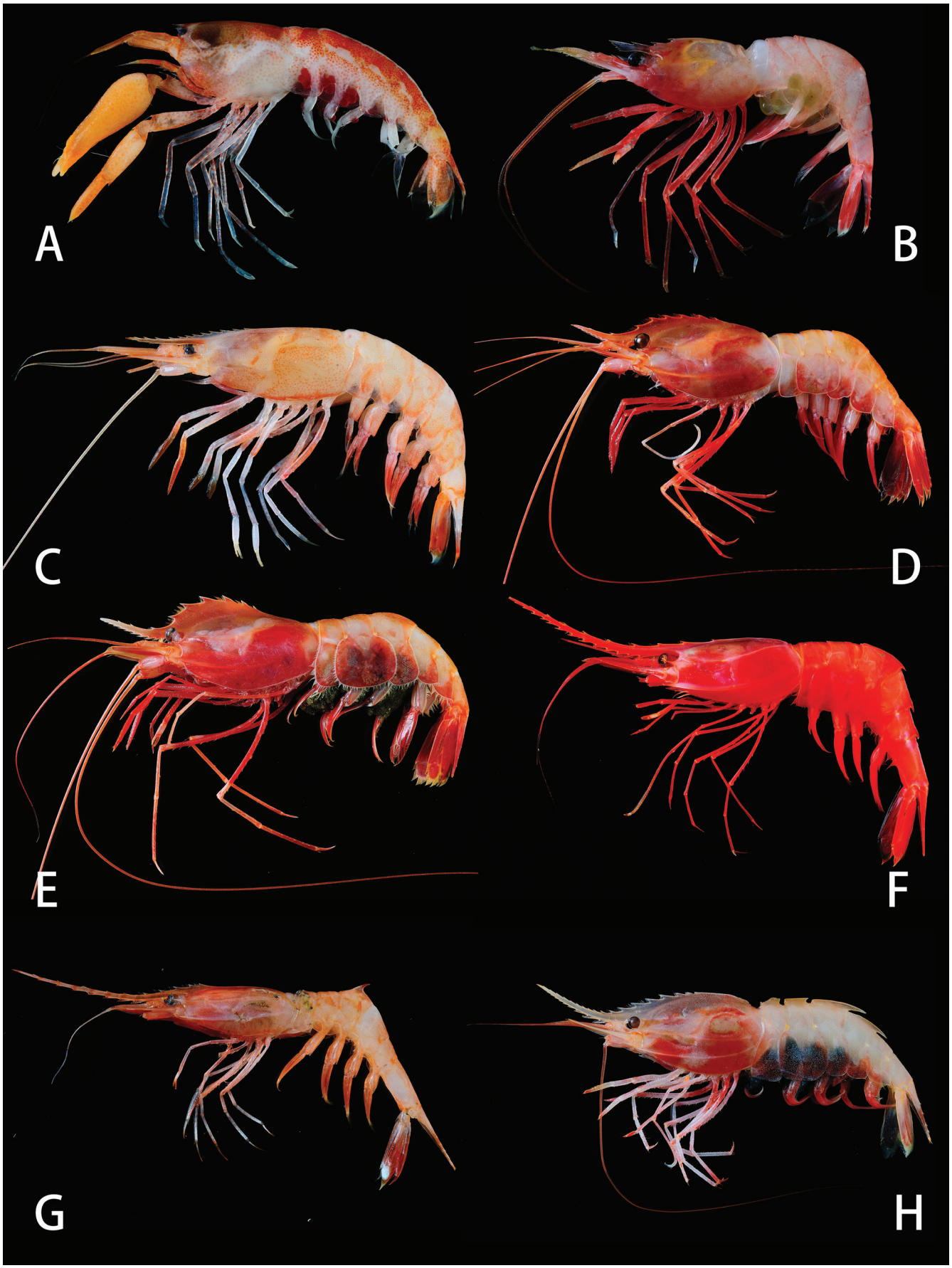

Fig. 9. A, *Alpheus soelae* Banner & Banner, 1986, stn CP10, ovig. female (cl 12.7 mm); B, *Lebbeus java* Komai, Chang & Chan, 2019, stn CP48, holotype ovig. female (cl 8.7 mm) (MZB Cru 4973); C, *Chlorotocus crassicornis* (Costa, 1871), stn CP34, male (cl 18.6 mm); D, *Heterocarpus chani* Li, 2006, stn CP39, male (cl 35.4 mm); E, *H. corona* Yang, Chan & Chu, 2010, stn CP39, ovig. female (cl 41.6 mm); F, *H. dorsalis* Bate, 1888, stn CP24, female (cl 28.7 mm); G, *H. fascirostrata* Yang, Chan & Kumar, 2018, stn CP7, female (cl 14.3 mm); H, *H. hayashii* Crosnier, 1988a, stn CP20, ovig. female (cl 29.8 mm).

***Alpheus soelae* Banner & Banner, 1986**
(Fig. 9A)

Material examined. stn CP07, 1 female cl 11.2 mm; stn CP10, 1 ovig. female cl 12.7 mm; stn CP34, 1 female cl 9.0 mm; stn CP39, 1 ovig. female cl 16.0 mm.

Distribution. Previously only known from the Philippines and Indian Ocean off Western Australia, at depths of 293–640 m (Banner & Banner, 1986; Chace, 1988). Reported for the first time from Indonesia and the present material was collected from depths of 234–637 m.

Remarks. The identification follows Banner & Banner (1986) and Chace (1988).

Family Thoridae Kingsley, 1879

***Lebbeus java* Komai, Chang & Chan, 2019**
(Fig. 9B)

Material examined. stn CP48, holotype ovig. female cl 8.7 mm (MZB Cru 4973), paratype ovig. female cl 8.5 mm (ZRC 2019.0378).

Distribution. So far only known from southern Java at depths of 637–689 m (Komai et al., 2019).

Remarks. This new species of shrimp was first described by Komai et al. (2019) based on SJADES material. The genus *Lebbeus* White, 1847, was previously included in the family Hippolytidae Bate, 1888, which has recently been divided into five families to better reflect phylogenetic relationships. This has resulted in the genus *Lebbeus* now being placed in the Thoridae (De Grave et al., 2014).

Superfamily Pandaloidea Haworth, 1825

Family Pandalidae Haworth, 1825

***Chlorotocus crassicornis* (Costa, 1871)**
(Fig. 9C)

Material examined. stn CP34, 1 male cl 18.6 mm.

Distribution. Widely distributed in the eastern Atlantic and Indo-West Pacific, at depths of 3–600 m (Chace, 1985; Davie, 2002).

Remarks. The identification mainly follows Chace (1985).

***Heterocarpus chani* Li, 2006**
(Fig. 9D)

Material examined. stn CP7, 1 male cl 30.7 mm, 1 ovig. female cl 40.8 mm; stn CP8, 2 females cl 23.8 & 35.1 mm; stn CP39, 1 male cl 35.4 mm.

Distribution. Previously known only from the South China Sea, Philippines, and India; at depths of 382 (perhaps 200) to 888 m (Yang et al., 2017). Recorded for the first time in Indonesia and the present material was collected from depths of 379–637 m.

Remarks. The identification is based on Yang et al. (2010; 2017).

***Heterocarpus corona* Yang, Chan & Chu, 2010**
(Fig. 9E)

Material examined. stn CP39, 1 ovig. female cl 41.6 mm.

Distribution. Widely distributed in the eastern Indian Ocean and western Pacific from NW Australia to Indonesia, Japan, and Tonga; at depths of 283–750 m (Yang et al., 2010).

Remarks. The identification is based on Yang et al. (2010).

***Heterocarpus dorsalis* Bate, 1888**
(Fig. 9F)

Material examined. stn CP24, 1 female cl 28.7 mm.

Distribution. Widely distributed in the Indo-West Pacific from eastern Africa to Samoa, at depths of 185–1,400 m (Chace, 1985).

Remarks. The identification follows Chace (1985) and Crosnier (1988a).

***Heterocarpus fascirostrata* Yang, Chan & Kumar, 2018**
(Fig. 9G)

Material examined. stn CP2, 1 female cl 13.8 mm; stn CP7, 1 female cl 14.3 mm.

Distribution. Eastern Indian Ocean and western Pacific from NW Australia to Japan and Solomon Islands; at depths of 262–655 m (Yang et al., 2018). The SJADES material was collected from 257–409 m deep.

Remarks. The identification follows Yang et al. (2018).

***Heterocarpus hayashii* Crosnier, 1988a**
(Fig. 9H)

Material examined. stn CP2, 1 ovig. female cl 35.1 mm; stn CP20, 1 ovig. female cl 29.8 mm.

Distribution. Eastern Indian Ocean and western Pacific from NW Australia to Japan and Samoa; at depths of 180–625 m (Crosnier, 1988a; Davie, 2002).

Remarks. The identification follows Crosnier (1988a).

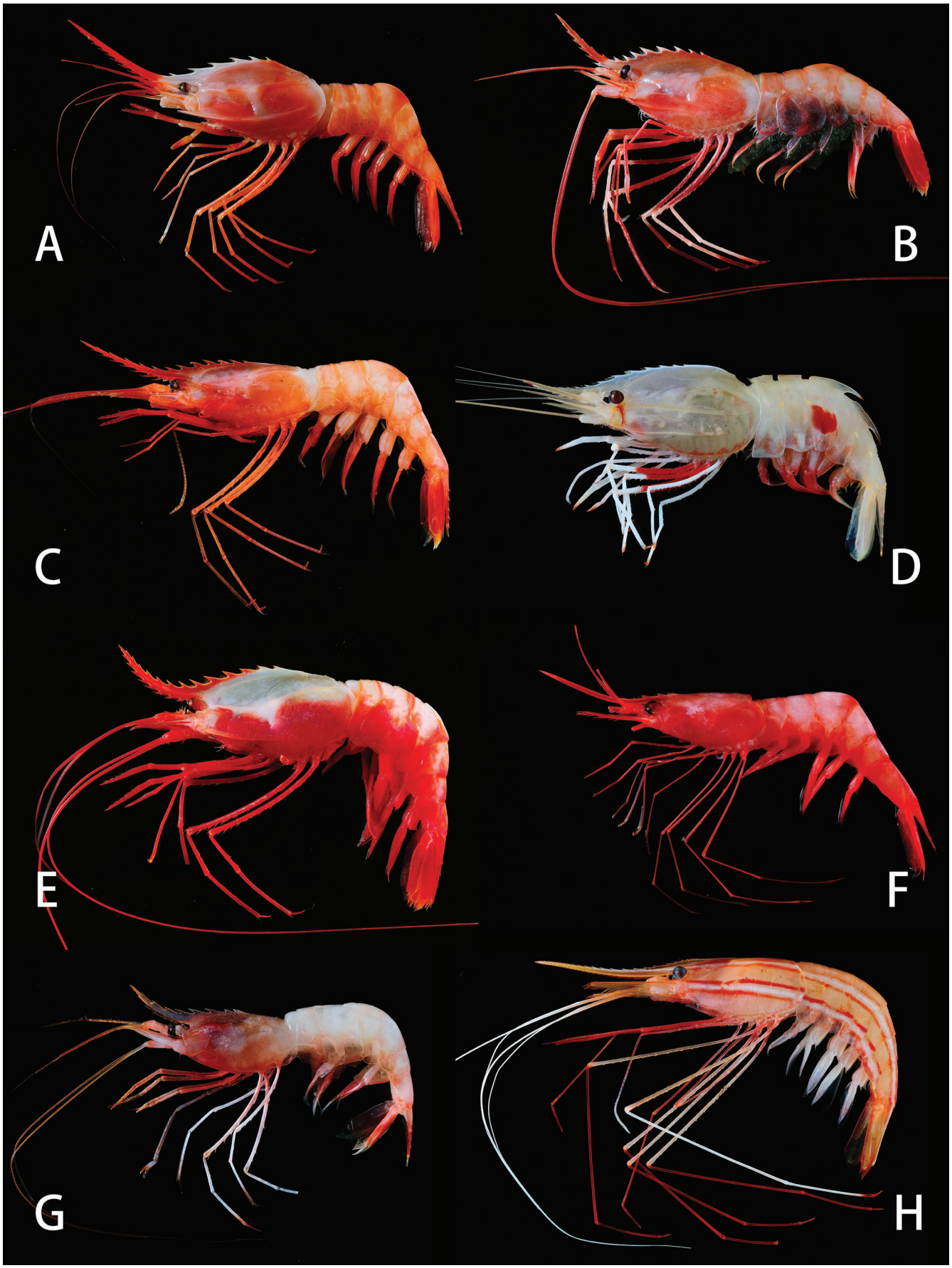

Fig. 10. A, *Heterocarpus laevigatus* Bate, 1888, stn CP47, female (cl 29.3 mm); B, *H. lepidus* De Man, 1917, stn CP39, ovig. female (cl 36.2 mm); C, *H. nesisi* Burukovsky, 1986, stn CP35, male (cl 19.5 mm); D, *H. sibogae* De Man, 1917, stn CP20, female (cl 35.6 mm); E, *H. tricarinatus* Alcock & Anderson, 1894, stn CP53, female (cl 37.2 mm); F, *Plesionika alcocki* (Anderson, 1896), stn CP25, female (cl 20.7 mm); G, *P. bifurca* Alcock & Anderson, 1894, stn CP48, ovig. female (cl 13.2 mm); H, *P. indica* De Man, 1917, stn CP38, male (cl 30.3 mm).

***Heterocarpus laevigatus* Bate, 1888**
(Fig. 10A)

Material examined. stn CP39, 1 juvenile cl 14.1 mm; stn CP47, 1 female cl 29.3 mm.

Distribution. Widely distributed in the Eastern Atlantic and Indo-Pacific, at depths of 366–966 m (Crosnier, 1988a).

Remarks. The identification follows Chace (1985) and Crosnier (1988a).

***Heterocarpus lepidus* De Man, 1917**
(Fig. 10B)

Material examined. stn CP39, 1 ovig. female cl 36.2 mm.

Distribution. Widely distributed in the Indo-West Pacific from the eastern coasts of Africa to Taiwan and Kiribati, at depths of 480–732 m (Chace, 1985; Crosnier, 1988a; Yang et al., 2010).

Remarks. The identification follows Chace (1985) and Crosnier (1988a).

***Heterocarpus nesisi* Burukovsky, 1986**
(Fig. 10C)

Material examined. stn CP35, 1 male cl 19.5 mm; stn CP40, 1 male cl 18.9 mm; stn CP47, 1 male cl 17.6 mm.

Distribution. Widely distributed in the Indo-Pacific from Madagascar to Baja California, at depths of 550–1,080 m (Chan & Crosnier, 1997; Hendrickx, 2019). Nevertheless, this species is recorded for the first time in Indonesia from depths of 476–1,091 m.

Remarks. The identification follows Chan & Crosnier (1997). *Heterocarpus nesisi* belongs to the "*Heterocarpus laevis* A. Milne-Edwards, 1883" species group which contains five species. As the characteristics of this species group form a continuum from typical *Heterocarpus* A. Milne-Edwards, 1881, to typical *Plesionika* Bate, 1888, its generic affinity has been rather controversial (see Chan & Crosnier, 1997; Komai, 2011). Hendrickx (2019) recently erected another genus *Heteronika* Hendrickx, 2019, solely for the present species. The latest and most comprehensive molecular phylogenetic analysis of the Pandalidae revealed that the "*H. laevis*" species group is nested within *Heterocarpus*, although *Heterocarpus* may not be a monophyletic group (Liao et al., 2019). Therefore, for the time being members of the "*H. laevis*" species group are better assigned to *Heterocarpus* before this genus is split.

***Heterocarpus sibogae* De Man, 1917**
(Fig. 10D)

Material examined. stn CP7, 1 female cl 22.4 mm; stn CP20, 1 female cl 35.6 mm.

Distribution. Widely distributed in the Indo-West Pacific from Madagascar to French Polynesia, at depths of 247–850 m (Chace, 1985; Crosnier, 1988a).

Remarks. The identification follows Crosnier (1988a).

***Heterocarpus tricarinatus* Alcock & Anderson, 1894**
(Fig. 10E)

Material examined. stn CP53, 1 female cl 37.2 mm.

Distribution. Widely distributed in the Indo-West Pacific from the eastern coast of Africa to Taiwan and New Caledonia, at depths of 712–2,307 m (Li & Chan, 2013).

Remarks. The identification is based on Crosnier (1988a) and Li & Chan (2013).

***Plesionika alcocki* (Anderson, 1896)**
(Fig. 10F)

Material examined. stn CP25, 1 female cl 20.7 mm.

Distribution. Widely distributed in the Indo-West Pacific from eastern Africa to Japan and New Caledonia, at depths of 316–1,761 m (Li & Chan, 2013).

Remarks. The identification is based on Chace (1985).

***Plesionika bifurca* Alcock & Anderson, 1894**
(Fig. 10G)

Material examined. stn CP10, 1 female cl 9.9 mm; stn CP25, 1 ovig. female cl 16.1 mm; stn CP48, 1 ovig. female cl 13.2 mm.

Distribution. Widely distributed in the Indo-West Pacific from eastern Africa to Japan and Australia, at depths of 220–1,412 m (Li & Chan, 2013).

Remarks. The identification is based on Chace (1985).

***Plesionika indica* De Man, 1917**
(Fig. 10H)

Material examined. stn CP20, 1 male cl 33.0 mm; stn CP38, 1 male cl 30.3 mm.

Distribution. Widely distributed in the Indo-West Pacific from Zanzibar to Japan and Australia, at depths of 220–600 m (Li & Chan, 2013).

Remarks. The identification is based on Chace (1985).

***Plesionika kensleyi* Chace, 1985**
(Fig. 11A)

Material examined. stn CP34, 1 ovig. female cl 10.4 mm.

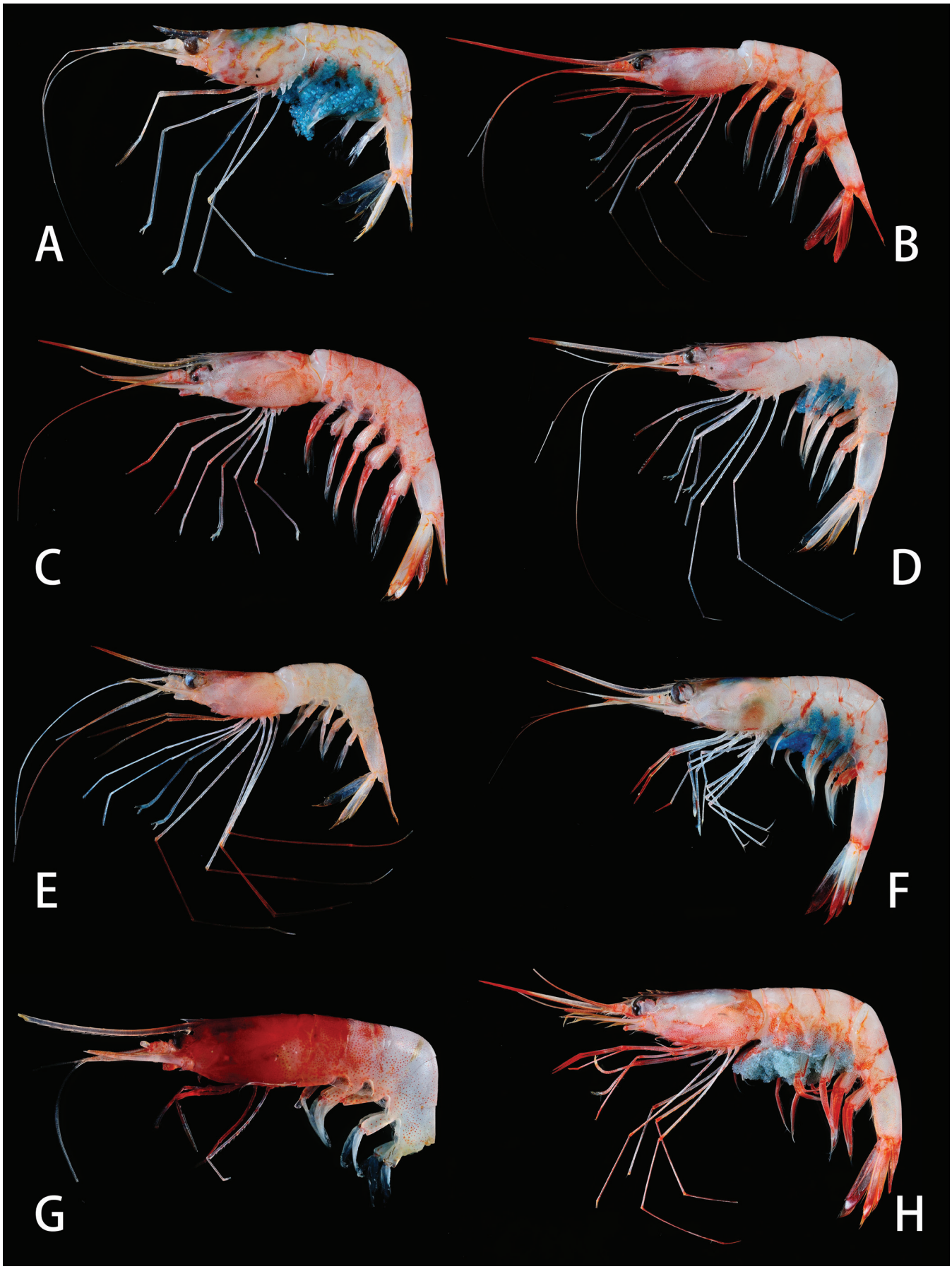

Fig. 11. A, *Plesionika kensleyi* Chace, 1985, stn CP34, ovig. female (cl 10.4 mm); B, *P. martia* (A. Milne-Edwards, 1883), stn CP39, female (cl 14.8 mm); C, *P. orientalis* Chace, 1985, stn CP8, male (cl 20.3 mm); D, *P. parvimartia* Chace, 1985, stn CP34, ovig. female (cl 11.1 mm); E, *P. quasigrandis* Chace, 1985, stn CP34, female (cl 8.9 mm); F, *P. reflexa* Chace, 1985, stn CP20, ovig. female (cl 19.2 mm); G, *P. richardi* (Coutiére, 1905b), stn CP44, female (cl 7.4 mm); H, *P. semilaevis* Bate, 1888, stn CP50, ovig. female (cl 19.2 mm).

Distribution. Previously reported from Durban in South Africa, South China Sea, and the Philippines; at depths of 118–333 m (Li & Chan, 2013). Recorded from Indonesia for the first time.

Remarks. The identification is based on Chace (1985). The present specimen has the abdominal pleuron IV pointed on both sides.

***Plesionika martia* (A. Milne-Edwards, 1883)**
(Fig. 11B)

Material examined. stn CP22, 1 male cl 23.1 mm; stn CP33, 1 ovig. female cl 21.6 mm; stn CP35, 1 ovig. female cl 26.0 mm; stn CP39, 1 female cl 14.8 mm.

Distribution. Atlantic and Indo-West Pacific, at depths of 190–2,195 m (Chan et al., 2020). In the Indo-West Pacific region, this species was previously known with certainty only from India, Taiwan, Australia, and French Polynesia. Reported for the first time in Indonesia.

Remarks. The identification is based on Chan et al. (2020).

***Plesionika orientalis* Chace, 1985**
(Fig. 11C)

Material examined. stn CP7, 1 ovig. female cl 18.8 mm; stn CP8, 6 males cl 12.0–20.3 mm, 2 ovig. females cl 15.9 & 18.3 mm, 2 females cl 10.1 & 13.4 mm.

Distribution. Known from the Philippines, Indonesia, Australia, and Japan; at depths of 247–686 m (Li & Chan, 2013).

Remarks. The identification is based on Chan et al. (2020).

***Plesionika parvimartia* Chace, 1985**
(Fig. 11D)

Material examined. stn CP34, 4 males cl 10.0–11.9 mm, 5 ovig. females cl 10.9–12.4 mm, 2 females cl 10.3 & 10.7 mm.

Distribution. Known from the Philippines, Indonesia, Australia, and Japan; at depths of 164–596 m (Li & Chan, 2013).

Remarks. The identification is based on Chan et al. (2020). The present record confirms the presence of this species in Indonesia (see Chace, 1985).

***Plesionika quasigrandis* Chace, 1985**
(Fig. 11E)

Material examined. stn CP34, 1 female cl 8.9 mm.

Distribution. Widely distributed in the Indo-West Pacific from Gulf of Aden to Australia and Japan, at depths of 164–501 m (Li & Chan, 2013).

Remarks. The identification is based on Chan & Crosnier (1991).

***Plesionika reflexa* Chace, 1985**
(Fig. 11F)

Material examined. stn CP20, 1 ovig. female cl 19.2 mm; stn CP38, 1 male cl 13.6 mm.

Distribution. Widely distributed in the Indo-West Pacific from Gulf of Aden to Japan and French Polynesia, at depths of 191–910 m (Chan et al., 2018).

Remarks. The identification follows Chace (1985) and Chan et al. (2018).

***Plesionika richardi* (Coutiére, 1905b)**
(Fig. 11G)

Material examined. stn CP44, 1 female cl 7.4 mm.

Distribution. World-wide tropical to temperate seas, from surface to 3,600 m deep (Chace, 1985).

Remarks. The identification is based on Chace (1985). This species was previously placed in the genus *Stylopandalus* Coutiére, 1905c, which has been recently synonymised with *Plesionika* by Liao et al. (2019).

***Plesionika semilaevis* Bate, 1888**
(Fig. 11H)

Material examined. stn CP7, 1 female cl 20.6 mm; stn CP8, 1 ovig. female cl 17.4 mm; stn CP10, 1 male cl 12.6 mm, 2 females cl 22.1 mm & 24.2 mm; stn CP20, 7 males cl 11.3–20.5 mm, 1 ovig. female cl 20.5 mm, 4 females cl 12.4–22.4 mm; stn CP27, 1 ovig. female cl 20.4 mm; stn CP50, 1 ovig. female cl 19.2 mm.

Distribution. Widely distributed in the Indo-West Pacific from India to Japan and French Polynesia, at depths of 164–888 m (Chan et al., 2020).

Remarks. The identification is based on Chan et al. (2020).

***Plesionika spinensis* Chace, 1985**
(Fig. 12A)

Material examined. stn CP56, 1 ovig. female cl 9.8 mm.

Distribution. Previously only known from the Philippines and the South China Sea; at depths of 162–472 m (Li & Chan, 2013). Recorded for the first time in Indonesia.

Remarks. The identification follows Chace (1985). The posterodorsal spines at the abdominal tergite III and IV are small and often missing in this species (see Li & Chan, 2013).

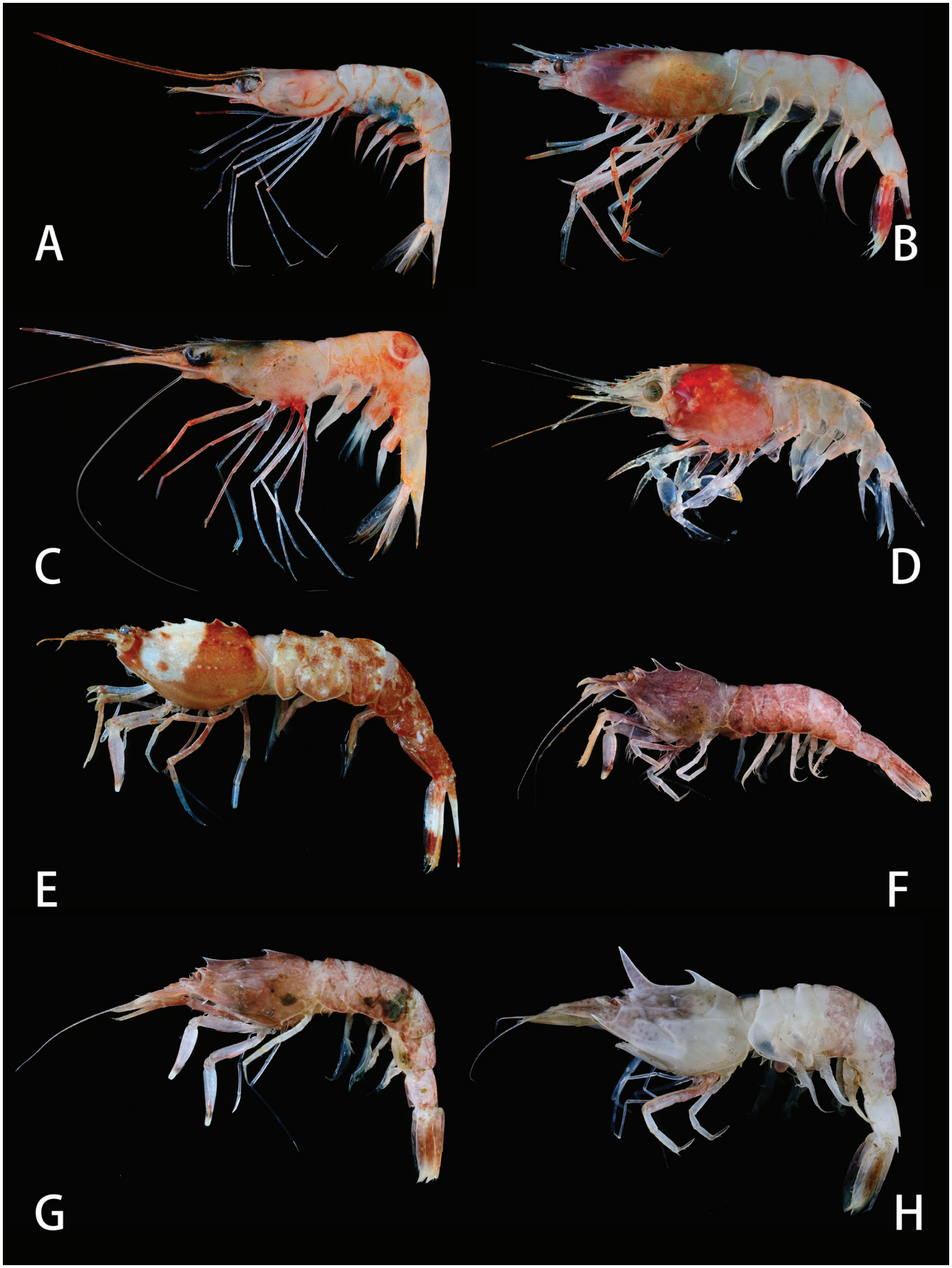

Fig. 12. A, *Plesionika spinensis* Chace, 1985, stn CP56, ovig. female (cl 9.8 mm); B, *P. spinidorsalis* (Rathbun, 1906), stn CP39, female (cl 15.6 mm); C, *P. unidens* Bate, 1888, stn CP34, male (cl 11.5 mm); D, *Thalassocaris crinita* (Dana, 1852), stn DW16, male (cl 5.3 mm); E, *Aegaeon lacazei* (Gourret, 1887), stn CP7, female (cl 12.1 mm); F, *Metacrangon clevai* Komai, 2012, stn DW32, female (cl 7.4 mm) (ZRC 2019.1872); G, *M. latirostris* Komai & Chan, 2020, stn CP47, holotype female (cl 9.4 mm) (MZB Cru 5054); H, *M. punctata* Komai, 2012, stn CP18, ovig. female (cl 12.5 mm) (ZRC 2019.1874).

***Plesionika spinidorsalis* (Rathbun, 1906)**
(Fig. 12B)

Material examined. stn CP39, 1 female cl 15.6 mm.

Distribution. Eastern Indian Ocean and western Pacific and known from NW Australia, Indonesia, Philippines, the South China Sea, Hawaii, and French Polynesia; at depths of 100–1,250 m (Li & Chan, 2013).

Remarks. The identification is based on Chace (1985).

***Plesionika unidens* Bate, 1888**
(Fig. 12C)

Material examined. stn CP34, 1 male cl 11.5 mm.

Distribution. Indo-West Pacific from Bay of Bengal to Japan and Papua New Guinea, at depths of 170–400 m (Hayashi, 1986; Davie, 2002).

Remarks. The identification follows Chace (1985).

***Thalassocaris crinita* (Dana, 1852)**
(Fig. 12D)

Material examined. stn DW16, 1 male cl 5.3 mm.

Distribution. Widely distributed in the Indo-West Pacific region from Madagascar to Japan and the Marshall Islands, at depths of 5–200 m (Chace, 1985; Davie, 2002; De Grave & Chan, 2010; Liao et al., 2019).

Remarks. The identification is based on Chace (1985). Previously *Thalassocaris* Stimpson, 1860, had been assigned to its own family Thalassocarididae Bate, 1888, but this family is now synonymised with Pandalidae by Liao et al. (2019).

Superfamily Crangonoidea Haworth, 1825

Family Crangonidae Haworth, 1825

***Aegaeon lacazei* (Gourret, 1887)**
(Fig. 12E)

Material examined. stn CP7, 1 female cl 12.1 mm.

Distribution. Widely distributed in the eastern Atlantic and Indo-West Pacific, at depths of 30–759 m (Chan, 1996).

Remarks. The identification follows Chan (1996).

***Metacrangon clevai* Komai, 2012**
(Fig. 12F)

Material examined. stn DW32, 1 female cl 7.4 mm (ZRC 2019.1872).

Distribution. Previously only known from the Solomon Islands and Vanuatu, recorded from Indonesia for the first time by the SJADES expedition; at depths of 777–1,040 m (Komai, 2012; Komai & Chan, 2020).

Remarks. The present material was earlier reported in Komai & Chan (2020).

***Metacrangon latirostris* Komai & Chan, 2020**
(Fig. 12G)

Material examined. stn CP47, holotype female cl 9.4 mm (MZB Cru 5054).

Distribution. At present only known from southern Java, at depths of 476–530 m (Komai & Chan, 2020).

Remarks. This new shrimp species was earlier described by Komai & Chan (2020) based on SJADES material.

***Metacrangon punctata* Komai, 2012**
(Fig. 12H)

Material examined. stn CP13, 1 ovig. female cl 12.9 mm (ZRC 2019.1873); stn CP18, 1 male cl 7.4 mm, 1 ovig. female cl 12.5 mm (ZRC 2019.1874).

Distribution. Known from Indonesia, Papua New Guinea, Solomon Islands, and New Caledonia, at depths of 670–1,268 m (Komai, 2012; Komai & Chan, 2020).

Remarks. The present material was earlier reported in Komai & Chan (2020). A previous record of this species in Indonesia was from the Banda Sea (Komai, 2012).

***Parapontocaris andamanensis* (Wood-Mason in Wood-Mason & Alcock, 1891c)**
(Fig. 13A)

Material examined. stn CP20, 1 female cl 14.1 mm; stn CP22, 1 female cl 9.3 mm.

Distribution. Previously only known with certainty from the Andaman Sea at depths of 344–403 m (Chan, 1996). Recorded for the first time in Indonesia from depths of 325–870 m.

Remarks. The identification follows Chan (1996).

***Parapontocaris aspera* Chace, 1984**
(Fig. 13B)

Material examined. stn CP34, 1 female cl 18.7 mm.

Distribution. Widely distributed in the Indo-West Pacific from Madagascar to Taiwan and New Caledonia, at depths of 215–525 m (Chan, 1996).

Remarks. The identification follows Chan (1996).

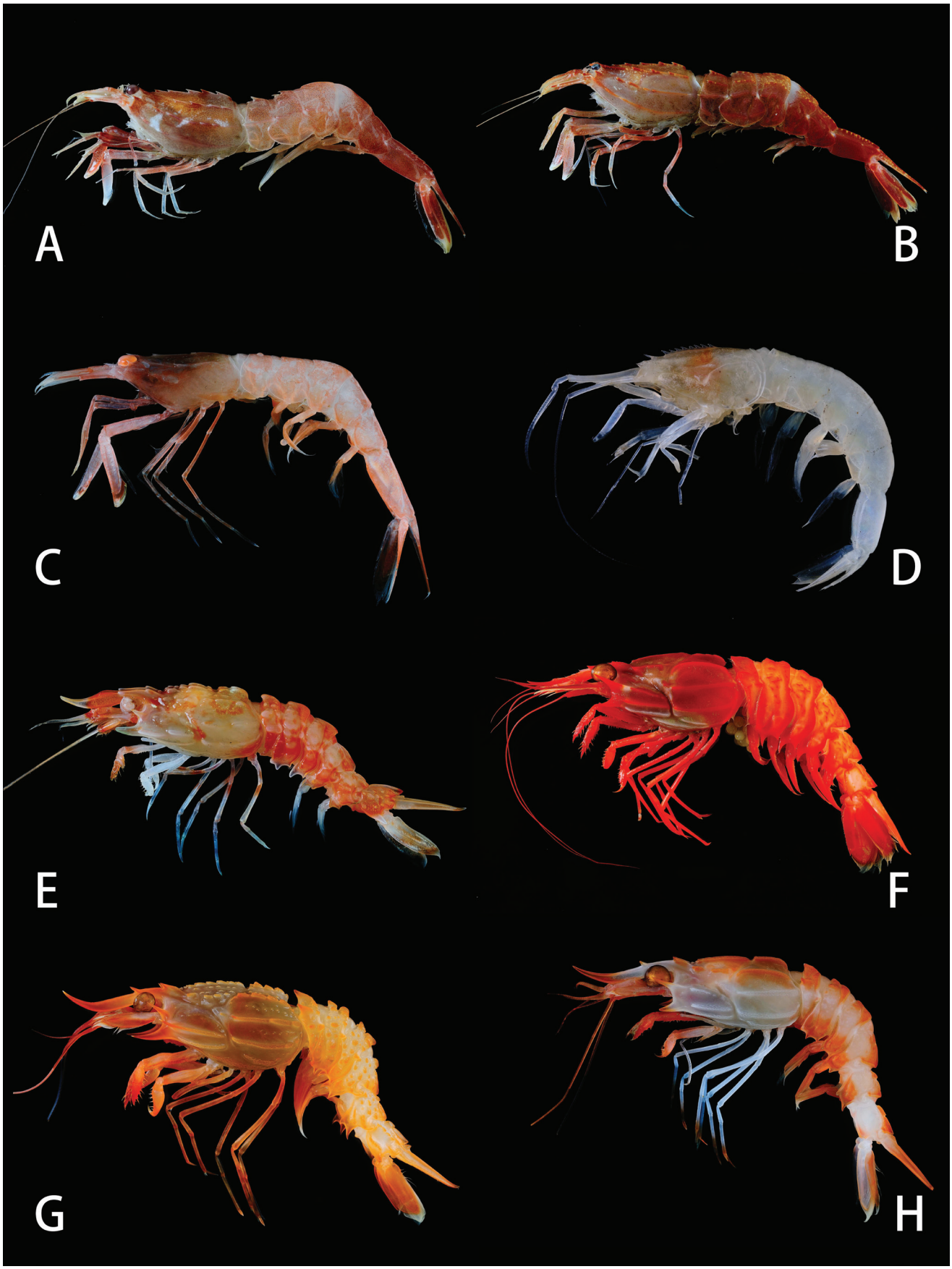

Fig. 13. A, *Parapontocaris andamanensis* (Wood-Mason in Wood-Mason & Alcock, 1891c), stn CP20, female (cl 14.1 mm); B, *P. aspera* Chace, 1984, stn CP34, female (cl 18.7 mm); C, *Parapontophilus difficilis* Komai, 2008, stn CP22, ovig. female (cl 9.0 mm); D, *Prionocrangon demani* Kim & Chan, 2005, stn DW32, female (cl 6.7 mm); E, *Glyphocrangon hakuhoae* Takeda & Hanamura, 1994, stn CP7, male (cl 12.4 mm) (ZRC 2019.0295); F, *G. indonesiensis* Komai, 2004, stn CP22, ovig. female (cl 28.1 mm) (ZRC 2020.0301); G, *G. juxtaculeata* Chace, 1984, stn CP35, female (cl 17.2 mm) (ZRC 2020.0296); H, *G. proxima* Komai, 2004, stn CP12, male (cl 12.3 mm) (ZRC 2020.0297).

***Parapontophilus difficilis* Komai, 2008**
(Fig. 13C)

Material examined. stn CP22, 1 ovig. female cl 9.0 mm.

Distribution. Previously known in the West Pacific from Taiwan, Philippines, Indonesia, Papua New Guinea, Solomon Islands, Vanuatu, and New Caledonia; at depths of 435–1,598 m (Komai, 2008; Kim & Chan, 2020). Recorded for the first time from the Indian Ocean.

Remarks. The identification follows Komai (2008).

***Prionocrangon demani* Kim & Chan, 2005**
(Fig. 13D)

Material examined. stn DW32, 1 female cl 6.7 mm; stn CP47, 1 female cl 6.8 mm.

Distribution. Only known from Indonesia and the Philippines, at depths of 1,158–1,488 m (Kim & Chan, 2005). The SJADES material was collected from 476–977 m deep.

Remarks. The identification follows Kim & Chan (2005). The telson of the specimen from stn CP47 has the distal part missing whereas the telson of the specimen from stn DW32 is shorter than the abdominal somite VI.

Family Glyphocrangonidae Smith, 1884

***Glyphocrangon hakuhoae* Takeda & Hanamura, 1994**
(Fig. 13E)

Material examined. stn CP7, 1 male cl 12.4 mm (ZRC 2019.0295), 2 males cl 13.4 & 13.8 mm, 1 female cl 11.8 mm (ZRC 2020.0300).

Distribution. Only known from Indonesia and the Philippines, at depths of 210–409 m (Komai et al., 2020).

Remarks. The present material has already been reported in Komai et al. (2020).

***Glyphocrangon indonesiensis* Komai, 2004**
(Fig. 13F)

Material examined. stn CP22, 1 ovig. female cl 28.1 mm (ZRC 2020.0301), 1 male cl 18.2 mm, 4 females cl 18.0–22.8 mm (ZRC 2020.0302); stn CP28, 1 juvenile cl 10.4 mm (ZRC 2020.0303); stn CP35, 1 ovig. female cl 23.8 mm (ZRC 2020.0304); stn CP43, 1 male cl 11.7 mm, 1 ovig. female cl 26.4 mm (ZRC 2020.0305).

Distribution. Indo-West Pacific and reported from the Madagascar, Philippines, Indonesia, Papua New Guinea, and the Solomon Islands; at depths of 200–1,150 m (Komai & Chan, 2013; Komai et al., 2020).

Remarks. The present material was previously reported in Komai et al. (2020).

***Glyphocrangon juxtaculeata* Chace, 1984**
(Fig. 13G)

Material examined. stn CP35, 1 female cl 17.2 mm (ZRC 2020.0296).

Distribution. Only known from Indonesia, at depths of 603–946 m (Komai et al., 2020).

Remarks. The present material was previously reported in Komai et al. (2020). This species was provisionally placed under the synonymy of *G. regalis* Bate, 1888 (Komai, 2004), but Komai et al. (2020) clarified that it is a distinct species.

***Glyphocrangon proxima* Komai, 2004**
(Fig. 13H)

Material examined. stn CP12, 1 male cl 12.3 mm (ZRC 2020.0297).

Distribution. Known from NW Australia, Philippines, Indonesia, and the Solomon Islands, at depths of 482–980 m (Komai et al., 2020).

Remarks. The present material was earlier reported in Komai et al. (2020).

***Glyphocrangon serratirostris* Komai, Yang & Chan, 2020**
(Fig. 14A)

Material examined. stn CP12, paratypes, 1 ovig. female cl 20.0 mm (ZRC 2020.0298), 3 males cl 17.2–20.0 mm, 2 ovig. females cl 19.1 & 21.2 mm, 2 females cl 16.0 & 16.2 mm (ZRC 2020.0306); stn CP23, holotype ovig. female cl 22.0 mm (MZB Cru 5055); stn CP26, paratype ovig. female cl 21.0 mm (ZRC 2020.0308); stn CP48, paratype male cl 20.0 mm (ZRC 2020.0299).

Distribution. Indonesia only, at depths of 517–727 m (Komai et al., 2020).

Remarks. This is one of the new shrimp species described previously in Komai et al. (2020) from the SJADES material.

***Glyphocrangon sibogae* De Man, 1918**
(Fig. 14B)

Material examined. stn CP24, 1 juvenile cl 11.1 mm (ZRC 2020.0309); stn CP44, 1 ovig. female cl 33.4 mm (ZRC 2020.0310).

Distribution. Only known from Indonesia, at depths of 200–1,112 m (Komai, 2004; Komai et al., 2020).

Remarks. The present material has already been reported in Komai et al. (2020).

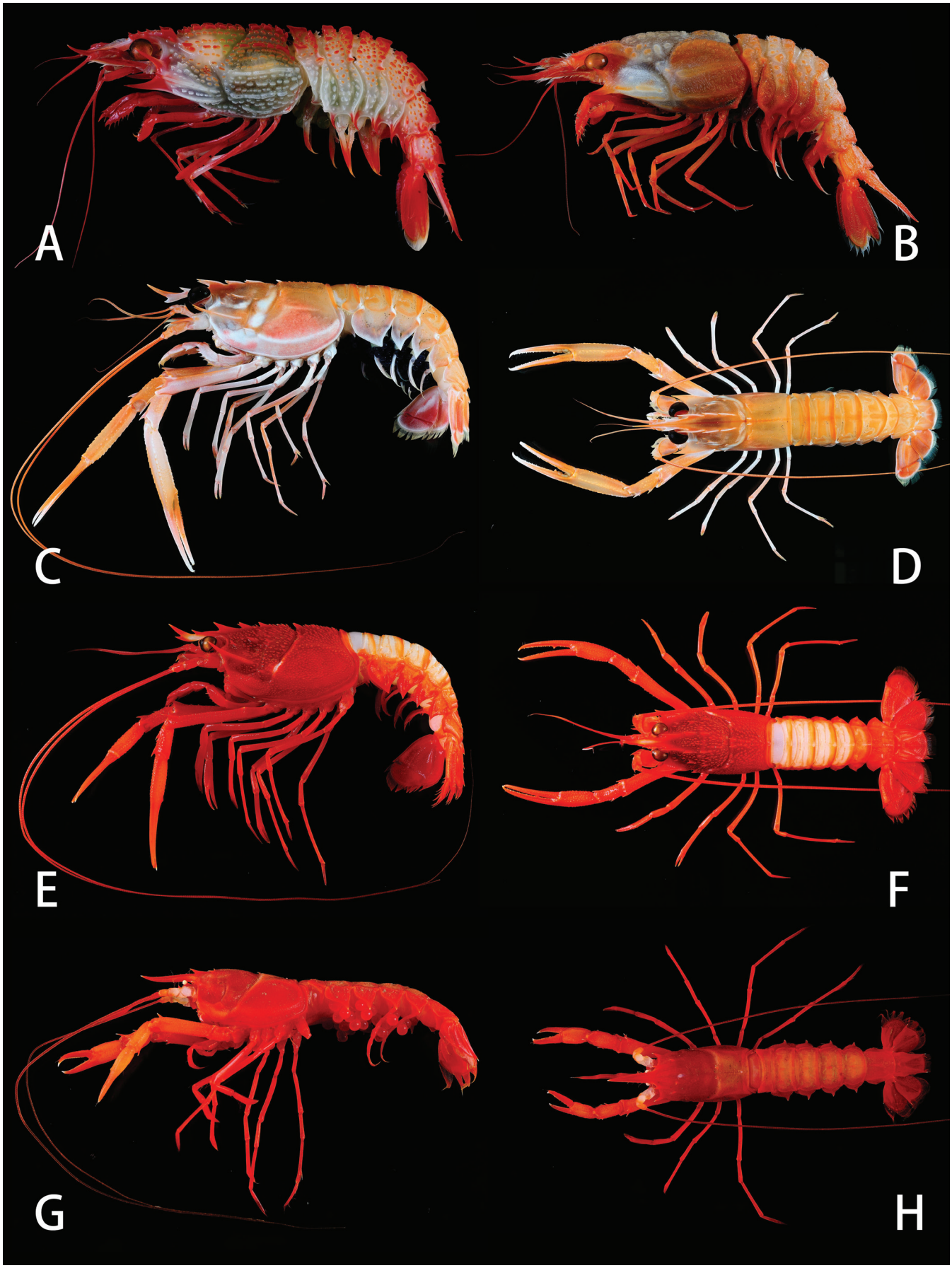

Fig. 14. A, *Glyphocrangon serratirostris* Komai, Yang & Chan, 2020, stn CP23, holotype ovig. female (cl 22.0 mm) (MZB Cru 5055); B, *G. sibogae* De Man, 1918, stn CP44, ovig. female (cl 33.4 mm) (ZRC 2020.0310); C, D, *Metanephrops andamanicus* (Wood-Mason, 1892), stn CP34, ovig. female (cl 41.4 mm); E, F, *M. neptunus* (Bruce, 1965), stn CP48, female (cl 34.9 mm); G, H, *Nephropsis ensirostris* Alcock, 1901, stn CP22, ovig female (cl 18.7 mm).

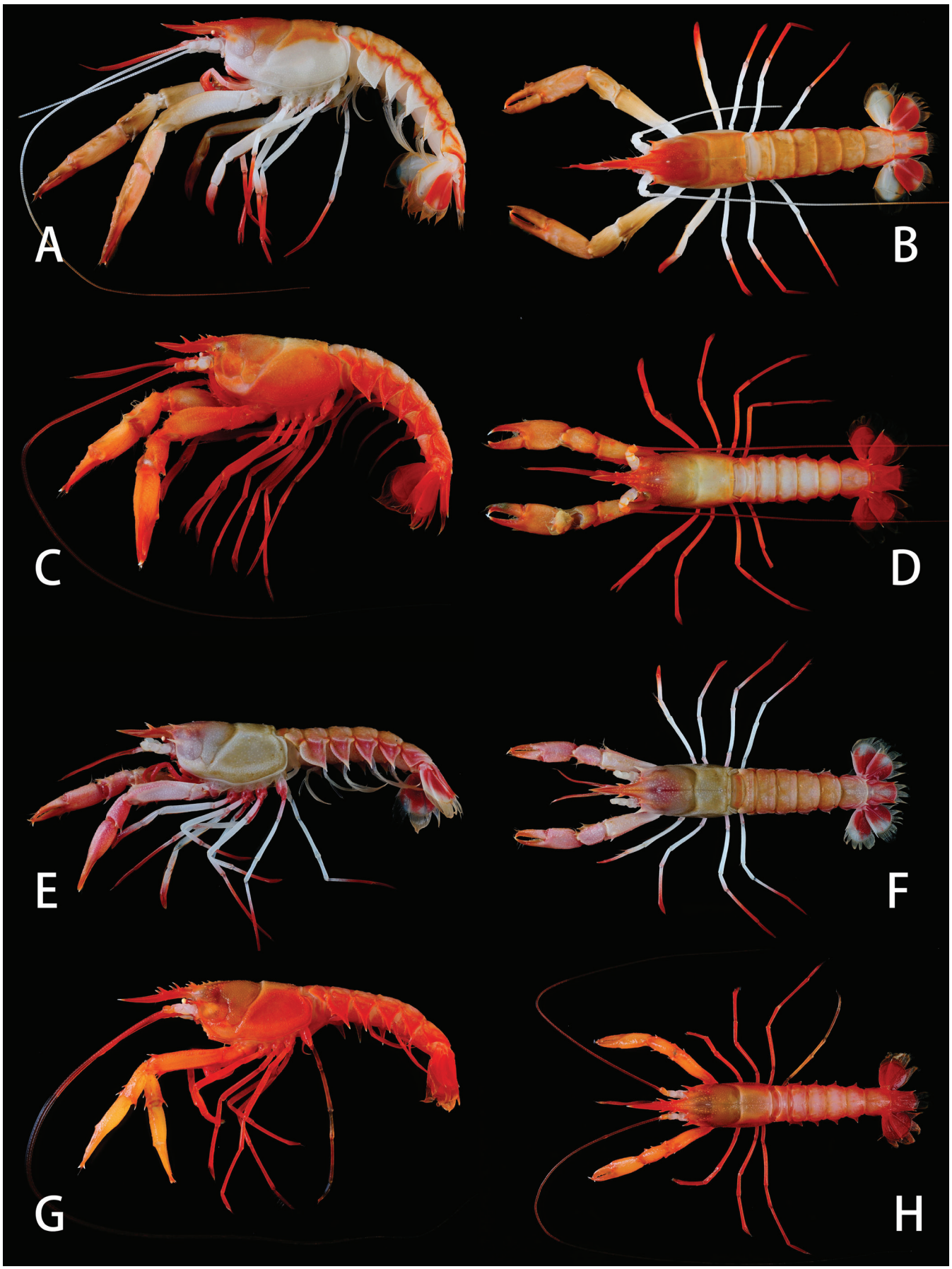

Fig. 15. A, B, *Nephropsis rahayuae* Chang, Chan & Kumar, 2020a, stn CP33, holotype male (cl 23.8 mm) (MZB Cru 5053, p); C, D, *N. serrata* Macpherson, 1993, stn CP35, male (cl 19.3 mm); E, F, *N. stewarti* Wood-Mason, 1872, stn CP39, male (cl 19.8 mm); G, H, *N. sulcata* Macpherson, 1990, stn CP24, male (cl 14.8 mm).

Infraorder Astacidea Latreille, 1802

Superfamily Nephropoidea Dana, 1852

Family Nephropidae Dana, 1852

***Metanephrops andamanicus* (Wood-Mason, 1892)**
(Fig. 14C, D)

Material examined. stn CP20, 1 ovig. female cl 40.0 mm; stn CP34, 1 male cl 45.7 mm, 1 ovig. female cl 41.4 mm.

Distribution. Widely distributed in the Indo-West Pacific from the eastern coast of Africa to the South China Sea, Indonesia, and probably Papua New Guinea, at depths of 250–750 m (Holthuis, 1991; Chan, 1997). The SJADES material was collected from 234–362 m deep.

Remarks. The identification is based on Chan (1997).

***Metanephrops neptunus* (Bruce, 1965)**
(Fig. 14E, F)

Material examined. stn CP48, 2 females cl 20.1 & 34.9 mm.

Distribution. Known from the South China Sea, Philippines, Indonesia, and NW Australia, at depths of 300–940 m (Chan, 1997).

Remarks. The identification is based on Chan (1997).

***Nephropsis ensirostris* Alcock, 1901**
(Fig. 14G, H)

Material examined. stn CP22, 1 ovig female, cl 18.7 mm.

Distribution. Widely distributed in the Indo-West Pacific from Gulf of Aden to the South China Sea, Philippines, Indonesia; at depths of 315–1,314 m (Chang & Chan, 2019).

Remarks. The identification is based on Holthuis (1991) and Chang & Chan (2019).

***Nephropsis rahayuae* Chang, Chan & Kumar, 2020a**
(Fig. 15A, B)

Material examined. stn CP20, paratype male cl 15.8 mm (ZRC 2020.0126); stn CP33, holotype male cl 23.8 mm (MZB Cru 5053).

Distribution. Known only from southwestern Java, at depths of 312–525 m (Chang et al., 2020a).

Remarks. This new lobster species was first described in Chang et al. (2020a) based on the SJADES material.

***Nephropsis serrata* Macpherson, 1993**
(Fig. 15C, D)

Material examined. stn CP35, 1 male cl 19.3 mm; stn CP48, 1 male cl 13.7 mm.

Distribution. Known from NW Australia, Indonesia, Taiwan, and Japan; at depths of 390–1,430 m (Chang & Chan, 2019).

Remarks. The identification is based on Holthuis (1991), Macpherson (1993) and Chang & Chan (2019).

***Nephropsis stewarti* Wood-Mason, 1872**
(Fig. 15E, F)

Material examined. stn CP39, 1 male cl 19.8 mm.

Distribution. Indian Ocean from the eastern coast of South Africa to Indonesia; at depths of 250–1,530 and perhaps 1,720 m (Chang et al., 2020b).

Remarks. The identification is based on Chang et al. (2020b). A previous record of this species from NE Sumatra in Indonesia was uncertain. The large cheliped of the rather small SJADES specimen has the merus bearing a subdistal outer spine and the inner surface of carpus armed with only one spine on the dorsal margin. These features render it to be morphologically somewhat intermediate between *N. stewarti* and *N. pygmaea* Chang, Chan & Kumar, 2020b (see Chang et al., 2020b).

***Nephropsis sulcata* Macpherson, 1990**
(Fig. 15G, H)

Material examined. stn CP24, 1 male cl 14.8 mm.

Distribution. Widely distributed in the Indo-West Pacific from Madagascar to the South China Sea and New Caledonia, at depths of 200–1,115 m (Chang & Chan, 2019).

Remarks. The identification is based on Holthuis (1991) and Chang & Chan (2019).

***Thaumastocheles massonktenos* Chang, Chan & Ahyong, 2014b**
(Fig. 16A, B)

Material examined. stn CP24, 1 male cl 27.9 mm.

Distribution. Widely distributed in the Indo-West Pacific from Madagascar to the South China Sea and New Caledonia, at depths of 713–1,110 m (Chang et al., 2014b). Recorded for the first time from Indonesia.

Remarks. The present specimen is identified according to Chang et al. (2014b).

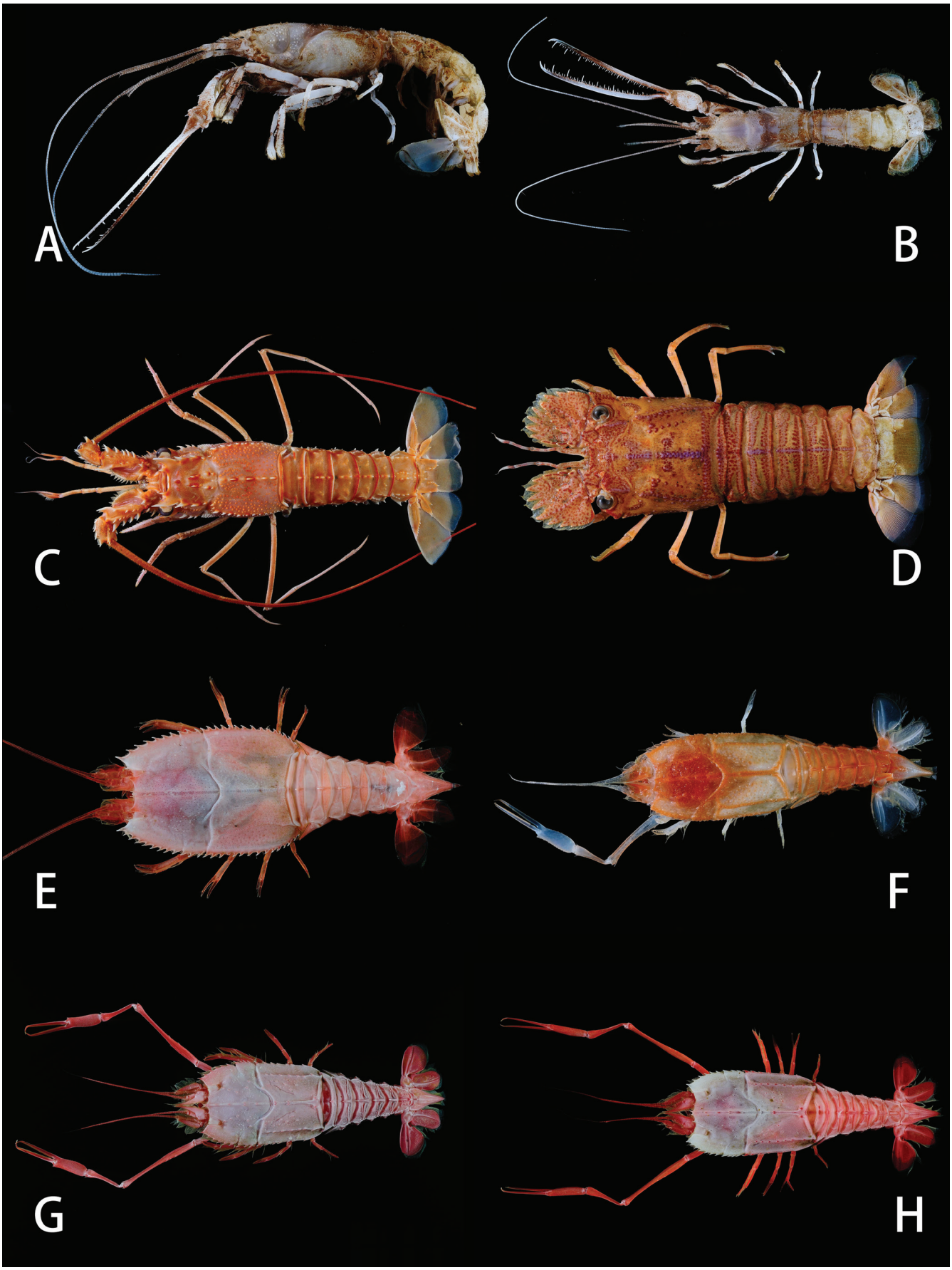

Fig. 16. A, B, *Thaumastocheles massonktenos* Chang, Chan & Ahyong, 2014b, stn CP24, male (cl 27.9 mm); C, *Puerulus mesodontus* Chan, Ma & Chu, 2013, stn CP2, male (cl 55.8 mm); D, *Scammarctus batei* (Holthuis, 1946), stn CP37, ovig. female (cl 23.9 mm); E, *Pentacheles laevis* Bate, 1878, stn CP40, female (cl 29.1 mm); F, *Polycheles typhlops* Heller, 1862, stn CP20, male (cl 22.6 mm); G, *Stereomastis galil* (Ahyong & Brown, 2002), stn CP22, female (cl 49.6 mm); H, *S. phosphorus* (Alcock, 1894), stn CP18, female (cl 31.6 mm).

Infraorder Achelaea Scholtz & Richter, 1995

Family Palinuridae Latreille, 1802

***Puerulus mesodontus* Chan, Ma & Chu, 2013**
(Fig. 16C)

Material examined. stn CP2, 1 male cl 55.8 mm.

Distribution. Widely distributed in the eastern Indian Ocean and western Pacific from Indonesia to Japan and Fiji, at depths of 219–736 m (Chan et al., 2013; Wardiatno et al., 2016).

Remarks. The SJADES specimen agrees well with the original description of the species given by Chan et al. (2013). This species has recently been reported also from southern Java by Wardiatno et al. (2016).

Family Scyllaridae Latreille, 1825

***Scammarctus batei* (Holthuis, 1946)**
(Fig. 16D)

Material examined. stn CP37, 1 ovig. female cl 23.9 mm.

Distribution. Widely distributed in the Indo-West Pacific from eastern coast of Africa to Taiwan and Vanuatu; at depths of 152–660 m (Holthuis, 2002).

Remarks. Two subspecies are recognised in *S. batei* (Chan, 2019). Following Holthuis (2002), the present specimen from Java lacks the blood red patch on the anterior half of the abdominal tergite I and therefore belongs to the western subspecies *S. batei arabicus* Holthuis, 1960.

Infraorder Polychelida Scholtz & Richter, 1995

Family Polychelidae Wood-Mason, 1875

***Pentacheles laevis* Bate, 1878**
(Fig. 16E)

Material examined. stn CP40, 1 female cl 29.1 mm.

Distribution. World-wide tropical to temperate seas, at depths of 212–2,505 m (Galil, 2000; Chang et al., 2014a).

Remarks. The identification is based on Galil (2000) and Ahyong (2009).

***Polycheles typhlops* Heller, 1862**
(Fig. 16F)

Material examined. stn CP10, 1 male cl 16.8 mm; stn CP20, 1 male cl 22.6 mm.

Distribution. Widely distributed in the Atlantic and Indo-West Pacific, at depths of 77–2,055 m (Galil, 2000; Chang et al., 2014a).

Remarks. The identification is based on Galil (2000) and Ahyong (2009).

***Stereomastis galil* (Ahyong & Brown, 2002)**
(Fig. 16G)

Material examined. stn CP4, 1 male cl 32.9 mm; stn CP22, 1 female cl 49.6 mm; stn CP48, 1 male cl 23.4 mm.

Distribution. Eastern Indian Ocean and western Pacific from NW Australia to Japan and Fiji, at depths of 200–1,354 m (Chang et al., 2014a).

Remarks. The identification is based on Ahyong & Chan (2008) and Ahyong (2009).

***Stereomastis phosphorus* (Alcock, 1894)**
(Fig. 16H)

Material examined. stn CP18, 1 female cl 31.6 mm.

Distribution. Indian Ocean and previously known with certainty from the Arabian Sea, Bay of Bengal, and Andaman Sea; at depths of 366–1,354 m (Ahyong & Brown, 2002). Recorded for the first time from Indonesia.

Remarks. The identification is based on Ahyong & Brown (2002) and Ahyong (2009).

***Stereomastis sculpta* (Smith, 1880)**
(Fig. 17A)

Material examined. stn CP14, 1 female cl 19.0 mm.

Distribution. Widely distributed in the Atlantic and Indo-West Pacific, at depths of 200–4,000 m (Galil, 2000; Chang et al., 2014a).

Remarks. The identification is based on Galil (2000) and Ahyong (2009).

Infraorder Axiidea de Saint Laurent, 1979

Family Axiidae Huxley, 1879

***Ambiaxius alcocki* (McArdle, 1900)**
(Fig. 17B)

Material examined. stn CP24, 1 ovig. hermaphrodite cl 20.5 mm; stn CP44, 1 hermaphrodite cl 20.3 mm.

Distribution. Indian Ocean, previously recorded from Sri Lanka and Mozambique Channel, at depths of 503–991 m (Poore, 2020). The present specimens extend the geographical range of the species to southern Java and also represent a new record for Indonesia. Moreover, the SJADES material was collected from 970–1,068 m deep.

Remarks. The identification follows Poore (2020).

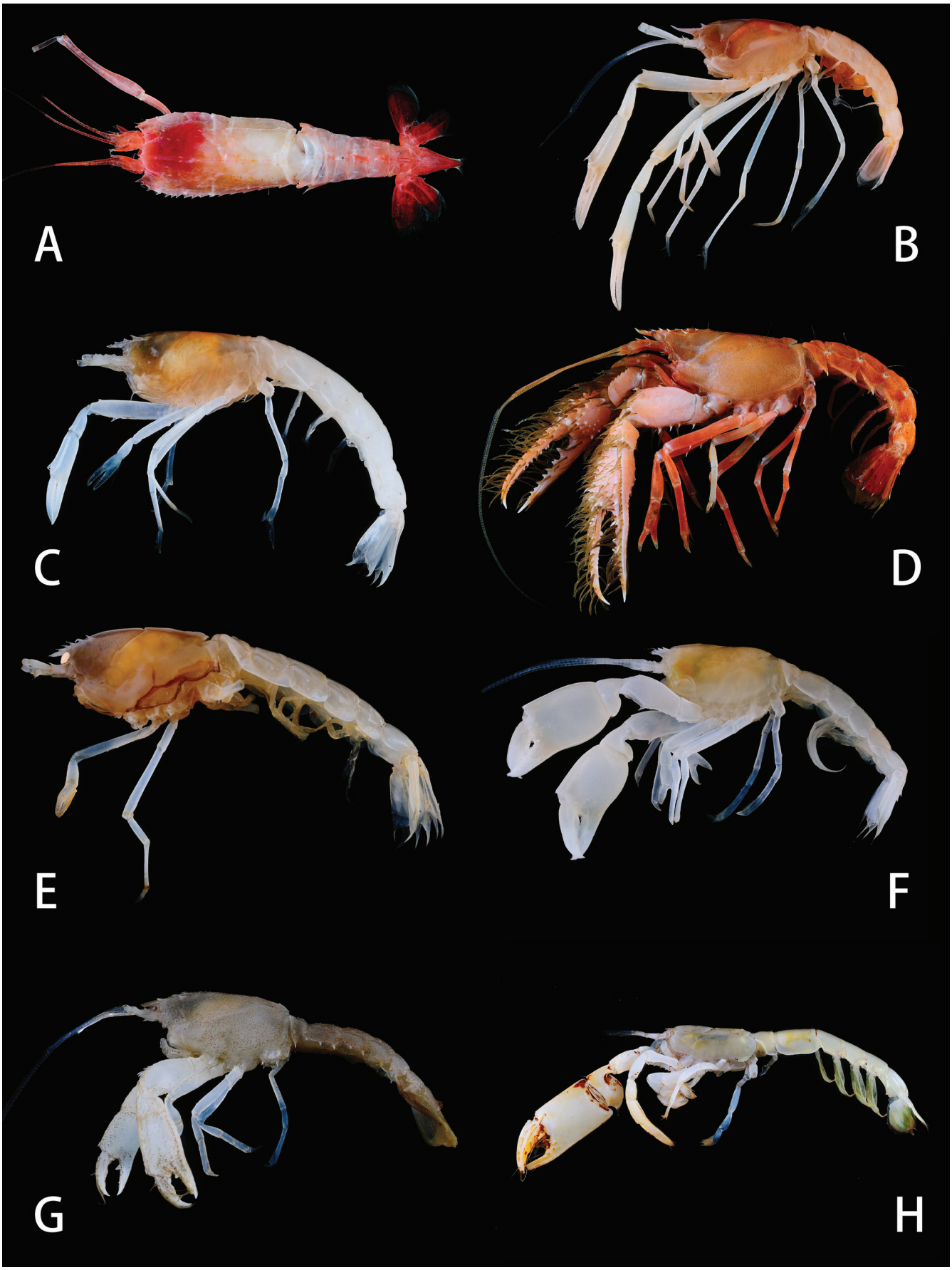

Fig. 17. A, *Stereomastis sculpta* (Smith, 1880), stn CP14, female (cl 19.0 mm); B, *Ambiaxius alcocki* (McArdle, 1900), stn CP24, ovig. hermaphrodite (cl 20.5 mm); C, *A.* aff. *japonicus* Kensley, 1996b, stn CP24, hermaphrodite (cl 8.2 mm); D, *Calaxius manningi* Kensley, Lin & Yu, 2000, stn CP39, male (cl 30.0 mm); E, *Calocaris* sp., stn DW32, hermaphrodite (cl 9.3 mm); F, *Paraxius altus* Bate, 1888, stn CP12, female (cl 7.4 mm); G, *Pilbaraxius* aff. *kariyarra* Poore & Collins, 2009, stn CP10, male (cl 8.3 mm); H, *Callianopsis* aff. *caecigena* (Alcock & Anderson, 1894), stn CP52, male (cl 13.2 mm).

***Ambiaxius* aff. *japonicus* Kensley, 1996b**
(Fig. 17C)

Material examined. stn CP24, 1 hermaphrodite cl 8.2 mm.

Distribution. *Ambiaxius japonicus* had only been reported from Japan at 472 m deep (Kensley, 1996b). The SJADES specimen was collected from 1,044–1,068 m deep.

Remarks. *Ambiaxius* is presently represented by nine species (Poore, 2020). The SJADES specimen resembles *Ambiaxius japonicus* Kensley, 1996b, closely, which is known only from the holotype from Suruga Bay in Japan. However, further comparison with the description of the holotype of *A. japonicus* (Kensley, 1996b: 487–488, fig. 11) revealed the following differences: (1) the rostrum reaches the distal margin of the antennular peduncle second article in the present specimen, rather than reaching the end of the antennular peduncle in the holotype of *A. japonicus*; (2) the carapace has a distinct cardiac prominence in the present specimen, whereas there is no cardiac prominence in the holotype of *A. japonicus*; (3) the telson is narrower in the present specimen than in the holotype of *A. japonicus* (about twice as long as wide in the present specimen versus 1.5 times as long in the holotype of *A. japonicus*). It is likely that the SJADES specimen represents an undescribed species.

***Calaxius manningi* Kensley, Lin & Yu, 2000**
(Fig. 17D)

Material examined. stn CP39, 1 male cl 30.0 mm.

Distribution. Indo-West Pacific, recorded from Taiwan, Philippines, Papua New Guinea, and NW Australia, at depths of 287–675 m (Poore, 2020). Recorded for the first time from Indonesia.

Remarks. The identification follows Kensley et al. (2000) and Poore (2020).

***Calocaris* sp.**
(Fig. 17E)

Material examined. stn DW32, 1 hermaphrodite cl 9.3 mm.

Remarks. The genus *Calocaris* Bell, 1846, is presently represented by the following six taxa (WoRMS Editorial Board, 2020): *C. barnardi* Stebbing, 1914, *C. caribbaeus* Kensley, 1996a, *C. granulosus* Grebenjuk, 1975, *C. isochela* Zarenkov, 1989, *C. macandreae* Bell, 1846, and *C. templemani* Squires, 1965. Sakai (2011) erected a new genus *Calocarisopsis* for *C. templemani*, and synonymised *C. barnardi* under *C. macandreae*, but his actions are here not accepted because of insufficient character analyses. The present specimen is referred to *Calocaris* as diagnosed by Ngoc-Ho (2003), and is notable in the unarmed dorsal surface and lateral margins of the telson, as well as the unarmed lateral margins of the uropodal endopod and exopod. In other taxa mentioned above, the telson is armed with one or more spines on the lateral margin, and the dorsal surface has paired spines (Squires, 1965; Grebenjuk, 1975; Zarenkov, 1989; Kensley, 1996a; Ngoc-Ho, 2003; Sakai, 2011). It is likely that the SJADES specimen represents an undescribed species of *Calocaris*.

***Paraxius altus* Bate, 1888**
(Fig. 17F)

Material examined. stn CP12, 1 female cl 7.4 mm; stn CP28, 1 female cl 5.8 mm.

Distribution. Previously only reported from the West Pacific in Papua New Guinea, Solomon Islands, and the Philippines; at depths of 300–1,957 m (Bate, 1888; Sakai & de Saint Laurent, 1989; Poore, 2020). Recorded for the first time from Indonesia and the Indian Ocean.

Remarks. The identification refers to Poore (2020).

***Pilbaraxius* aff. *kariyarra* Poore & Collins, 2009**
(Fig. 17G)

Material examined. stn CP10, 1 male cl 8.3 mm.

Distribution. *Pilbaraxius kariyarra* is known only from Western Australia at 401–405 m deep (Poore & Collins, 2009). The SJADES specimen was collected from 429–446 m deep.

Remarks. The present specimen is quite distinctive among axiid taxa particularly in the unarmed rostrum, prominently spinose pleura of the abdominal somite I–V, and the lack of an appendix masculina on the pleopod II even in male. There is little doubt that it represents an undescribed species. In the armature of the abdominal pleura and the lack of an appendix masculina, the species is similar to *Pilbaraxius kariyarra*, the type species of the presently monotypic genus. This undescribed species is provisionally placed in *Pilbaraxius* Poore & Collins, 2009, based on its similarity to *P. kariyarra*, although it differs from the type species in many ways.

Family Callianopsidae Manning & Felder, 1991

***Callianopsis* aff. *caecigena* (Alcock & Anderson, 1894)**
(Fig. 17H)

Material examined. stn CP52, 1 male cl 13.2 mm, 1 female cl 11.5 mm.

Distribution. *Callianopsis caecigena* was known only from the Bay of Bengal at depths of 365–690 m. The SJADES material was collected from 1,124–1,156 m deep.

Remarks. The present specimens represent a species of Callianopsidae as diagnosed following Poore et al. (2019) and closely resemble *Callianopsis caecigena* particularly in having spinose pleura of the abdominal somites I, II, IV–VI (Alcock & Anderson, 1894, 1896). *Callianopsis caecigena* was originally described based on a female specimen from the

Fig. 18. A, Callianopsidae gen. sp., stn CP56, male (cl 7.4 mm); B, *Acutigebia* sp., stn DW45, female (cl 6.7 mm).

Bay of Bengal, and since then, no additional specimens have been collected. Nevertheless, a comparison with the original description (Alcock & Anderson, 1894) and subsequently published illustration of the unique holotype (Alcock & Anderson, 1896) have revealed the following differences in the SJADES specimens: the abdominal pleuron III is unarmed (versus armed with a spine at the midlength in the holotype); the carpus of the major cheliped is subacutely pointed at the lower distal angle (versus armed with two spines at the lower distal angle in the holotype); the lower margin of the major cheliped palm is only slightly crenulate (versus finely serrate in the holotype). These differences suggest that the present material represents a species distinct from *C. caecigena*.

Callianopsidae gen. sp.
(Fig. 18A)

Material examined. stn CP56, 1 male cl 7.4 mm.

Remarks. Poore et al. (2019) stated: "Callianopsids differ from other callianassoids except eucalliacids in having the dactylus of maxilliped III dilating, truncate, and with a dense field of setae on its distal margin. The uropodal exopod lacks a dorsal plate, which is present in eucalliacids." Accordingly, the present specimen is assigned to Callianopsidae, which consists of three genera, *Callianopsis* de Saint Laurent, 1973, *Bathycalliax* Sakai & Türkay, 1999, and *Vulcanocalliax* Dworschak & Cunha, 2007 (Poore et al., 2019). However, the abdominal somite I of this SJADES specimen has a pair of anterolateral lobes interacting with the posterolateral margins of the carapace. In this regard, the SJADES specimen does not fit the family diagnosis given by Poore et al. (2019). It is likely that the present specimen represents an undescribed genus and species of Callianopsidae.

Infraorder Gebiidea de Saint Laurent, 1979

Family Upogebiidae Borradaile, 1903

***Acutigebia* sp.**
(Fig. 18B)

Material examined. stn CP45, 1 female cl 6.7 mm; stn CP56, 1 female cl 5.1 mm.

Remarks. The two specimens examined are assigned to *Acutigebia* Sakai, 1982, on account of the following features: lateral gastric ridges on carapace strongly produced anteriorly and terminating acutely; maxilliped III ischium with well-developed crista dentata. *Acutigebia* is currently represented by the following six species: *A. danai* (Miers, 1876), *A. kyphosoma* Sakai, 1993, *A. laticauda* Liu & Liu, 2013, *A. serrifera* Liu & Liu, 2013, *A. simsoni* (Thomson, 1893), and *A. trypeta* (Sakai, 1970) (Liu & Liu, 2013; WoRMS Editorial Board, 2020). The SJADES specimens substantially differs from all these species in having a row of slender spines on the carapace anterolateral margin, the pereiopod I with the merus bearing a row of prominent spines on the lower margin, and the propodus having two prominent spines on the lower margin. None of the six known species has such strong armature (Poore & Griffin, 1979; Sakai, 1970, 1982, 1993; Liu & Liu, 2013). There is little doubt that the SJADES material represents an undescribed species.

ACKNOWLEDGEMENTS

The SJADES cruise was a joint Indonesian–Singapore expedition to southern Java by the National University of Singapore and the Research Center for Oceanography, Indonesian Institute of Sciences (LIPI), supported by their respective Ministries of Foreign Affairs under the RISING 50 program to promote bilateral co-operation. The authors are grateful to the two chief scientists, Dwi Listyo Rahayu and Peter Ng, for sharing the interesting material from this cruise with them. This work was supported by grants from the Ministry of Science and Technology, Taiwan, R.O.C., and the Center of Excellence for the Oceans (National Taiwan Ocean University), which is financially supported from The Featured Areas Research Center Program within the framework of the Higher Education Sprout Project by the Ministry of Education (MOE) in Taiwan, R.O.C. Specimens

were collected under the research permit RISTEKDIKTI 80/SIP/FRP/E5/Dit.KI/III/2018.

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