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The generic affinities of the Indo-West Pacific species assigned to *Rochinia* A. Milne-Edwards, 1875 (Crustacea: Brachyura: Majoidea: Epialtidae)

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Abstract. The generic positions of the 29 Indo-West Pacific species currently placed in *Rochinia* A. Milne-Edwards, 1875, sensu lato, are addressed, in an attempt to establish a more phylogenetically coherent classification for these spider crabs. Twenty-five Indo-West Pacific species are referred to a redefined *Samadinia* Ng & Richer de Forges, 2013. Three species are transferred to *Laubierinia* Richer de Forges & Ng, 2009, *Pugettia* Dana, 1851, and *Oxypleurodon* Miers, 1885, respectively. *Rochinia kagoshimensis* (Rathbun, 1932) and a new species from the South China Sea are assigned to a new genus. The generic status of four Atlantic species of *Rochinia* is also discussed.

Keywords. spider crabs, revision, new genus, new species, *Samadinia* Ng & Richer de Forges, 2013

INTRODUCTION

The single most species-rich genus in the majoid family Epialtidae MacLeay, 1838, is *Rochinia* A. Milne-Edwards, 1875. Ng et al. (2008) listed 34 species and since then the number of species has continued to grow, especially in the Indo-West Pacific region (see Takeda, 2001; Takeda & Komatsu, 2005; Ng & Richer de Forges, 2007; Richer de Forges & Poore, 2008; Takeda, 2009; McLay, 2009; Ng & Richer de Forges, 2013; Richer de Forges & Ng, 2013; Takeda & Marumura, 2014; Lee et al., 2017; Lee et al., 2019). The systematic problems with the genus are well known; *Rochinia*, as defined by Griffin & Tranter (1986a) was too broad and clearly polyphyletic. *Rochinia* sensu Griffin & Tranter (1986a) includes four synonyms: *Sphenocarcinus* A. Milne-Edwards, 1875, *Scyramathia* A. Milne-Edwards, 1880, *Anamathia* Smith, 1885, and *Oxypleurodon* Miers, 1885. Griffin & Tranter (1986a) also transferred three species that were described under *Hyastenus* White, 1847, and *Pugettia* Dana, 1851, to *Rochinia*. *Goniopugettia* Sakai, 1986, a genus overlooked by Griffin & Tranter (1986a), included *Rochinia sagamiensis* (Gordon, 1930), and was recognised by Ng et al. (2008) as a distinct genus. The authority for *Goniopugettia*, however, should be Ng, Guinot & Davie (2008), as Article 13.3 of the Code (ICZN, 1999) requires that for a genus name to be available after 1930, the type species must be specified. *Goniopugettia* was established by Sakai (1986) with two species: *Pugettia sagamiensis* Gordon, 1930, and *Goniopugettia tanakae* Sakai, 1986, but no type species was selected. Since Ng et al. (2008: 103) selected *Goniopugettia tanakae* Sakai, 1986, as the type species, they assume the authorship for the genus.

Over the last decade, with the discovery of more taxa and the use of additional morphological characters, workers have started to refine the concept of *Rochinia*. Richer de Forges & Ng (2009a) transferred *Rochinia carinata* Griffin & Tranter, 1986, to a new genus *Laubierinia*. *Oxypleurodon* was recognised as a distinct genus by Richer de Forges & Ng (2009b) and the allied genus, *Nasutocarcinus* Tavares, 1991, was synonymised with it by Richer de Forges (2010). *Anamathia* was recognised as a distinct genus by Ng et al. (2008) without clarification, but Tavares & Santana (2018) and Lee et al. (2020) have since discussed its taxonomy at length and demonstrated that it was a valid genus. *Sphenocarcinus* was recognised as a valid taxon by Richer de Forges & Ng (2009b) who also established a new genus, *Rhinocarcinus* Richer de Forges & Ng, 2009, for *Sphenocarcinus agassizi* Rathbun, 1893. Ng & Richer de Forges (2013) established *Samadinia* for *Samadinia longispina* Ng & Richer de Forges, 2013, and provided a detailed discussion why *Rochinia* should be revised, suggesting several preliminary groupings based on the shape of the male anterior thoracic sternum and pleon. Ng et al. (2017) clarified the taxonomy of *Goniopugettia* and established *Tunepugettia* Ng, Komai & Sato, 2017, for *Pugettia sagamiensis* Gordon, 1930. Tavares & Santana (2018) later established *Minyorhyncha* Tavares & Santana, 2018, for the Atlantic *Rochinia crassa* (A. Milne-Edwards,

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1879) while Lee et al. (2019) established *Crocydocinus* Lee, Richer de Forges & Ng, 2019, for four species previously placed in *Rochinia* (*Scyramathia beauchampi* Alcock & Anderson, 1894, *Hyastenus brevirostris* Doflein, 1904, *Rochinia crosnieri* Griffin & Tranter, 1986, and *Rochinia decipiata* Williams & Eldredge, 1994). Tavares & Santana (2018) re-described *Rochinia* sensu stricto and argued it should be restricted to just the type species *Rochinia gracilipes* A. Milne-Edwards, 1875, and perhaps several closely related Atlantic species, a decision supported by Lee et al. (2020). Tavares & Santana (2018) recognised *Scyramathia* as a distinct taxon with two species, *S. carpenteri* (Norman, in Thomson, 1873) and *S. umbonata* (Stimpson, 1871) (Tavares & Santana, 2018), but left the Indo-West Pacific species of *Rochinia* unresolved, just referring to them as "*Rochinia* sensu lato". Recently, Lee et al. (2020) revised *Scyramathia* sensu stricto and added *S. hertwigi* Doflein, in Chun, 1900, and a new species, *S. tenuipes*, from the Mediterranean. The generic status of four other Atlantic species, "*Rochinia*" *cornuta* (Rathbun, 1898), "*Rochinia*" *hystrix* (Stimpson, 1871), "*Rochinia*" *occidentalis* (Faxon, 1893), and "*Rochinia*" *tanneri* (Smith, 1883), is now being revised by the first author with Marcos Tavares, Amanda Windsor, and William Santana. Suffice to say, they are also not members of *Scyramathia*, *Anamathia*, or *Minyorhyncha*.

Despite these revisions, there are still 33 species currently assigned to *Rochinia* sensu lato (Ng et al., 2008; Richer de Forges & Ng, 2013; Takeda & Marumura, 2014; Tavares et al., 2016; Lee et al., 2017; Tavares & Santana, 2018; Lee et al., 2019; Lee et al., 2020), distributed across the Indo-West Pacific, Atlantic Ocean, and East Pacific regions (Griffin & Tranter, 1986a, b; Ng & Richer de Forges, 2007; Tavares & Santana, 2018). Continually referring species (new and previously described ones) from the Indo-West Pacific to "*Rochinia* sensu lato" is unsatisfactory and will only cause more confusion especially since *Rochinia* sensu stricto is now monotypic and is clearly diagnosed (Tavares & Santana, 2018; Lee et al., 2020).

The purpose of the present paper is to revise "*Rochinia* sensu lato" to comply with a more phylogenetically coherent classification for the group. We here refer 25 of these species to a redefined *Samadinia* Ng & Richer de Forges, 2013, inclusive of the poorly known species, *Rochinia debilis* Rathbun, 1932. One species is transferred to *Laubierinia* Richer de Forges & Ng, 2009, one is reassigned to *Pugettia* Dana, 1851, one species is moved to *Oxypleurodon* Miers, 1885, and another is referred to a new genus.

MATERIAL AND METHODS

The following abbreviations are used: coll. = collected by; G1 and G2 = male first and second gonopod, respectively; IWP = Indo-West Pacific; P2–P5 = first to last walking legs, respectively, stn = station. Specimens examined are listed in Appendix 1. The measurements of specimens, in millimetres, are of maximum carapace length (excluding the pseudorostral spine) and maximum carapace width (measured at the base of the lateral spines or plates).

The specimens examined in this study and others listed in Appendix 1 are from the following repositories: Australian Museum, Sydney, Australia (AM); Muséum national d'Histoire naturelle, Paris, France (MNHN); Natural History Museum, London, United Kingdom (NHM); National Museum of Science and Technology, Tokyo, Japan (NSMT); Queensland Museum & Science Centre, Brisbane, Queensland, Australia (QM); Naturalis Biodiversity Centre (formerly the Rijksmuseum van Natuurlijke Historie), Leiden, The Netherlands (RMNH); South African Museum (Iziko Museums of South Africa), Cape Town, South Africa (SAM); Senckenberg Museum Frankfurt, Frankfurt, Germany (SMF); U.S. National Museum of Natural History, Smithsonian Institution, Washington D.C., U.S.A (USNM); Western Australia Museum, Australia (WAM); Natural History Museum of Denmark (Zoological Museum), University of Copenhagen, Copenhagen, Denmark (ZMUC); Zoological Reference Collection, Lee Kong Chian Natural History Museum, National University of Singapore, Singapore (ZRC); and Zoological Survey of India, Kolkata, India (ZSI).

SYSTEMATIC ACCOUNT

Superfamily Majoidea Samouelle, 1819

Family Epialtidae MacLeay, 1838

Samadinia Ng & Richer de Forges, 2013

(Figs. 1A–E, 2A–D, 3A–D, 4A–M)

Samadinia Ng & Richer de Forges, 2013: 358.

Type species. *Samadinia longispina* Ng & Richer de Forges, 2013, by original designation.

Species composition. The genus as redefined here now contains 26 species (Table 1).

Comparative material examined. See Appendix 1.

Diagnosis. Carapace pyriform; smooth or covered with either numerous granules or spines (Fig. 1A–D). Pseudorostral spines relatively long, slender, diverging at approximately 45° angle or less. Supraorbital eave narrow, preorbital angle acutely triangular; postorbital lobe cup-like, acutely triangular to blunt anterior margin. Carapace with hepatic spine distinct, plate-like or long, sharp; absent to strong lateral branchial spine directed outwards (Fig. 1A–D). Antennal flagellum shorter than to longer than pseudorostral spines. Basal antennal article longer than broad, with distinct distolateral angle, outer margin straight to slightly constricted medially. Distal angle of buccal frame blunt, slightly raised. Pterygostomial region with granules or short spines on outer margin (Fig. 2A–D). Chelipeds with propodus slightly inflated, carinate margin; carpus with carinate outer margin;

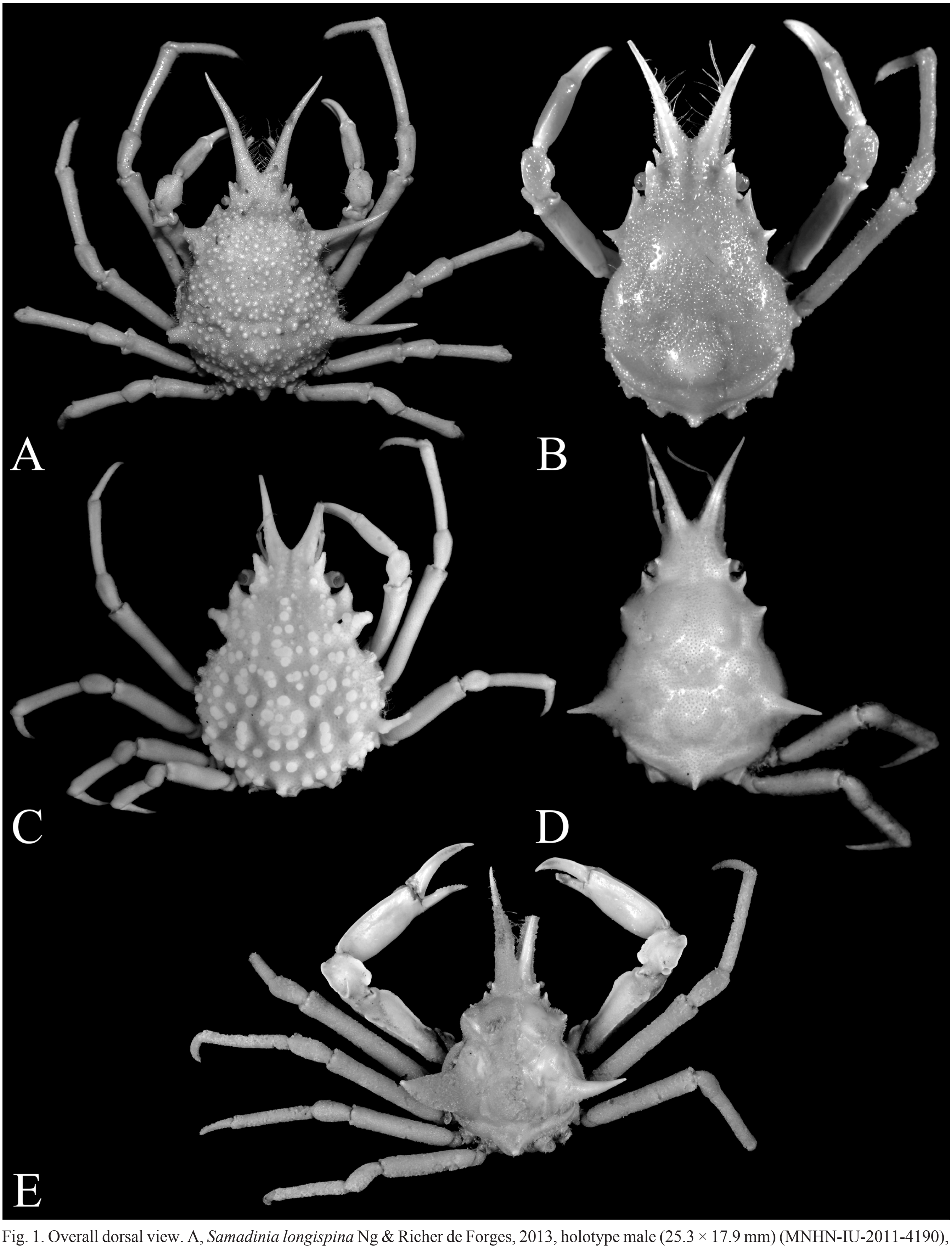

Fig. 1. Overall dorsal view. A, *Samadinia longispina* Ng & Richer de Forges, 2013, holotype male (25.3 × 17.9 mm) (MNHN-IU-2011-4190), Polynesia; B, *S. suluensis* (Griffin & Tranter, 1986) new combination, holotype male (7.8 × 5.0 mm) (RMNH De:103.921), Bougainville Strait; C, *S. granulosa* (Ng & Richer de Forges, 2013) new combination, holotype female (9.2 × 6.9 mm) (MNHN-IU-2011-2944a), Papua New Guinea; D, *S. debilis* (Rathbun, 1932) new combination, holotype female (10.8 × 7.0 mm) (USNM49572), Japan; E, *S. debilis* (Rathbun, 1932) new combination, male (28.9 × 21.0 mm) (SMF 49905), Japan.

Table 1. Indo-West Pacific species formerly placed in *Rochinia*.

***Laubierinia* Richer de Forges & Ng, 2009**

Laubierinia carinata (Griffin & Tranter, 1986) (type species)
Laubierinia globulifera (Wood-Mason, in Wood-Mason & Alcock, 1891)
Laubierinia nodosa (Rathbun, 1916)

***Oxypleurodon* Miers, 1885**

Oxypleurodon alaini Richer de Forges & Ng, 2009
Oxypleurodon alisae Lee, Richer de Forges & Ng, 2019
Oxypleurodon annulatum Richer de Forges & Ng, 2009
Oxypleurodon auritum (Rathbun, 1916)
Oxypleurodon aurorae (Alcock, 1899)
Oxypleurodon barazeri Richer de Forges & Ng, 2009
Oxypleurodon bidens (Sakai, 1969)
Oxypleurodon bipartitum (Guinot & Richer de Forges, 1986)
Oxypleurodon boholense Richer de Forges & Ng, 2009
Oxypleurodon carbunculum (Rathbun, 1906)
Oxypleurodon christiani Richer de Forges & Corbari, 2012
Oxypleurodon coralliophilum (Takeda, 1980)
Oxypleurodon cuneus (Wood-Mason, in Wood-Mason & Alcock, 1891)
Oxypleurodon difficilis (Guinot & Richer de Forges, 1985)
Oxypleurodon forte Lee, Corbari & Richer de Forges, 2015
Oxypleurodon fultoni (Grant, 1905)
Oxypleurodon holthuisi Richer de Forges, 2010
Oxypleurodon karubar Richer de Forges, 1995
Oxypleurodon leonis Lee, Richer de Forges & Ng, 2017
Oxypleurodon lowryi (Richer de Forges, 1992)
Oxypleurodon luzonicum (Rathbun, 1916)
Oxypleurodon mammatum (Guinot & Richer de Forges, 1986)
Oxypleurodon orbiculatum (Guinot & Richer de Forges, 1986)
Oxypleurodon parallelum Richer de Forges & Ng, 2009
Oxypleurodon papuaensis Lee, Richer de Forges & Ng, 2019
Oxypleurodon pinocchio (Guinot & Richer de Forges, 1985)
Oxypleurodon sanctaeclausi Richer de Forges & Ng, 2009
Oxypleurodon sphenocarcinoides (Rathbun, 1916)
Oxypleurodon stimpsoni Miers, 1885 (type species)
Oxypleurodon stuckiae (Guinot & Richer de Forges, 1986)
Oxypleurodon tavaresi Richer de Forges, 1995
Oxypleurodon velutinum (Miers, 1886)
Oxypleurodon wanganella Webber & Richer de Forges, 1995
Oxypleurodon wilsoni Richer de Forges & Poore, 2008

***Pugettia* Dana, 1851**

Pugettia dalli Rathbun, 1894
Pugettia elongata Yokoya, 1933
Pugettia ferox Ohtsuchi & Kawamura, 2019
Pugettia foliata (Stimpson, 1860)
Pugettia gracilis Dana, 1851 (type species)
Pugettia hubbsi Garth, 1958
Pugettia incisa (De Haan, 1839)
Pugettia intermedia Sakai, 1938
Pugettia leytensis Rathbun, 1916
Pugettia longipes Ohtsuchi, Komatsu & Li, 2020
Pugettia marissinica Takeda & Miyake, 1972
Pugettia mindanaoensis Rathbun, 1916
Pugettia minor Ortmann, 1893
Pugettia nipponensis Rathbun, 1932
Pugettia ogasawaraensis Komatsu, 2011
Pugettia producta (Randall, 1840)
Pugettia quadridens (De Haan, 1839)
Pugettia pellucens Rathbun, 1932
Pugettia richii Dana, 1851
Pugettia similis Rathbun, 1932
Pugettia tasmanensis Richer de Forges, 1993
Pugettia venetiae Rathbun, 1924
Pugettia vesicularis (Rathbun, 1907)
Pugettia vulgaris Ohtsuchi, Kawamura & Takeda, 2014

***Samadinia* Ng & Richer de Forges, 2013**

Samadinia ahyongi (McLay, 2009)
Samadinia annae (Richer de Forges & Poore, 2008)
Samadinia boucheti (Richer de Forges & Ng, 2013)
Samadinia cidaris (Lee, Richer de Forges & Ng, 2019)
Samadinia daiyuae (Takeda & Komatsu, 2005)
Samadinia despereaux (Lee, Richer de Forges & Ng, 2019)
Samadinia debilis (Rathbun, 1932)
Samadinia galathea (Griffin & Tranter, 1986)
Samadinia granulosa (Ng & Richer de Forges, 2013)
Samadinia griffini (Davie & Short, 1989)
Samadinia kotakae (Takeda, 2001)
Samadinia longispina Ng & Richer de Forges, 2013 (type species)
Samadinia makassar (Griffin & Tranter, 1986)
Samadinia miyakensis (Takeda & Marumura, 2014)
Samadinia moluccensis (Griffin & Tranter, 1986)
Samadinia mosaica (Whitelegge, 1900)
Samadinia natalensis (Kensley, 1977)
Samadinia planirostris (Takeda, 2009)
Samadinia paulayi (Ng & Richer de Forges, 2007)
Samadinia pulchra (Miers, 1886)
Samadinia riversandersoni (Alcock, 1895)
Samadinia sibogae (Griffin & Tranter, 1986)
Samadinia soela (Griffin & Tranter, 1986)
Samadinia strangeri (Serène & Lohavanijaya, 1973)
Samadinia suluensis (Griffin & Tranter, 1986)
Samadinia tomentosa (Griffin & Tranter, 1986)

***Siderochinia*, new genus**

Siderochinia kagoshimensis (Rathbun, 1932) (type species)
Siderochinia aglaos, new species

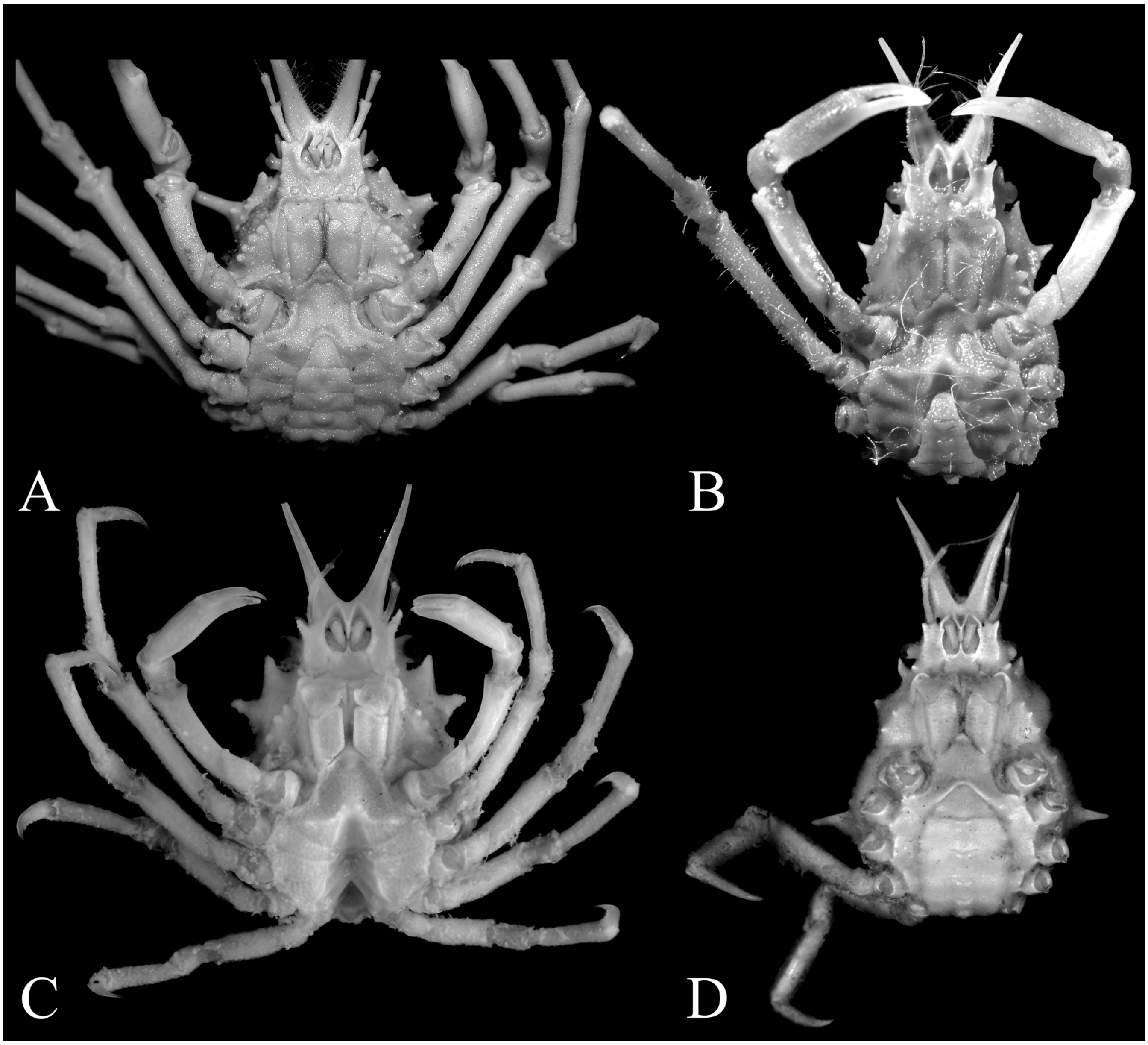

Fig. 2. Overall ventral view. A, *Samadinia longispina* Ng & Richer de Forges, 2013, holotype male (25.3 × 17.9 mm) (MNHN-IU-2011-4190), Polynesia; B, *S. suluensis* (Griffin & Tranter, 1986) new combination, holotype male (7.8 × 5.0 mm) (RMNH De:103.921), Bougainville Strait; C, *S. granulosa* (Ng & Richer de Forges, 2013) new combination, paratype male (6.5 × 4.6 mm) (MNHN-IU-2011-2944b), Papua New Guinea; D, *S. debilis* (Rathbun, 1932) new combination, holotype female (10.8 × 7.0 mm) (USNM49572), Japan.

merus triangular in cross-section, with carinate margins, with spine or blunt distal angle. Ambulatory legs slender, articles with smooth, rounded margins; merus with blunt distal angle, ventral margin of P2–P5 dactylus typically smooth or with small granules; P2 longest; P5 merus length more than 4 times width (Fig. 1A–D). Male thoracic sternum slightly concave anteriorly; sternites 3, 4 transversely narrow, constricted anteriorly, lateral margin relatively straight to constricted medially. Male pleon triangular to trapezoidal, telson triangular to dome-shaped; surface of somites smooth (Fig. 2A–D). G1 straight, slender, distal tip sharp or with 2 small distinct projections, slightly constricted on distal third (Fig. 4A–M); G2 with distal tip blunt (Ng & Richer de Forges, 2013: fig. 4D).

Remarks. *Samadinia* Ng & Richer de Forges, 2013, was described by Ng & Richer de Forges (2013) for one species, *Samadinia longispina* Ng & Richer de Forges, 2013, which differs from other species then referred to *Rochinia* in having four long spines, poorly defined carapace regions, a granulated carapace, and a transversely narrow male anterior thoracic sternum where sternites 3 and 4 are strongly constricted at the anterior region (Ng & Richer de Forges, 2013). In their discussion, Ng & Richer de Forges (2013) recognised five groups in *Rochinia* sensu lato based on the carapace and the male anterior thoracic sternum morphology (Ng & Richer de Forges, 2013: fig. 5) but refrained from establishing any genera as they noted they had not examined most of the *Rochinia* species at that time and were unsure about the degree of variation within this taxon.

Since the original description of *Samadinia*, the authors have examined most of the known species of *Rochinia* sensu lato, and the above-mentioned characters used to separate them

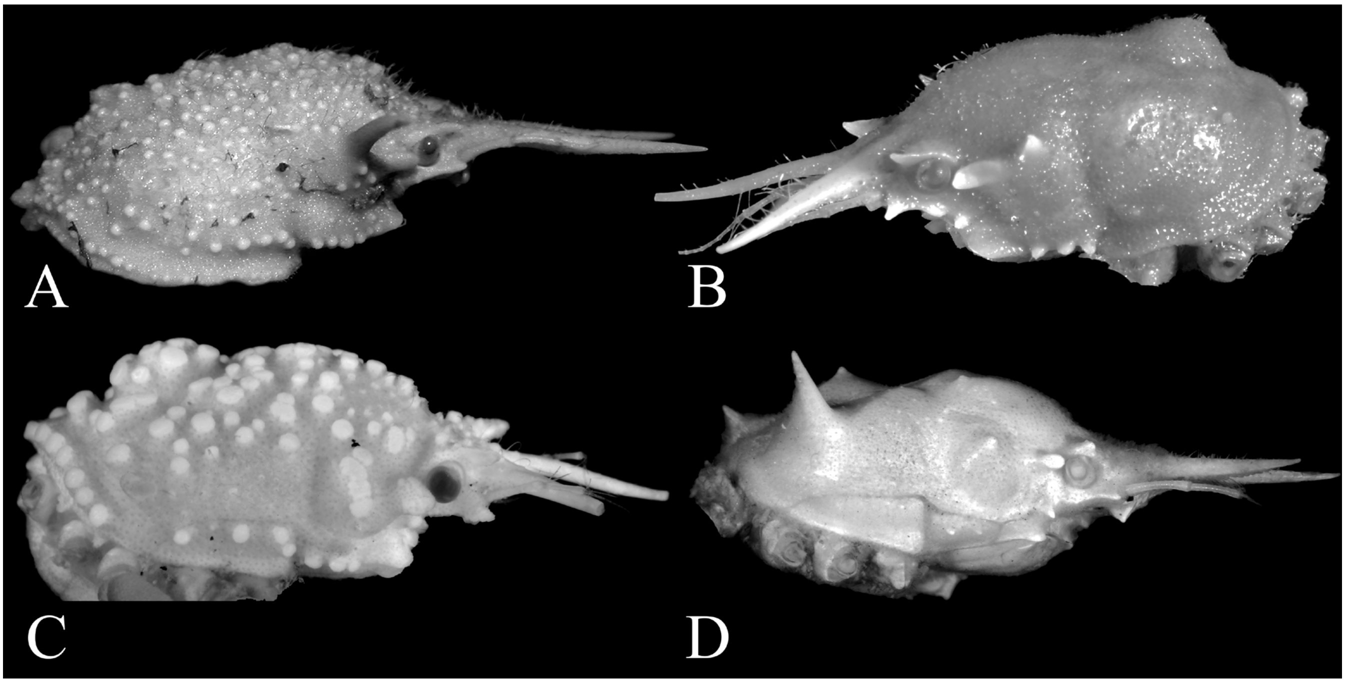

Fig. 3. Lateral view of carapace. A, *Samadinia longispina* Ng & Richer de Forges, 2013, holotype male (25.3 × 17.9 mm) (MNHN-IU-2011-4190), Polynesia; B, *S. suluensis* (Griffin & Tranter, 1986) new combination, holotype male (7.8 × 5.0 mm) (RMNH De:103.921), Bougainville Strait; C, *S. granulosa* (Ng & Richer de Forges, 2013) new combination, holotype female (9.2 × 6.9 mm) (MNHN-IU-2011-2944a), Papua New Guinea; D, *S. debilis* (Rathbun, 1932) new combination, holotype female (10.8 × 7.0 mm) (USNM 49572), Japan.

are not all reliable. The carapace armature certainly varies too substantially between species and does not appear to be a useful genus character. Studying the material, it is in fact more parsimonious that we expand the diagnosis of *Samadinia* to accommodate most of the species now in *Rochinia* sensu lato. *Samadinia* is herein redefined to include 25 species that were previously in *Rochinia* sensu lato (Table 1).

Of the five groups of "*Rochinia*" recognised by Ng & Richer de Forges (2013), the first included *Rochinia gracilipes* A. Milne-Edwards, 1875, and *Scyramathia carpenteri* (Norman, in Thomson, 1873), species that have distinct, raised carapace regions, with most of the surface smooth but otherwise armed with larges granules or spines, with the male thoracic sternum broad anteriorly and the male pleon acutely triangular to T-shaped (cf. Ng & Richer de Forges, 2013: fig. 5A, B). As discussed earlier, further comparisons by Tavares & Santana (2018) and Lee et al. (2020) have now indicated that the two species belong to separate genera. The second group contained species that have distinct carapace regions, with the rest of the surface smooth but otherwise armed with large rounded granules and low or absent lateral branchial spines, with the broad male thoracic sternum slightly constricted anteriorly, and the male pleon triangular to T-shaped (cf. Ng & Richer de Forges, 2013: fig. 5C). Most of the members of this group were recently referred to a new genus, *Crocydocinus*, by Lee et al. (2019) (see notes below on *Samadinia makassar* species-group). The third group contained *Rochinia fultoni* (Grant, 1905) as the sole representative, characterised by a relatively elongated carapace, distinct carapace regions with several sharp tubercles, and a narrow male thoracic sternum that is constricted anteriorly and acutely triangular male pleon (cf. Ng & Richer de Forges, 2013: fig. 5F). The male sternum of *R. fultoni* matches that of *Oxypleurodon* Miers, 1885, and although it lacks the typical carapace plate characters, it is here assigned to this genus as it has other associated features (see account of *O. fultoni* below).

The fourth and fifth groups recognised by Ng & Richer de Forges (2013) are here placed in *Samadinia*. The fourth group contained species that have distinct carapace regions, with numerous sharp spines on carapace surface, with the male thoracic sternum transversely narrow and constricted anteriorly and the male pleon acutely triangular or T-shaped (typified by *R. pulchra* (Miers, 1886)), while the fifth group has species with distinct carapace regions, a granulated carapace surface, strong lateral branchial spines, and similar male sternal characters as the preceding one (e.g., *R. kotakae* Takeda, 2001). While the carapace morphologies and armature of these two groups appear different, all 18 constituent species share all other diagnostic characters and are here referred to a redefined *Samadinia*.

In the present paper, two species-groups, with a total of six species, are recognised within *Samadinia*. There are five species in the *S. makassar* group, viz., *S. daiyuae* (Takeda & Komatsu, 2005), new combination, *S. makassar* (Griffin & Tranter, 1986), new combination, *S. moluccensis* (Griffin & Tranter, 1986), new combination, *S. suluensis* (Griffin & Tranter, 1986), new combination, and *S. tomentosa* (Griffin & Tranter, 1986), new combination. Compared to the other species of *Samadinia*, these five taxa lack or only have a weak lateral branchial spine, have a prominently rounded posterior lateral carapace margin, with the postorbital lobe flattened laterally, and the preorbital angle is distinct (Fig. 1B). These species, however, are rare in collections (Appendix 1), and until more material becomes available,

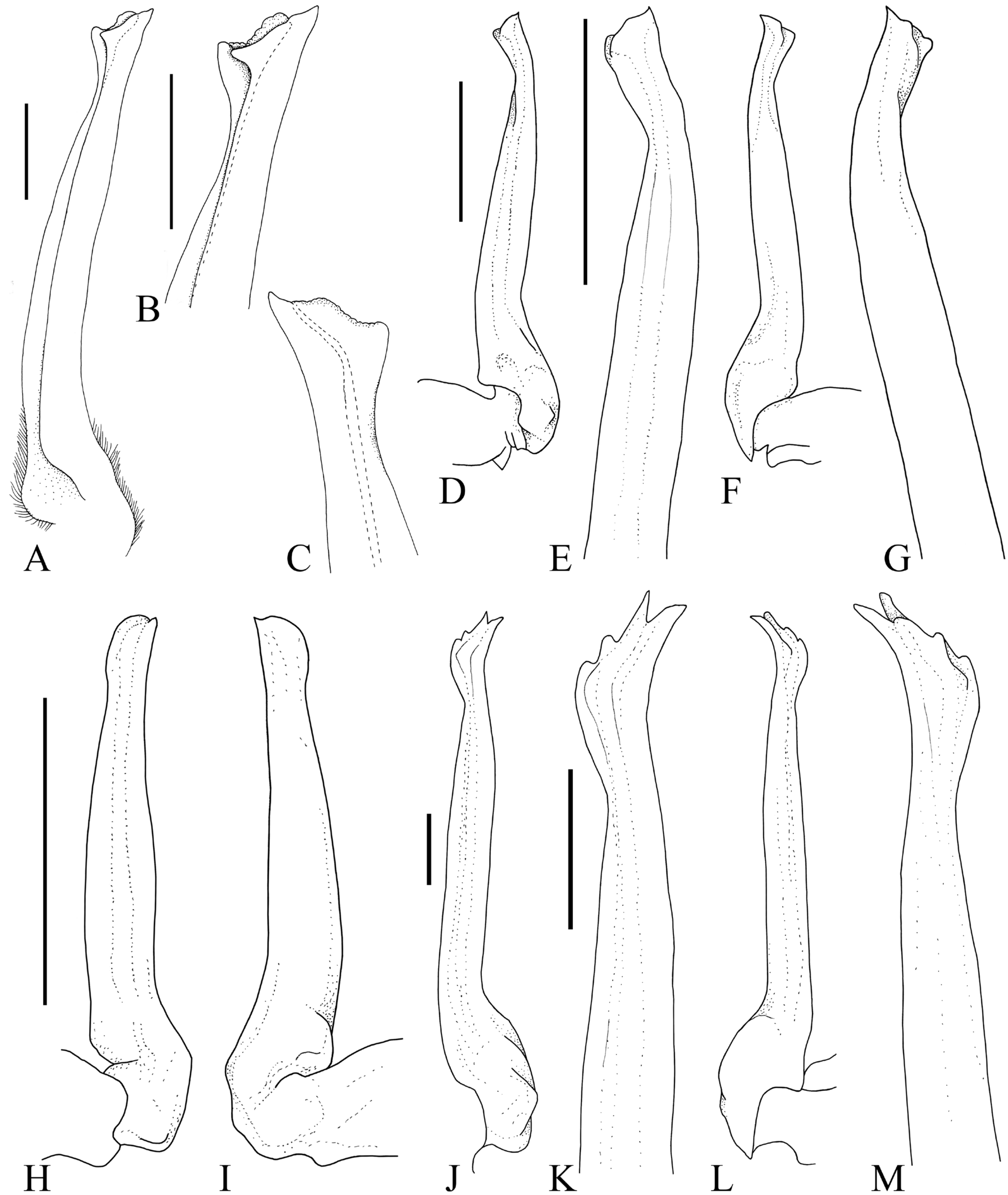

Fig. 4. Left G1. A–C, *Samadinia longispina* Ng & Richer de Forges, 2013, holotype male (25.3 × 17.9 mm) (MNHN-IU-2011-4190) (after Ng & Richer de Forges, 2007: fig. 4A–D); D–G, *S. moluccensis* (Griffin & Tranter, 1986) new combination, paratype male (11.5 × 6.9 mm) (RMNH De:103.737), Java Sea; H, I, *S. granulosa* (Ng & Richer de Forges, 2013) new combination, paratype male (6.5 × 4.6 mm) (MNHN-IU-2011-2944b), Papua New Guinea; J–M, *S. debilis* (Rathbun, 1932) new combination, male (27.0 × 19.2 mm) (NSMT-Cr 12139), Japan. A, D, H, J, ventral view; B, E, K, ventral view of distal portion; C, G, M, dorsal view of distal portion; F, I, L, dorsal view. Scale bar = 1 mm.

they are provisionally included in *Samadinia* for now. The other species-group, *S. granulosa* species-group, includes only *S. granulosa* (Ng & Richer de Forges, 2013), new combination. Ng & Richer de Forges (2013) commented that *S. granulosa* is morphologically similar to *S. longispina* in the carapace shape as well as the numerous carapace granules on the surface, but differed in its relatively smaller adult size, with mature females mature at 6.9 mm in carapace width (vs. 9.6 mm carapace width in *S. longispina*); the carapace is covered with relatively larger granules (Fig. 1C) (vs. carapace with small granules in *S. longispina*; Fig. 1A); the pseudorostral spines are relatively shorter and less diverging (Fig. 1C) (vs. longer, more diverging pseudorostral spines in *S. longispina*; Fig. 1A); the male thoracic sternum is proportionately broader anteriorly (Fig. 2C) (vs. male thoracic sternum proportionately narrower anteriorly in *S. longispina*; Fig. 2A); and the ambulatory legs are distinctly shorter (Fig. 1C) (vs. proportionately longer ambulatory legs in *S. longispina*; Fig. 1A). Until more material or allied species are available, *S. granulosa* is retained in *Samadinia* for the time being.

Rochinia debilis Rathbun, 1932, was described from a single immature female specimen from Joga Shima Light, Japan (Fig. 1D). The G1 morphology is figured here for the first time from newly examined males (Fig. 4J–M; Appendix 1). Based on the G1 morphology with an angled tip with two small but distinct projections, it is relatively similar to *Crocydocinus decipiata* (Williams & Eldredge, 1994), *Tunepugettia sagamiensis* and *T. corbariae* Lee, Richer de Forges & Ng, 2019. However, as all other carapace and pereiopod characters are closer to *Samadinia*, this species is here referred to this genus.

Distribution. Across Indo-West Pacific, and East China Sea.

Laubierinia Richer de Forges & Ng, 2009

Laubierinia Richer de Forges & Ng, 2009a: 14.

Type species. *Rochinia carinata* Griffin & Tranter, 1986, original designation by Richer de Forges & Ng (2009a).

Species composition. With three species (Table 1).

Comparative material examined. See Appendix 1.

Diagnosis. Carapace rounded; covered by thick tomentum, masking swollen regions (Richer de Forges & Ng, 2009a: figs. 6E, 10A, 11D; Fig. 5A, D). Pseudorostral spines short, stout, sharp, diverging at approximately 45° angle or less. Supraorbital eave with preorbital angle distinct, sharp; postorbital lobe cup-like, blunt anterior margin (Richer de Forges & Ng, 2009a: figs. 6E, 9A, 10A, 11D; Fig. 5A, D). Carapace with several strong elevated swollen regions, some flattened on top; hepatic region particularly elevated; diagnostic laterally flattened plate present on lateral carapace border of branchial region, forming groove with rest of carapace (Richer de Forges & Ng, 2009a: figs. 6E, 9A, B 10A, B, 11D; Fig. 5A, C, D, F). Antennal flagellum longer than pseudorostral spines. Basal antennal article longer than broad, outer margin slightly curved. Distal angle of buccal frame blunt, not raised. Pterygostomial region with single raised plate on outer margin (Richer de Forges & Ng, 2009a: figs. 6F, 10C; Fig. 5B, E). Chelipeds with propodus slightly inflated, carinate margin; carpus with carinate outer margin; merus triangular in cross-section, carinate on each margin. Ambulatory legs with carinate margin on merus, carpus, porpodus; merus with blunt distal angle; P2 longest (Richer de Forges & Ng, 2009a: figs. 6E, 10A, 11D; Fig. 5A, D). Male thoracic sternum slightly concave anteriorly; sternites 3, 4 narrow, with lateral margin constricted (Richer de Forges & Ng, 2009a: figs. 6F, 10C; Fig. 5B, E). Male pleon triangular, telson triangular; surface of somites smooth. G1 straight, slightly bifid at distal tip (Richer de Forges & Ng, 2009a: fig. 9C, D; Fig. 9A, B); G2 with blunt, rounded tip (Richer de Forges & Ng, 2009a: fig. 9E, F).

Remarks. *Laubierinia* was established by Richer de Forges & Ng (2009a) for two species previously placed in *Rochinia*: *L. carinata* (Griffin & Tranter, 1986) (type species) (Richer de Forges & Ng, 2009a: figs. 6E, F, 9A–F, 11D), and *L. nodosa* (Rathbun, 1916) (Richer de Forges & Ng, 2009a: fig. 10A–C). *Laubierinia* can be distinguished from *Samadinia* by its more rounded carapace (vs. pyriform carapace in *Samadinia*), short and flattened pseudorostral spines (vs. long, slender pseudorostral spines in *Samadinia*); the presence of a laterally flattened branchial plate on lateral margin of carapace (vs. smooth, with granules or rounded branchial plate on lateral margin of carapace in *Samadinia*), and the presence of large distinct granules on the hepatic and branchial regions (vs. with hepatic and branchial spines or the lack of branchial spines in *Samadinia*) (Richer de Forges & Ng, 2009a). In the present study, one species is transferred to *Laubierinia* after the examination of the type. With the transfer of *L. globulifera* (Wood-Mason & Alcock, 1891), new combination, three species are now recognised in this genus (Table 1).

Laubierinia globulifera (Wood-Mason, in Wood-Mason & Alcock, 1891), new combination

(Figs. 5A–F, 8A, B)

Pugettia globulifera Wood-Mason, in Wood-Mason & Alcock, 1891: 260 (type locality: Andaman Sea).
Scyramathia globulifera – Alcock, 1895: 205. – Alcock & Anderson, 1895: pl. 20 fig. 3, 3a. – Alcock, 1899: 5 (list), 54. – Doflein, 1904: 85.
Rochinia globulifera – Serène & Lohavanijaya, 1973: 56 (key). – Griffin & Tranter, 1986a: 175 (key), 179, fig. 62a, b. – Casadío et al., 2005: 159 (list). – Ng & Richer de Forges, 2007: 62 (list). – Ng et al., 2008: 105 (list). – Huys et al., 2014: 15 (table). – Tavares & Santana, 2018: 223 (list).

Material examined. Lectotype (herein designated): female (11.0 × 6.7 mm) (NHM 96.5.14.2), off Sentinel, Andaman, 439 m, no other data. **Others:** 1 male (9.2 × 6.0 mm) (AM P.34652), stn 7, Bali Sea, Indonesia, 8°29′S 114°40′E, 200 m, coll. Java-South Africa Expedition, 5 April 1929.

Comparative material examined. See Appendix 1.

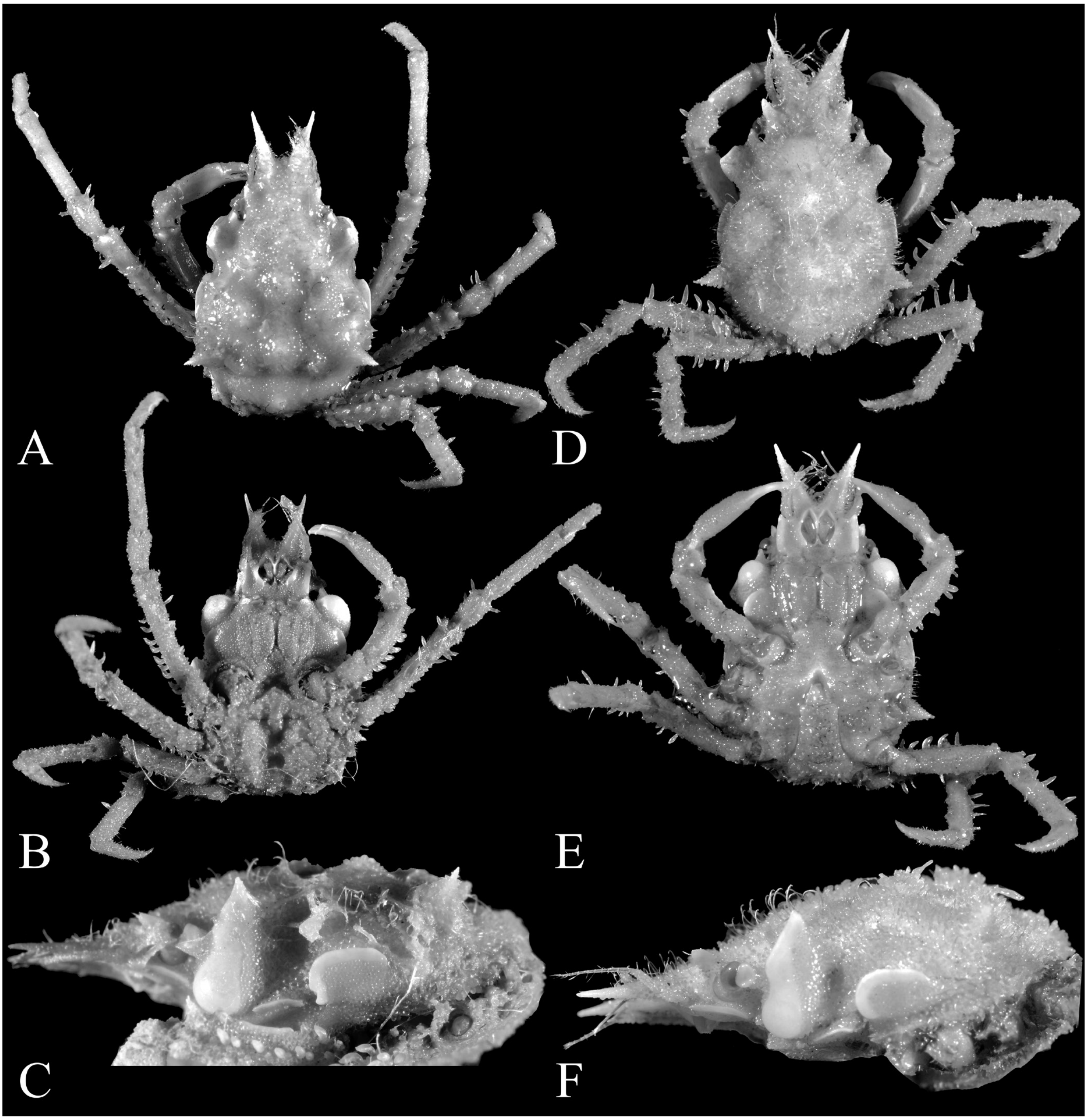

Fig. 5. *Laubierinia globulifera* (Wood-Mason, in Wood-Mason & Alcock, 1891) new combination. A–C, lectotype female (11.0 × 6.7 mm) (NHM 96.5.14.2), Andaman; D–F, male (9.2 × 6.0 mm) (AM P.34652), Indonesia. A, D, overall dorsal view; B, E, overall ventral view; C, F, lateral view of carapace.

Remarks. *Pugettia globulifera* Wood-Mason, in Wood-Mason & Alcock, 1891, was described with no indication of the number of specimens examined. In his description, however, only a single length measurement was presented but there are no indications if he had more specimens. For the other species described or recorded in the same paper, the number of specimens was typically provided. The specimen he discussed was collected from Station 56, which is between North Sentinel and South Sentinel islands (Andaman Is.), at a depth between 220–240 fathoms (407–444 m) (see Huys et al., 2014: 45 (Appendix 2)). In the NHM, there is a single female specimen labelled as a "syntype" for this species, with the locality information of the specimen exactly matching the collected locality. The specimen also matches the brief description by Wood-Mason & Alcock (1891: 260–261). Wood-Mason & Alcock (1891: 261) recorded the carapace length of their specimen as 15.5 mm but they did not explain how it was measured although it probably included the pseudorostral spines. The carapace length of the present specimen (NHM 1896.5.14.2) is 11.0 mm, excluding the pseudorostral spines, and in proportions, and appears to match the type. It also agrees well with the original figure of the species in Alcock & Anderson (1895: pl. 20 fig. 3, 3a), but the problem is that their caption stated that it was a male specimen. No male specimen, however, was found in the NHM. From the available information, it would therefore appear that Wood-Mason & Alcock (1891) had at least two specimens, one male (the one figured) and one female (the one present in NHM). As such, the syntype specimen (NHM 1896.5.14.2) is here designated as the lectotype of *Pugettia globulifera* Wood-Mason, in Wood-Mason & Alcock, 1891.

Griffin & Tranter (1986a) examined two male specimens of *L. globulifera*, new combination, from Bali Sea and compared them to the male specimen from Andaman Sea that was figured by Alcock & Anderson (1895: pl. 20 fig. 3, 3a). The lectotype female specimen examined here agrees best with the diagnosis of *Laubierinia*; notably in that it has the characteristic laterally flattened branchial plate found on the lateral border of the carapace (Fig. 5C, F). *Laubierinia globulifera*, new combination, also has a distinct strong rounded granule on the ventral side of the hepatic plate, a character present but weaker in the two congeners (Fig. 5B, E).

Distribution. *Laubierinia globulifera*, new combination, is recorded from its type locality, Andaman Sea (Wood-Mason & Alcock, 1891), and Indonesia (Griffin & Tranter, 1986a).

Oxypleurodon Miers, 1885

Oxypleurodon Miers, 1885: 588. – Miers, 1886: 38. – Tavares, 1991: 167, 169. – Ng et al., 2008: 104. – Richer de Forges & Ng, 2009a: 2. – Richer de Forges & Ng, 2009b: 250. – Richer de Forges, 2010: 646.
Nasutocarcinus Tavares, 1991: 160 (list), 169. – Ng et al., 2008: 104.
(For a complete synonymy of the genus, see Richer de Forges, 2010: 646).

Type species. *Oxypleurodon stimpsoni* Miers, 1885, by monotypy.

Species composition. With 34 species (Table 1).

Comparative material examined. See Appendix 1.

Diagnosis. Carapace pyriform, with strongly projecting lateral branchial spines or plates. Pseudorostral spines short to long, slender, slightly diverging at approximately 30° angle or less, sometimes subparallel or fused along most of length. Supraorbital eave forms plate with distinct preorbital angle; postorbital lobe fused with hepatic angle forming L-shaped lobe, with some species not fused with postorbital lobe cup-like, blunt anterior margin (Richer de Forges & Ng, 2009b: figs. 2C, D, 3A–F, 4A, C, 6A, 7A–F; Fig. 6A). Carapace usually with distinct plates on each region (Richer de Forges & Ng, 2009b: figs. 2C, D, 3A–F, 4A, C, 6A, 7A–F; Fig. 6A). Antennal flagellum shorter than to longer than pseudorostral spines (Richer de Forges & Ng, 2009b: figs. 4B, D, 6B; Fig. 6B). Basal antennal article longer than broad, with outer margin relatively straight. Distal angle of buccal frame blunt, not raised. Pterygostomial region with single raised plates or granules on outer margin (Richer de Forges & Ng, 2009b: figs. 4B, D, 6B; Fig. 6B). Chelipeds stout; propodus slightly inflated with outer margin carinate; carpus with carinate outer margin; merus triangular in cross-section with carinate margins. Ambulatory legs slender, articles with carinate margins or rounded margins; merus with blunt distal angle; P2 longest (Fig. 6A). Male thoracic sternum concave anteriorly; sternites 3, 4 narrow, lateral margins constricted. Male pleon triangular, telson triangular; surface of somites smooth (Richer de Forges & Ng, 2009b: fig. 4B, D; Fig. 6B). G1 straight, with distal tip sharp (Richer de Forges & Ng, 2009b: figs. 10A–F, 11A–F; Fig. 9C, D); G2 slight curve, distal outer margin concave, distal tip rounded (Richer de Forges & Ng, 2009b: fig. 11G, H).

Remarks. *Oxypleurodon* was considered to be a junior synonym of *Rochinia* A. Milne-Edwards, 1875, by Griffin & Tranter (1986a), but was later resurrected by Tavares (1991) (see also Richer de Forges & Ng, 2009b; Lee et al., 2015). *Nasutocarcinus* Tavares, 1991, however, was synonymised with *Oxypleurodon* by Richer de Forges (2010). There have been a number of changes to the generic boundaries between *Oxypleurodon* Miers, 1885, *Sphenocarcinus* A. Milne-Edwards, 1875, and *Rochinia* A. Milne-Edwards, 1875 (Richer de Forges & Ng, 2009b; Lee et al., 2015). *Oxypleurodon* was revised by Richer de Forges & Ng (2009b) and they also redefined *Sphenocarcinus* A. Milne-Edwards, 1875, for its type species, *S. corrosus* A. Milne-Edwards, 1875. Richer de Forges & Ng (2009b) established *Rhinocarcinus* for *R. agassizi* Rathbun, 1893. With the present inclusion of *O. fultoni* (Grant, 1905), there are now 34 species in *Oxypleurodon* (see also Richer de Forges & Ng, 2009a, b; Richer de Forges, 2010; Richer de Forges & Corbari, 2012; Lee et al., 2015; Lee et al., 2017; Lee et al., 2019) (Table 1).

Oxypleurodon fultoni (Grant, 1905), new combination
(Figs. 6A–C, 8C, D)

Hyastenus Fultoni Grant, 1905: 313, pl. 11 fig.1 (type locality: off Port Jackson).
Scyramathia fultoni – Rathbun, 1918: 14, pl. 5.
Hyastenus fultoni – Griffin, 1966: 268.
Rochinia fultoni – Griffin, 1966: 280 (key) [new combination]. – Griffin, 1972: 71. – Serène & Lohavanijaya, 1973: 55 (key). – Griffin & Brown, 1976: 253, 254. – Griffin & Tranter, 1986a: 176 (key). – Davie, 2002: 329. – Poore, 2004: 387, fig. 118f. – Casadío et al., 2005: 159 (list). – Ng & Richer de Forges, 2007: 62 (list). – Ng et al., 2008: 105 (list). – Richer de Forges & Poore, 2008: 68, fig. 2a. – Ng & Richer de Forges, 2013: 363, fig. 5F. – Richer de Forges & Ng, 2013: 470, figs. 2A, 3A–C, 8A–D. – Tavares & Santana, 2018: 223 (list).

Material examined. Holotype: male (8.2 × 5.1 mm) (AM G.5427), East of Port Jackson, New South Wales, 457 m, coll. WF Pettard. **Others: Australia:** 1 male (with bopyrid; 10 × 7.4 mm), 2 females (with bopyrids; 8.0 × 6.1 mm, 7.2 × 8.21 mm) (NHM 1906.11.13.1–3), off Port Jackson, no other data. – 1 male (23.0 × 15.3 mm), 1 female (14.8 × 10.0 mm) (AM P.46505), east of Brush Island, New South Wales, 25°32′S 150°44′E, 264–282 m, coll. FRV "Kapala", 21 October 1975. – 5 males (29.5 × 13.4 mm, 29.1 × 12.7 mm, 15.4 × 10.1 mm, 14.6 × 9.2 mm), 4 females (17.9 × 11.7 mm, 15.3 × 10.0 mm, 14.3 × 9.5 mm, 13.0 × 8.0 mm)

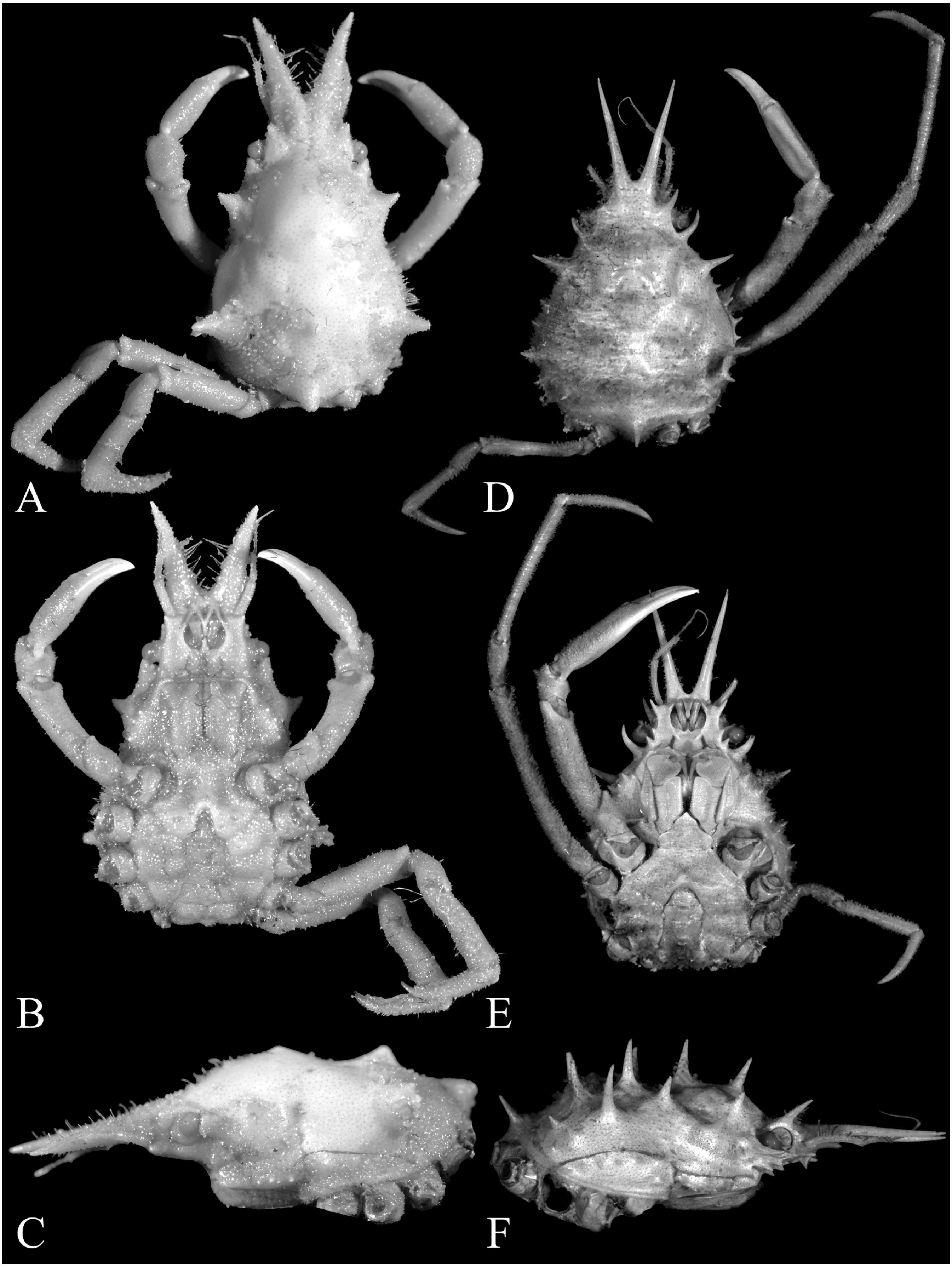

Fig. 6. A–C, *Oxypleurodon fultoni* (Grant, 1905) new combination, holotype male (8.2 × 5.1 mm) (AM G.5427), Australia; D–F, *Pugettia vesicularis* (Rathbun, 1907) new combination, holotype male (14.6 × 10.6 mm) (USNM32860), Galapagos. A, D, overall dorsal view; B, E, overall ventral view; C, F, lateral view of carapace.

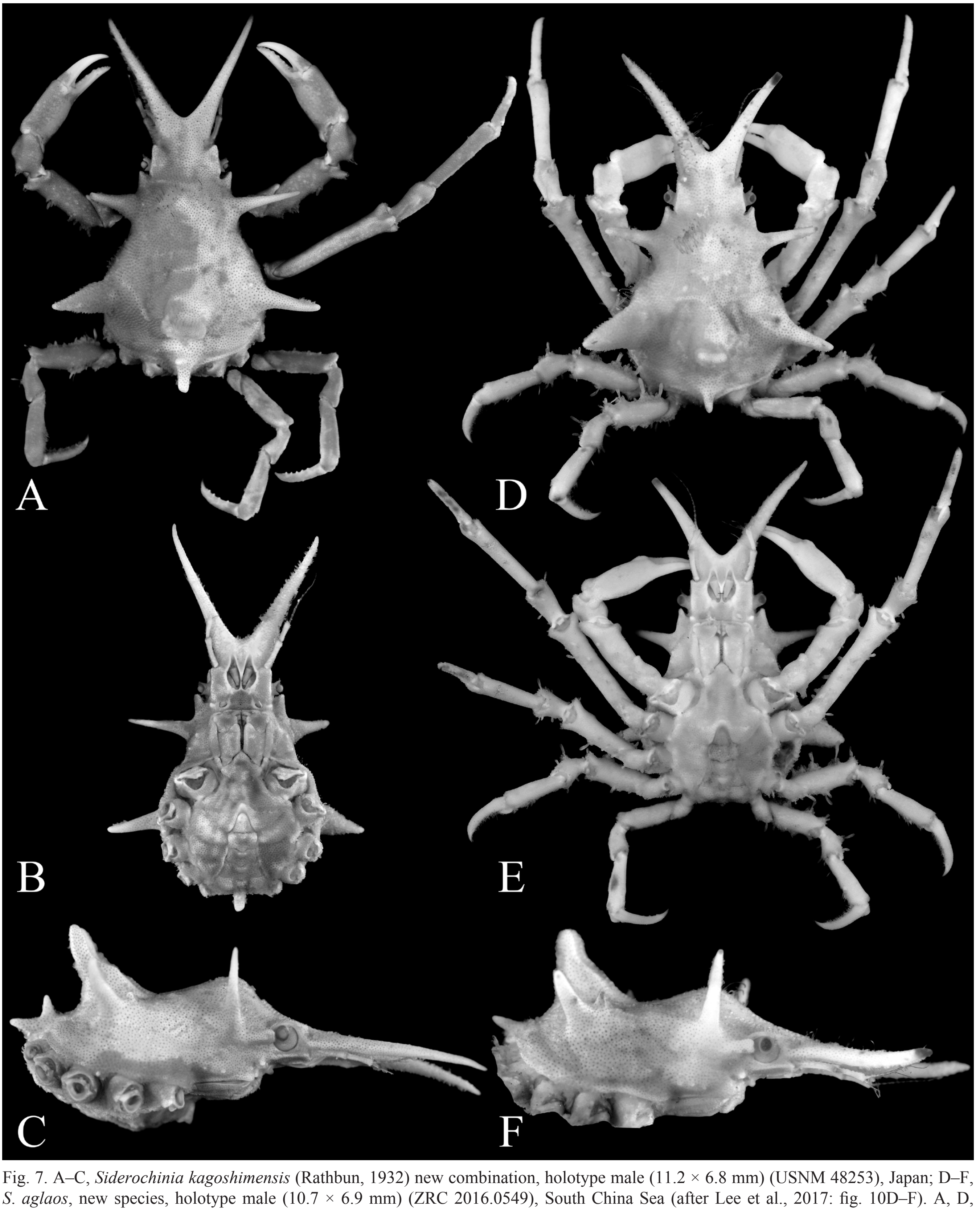

Fig. 7. A–C, *Siderochinia kagoshimensis* (Rathbun, 1932) new combination, holotype male (11.2 × 6.8 mm) (USNM 48253), Japan; D–F, *S. aglaos*, new species, holotype male (10.7 × 6.9 mm) (ZRC 2016.0549), South China Sea (after Lee et al., 2017: fig. 10D–F). A, D, overall dorsal view; B, E, overall ventral view; C, F, lateral view of carapace.

(AM P.68743), east of Broken Bay, east of Sydney, New South Wales, 33°35′S 151°56′E, 70–80 m, coll. 29 October 1981. – 5 males (20.2 × 13.2 mm, 18.9 × 12.3 mm, 14.0 × 9.1 mm, 13.6 × 8.8 mm), 5 ovigerous females (16.9 × 11.0 mm, 16.8 × 10.7 mm, 16.5 × 11.0 mm, 13.5 × 8.7 mm), 1 female (17.1 × 11.2 mm) (AM P.25036), southeast of Broken Bay, New South Wales, 33°26′43″S 151°50′21″E, 329 m, coll. FRV "Kapala", 5 October 1976. – 2 males (13.6 × 8.6 mm, 11.8 × 7.5 mm), 2 females (16.1 × 10.7 mm, 14.6 × 9.0 mm) (ZRC 1965.10.14.38–41), south of Cape Everard, Victoria, coll. 16 June 1929. **Solomon Islands:** 1 male (13.6 × 8.4 mm), 1 female (14.4 × 9.2 mm) (ZRC 2011.1057), stn CP2832, Coloman Island, 10°44.54′S 162°19.65′E, 410–430 m, coll. SALOMON BOA Cruise, 21 September 2007. – 1 male (15.2 × 9.4 mm) (ZRC 2011.1062), stn CP2812, Solomon Islands, 9°42.71′S 161°31.04′E, 280–326 m, coll. SALOMON BOA Cruise, 18 September 2007. **Papua New Guinea:** 1 ovigerous female (18.6 × 11.8 mm) (MNHN-IU-2013-2343) [photographed], stn CP4259, northeast New Ireland, Bismarck sea, 02°53′S 151°06′E, 370–429 m, coll. MADEEP Expedition, 25 April 2014. – 1 ovigerous female (17.6 × 10.9 mm) (MNHN-IU-2013-2398) [photographed], stn DW4280, north Bougainville Island, Solomon Sea, 05°40′S 154°02′E, 386 m, coll. MADEEP Expedition, 28 April 2014. – 1 male (16.5 × 10.7 mm) (ZRC 2018.1487, ex. MNHN-IU-2013-3034) [photographed], stn CP4337, Ainto Bay, southeast New Britain, Solomon Sea, 06°07′S 149°17′E, 287–447 m, coll. MADEEP Expedition, 7 May 2014. – 1 male (14.4 × 9.2 mm), 1 ovigerous female (15.9 × 10.1 mm) (ZRC 2018.1488, ex. MNHN-IU-2011-1286), stn DW3734, Papua New Guinea, 08°16′S 150°30′E, 389 m, coll. BIOPAPUA, 9 October 2010. – 1 ovigerous female (16.5 × 10.2 mm) (ZRC 2018.1489, ex. MNHN-IU-2015-585), stn CP4259, Gazelle Channel, northeast New Ireland, Bismarck Sea, 02°53′S 151°06′E, 370–429 m, coll. MADEEP Expedition, 25 April 2014. – 1 female (12.9 × 7.8 mm) (MNHN-IU-2011-3292), stn DW3733, off Lancasay Islands and reefs, 08°16′S 150°30′E, 353 m, coll. BIOPAPUA, 9 October 2010. – 1 female (12.1 × 7.4 mm) (MNHN-IU-2011-1272), stn DW3641, Tami Island, Gulf of Huon, 06°45′S 148°01′E, 380–476 m, coll. BIOPAPUA, 24 August 2010.

Comparative material examined. See Appendix 1.

Remarks. As discussed earlier, of the five groups of "*Rochinia*" recognised by Ng & Richer de Forges (2013: 363, fig. 5F), *R. fultoni* was in its own group because of its carapace and male thoracic sternal features. *Oxypleurodon fultoni* was described from two males and four females from the east coast of Australia, with one measured male designated as the holotype by Grant (1905). This species lacks the typical carapace plates that are distinct in most *Oxypleurodon* species (see Richer de Forges & Ng, 2009b). It is, however, morphologically close to *O. sphenocarcinoides* (Rathbun, 1916), which has long been regarded as an atypical member of the genus in that it also lacks large and distinctive carapace plates (see Richer de Forges, 1995: pl. 3 fig. A, B; Richer de Forges & Ng, 2009b: fig. 3f). *Rochinia fultoni*, however, does possess other characters of *Oxypleurodon*, such as the lobe-like supraorbital eave with sharp preorbital angle (Fig. 6C), and the male thoracic sternum is concave anteriorly with sternites 3 and 4 narrow and the lateral margins constricted medially (Fig. 6B). The posterior region of the carapace for *R. fultoni* actually forms a slightly raised ridge, which is similar to the plate-like structure seen in the carapace posterior regions of more typical species of *Oxypleurodon*. The pterygostomial region is also similar between *O. sphenocarcinoides* and *R. fultoni*, with both species possessing distinct granules on the outer margin (Fig. 6B) instead of a single raised plate-like granule like on congeners (Fig. 6A). As such, the present morphological data indicates that *Rochinia fultoni* should be transferred to *Oxypleurodon*. In an unpublished molecular phylogeny of the genus using three mitochondrial (COI, 12S, 16S) and two nuclear (18S, H3) genes (Lee BY, in prep), *O. fultoni*, new combination, also clusters with other *Oxypleurodon* species, far from *Samadinia* as defined here.

It is possible that *O. fultoni* and *O. sphenocarcinoides* form a distinct species-group in *Oxypleurodon* with the shared character of lacking carapace plates. There are also other species-group in *Oxypleurodon* that were discussed by Richer de Forges & Ng (2009b), some of which are morphologically close to *Stegopleurodon* Richer de Forges & Ng, 2009. It is likely that *Oxypleurodon* is polyphyletic and more work will need to be done to revise the genus.

Distribution. This species is known from southeastern Australia (Port Jackson, New South Wales, and Victoria) to Tasmania (Cape Pillar) (Grant, 1905; Richer de Forges & Poore, 2008; Richer de Forges & Ng, 2013), and PNG (Lee et al., 2019). The depth range observed is 314–456 m.

Pugettia Dana, 1851

Pugettia Dana, 1851a: 268. – Miers, 1879: 650. – Rathbun, 1925: 167. – Garth, 1958: 186. – Sakai, 1965: 72. – Griffin & Tranter, 1986a: 92. – Ng et al., 2008: 101 (list). – Wicksten & Stachowicz, 2013: 359.
Mimulus Stimpson, 1860: 199. – Miers, 1879: 649. – Rathbun, 1925: 182. – Garth, 1958: 183. – Ng et al., 2008: 101 (list).
(For the complete synonymy, refer to Wicksten & Stachowicz, 2013: 359).

Type species. *Pugettia gracilis* Dana, 1851, subsequent designation by Miers (1879).

Species composition. With 24 species (Table 1).

Comparative material examined. See Appendix 1.

Diagnosis. Carapace pyriform, tuberculate or uneven, with 2 prominent, angular, lateral projections, separated by a concave interspace. Pseudorostral spines short, slender, relatively straight, subparallel to diverging at approximately 45° angle or less. Supraorbital eave well-developed, with distinct preorbital angle; postorbital lobe slender with blunt anterior margin to slender, curved spine. Carapace smooth or with spines (Garth, 1958: pl. K fig. 1, pl. 19, 20 figs. 1, 2, pl. 21

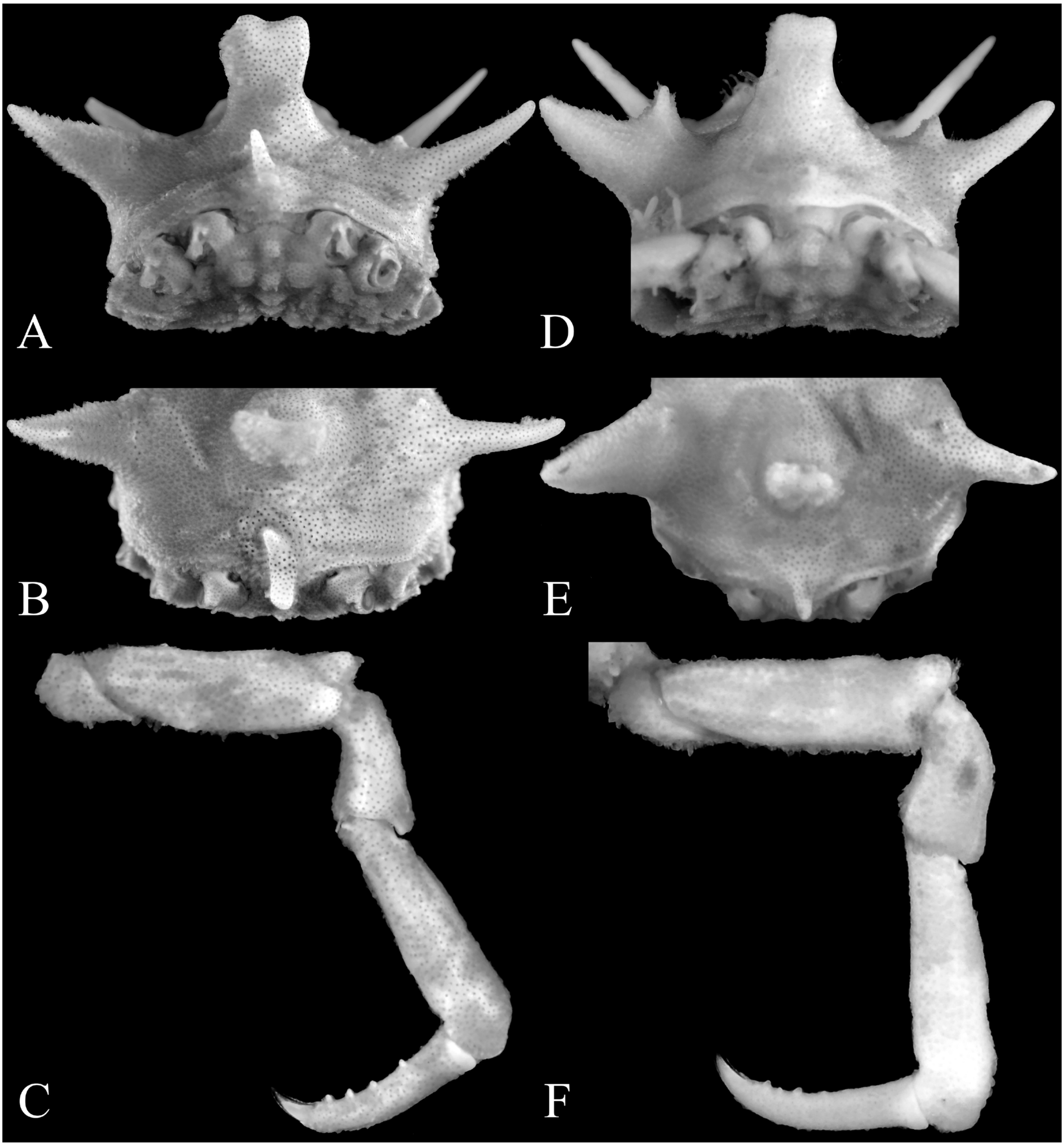

Fig. 8. A–C, *Siderochinia kagoshimensis* (Rathbun, 1932) new combination, holotype male (11.2 × 6.8 mm) (USNM 48253), Japan; D–F, *S. aglaos*, new species, holotype male (10.7 × 6.9 mm) (ZRC 2016.0549), South China Sea. A, D, side view of cardiac spine; B, E, dorsal view of intestinal spine along lateral carapace margin; C, F, dorsal view of P5.

figs. 1, 2; Fig. 6D). Antennal flagellum as long as or longer than pseudorostral spines. Basal antennal article with distal angle sharp, distinct; some with sharp basal angle (Garth, 1958: pl. K fig. 4; Fig. 6E). Distal angle of buccal frame blunt, slightly raised. Pterygostomial region with granules or short spines on outer margin (Fig. 6E). Chelipeds of male well developed; propodus slightly inflated, outer margin with carinate; carpus with outer margin carinate; merus triangular in cross-section, carinate on all margins. Ambulatory legs slender, articles with rounded margins; merus with small spine or blunt distal angle; P2 longest (Garth, 1958: pl. K fig. 1, pl. 19, 20 figs. 1, 2, pl. 21 figs. 1, 2; Fig. 6D). Male thoracic sternum slightly concave anteriorly; sternites 3, 4 wide, lateral margin slightly constricted. Male pleon broadly triangular to slightly rectangular, telson triangular to slightly dome-shaped; surface of somites smooth (Garth, 1958: pl. K fig. 2; Fig. 6E). G1 relatively straight to slightly curved, with 3 distinct lobes on distal tip (Garth, 1958: pl. L figs. 1–7; Fig. 9E, F); G2 slightly curved, distal outer margin concaved forming C-shaped curve, distal tip sharp.

Remarks. There are currently 23 recognised species assigned to *Pugettia* Dana, 1851 (Ng et al., 2008; Komatsu, 2011; Wicksten & Stachowicz, 2013; Ohtsuchi et al., 2014; Lee et al., 2017; Ohtsuchi & Kawamura, 2019; Ohtsuchi et al., 2020), with a distribution across the northern Pacific. In addition to the review by Wicksten & Stachowicz (2013), who synonymised *Mimulus* Stimpson, 1860, with *Pugettia*, the genus has not been revised as a whole. Lee et al. (2017) transferred one species to *Rochinia* sensu lato, *R. kagoshimensis* (Rathbun, 1932), but in the context of the present reappraisal, it is here transferred to its own genus (see *Siderochinia*, new genus).

As shown by Garth (1958), *Pugettia* has the scyriform type of G1, i.e., the distal tip of the G1 forming three distinct lobes, a character which is unique to this genus. Examination of the morphology of species of *Rochinia* sensu lato indicate that there is one species that possesses the same G1 morphology as *Pugettia* species, *P. vesicularis*, new combination, from the Galapagos Islands (Fig. 9E, F).

Pugettia vesicularis (Rathbun, 1907), new combination
(Figs. 6D–F, 8E, F)

Scyramathia vesicularis Rathbun, 1907: 73, pl. 5 fig. 7, pl. 8 fig. 1–1a (type locality: Southeast of Hood island, Galapagos).
Rochinia versicularis – Rathbun, 1925: 210 (key), 221, pl. 230. – Garth, 1958: 283 (key), 284, pl. P fig. 6, pl. 31 fig. 1. – Tavares, 1991: 161 (list), 170, 174, fig. 4C. – Casadío et al., 2005: 159 (list). – Ng & Richer de Forges, 2007: 63 (list). – Ng et al., 2008: 106 (list). – Pettan, 2013: 81, 86 (key), figs. 15a, b, 22d. – Tavares & Santana, 2018: 223 (list).

Material examined. Holotype: male (14.6 × 10.6 mm) (USNM 32860), stn 4642, southeast of Hood Island (= Española Island), Galapagos Island, coll. 7 November 1904. **Others:** 1 ovigerous female (13.4 × 10.0 mm), 1 female (9.3 × 6.7 mm) (USNM 32860), same data as holotype.

Remarks. Little is known about *P. vesicularis*. The species was described based on four specimens collected from southeast of Hood Island, Galapagos Islands, and Rathbun (1907) indicated the single male specimen as the holotype. She did not describe the G1 but the overall morphology was noted to be similar to that of *Samadinia pulchra* due to its spiny carapace (Rathbun, 1907). It was also observed by Rathbun (1907: 73) that the difference between the species is in the placement of spines on the carapace and having shorter ambulatory legs. The G1 figured by Garth (1958: 535, pl. P fig. 6) shows three lobes at its extremity (see also Griffin & Tranter, 1986a: 175; Tavares, 1991: 170, fig. 4C). This G1 morphology is distinct from that of *Samadinia* (Fig. 4A–M), which has single distal sharp tip. Garth (1958) commented that this species should be removed from *Rochinia* to its own genus due to the morphology of the G1 but did not take any formal action. After examining the morphology of the G1 of this species (Fig. 9E, F), it is here shown to be different from *Rochinia* (see Tavares & Santana, 2018: fig. 13I, J), *Scyramathia* (see Tavares & Santana, 2018: fig. 13A, B), and *Samadinia* (Fig. 4A–M). It is more similar to the typical form seen in *Pugettia* (see also Garth, 1958: pl. L figs. 1–7).

A total of 24 species are now recognised in *Pugettia* (Table 1), but the different external morphologies of these species suggest a revision is necessary and *Pugettia* is probably not monophyletic.

Distribution. This species is only known from the Galapagos Islands (Rathbun, 1907).

Siderochinia, new genus

Type species. *Pugettia kagoshimensis* Rathbun, 1932, by present designation.

Species composition. With two species (Table 1).

Diagnosis. Carapace pyriform, covered with layer of short setae which obscures carapace surface. Pseudorostral spines long, slender, diverging at approximately 45° angle. Supraorbital eave with preorbital angle distinct; postorbital angle lobe cup-like, round anterior margin. Carapace with strong hepatic, cardiac, lateral branchial, posterior spines (Fig. 7A, D). Antennal flagellum shorter than pseudorostral spines. Basal antennal article longer than broad, distal angle blunt, relatively straight outer margin. Distal angle of buccal frame blunt, not raised. Pterygostomial region with granules on outer margin (Fig. 7B, E). Male chelipeds short, propodus slightly inflated, rounded margins; carpus with rounded margin; merus with distinct, blunt distal angle, with margin rounded. Ambulatory legs slender, articles with rounded margins; merus with blunt distal angle; short spines present on ventral margin of P2–P5 dactyli, strongest on P4, P5 (Figs. 7A, D, 8C, F). Male thoracic sternum anteriorly slightly depressed; sternites 3, 4 narrow, lateral margins slightly constricted. Male pleon triangular, telson triangular; somites with slightly raised granules medially (Fig. 7B, E). G1 straight with wide, flattened tip (Fig. 9G, H, K, L); G2 slight curved, distal outer margin concave, distal rip rounded (Fig. 9I, J).

Etymology. The species in the genus possess strong hepatic, cardiac, lateral branchial and posterior spines, which makes it look like a star. The name is derived from the Latin word "sideris" for star, in arbitrary combination with the genus name *Rochinia*. Gender feminine.

Remarks. Comparison of the morphological characters showed several differences between *Siderochinia*, new genus, and allied genera. In *Siderochinia*, the hepatic spine is large and directed outwards (Fig. 7A, D) (vs. the hepatic spines are short and weak on *Samadinia* and *Crocydocinus*; cf. Lee et al., 2019: figs. 13A–D, 14A–C; Fig. 1A–D); there is a strong spine on each of the mesogastric and cardiac regions (Fig. 7A, D) (vs. only granules, tubercles, or weak spines on the same regions on *Samadinia*; Fig. 1A–D; large carapace granules on each region on *Crocydocinus*; cf. Lee et al., 2019: figs. 13A–D, 14A–C); the ambulatory legs are proportionately much shorter and stouter, with the P5 merus length approximately 2.3–3.5 times width in *Siderochinia* (Figs. 7A, D, 8C, F) (vs. ambulatory legs generally longer and more slender, with P5 merus length more than 3.5 times width in *Samadinia*, *Crocydocinus*, and *Laubierinia*; cf. Fig. 1A–D; Lee et al., 2019: figs. 13A–D, 14A–C; Fig. 5A, D); the P2–P5 meri are not carinate in *Siderochinia* and *Samadinia* (Figs. 1A–D, 7A, D, 8C, F) (vs. with dorsal margin weakly carinate or not carinate in *Laubierinia*; cf. Fig. 5A, D; Richer de Forges & Ng, 2009b: figs. 6E, 10A, 11D); the ventral margin P2 and P3 dactyli have weak spines while those of P4 and P5 have distinct short spines in *Siderochinia* (Figs. 7A, D, 8C, F) (vs. the ventral margins of P2–P5 dactyli smooth or with only small granules in *Samadinia* and *Crocydocinus*, and the P3–P5 dactyli with short spines in *Laubierinia*; cf. Fig. 1A–D; Lee et al., 2019: figs. 13A–D, 14A–C; Fig. 5A, D); and the male thoracic sternites 3 and 4 are narrow, with the lateral margins slightly constricted (Fig. 7B, E) (vs. male thoracic sternites 3 and 4 transversely narrow, constricted anteriorly, lateral margin relatively straight to constricted medially on *Samadinia*; Fig. 2A–D; sternites 3 and 4 wide, lateral margins slightly constricted on *Crocydocinus*; see Lee et al., 2019: figs. 15A–D, 16A–C).

Compared to *Tunepugettia*, *Siderochinia* differs in having rounded, cylindrical ambulatory legs without any marginal carinae (Figs. 7A, D, 8C, F) (vs. having carinate margins on the ambulatory meri and propodi in *Tunepugettia*; cf. Lee et al., 2019: figs. 10A, 11A, D); and the G1 has only a single flattened distal tip (Fig. 9G, H, K, L) (vs. G1 having bilobed distal tip in *Tunepugettia*; cf. Lee et al., 2019: fig. 12A–D; Ng et al., 2017a: fig. 7). *Siderochinia* differs from *Goniopugettia* in lacking an epibranchial spine, and the hepatic and lateral branchial spines on the carapace are directed outwards and in opposite directions (Fig. 7A, D) (vs. having prominent epibranchial spine, and the hepatic and lateral branchial spines on the carapace are directed outwards and parallel to each other in *Goniopugettia*; cf. Ng et al., 2017a: figs. 1, 2A); and the pseudorostral spines are not fused, long, slender and cylindrical (Fig. 7A, D) (vs. the pseudorostral spines are fused along proximal half, and are dorsal-ventrally flatted in *Goniopugettia*; cf. Ng et al., 2017a: figs. 1, 2A). *Siderochinia* is different from *Oxypleurodon* in the absence of carapace plates and the lack of any distinct raised ridge on the posterior region of the carapace (Fig. 7A, D) (vs. having distinct or weak carapace plates and distinct raised ridge on the posterior region of the carapace in *Oxypleurodon*; cf. Richer de Forges & Ng, 2009b: figs. 1A, 2A–D, 3A–F, 4A, C, 5A, 7A–E); and having the male thoracic sternum slightly depressed anteriorly with sternites 3 and 4 narrow, with the lateral margins slightly constricted (Fig. 7B, E) (vs. the male thoracic sternum is concave anteriorly with sternites 3 and 4 narrow and the lateral margins constricted medially in *Oxypleurodon*; cf. Richer de Forges & Ng, 2009b: fig. 4B, D).

There are currently two species in this genus, *Siderochinia kagoshimensis* (Rathbun, 1932) new combination, and *S. aglaos*, new species.

***Siderochinia kagoshimensis* (Rathbun, 1932), new combination**

(Figs. 7A–C, 8A–C, 9G–J)

Pugettia kagoshimensis Rathbun, 1932: 31 (type locality: Sata Misaki Light, Japan). – Yokoya, 1933: 153. – Sakai, 1938: 253 (key), 259, 260. – Sakai, 1976: 194 (key), 198, 199, text-fig. 105. – Griffin & Tranter, 1986a: 92 (key). – Wicksten & Stachowicz, 2013: 359 (list). – Ohtsuchi et al., 2014: 557 (list).
Rochinia kagoshimensis – Lee et al., 2017: 19, 22, figs. 7C, 10A–C, 11E, F [new combination]. – Ng et al., 2017b: 53 (list). – Tavares & Santana, 2018: 223 (list).
Pugettia kagoshimaensis [sic] – Ng et al., 2017a: 135 (list).

Material examined. Holotype: male (11.2 × 6.8 mm) (USNM 48253), stn 4935, off Kagoshima Gulf, Eastern Sea, Japan, coll. ALBATROSS, 16 August 1906.

Description. Carapace triangular, covered with tomentum, large tuft of long setae on mesogastric region (Fig. 7A). Pseudorostral spines relatively long, curved, diverging. Supraorbital eave narrow, with sharp preorbital angle; small postorbital angle forming cavity protecting eye. Carapace with distinct spines: 2 long hepatic spines, pointed obliquely outwards; 1 short gastric spine surrounded by hooked setae; 1 strong thick cardiac spine with blunt truncate tip; 2 thick branchial spines long, pointing outward with rounded tips, proximal small spine on each branchial spine, pointing upwards; 1 tooth on posterior margin of carapace, with spine on anterior region of tooth (Figs. 7A, 8A, B); long setae along lateral margin of carapace, between hepatic and branchial spines.

Antennal flagellum shorter than pseudorostral spine. Basal antennal article longer than broad, sharp distal angle, with straight outer margin. Buccal frame squarish. Pterygostomial region with 2 or 3 small granules on outer margin (Fig. 7B).

Male cheliped short, propodus slightly inflated, fingers serrulate, carpus carinate, merus with granules on border, covered by short setae. Ambulatory legs slender; on each leg, distal border of carpus and merus with stout setae; merus with several small bulbous setae; distal end of merus with blunt spine; dactylus slightly curved with sharp tip, proximal region covered with row of setae, 4 short spines on inner margin of distal third of dactylus of P5, weaker spines on inner margin of dactylus of P2–P4 (Figs. 7A, 8C).

Male thoracic sternum anteriorly slightly depressed; sternites 3, 4 narrow with lateral margin slightly constricted medially. Male pleon triangular with triangular telson, widest at second and third somites (Fig. 7B). G1 straight with wide, flattened tip; constricted in distal region near tip (Fig. 9G, H).

Remarks. The species was originally described as *Pugettia kagoshimensis* by Rathbun (1932) without figures. Sakai (1976: text-fig. 105) provided a rather schematic line drawing of the holotype specimen, but later Lee et al. (2017: fig. 10A–C) produced more detailed figures. The overall carapace morphology has long hepatic spines that are not typically seen in *Pugettia* (Lee et al., 2017: figs. 7C, 10A, D; Fig.

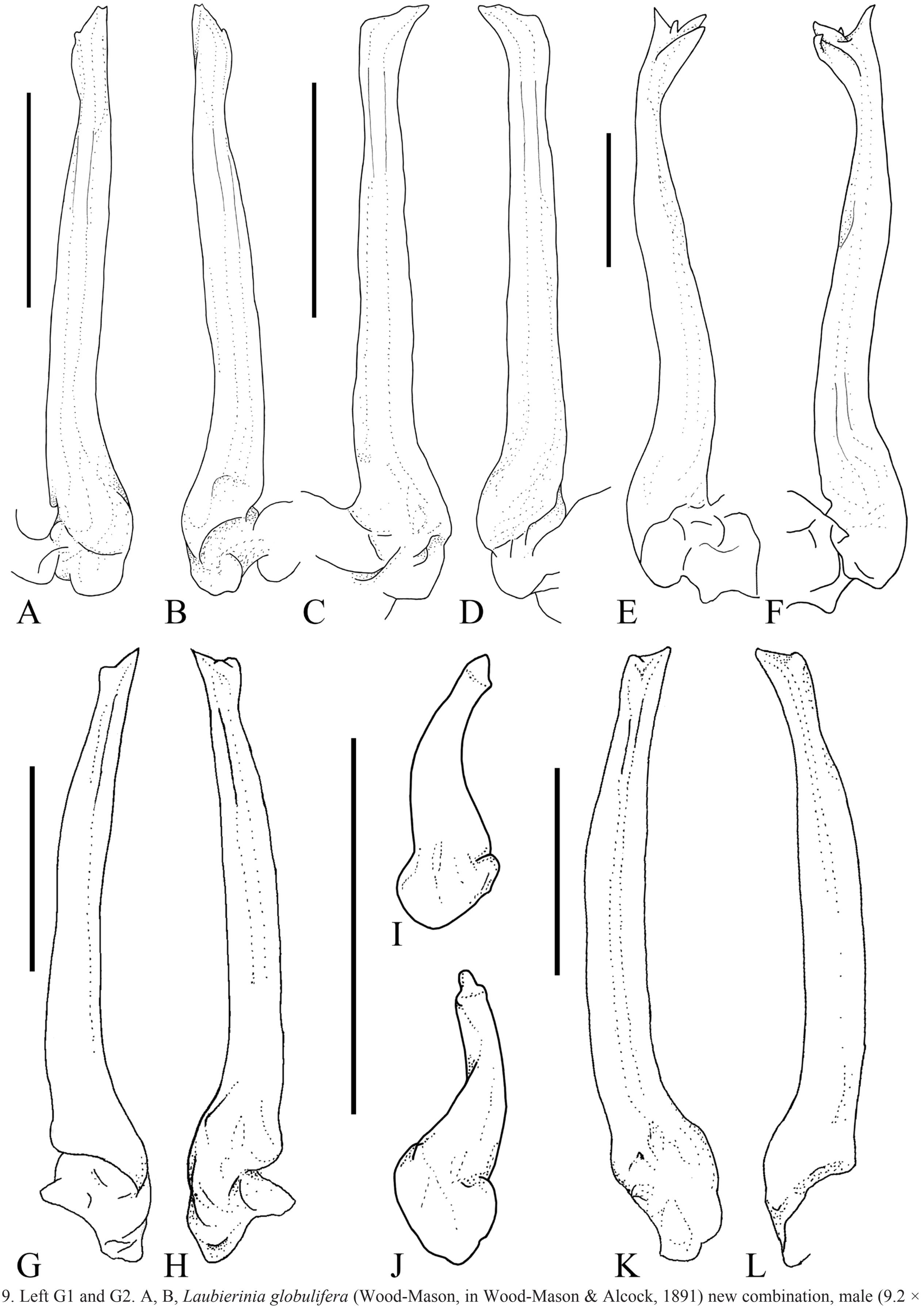

Fig. 9. Left G1 and G2. A, B, *Laubierinia globulifera* (Wood-Mason, in Wood-Mason & Alcock, 1891) new combination, male (9.2 × 6.0 mm) (AM P.34652), Indonesia; C, D, *Oxypleurodon fultoni* (Grant, 1905) new combination, holotype male (8.2 × 5.1 mm) (AM G.5427), Australia; E, F, *Pugettia vesicularis* (Rathbun, 1907) new combination, holotype male (14.6 × 10.6 mm) (USNM32860), Galapagos; G–J, *Siderochinia kagoshimensis* (Rathbun, 1932) new combination, holotype male (11.2 × 6.8 mm) (USNM 48253), Japan (after Lee et al., 2017: fig. 11E, F); K, L, *S. aglaos*, new species, holotype male (10.7 × 6.9 mm) (ZRC 2016.0549), South China Sea (after Lee et al., 2017: fig. 11G–J). A, C, E, G, K, ventral view; B, D, F, H, L, dorsal view; I, ventral view of G2; J, dorsal view of G2. Scale bar = 1 mm.

7A). The G1 morphology as shown by Lee et al. (2017: fig. 11E–J) (Fig. 9G, H) is also unlike typical *Pugettia*, which is scyriform with three angles at the G1 tip (Fig. 9E, F). This species was therefore assigned to *Rochinia* on the basis of the G1 morphology by Lee et al. (2017).

Distribution. *Siderochinia kagoshimensis*, new combination, is only known from Japan (Rathbun, 1932).

Siderochinia aglaos, new species
(Figs. 7D–F, 8D–F, 9K, L)

Rochinia kagoshimensis – Lee et al., 2017: 19, 20, 22 (in part), figs. 7C, 10D–F, 11G–J.

Material examined. Holotype: male (10.7 × 6.9 mm) (ZRC 2016.0549), stn CP4159, northwest of Dongsha, South China Sea, 20°45.92′N 116°41.11′E to 20°47.62′N 116°42.35′E, 221–190 m, coll. ZHONGSHA 2015 Expedition, 30 July 2015.

Diagnosis. Small species. Carapace triangular, covered with tomentum, large tuft of long setae on mesogastric region. Pseudorostral spines relatively long, curved, diverging. Small round eyes. Supraorbital eave narrow, forming sharp distal angle. Small postorbital angle forming cavity protecting eye. Carapace with distinct spines: 2 long hepatic spines, pointed obliquely outwards; 1 short gastric spine surrounded by hooked setae; 1 strong thick cardiac spine with blunt squarish tip; 2 thick branchial spines long, pointing outward with rounded tips, proximal small spine on each branchial spine and pointing upwards; 1 intestinal spine on posterior margin of carapace. Long setae along lateral edge of carapace, between hepatic and branchial spines (Fig. 7D). Antennae shorter than pseudorostral spine. Basal antennal article wide, fused on carapace, rectangular with straight distal edge, sharp external distal angle. Distinct tubercle at base of basal antennal article. Epistome small. Pterygostomial region with 2 or 3 small granules on edge. Buccal frame squarish (Fig. 7E). Male cheliped short, propodus slightly inflated, fingers serrulate, carpus carinate, merus bearing swellings on border, covered by short setae. Ambulatory legs: P2 longest; on each leg, distal border of carpus and merus with stout setae; merus with several small bulbous setae; distal end of merus with blunt spine; dactylus slightly curved with sharp tip, proximal region covered with row of setae, 3 short spines on inner margin of distal third of dactylus of P5, weaker spines on ventral margin of P2–P4 dactylus (Figs. 7D, 8F). Male thoracic sternum anteriorly slightly depressed. Male pleon with triangular telson and 6 somites, widest at second and third (Fig. 7E). G1 with wide, flattened tip; slightly constricted in distal region near tip (Fig. 9K, L).

Etymology. The species name is derived from the Greek word, "aglaos", alluding to the word splendid. The name is used as a Latin noun in apposition.

Remarks. Lee et al. (2017) observed that there were some morphological differences between the holotype specimen of *Siderochinia kagoshimensis*, new combination, and their South China Sea specimen, but as they only had two specimens, they decided to treat both as conspecific at that time. Recently, both specimens were re-examined at length and more differences between the two were observed and are here treated as separate species. The South China Sea specimen is recognised as a separate species, *S. aglaos*, new species, distinct from *S. kagoshimensis*.

Siderochinia aglaos, new species, differs from *S. kagoshimensis* in having more widely diverging and outwardly curved pseudorostral spines (Fig. 7D) (vs. less divergent, straighter and more V-shaped, straight pseudorostral spines in *S. kagoshimensis*; Fig. 7A); the hepatic spines are directed laterally outwards (Fig. 7D) (vs. the hepatic spines directed slightly upwards in *S. kagoshimensis*; Fig. 7A); the branchial spines are directed upwards and prominently posteriorly, at an angle of almost 45° (Figs. 7D, 8D, E) (vs. the branchial spines directed more prominently upwards and less posteriorly in *S. kagoshimensis*; Figs. 7A, 8A, B); the cardiac spine gently tapers towards a subtruncate tip (Figs. 7D, 8D) (vs. cardiac spine with proximal and distal parts subequal in width, with the tip truncate in *S. kagoshimensis*; Figs. 7A, 8A); there is only one intestinal spine (Figs. 7D, 8E) (vs. with one small accessory spine at the top of the main intestinal spine in *S. kagoshimensis*; Figs. 7A, 8B); the male thoracic sternum is relatively less depressed anteriorly (Fig. 7E) (vs. male thoracic sternum more depressed anteriorly in *S. kagoshimensis*, new combination; Fig. 7B); and the subdistal part of the G1 is relatively less constricted with the tip proportionately shorter and more rounded (Fig. 9K, L) (vs. subdistal part of G1 more distinctly constricted with the tip longer and sharper in *S. kagoshimensis*; Fig. 9G, H).

Distribution. Only known from South China Sea (Lee et al., 2017).

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APPENDIX 1

Comparative material examined

Samadinia **Ng & Richer de Forges, 2013**

Samadinia longispina **Ng & Richer de Forges, 2013: Holotype:** male (25.3 × 17.9 mm) (MNHN-IU-2011-4190), stn CP3381, Tarava Seamounts, south of Society Islands, French Polynesia, 15°41′S 146°56′W, 830–988 m, coll. TARASOC, 5 October 2009. **Other material:** 1 female (13.8 × 9.6 mm) (ZRC 2013.1802), stn CP3911, Astrolabe reefs, New Caledonia, 19°50′S 165°33′E, 680–802 m, coll. RV Alis, 23 September 2011.

Samadinia ahyongi **(McLay, 2009), new combination:** 1 male (11.0 × 7.8 mm), 1 ovigerous female (11.0 × 7.9 mm), 1 female (7.7 × 5.3 mm) (ZRC 2018.1480, ex. MNHN-IU-2014-9855), stn DW4300, Solomon Sea, Siga Island, 10°45′S 151°06′E, 470–526 m, coll. MADEEP Expedition, 2 May 2014. – 2 ovigerous females (11.6 × 8.4 mm, 11.0 × 7.8 mm), 1 female (10.8 × 7.7 mm) (MNHN-IU-2014-18328), stn CP4306, Solomon Sea, Siga Island, 10°46′S 151°10′E, 666–680 m, coll. MADEEP Expedition, 2 May 2014. – 1 ovigerous female (12.3 × 9.0 mm) (ZRC 2018.1481, ex. MNHN-IU-2015-83) [photographed], stn DW4300, Solomon Sea, Siga Island, 10°45′S 151°06′E, coll. MADEEP Expedition, 2 May 2014. – 1 male with bopyrid (9.9 × 7.2 mm) (MNHN-IU-2015-376), stn CP4306, Solomon Sea, Siga Island, 10°46′S 151°10′E, 666–680 m, coll. MADEEP Expedition, 2 May 2014. – 1 ovigerous female (13.3 × 9.2 mm) (MNHN-IU-2015-82) [photographed], stn DW4305, 10°45′S 151°10′E, 666–680 m, coll. MADEEP Expedition, 2 May 2014.

Samadinia annae **(Richer de Forges & Ng, 2008), new combination: Holotype:** male (11.6 × 8.6 mm) (WAM C400531), off Two rocks, Western Australia, 31°37.05′S 114°58.19′E to 31°37.23′S 115°14.39′E, 364–404 m, coll. 19 November 2005. **Paratypes:** 6 males (11.1 × 8.3 mm, 8.5 × 6.3 mm, 8.5 × 6.1 mm, 8.1 × 6.1 mm), 4 ovigerous females (9.7 × 7.1 mm, 9.0 × 6.7 mm, 8.9 × 6.6 mm, 8.5 × 6.2 mm), 1 female (10.6 × 7.5 mm) (WAM C400532), same locality information as Holotype.

Samadinia boucheti **(Richer de Forges & Ng, 2013), new combination: Holotype:** male (18.6 × 13.3 mm) (MNHN-IU-2011-5988), stn CP2766, Solomon Islands, 9°19.41′S 160°02.54′E, 371–411 m, coll. SALOMON BOA cruise, 10 September 2007. **Paratype:** 1 female (13.2 × 9.0 mm) (ZRC 2011.1046), stn CP2766, Solomon Islands, 9°19.41′S 160°02.54′E, 371–411 m, coll. SALOMON BOA cruise, 10 September 2007. **Other material: Papua New Guinea:** 1 male (11.0 × 7.5 mm) (ZRC 2018.1482, ex. MNHN-IU-2017-11836), stn CP4447, New Ireland, 02°14′S 150°15′E, 517–658 m, coll. KAVIENG 2014, 1 September 2014. – 1 male (19.5 × 14.1 mm) (ZRC 2018.1483, ex. MNHN-IU-2014-8130) [photographed], stn CP4438, New Ireland, 02°23′S 150°39′E, 490–610 m, coll. KAVIENG 2014, 31 August 2014. – 2 ovigerous females (16.0 × 11.2 mm, 14.1 × 9.7 mm) (ZRC 2018.1484, ex. MNHN-IU-2013-3020) [photographed], stn CP4265, east of New Britain, Solomon Sea, 04°34′S 152°24′E, 487–550 m, coll. MADEEP Expedition, 26 April 2014. – 1 ovigerous female (17.0 × 12.3 mm) (ZRC 2018.1485, ex. MNHN-IU-2013-2397) [photographed], stn CP4264, east of New Britain, Solomon sea, 04°35′S 152°24′E, 430–523 m, coll. MADEEP Expedition, 26 April 2014. – 1 ovigerous female (17.9 × 13.0 mm) (ZRC 2018.1486, ex. MNHN-IU-2014-9477), stn DW4309, Solomon Sea, north of Normanby Island, 09°50′S 151°31′E, 518–520 m, coll. MADEEP Expedition, 3 May 2014. – 1 male (12.6 × 8.5 mm), 1 female (10.0 × 6.0 mm) (MNHN-IU-2011-3359), stn CP3739, off coast of Woodlark Islands, 09°09′S 152°15′E, 503–546 m, coll. BIOPAPUA, 10 October 2010. – 2 females (11.2 × 7.1 mm, 10.5 × 7.0 mm) (MNHN-IU-2011-873), stn CP3659, off coast of Rabaul, 04°14′S 152°17′E, 508 m, coll. BIOPAPUA, 22 September 2010. – 1 male (20.1 × 14.3 mm) (MNHN-IU-2011-1960), stn CP3742, off coast of Woodlark Islands, 09°08′S 152°19′E, 448–470 m, coll. BIOPAPUA, 10 October 2010. – 2 males (10.7 × 7.2 mm, 9.5 × 6.1 mm) (MNHN-IU-2015-1446), stn CP4438, New Ireland, 02°23′S 150°39′E, 490–610 m, coll. KAVIENG 2014, 31 August 2014. – 1 male (13.3 × 8.6 mm), 1 female with *Sacculina* (13.9 × 9.3 mm) (MNHN-IU-2017-11837), stn CP4437, New Ireland, 02°23.4′S 150°37.4′E, 416–535 m, coll. KAVIENG 2014, 31 August 2014. – 1 female (17.1 × 12.0 mm) (MNHN-IU-2014-8045) [photographed], stn CP4447, New Ireland, 02°14′S 150°15′E, 517–658 m, coll. KAVIENG 2014, 1 September 2014. – 1 male (18.8 × 13.0 mm) (MNHN-IU-2017-11838), stn CP4444, New Ireland, 02°15′S 150°14′E, 417–421 m, coll. KAVIENG 2014, 1 September 2014. – 1 female (14.3 × 9.5 mm) (MNHN-IU-2014-8010) [photographed], stn CP4422, New Ireland, 02°21′S 150°38′E, 496–609 m, coll. KAVIENG 2014, 28 August 2014. – 1 ovigerous female (15.9 × 11.3 mm) (MNHN-IU-2017-11839), stn CP4339, Ainto Bay, southeast New Britain, Solomon Sea, 06°10′S 149°18′E, 510–743 m, coll. MADEEP Expedition, 7 May 2014. – 1 male (13.3 × 9.1 mm) (MNHN-IU-2014-18552), stn DW4320, off coast of Marshall Bennett Island, west Woodlark Island, Solomon Sea, 08°41′S 151°47′E, 552 m, coll. MADEEP Expedition, 4 May 2014. – 1 male (15.3 × 10.1 mm) (MNHN-IU-2011-2144), stn CP3741, 09°14′S 152°18′E, 694–766 m, coll. BIOPAPUA, 10 October 2010. – 1 ovigerous female (17.1 × 11.8 mm) (MNHN-IU-2011-3268), stn CP3659, off coast of Rabaul, Papua New Guinea, 04°14′S 152°17′E, 508 m, coll. BIOPAPUA, 22 September 2010. – 1 male (13.4 × 9.2 mm) (MNHN-IU-2014-17501), stn CP4422, New Ireland, 02°21′S 150°38′E, 496–609 m, coll. KAVIENG 2014, 28 August 2014. – 1 male (16.9 × 11.9 mm), 2 ovigerous females (16.9 × 12.0 mm, 16.2 × 12.0 mm) (MNHN-IU-2011-1815), stn CP3742, off coast of Woodlark Islands, 09°08′S 152°19′E, 448–470 m, coll. BIOPAPUA, 10 October 2010. – 1 male (18.7 × 13.3 mm), 1 ovigerous female (18.6 × 13.1 mm) (MNHN-IU-2011-2888), stn CP3739, off coast of Woodlark Islands, 09°09′S 152°15′E, 503–546 m, coll. BIOPAPUA, 10 October 2010. – 1 female (13.6 × 8.7 mm), 1 ovigerous female (17.5 × 12.6 mm) (MNHN-IU-2011-2951), stn CP3692, southeast point of Manus Island, 02°10′S 147°19′E, 408–448 m, coll. BIOPAPUA, 29 September 2010. – 1 male (16.5 × 12.1 mm), 1 female with *Sacculina* (11.9 × 8.3 mm), 3 ovigerous females (15.8 × 11.3 mm, 14.0 × 9.6 mm, 13.3 × 9.2 mm) (MNHN-IU-2011-1472), stn CP3669, north of Rabaul, 04°08′S 151°56′E, 382–389 m, coll. BIOPAPUA, 24 September 2010. – 1 female with *Sacculina* (11.9 × 8.7 mm) (MNHN-IU-2011-3859), stn CP3655, west of New Hanover, 02°15′S 150°16′E, 402–440 m, coll. BIOPAPUA, 28 August 2010.

***Samadinia cidaris* (Lee, Richer de Forges & Ng, 2019), new combination: Holotype:** male (19.0 × 11.5 mm) (MNHN-IU-2014-19044), stn CP4448, New Ireland, Papua New Guinea, 02°13′S 150°12′E, 564–743 m, coll. KAVIENG 2014, 1 September 2014.

***Samadinia despereaux* (Lee, Richer de Forges & Ng, 2019), new combination: Holotype:** male (15.2 × 10.1 mm) (MNHN-IU-2011-3878), stn CP3653, west of New Hanover Island, New Ireland Province, Papua New Guinea, 2°13′S 150°23′E, 680–700 m, coll. BIOPAPUA, 28 August 2010. **Paratypes:** 1 ovigerous female (17.2 × 11.5 mm) (MNHN-IU-2014-18616), stn CP4483, New Ireland, Papua New Guinea, 02°42′S 150°02′E, 827–966 m, coll. KAVIENG 2014, 5 September 2014. – 1 ovigerous female (16.0 × 10.4 mm) (ZRC 2018.1490, ex. MNHN-IU-2013-2277) [photographed], stn CP4250, southeast of Admiralty Islands, Bismarck Sea, Papua New Guinea, 03°31′S 148°04′E, 780–855 m, coll. MADEEP Expedition, 23 April 2014.

***Samadinia debilis* (Rathbun, 1932), new combination: Holotype:** female (10.8 × 7.0 mm) (USNM 49572), stn 5091, Joga Shima Lighthouse, Japan, 35°04.10′N 139°38.12′E, 360 m, coll. ALBATROSS, 26 October 1906. **Other material:** 1 male (27.0 × 19.2 mm) (NSMT-Cr 12139), Japan, coll. 21 November 1980. – 1 male (23.5 × 16.5 mm) (NSMT-Cr 11655), east-southeast of Tsurugizaki, Tokyo Bay, Japan, coll. H Watabe, 24 February 1994. – 1 male (23.1 × 15.8 mm), 1 female (21.6 × 14.7 mm) (SMF49904), Miura City, Tsurugasaki, Kanagawa Prefecture, Japan, coll. K Sakai, 8 March 1998. – 2 males (28.9 × 21.0 mm, 27.1 × 19.8 mm), 1 ovigerous female (27.4 × 18.0 mm) (SMF49905), Miura city, Tsurugasaki, Kanagawa Prefecture, Japan, coll. K Sakai, 19 June 1998. – 1 male (17.2 × 11.6 mm) (SMF uncat.), off Enoshima, Japan, coll. H Watabe, 5 November 1997. – 1 male (18.5 × 12.5 mm), 2 ovigerous females (26.4 × 17.8 mm, 24.5 × 16.7 mm), 1 damaged female (SMF uncat.), stn. MU-89, Tokyo submarine canyon, east-southeast of Tsurugasaki, Japan, 240–270 m, coll. H Watabe, 8 March 2004.

***Samadinia galathea* (Griffin & Tranter, 1986), new combination: Holotype:** male (9.2 × 6.3 mm) (ZMUC-CRU-6514), stn 202, off Natal, 25°20′S 35°17′E, coll. 21 February 1951.

***Samadinia griffini* (Davie & Short, 1989), new combination: Holotype:** male (27.1 × 18.4 mm) (QM-W11245), southeast Queensland, Australia, 27°59.37′S 154°00′E, 590 m, trawl, coll. R Morton, 31 March 1983. **Paratypes:** 1 female (26.0 × 16.6 mm) (AM P.32090), northeast of Tweed Heads, New South Wales, Australia, 27°55′S 154°03′E, 549 m, coll. FRV "Kapala", 6 November 1978. – 1 female (18.7 × 11.8 mm) (QM-W11247), southeast Queensland, Australia, 27°44′S 153°52′E, 220 m, trawl, coll. P Dutton, 30 July 1982. – 1 ovigerous female (26.4 × 17.8 mm) (QM-W11246), southeast Queensland, Australia, 27°35.54′S 153°56.72′E, 520 m, trawl, coll. R Morton, 31 March 1983.

***Samadinia kotakae* (Takeda, 2001), new combination: Holotype:** ovigerous female (18.0 × 12.6 mm) (NSMT–Cr 12935), Tosa Bay, Japan, 654–686 m, coll. Kotaka Mara, 10 December 1988. **Other material: South China Sea:** 1 ovigerous female (14.0 × 9.1 mm) (ZRC 2016.0079), stn CP4118, continental slope, Nanhai, 20°00.76′N 115°00.83′E to 20°01.28′N 115°02.12′E, 700–723 m, coll. NANHAI 2014 Expedition, 12 January 2014. – 5 males (17.2 × 12.0 mm, 13.1 × 8.5 mm, 12.3 × 8.0 mm, 11.2 × 7.0 mm), 1 male (16.9 × 11.2 mm) [photographed], 1 female (15.9 × 10.2 mm), 1 ovigerous female (16.8 × 11.3 mm) (ZRC 2016.0544), stn CST12, Horse Shoe Ridge, 22°0.95′N 118°53.95′E to 22°4.86′N 11°52.78′E, 1346–758 m, coll. TW Wang, 29 April 2016. – 1 male (13.0 × 8.1 mm), 1 female (9.3 × 5.7 mm) (ZRC 2016.0545), stn CST13, Horse Shoe Ridge, 22°1.22′N 118°53.80′E to 22°6.19′N 118°52.45′E, 1,311–816 m, coll. TW Wang, 30 April 2016. **Taiwan:** 1 ovigerous female (16.6 × 11.0 mm) (ZRC 2011.1055), stn CP229, 22°13.35′N 120°01.9′E, coll. 30 August 2003.

***Samadinia makassar* (Griffin & Tranter, 1986), new combination: Holotype:** female (13.0 × 8.8 mm) (RMNH-ZMA 103.894), stn 87, coll. Siboga Expedition. **Paratype:** 1 female (8.3 × 5.5 mm) (AM P.34656), stn 173, Ceram Sea, Indonesia, 3°27′S 131°0.5′E, 567 m coll. Siboga Expedition, 28 August 1899.

***Samadinia moluccensis* (Griffin & Tranter, 1986), new combination: Holotype:** female (13.6 × 8.6 mm) (ZMUC-CRU-380), 7°35′N 114°42′W, 200 m. **Paratype:** 1 male (11.5 × 6.9 mm) (RMNH-ZMA 103.737), stn 156, 02°29.2′S 130°5.3′E, 469 m, coll. Siboga Expedition, 15 August 1899.

***Samadinia mosaica* (Whitelegge, 1900), new combination: Lectotype:** male (13.0 × 9.4 mm) (AM P.15175), 9.5–13.5 km off Wattamolla, New South Wales, Australia, 34°12′30″S 151°13′E, coll. 13 March 1898. **Paralectotypes:** 1 ovigerous female (11.1 × 7.8 mm) (AM G2331), stn 37, 3–4 km off Botany Bay, New South Wales, Australia, 34°5′S 151°15′E, coll. 11 March 1898. – 2 males (8.9 × 5.8 mm, 8.0 × 5.1 mm), 2 females (9.5 × 6.6 mm, 93 × 6.6 mm), 2 ovigerous females (9.5 × 6.6 mm, 8.3 × 5.4 mm) (AM G2332), 4–7.5 km off Wattamolla, New South Wales, Australia, 34°8′S 151°14′5, coll. 15 March 1898. – 1 ovigerous female (7.1 × 4.9 mm) (AM G2333), 9–12 km off Cape Three Points, New South Wales, Australia, 33°32′S 151°32′30″E, coll. 25 February 1898. – 1 male (6.8 × 4.5 mm), 4 females (9.7 × 7.0 mm, 9.6 × 6.6 mm, 7.0 × 5.5 mm, 6.1 × 4.0 mm) (AM G2335), 2–3 km off Port Hacking, New South Wales, Australia, 34°3′30″S 151°12′30″E, coll. 10 March 1898. –

2 males (5.9 × 3.8 mm, 5.2 × 3.4 mm), 3 females (9.0 × 5.8 mm, 5.4 × 3.5 mm, 5.3 × 3.5 mm) (AM G2336), 3–4 km off Botany Bay, New South Wales, Australia, 34°5′S 151°15′E, coll. 11 March 1898. – 1 male (11.0 × 7.8 mm), 1 female (10.0 × 7.1 mm) (AM G2344), stn S42, 9.5–13.5 km off Wattamolla, New South Wales, Australia, 34°12′30″S 151°13′E, coll. 13 March 1898. **Holotype of *Doclea profunda* Rathbun, 1918:** 1 female (8.1 × 6.5 mm) (AM E.6279), South of Eucla, Great Australian Bight, Western Australia, Australia, 33°30′S 129°28′E.

***Samadinia natalensis* (Kensley, 1977), new combination: Holotype:** ovigerous female (16.0 × 10.8 mm) (SAM–A15323), stn SM43, off Natal, South Africa, no other data. **Paratype:** 1 male (7.6 × 4.7 mm) (SAM–A15324), stn SM23, off Natal, South Africa, 450–400 m depth, coll. 26 May 1975.

***Samadinia paulayi* (Ng & Richer de Forges, 2007), new combination: Holotype:** female (29.2 × 18.9 mm) (ZRC 2017.0071), 1.5 miles off Merizo, Micronesia, Guam, 711 m, coll. Pioneer, 3 October 1998.

***Samadinia planirostris* (Takeda, 2009), new combination: Holotype:** male (8.7 × 6.2 mm) (NSMT-Cr-S10), west off Izu-Ohshima Island, Sagami Sea, Japan, 34°43.2′N 139°16.8′E to 34°43.3′N 139°16.9′E, 171–181 m, coll. TRV SHIN'YO-MARU, 24 October 2002. **Paratypes:** 1 female (7.6 × 4.8 mm) (NSMT-Cr-S11), west off Izu-Ohshima Island, Sagami Sea, Japan, 34°41.2′N 139°19.7′E to 34°41.3′N 139°19.6′E, 161–145 m, coll. TRV SHIN'YO-MARU, 24 October 2002. – 1 female (7.7 × 5.4 mm) (NSMT-Cr-S14), Kurose Bank, Izu Island, Japan, 33°27.3′N 139°42.6′E to 33°27.7′N 139°42.4′E, 200–211 m, coll. TRV SHIN'YO-MARU, 21 October 2003. – 1 male (6.4 × 4.2 mm) (NSMT-Cr-S25), Kurose Bank, Izu Island, Japan, 33°26.8′N 139°42.7′E to 33°27.0′N 139°42.4′E, 170–176 m, coll. TRV SHIN'YO-MARU, 21 October 2003. – 3 males (6.3 × 4.1 mm, 6.3 × 4.1 mm, 6.1 × 4.1 mm), 2 ovigerous females (7.0 × 4.6 mm, 6.0 × 4.1 mm) (NSMT-Cr-S12), west off Izu-Ohshima Island, Sagami Sea, Japan, 34°43.2′N 139°16.8′E to 34°43.3′N 139°16.9′E, 171–181 m, coll. TRV SHIN'YO-MARU, 24 October 2002.

***Samadinia pulchra* (Miers, 1886), new combination: Holotype:** male (19.3 × 13.0 mm) (NHM 1884.31), Philippines, coll. CHALLENGER. **Other material: Philippines:** 1 female (16.2 × 11.2 mm) (AM P90365), stn CP2358, Balicasag Island, Bohol, 8°52.1′N 123°37.1′E, 569–583 m, coll. PANGLAO 2005 Expedition, 26 May 2005. – 1 ovigerous female (19.9 × 13.3 mm) (USNM 49492), stn 5528, northern Mindanao, coll. 11 August 1909. – 1 male (13.3 × 8.0 mm) (ZRC 2011.1059), stn CP2678, 18°47.49′N 123°08.26′E, 507–540 m, coll. AURORA 2007 Expedition, 23 May 2007. – 1 male (16.5 × 10.5 mm), 2 females (12.4 × 7.7 mm, 11.6 × 7.2 mm) (ZRC 2011.1052), stn CC2745, Luzon, 15°59.07′N 121°49.22′E, 496–364 m, coll. AURORA 2007 Expedition, 2 June 2007. – 1 damaged male, 1 ovigerous female (15.7 × 9.6 mm) (ZRC 2011.1049), stn CP2658, 15°58.03′N 121°49.11′E, 422–431 m, coll. AURORA 2007 Expedition, 20 May 2007. – 1 male (12.5 × 7.5 mm), 1 ovigerous female (12.2 × 7.6 mm), 4 females (15.6 × 9.8 mm, 13.0 × 8.0 mm, 12.7 × 7.7 mm, 11.5 × 6.9 mm) (ZRC 2011.1053), stn CP2659, Luzon, 15°56.41′N 121°48.88′E, 460–480 m, coll. AURORA 2007 Expedition, 20 May 2007. – 1 ovigerous female (14.9 × 9.8 mm) (ZRC 2013.0629), stn CP2708, 309 m, coll. AURORA 2007 Expedition, 28 May 2007. – 2 females (12.9 × 8.0 mm, 12.2 × 7.9 mm) (ZRC 2013.0623), stn CP2358, Bohol-Sulu Sea Sills, coll. PANGLAO 2005 Expedition, 26 May 2005. – 1 male (17.7 × 11.7 mm), 1 female (15.0 × 9.4 mm) (ZRC 2011.1043), stn CC2746, 191–218 m, coll. AURORA 2007 Expedition, 2 June 2007. **Japan:** 3 males (17.6 × 11.3 mm, 16.3 × 10.6 mm, 15.9 × 9.9 mm), 2 females (19.0 × 12.2 mm, 18.8 × 12.5 mm) (USNM 120721), Tosa Bay, Shikoku Island, coll. T Sakai & K Sakai, February 1966. – 6 males (21.1 × 14.1 mm, 17.9 × 11.7 mm, 17.7 × 11.7 mm, 13.9 × 9.2 mm), 2 ovigerous females (17.8 × 12.2 mm, 17.5 × 11.6 mm), 1 female (18.3 × 12.9 mm) (NSMT-Cr 13615), Tosa Bay, 440–460 m, coll. Kotaka Mara, 24 August 2000. – 1 male (19.0 × 12.3 mm), 1 ovigerous female (17. 3 × 11.2 mm) (SMF Uncat.), off Kii, 250–350 m, coll. S Nagai, November 1993. – 4 ovigerous females (17.3 × 11.2 mm, 16.2 × 11.1 mm, 16.1 × 10.7 mm, 15.0 × 10.2 mm) (SMF Uncat.), Tosa Bay, coll. K Sakai, 1995. – 1 male (16.0 × 10.4 mm), 1 ovigerous female (15.3 × 10.2 mm) (SMF Uncat.), TS00433, Haritsunogani, Tosa Bay, coll. K Sakai. – 1 ovigerous female (14.1 × 9.0 mm), 1 female with *Sacculina* (13.1 × 8.8 mm) (SMF Uncat.), Mimase, Kochi, coll. 10 March 1988. **South China Sea:** 1 male (21.0 × 14.2 mm) (ZRC), CP4155, northeast of Zhongsha, 16°13.60′N 115°01.61′E to 16°11.21′N 114°59.77′E, 526–510 m, coll. ZHONGSHA 2015 Expedition, 28 July 2015. – 3 males (17.8 × 11.6 mm, 14.9 × 9.2 mm, 14.5 × 9.7 mm), 2 females (17.4 × 11.0 mm, 10.5 × 6.3 mm), 6 ovigerous females (17.4 × 11.5 mm, 17.0 × 11.0 mm, 14.7 × 9.4 mm, 13.9 × 8.8 mm) (ZRC), stn CP4155, northeast of Zhongsha, 16°13.60′N 115°01.61′E to 16°11.21′N 114°59.77′E, 526–510 m, coll. ZHONGSHA 2015 Expedition, 28 July 2015. – 5 males (21.2 × 14.3 mm, 17.2 × 10.4 mm, 17.1 × 11.6 mm, 16.7 × 10.9 mm, 13.9 × 8.5 mm) (ZRC), stn CP4156, northeast of Zhongsha, 511–510 m, 16°09.80′N 114°58.73′E to 16°12.19′N 115°00.53′E, coll. ZHONGSHA 2015 Expedition, 28 July 2015.

***Samadinia riversandersoni* (Alcock, 1895), new combination: Lectotype (herein designated):** male (13.0 × 10.0 mm) (ZSI9901-3/9), stn 197, off Malabar coast, 742.5 m, coll. Marine Survey. **Paralectotype:** 1 female (9.5 × 6.7 mm) (ZSI9901-3/9), same locality and collection information as lectotype. **Other material:** 1 male (11.6 × 8.0 mm) (NHM 1955.4.4.7), off Travancore Coast, 742.5 m, no other data. – 2 females (NHM 1896.5.14.13–14), off Malabar Coast, 742 m, coll. East Indian Museum.

***Samadinia soela* (Griffin & Tranter, 1986), new combination: Holotype:** female (23.5 × 14.8 mm) (AM P.35500), northwest of Port Hedland, Western Australia, 18°40′S 116°42′E, 600 m, coll. JR Paxton, 4 April 1982.

Samadinia strangeri **(Serène & Lohavanijaya, 1973), new combination: Holotype:** male (10.7 × 7.2 mm) (USNM 149304), South China Sea, 15°40′N 109°45.5′E, 4,019 m, coll. NAGA Expedition, 28 February 1960. **Other material:** 3 males (12.2 × 8.0 mm, 12.1 × 8.0 mm, 9.3 × 6.1 mm) (ZRC 2016.0546), 1 male (10.5 × 6.9 mm), 1 ovigerous female (10.0 × 6.7 mm) (NTOU), 1 male (10.0 × 6.7 mm), 2 ovigerous females (12.2 × 8.4 mm, 10.2 × 6.9 mm) (MNHN), stn CP4117, continental slope, Nanhai, South China Sea, 20°00.88′N 114°08.80′E to 20°01.87′N 114°09.35′E, 421–333 m, coll. NANHAI 2014 Expedition, 11 January 2014. – 1 female (12.2 × 8.0 mm) (ZRC 2016.0547), stn CP4137, continental slope, Zhongsha, South China Sea, 19°53.06′N 114°21.68′E to 19°53.03′N 114°24.74′E, 536–524 m, coll. ZHONGSHA 2015 Expedition, 23 July 2015. – 1 male (12.4 × 8.1 mm), 1 female (13.5 × 8.7 mm), 1 ovigerous female (12.6 × 8.5 mm) (ZRC 2016.0548), stn CP4128, Dongsha, South China Sea, 20°44.86′N 116°08.01′E to 20°42.28′N 116°08.01′E, 420–444 m, coll. DONGSHA 2014 Expedition, 1 May 2014. – 2 males (15.9 × 11.0 mm, 13.1 × 9.0 mm) (ZRC), stn CP316, 22°25′S 159°24′E, 230 m, coll. MUSORSTOM 5, 13 October 1986.

Samadinia suluensis **(Griffin & Tranter, 1986), new combination: Holotype:** male (7.8 × 5.0 mm) (RMNH-ZMA 103.921), stn 156, west of Waigeo Island, Bougainville Strait, 00°29.2′S 130°5.3′E, 469 m, coll. Siboga Expedition, 15 August 1899. **Paratypes:** 1 female (8.5 × 5.6 mm) (RMNH-ZMA 103.872), same location and collection information as holotype. – 1 male (7.3 × 4.6 mm) (AM P.34659), stn 105, Sulu Archipelago, 6°8′N 121°19′E, 275 m, coll. Siboga Expedition, 4 July 1899.

Samadinia tomentosa **(Griffin & Tranter, 1986), new combination: Holotype:** male (7.2 × 4.9 mm) (RMNH-ZMA 103.928), stn 156, west of Waigeo Island, Bougainbille Strait, 00°29.2′S 130°5.3′E, 469 m, coll. Siboga Expedition, 15 August 1899. **Paratype:** 1 female (5.8 × 4.1 mm) (RMNH-ZMA 103.929), stn 89, Pulu Kaniungan Ketjil, north Makassar Strait, 11 m, coll. Siboga Expedition, 21 June 1899.

Laubierinia **Richer de Forges & Ng, 2009**

Laubierinia carinata **(Griffin & Tranter, 1986):** 1 male (24.7 × 16.0 mm) (MNHN-IU-2014-8128) [photographed], stn CP4445, Papua New Guinea, New Ireland, 02°15′S 150°17′E, 342–380 m, coll. KAVIENG 2014, 1 September 2014. – 1 ovigerous female (17.4 × 11.6 mm) (MNHN-IU-2014-8129) [photographed], stn CP4445, Papua New Guinea, New Ireland, 02°15′S 150°17′E, coll. KAVIENG 2014, 1 September 2014.

Laubierinia nodosa **(Rathbun, 1916):** 1 female (15.5 × 10.7 mm) (ZRC 2017.0220), stn CP2389, Dipolog Bay, off Balicasag Island, Bohol Sea, 9°27.9′N 123°38.4′E, 784–786 m, coll. PANGLAO 2005 expedition, 30 May 2005. – 1 ovigerous female (15.9 × 12.3 mm) (ZRC 2017.0221), stn CP2350, Dipolog Bay, off Balicasag Island, Bohol Sea, 8°53.1′N 123°33.5′E, 602–738 m, coll. PANGLAO 2005 Expedition, 26 May 2005. – 1 male (10.7 × 7.1 mm) (ZRC 2017.0843), stn CP2341, off Pamilacan Islan, Bohol Sea, Philippines, 9°24.5′N 123°49.7′E, 544–712 m, coll. PANGLAO 2005 Expedition, 23 May 2005. – 1 male (19.4 × 14.7 mm) (ZRC 2017.0841), Maribojoc Bay, Philippines, 100–300 m, coll. TJ Arbasto, 11 March–4 April 2004. – 1 male (18.7 × 14.5 mm), 1 ovigerous female (16.8 × 12.5 mm) (ZRC 2017.0842), stn CP2360, Dipolog Bay, Bohol/Sulu seas sill, Philippines, 8°48.9′N 123°37.6′E, 357–372 m, coll. PANGLAO 2005 Expedition, 26 May 2005.

Oxypleurodon **Miers, 1885**

Oxypleurodon sphenocarcinoides **(Rathbun, 1916):** 1 male (14.9 × 9.9 mm), 1 ovigerous female (11.6 × 7.5 mm) (ZRC 2017.0846), stn CP2332 [Photo], Maribojoc Bay, Bohol Sea, Philippines, 9°38.8′N 123°45.9′E, 396–418 m, coll. PANGLAO 2005 Expedition, 22 May 2005. – 1 male (6.8 × 3.9 mm) (ZRC 2017.0847), stn CP2372, off Balicasag Island, Bohol/Sulu seas sill, Philippines, 9°31.4′N 124°00.6′E, 255–301 m, coll. PANGLAO 2005 Expedition, 24 May 2005. – 1 male (12.6 × 7.7 mm), 2 females (15.3 × 11.5 mm, 14.7 × 9.8 mm), 1 ovigerous female (13.7 × 9.3 mm) (ZRC 2017.0848), stn CP2332, Maribojoc Bay, Bohol Sea, Philippines, 9°38.8′N 123°45.9′E, 396–418 m, coll. PANGLAO 2005 Expedition, 22 May 2005.