A revision of *Myra* Leach, 1817 (Crustacea: Decapoda: Leucosioidea)

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Key words: Decapoda; Leucosioidea; *Myra*; *Myrodes*; *Myrine*; new genus; new species; Indo-Pacific.
A study of major collections led to a revision of the Indo-Pacific leucosioid genus *Myra* Leach, 1817. The systematic status and nomenclatural disposition of each species was assessed, and many were diagnosed based on examination of the type material. A new genus, *Myrine*, is established for *M. acutidens* (Ihle, 1918) and *M. kesslerii* (Paulson, 1875). The genus *Myrodes* Bell, 1855, is synonymized with *Myra*. Nine species are retained as valid: *M. affinis* Bell, 1855, *M. australis* Haswell, 1880, *M. brevimana* Alcock, 1896, *M. elegans* Bell, 1855, *M. eudactyla* (Bell, 1855), *M. fugax* (Fabricius, 1798), *M. grandis* Zarenkov, 1990, *M. mammillaris* Bell, 1855, and *M. subgranulata* Kossmann, 1877. Five new species are established: *M. celeris*, *M. currax*, *M. curtimana*, *M. pernix* and *M. tumidospina*. All species are described and illustrated, extended synonymies are given, and a key for their identification is provided.

Introduction

Leach (1817) established *Myra* for *Leucosia fugax* Fabricius, 1798. *Myra* has since been a source of systematic and nomenclatural confusion because the subtle variants on its deceptively uniform morphology may be specific characters, or sex and age-dependent. Miers (1879: 42) noted "The species of this genus [*Myra*] .....bear a very close resemblance to one another" and advised (1884: 250) "large series are needed to determine with certainty the distinctions between the very variable species of this genus", and Alcock (1896: 201) cautioned "The species of this genus [*Myra*] are often difficult to discriminate owing to the changes that they undergo in growth". Yet, each author described new species based on inadequate or inappropriate material (e.g., juveniles, immature females). In fact, of the eight species that were described from juveniles - *M. biconica* Ihle, 1918; *M. carinata* Bell, 1855; *M. coalita* Hilgendorf, 1878; *M. cyrenae* Ward, 1942; *M. dubia* Miers, 1879; *M. intermedia* Borradaile, 1903; *M. pentacantha* Alcock, 1896; *M. subgranulata* Kossmann, 1877 - five were described from single specimens.

A study of the collections of the Nationaal Natuurhistorisch Museum, Leiden (formerly Rijksmuseum van Natuurlijke Historie) (RMNH), Museum National d'Histoire naturelle, Paris (MNHN), National Museum of Natural History, Smithsonian Institution, Washington (USNM), Natural History Museum, London (NHM), together with material made available by the Australian Museum, Sydney (AMS), Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussels (KBIN), Kyushu Museum of Natural History (KMNH), National Taiwan Ocean University (NTOU), Queensland Museum, Brisbane (QM), Zoological collections, Tel Aviv University (TAU); University Museum of Zoology, Cambridge (UMZC), Western Australian Museum, Perth (WAM), Zoological Museum, Amsterdam (ZMA), and the Zoological Museum, University of Copenhagen (ZMUC) has enabled re-examination of many type specimens and much of the published material and led to a revision of the Indo-Pacific leucosioid

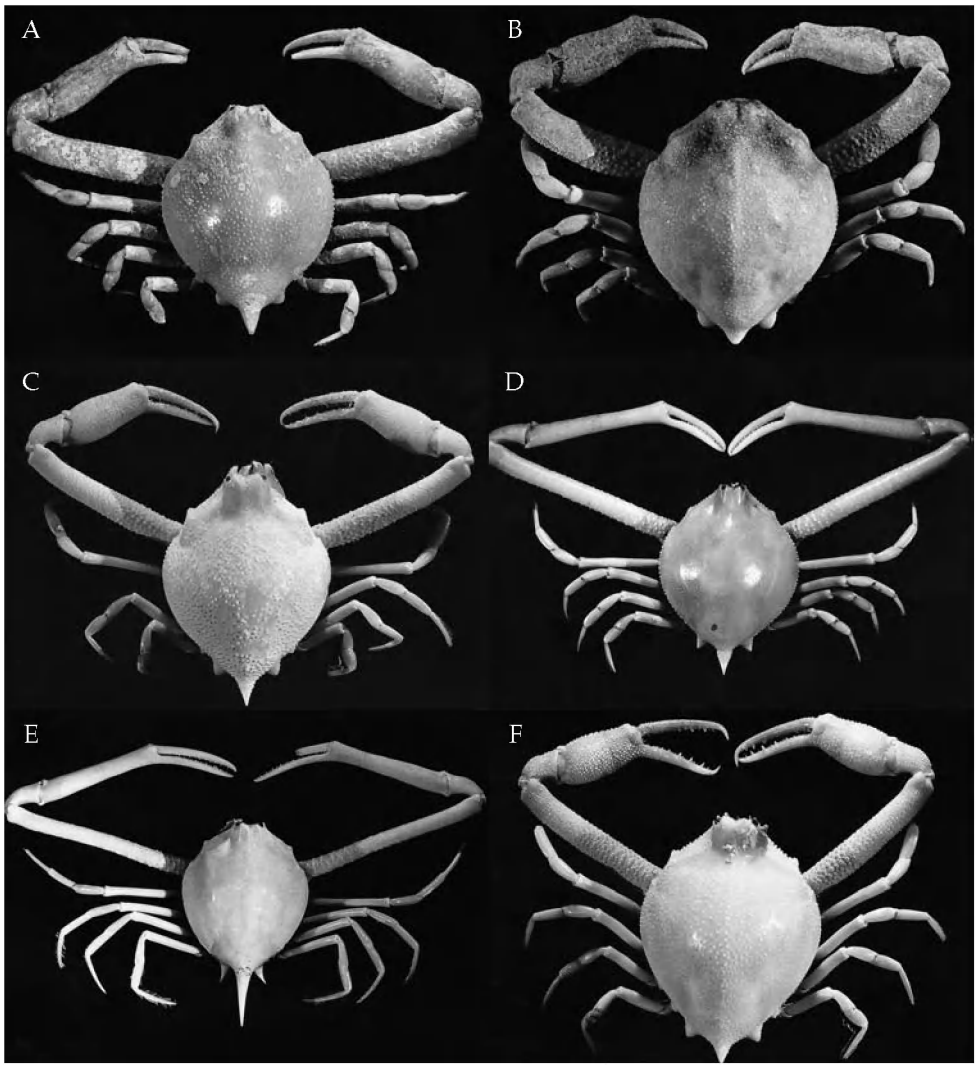

Fig. 1. A, *Myra affinis* Bell, 1855, 26.1 mm cl, NHM 1907.5.22.32; B, *M. australis* Haswell, 1880, 17.3 mm cl, WAM c7727; C, *M. brevimana* Alcock, 1896, 16.2 mm cl, MNHN B18997; D, *M. celeris* spec. nov., 31.1 mm cl, NTOU; E, *M. currax* spec. nov., paratype, 24.2 mm cl, ZMUC; F, *M. curtimana* spec. nov., paratype, 21.4 mm cl, MNHN.

genus *Myra* Leach, 1817. A new genus, *Myrine,* is established for *M. acutidens* (Ihle, 1918) and *M. kesslerii* (Paulson, 1875). The genus *Myrodes* Bell, 1855, is synonymized with *Myra.* Nine species are retained as valid: *M. affinis* Bell, 1855, *M. australis* Haswell, 1879, *M. brevimana* Alcock, 1896, *M. elegans* Bell, 1855, *M. eudactyla* (Bell, 1855), *M. fugax* (Fabricius, 1798), *M. grandis* Zarenkov, 1990, *M. mammillaris* Bell, 1855 and *M. subgranulata* Kossmann, 1877. Five new species are established: *M. celeris*, *M. curtimana, M. currax*, *M. pernix* and *M. tumidospina.*

Distributional information for the majority of *Myra* species is uncertain. Although

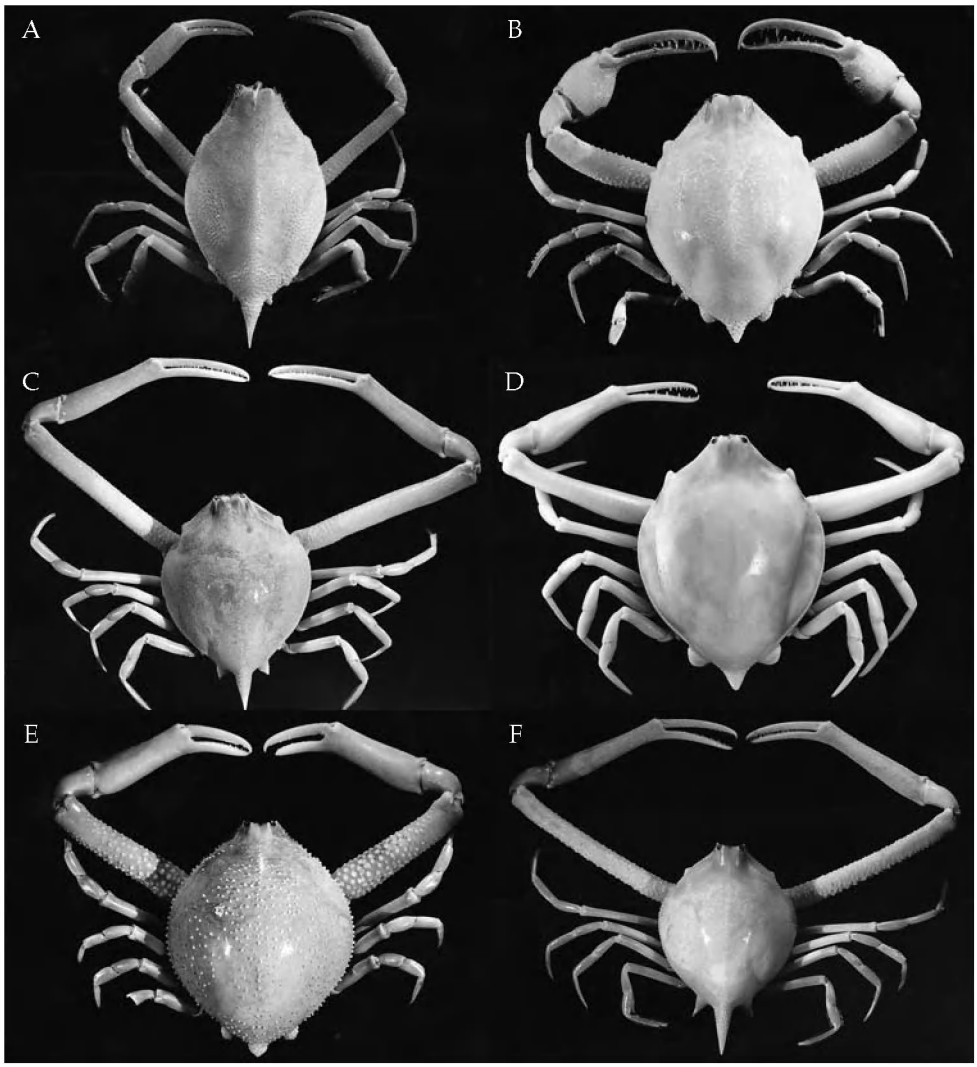

Fig. 2. A, *Myra elegans*, Bell, 1855, 16.1 mm cl, MNHN B18012; B, *M. eudactyla* (Bell, 1855), 20.5 mm cl, MNHN B21029; C, *M. fugax* (Fabricius, 1798) 31.1 mm cl, MNHN; D, *M. grandis* Zarenkov, 1990, 37.1 mm cl, MNHN B19741; E, *M. mammillaris* Bell, 1855, 38.5 mm cl, QM W2054; F, *M pernix* spec. nov., holotype, 24.5 mm cl, ZMUC.

the body of litterature abounds with distributional records, many of these are suspect due to faulty identifications. The distribution records given below as part of the species account are conservative in an attempt to eliminate misleading or erroneous information. All species are described and illustrated, extended synonymies are given, and a key for their identification is provided.

The abbreviation cl is used for carapace length along the median line, excluding the intestinal spine.

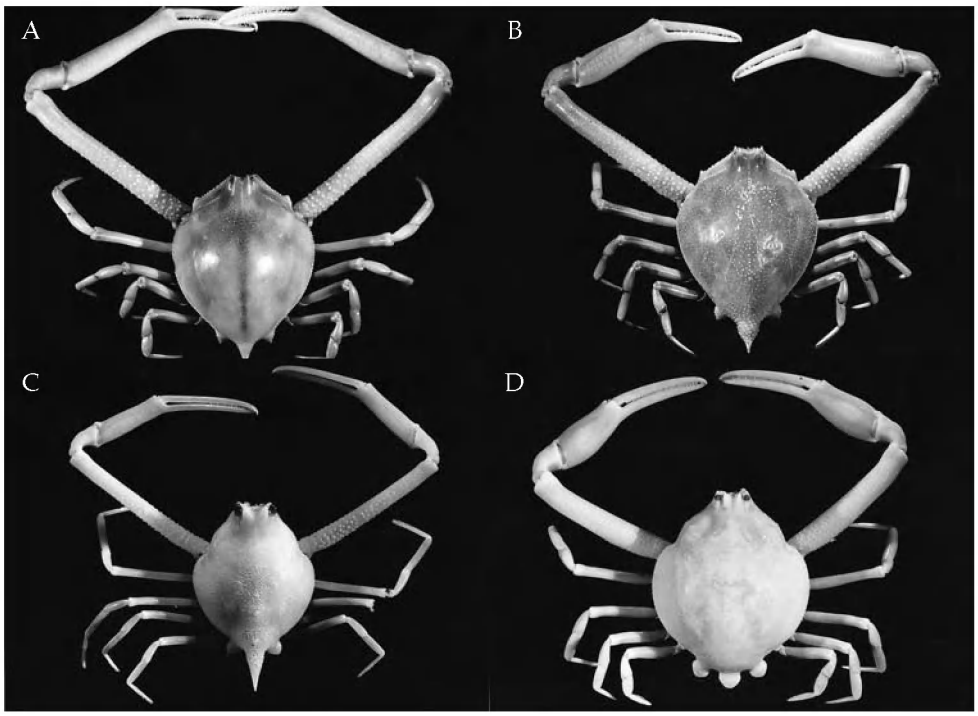

Fig. 3. A, *Myra subgranulata* Kossmann, 1877, 34.7 mm cl, TAU; B, *M. tumidospina* spec. nov., 29.7 mm cl, MNHN; C, *Myrine acutidens* (Ihle, 1918), 11.9 mm cl, KBIN IG25715; D, *M. kesslerii* (Paulson, 1875), 24.7 mm cl, NHM 1884.31.

Key to species of the genera *Myra* and *Myrine*

1. Well-defined beaded line along lateral margins of carapace; subhepatic denticle present; outer maxilliped endopod in female bearing vertical row of setae; anterior margin of efferent branchial channel forming lower orbital margin ..... ***Myra*** 3
- Lateral margins of carapace lacking beaded line; subhepatic denticle lacking; outer maxilliped endopod in female lacking vertical row of setae; anterior margin of efferent branchial channel distinct, separated from lower orbital margin by groove ..... ***Myrine*** gen. nov. 2
2. Median denticle on posterior margin of carapace elongate, acuminate; apical process on first male pleopod lamellate, subrectangular ..... ***Myrine acutidens***
- Median denticle on posterior margin of carapace petaloid; apical process on first male pleopod squat ..... ***Myrine kesslerii***
3. Carapace elongate, ovate, slightly convex; lacking subhepatic denticle, and branchial notch ..... ***Myra elegans***
- Carapace rounded, globose; subhepatic denticle and branchial notch present 4
4. Subhepatic margin rounded; ogival apical process on first male pleopod ..... ***Myra australis***

   Subhepatic margin faceted; apical process on first male pleopod otherwise 5
5. Palm pyriform; cheliped dactyl twice as long as palm ..... ***Myra eudactyla***

- Palm elongate, subcylindrical; cheliped dactyl not longer than palm 6
6. Carapace smooth, shiny; margins of abdominal sulcus smooth ..... ***Myra grandis***
- Carapace granulate; margins of abdominal sulcus beaded subdistally 7
7. Cheliped merus in male less than carapace length 8
- Cheliped merus in male more than carapace length 11
8. Cheliped dactyl as long as upper margin of palm, or longer 9
- Cheliped dactyl 3/4 as long as upper margin of palm 10
9. Carapace and chelipeds finely granulate; apical process of first male pleopod sickle-shaped ..... ***Myra brevimana***
Carapace and chelipeds coarsely granulate; apical process of first male pleopod curved, distally foliolate ..... ***Myra curtimana*** spec. nov.
10. Median posterior carapacial denticle acuminate, more prominent than lateral denticles; third thoracic sternite in male bearing horizontal granulate band; abdominal margins in female granulate ..... ***Myra affinis***
Posterior carapacial denticles subequal; third thoracic sternite in male lacking granulate band; abdominal margins in female smooth ..... ***Myra mammillaris***
11. Median posterior spine in male third as long as carapace; lateral posterior denticles acuminate 12
Median posterior spine in male fifth as long as carapace; lateral posterior denticles triangular 13
12. Cheliped merus in male 1.2 as long as carapace; apical process of first male pleopod foliate, notched on interior margin ..... ***Myra pernix*** spec. nov.
Cheliped merus in male 1.4 as long as carapace; apical process with slender neck, distally lamellate, petaloid ..... ***Myra currax*** spec. nov.
13. Median posterior spine greatly swollen proximally; external denticle on anterior margin of efferent branchial channel prominent; lateral margins of fused segments of male abdomen distally sinuous ..... ***Myra tumidospina*** spec. nov.
- Median posterior spine slightly thickened proximally; denticles on anterior margin of efferent branchial channel subequal; lateral margins of fused segments of male abdomen distally straight 14
14. Cheliped merus in male 1.1 as long as carapace; cheliped dactyl as long as upper margin of palm; apical process of first male pleopod curved distad, distally vulvate ..... ***Myra fugax***
Cheliped merus in male 1.5 as long as carapace; cheliped dactyl half as long as upper margin of palm; apical process of first male pleopod curved distad, subterminal denticle on interior margin ..... ***Myra celeris*** spec. nov.
- Cheliped merus in male 1.4 as long as carapace; cheliped dactyl 0.7 as long as upper margin of palm; apical process of first male pleopod curved distad ..... ***Myra subgranulata***

Myra Leach, 1817

Myra Leach, 1817: 23; Desmarest, 1825: 169; H. Milne Edwards 1837: 125; Bell, 1855a: 364; Bell, 1855b: 296; Bell, 1855c: 12; A. Milne Edwards, 1874: 45; Miers, 1886: 312; Alcock, 1896: 200; Klunzinger, 1906: 73; Ihle, 1918: 255; Serène, 1955: 179; Barnard, 1950: 372; Tirmizi & Kasmi, 1988: 89.

Myrodes Bell, 1855a: 364; Bell, 1855b: 298; Bell, 1855c: 13; Miers, 1886: 297; Alcock, 1896: 254; Ihle, 1918:

261; Serène, 1955: 199; Tyndale-Biscoe & George, 1962: 87. Syn. nov.
Persephona Rathbun, 1902: 30.

Type species.— *Leucosia fugax* Fabricius, 1798, by monotypy; gender: feminine.

Diagnosis.— Carapace ovate or rounded; regions of carapace indistinct. Dorsal surface of carapace smooth or granulate. Front narrow, well delimited, medially notched. Antennular fossa continuous with orbit, partially sealed by basal plate on antennule; antennules fold obliquely within fossa. Antennae short, inserted between antennular fossa and orbit. Orbits small, outer orbital margin trisutured, tridentate anterior margin of efferent branchial channel forms lower orbital margin. Eyes retractible. External maxillipeds concealing buccal opening; endopod merus triangulate, shorter than rectangular ischium; vertical row of setae on endopod in female. Lateral margins of carapace, from outer angle of efferent branchial channel to lateral posterior denticle, lined with closely-spaced granules. Lateral posterior denticles on lower plane than median posterior spine. Chelipeds slender, long, subequal, longer in adult male than in female specimens; fingers curved distally, their inner margins ctenoid. Pereiopods slender, dactyls styliform, setose, longer than propodi. Abdominal sulcus deep, elongate, nearly reaching buccal cavity. Male abdomen narrowly triangular; segments 3-6 fused, bearing preapical denticle; lateral margin bearing 3 indistinct ridges fitting into sutures between thoracic sternites; telson lingulate, fifth as long as fused segment. Female abdomen with segments 4-6 fused, greatly enlarged, shield-like, telson laciniate. First male pleopod elongate, shaft straight or slightly sinuous, dorso-ventrally flattened, bearing ruff of setae preapically, apical process slender, cornute. Second male pleopod short, curved, apex scoop-like.

Remarks.— Bell (1855b: 298) separated *Myrodes* from *Myra* mostly because of 'the form and length of the anterior legs'. Already A. Milne Edwards (1874: 45) observed "M. Bell a formé un genre particulier (*Myrodes*) pour un espèce qui ne diffère des *Myra* que par la forme des pattes de la première paire, et présente d'ailleurs tous les caractères de ce dernier genre; elle doit donc y être réunie". Miers (1886: 297), Ihle (1918: 205, 261), and Alcock, (1896: 254) agreed that *Myrodes* "closely resembles *Myra* in all details of form", yet chose to retain it. It is recognized herein as a synonym of *Myra*.

On describing *Myra townsendi* and *M. subovata* from the Gulf of California, Rathbun noted (1893: 256) the species as "very close to *Persephona*". Rathbun (1902: 30) contended "..that the genus *Myra* Leach is not distinct from *Persephona* Leach" and put the former into synonymy with the latter, though she retracted it later (Rathbun, 1937: 151).

M. anomala Zarenkov (1990: 62, pl. 5, figs 4-10) does not belong within *Myra*, as the male abdomen is depicted with an articulate sixth segment.

Myra affinis Bell, 1855
(figs. 1a, 4)

Myra affinis White, 1847: 49 [*nomen nudum*]; Bell, 1855a: 364; Bell, 1855b: 296, pl. 32, fig. 2; Bell, 1855c: 12; Miers, 1884: 250 (pro parte); Alcock, 1896: 205 (pro parte); Laurie, 1906: 361; Ihle, 1918: 257; Stephensen, 1945, fig. 7a; Tyndale-Biscoe & George, 1962: 88, fig. 10a, b (pro parte); Serène, 1968: 44 (pro parte).

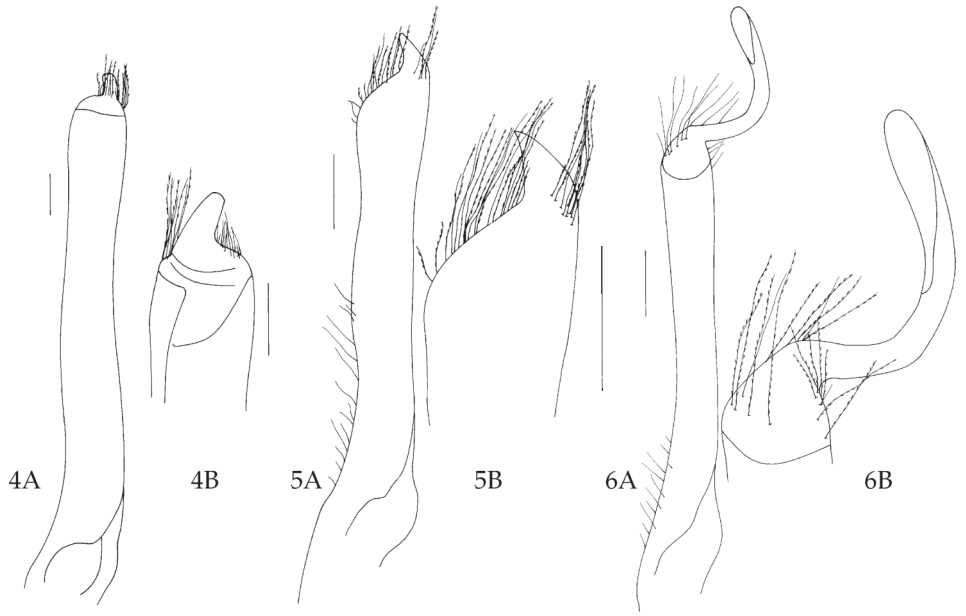

Fig. 4. *Myra affinis* Bell, 1855, Lectotype, 31.6 mm cl, NHM 43.6. A, first male pleopod, ventral view; B, first male pleopod, tip, dorsal view. Scale 1 mm. Fig. 5. *Myra australis* Haswell, 1880, 16.4 mm cl, QM W12059. A, first male pleopod, ventral view; B, first male pleopod, tip, ventral view; C, first male pleopod, tip, dorsal view. Scale 1 mm. Fig. 6. *Myra brevimana* Alcock, 1896, 16.4 mm cl, ZMUC. A, first male pleopod, ventral view, B. first male pleopod, tip, ventral view. Scale 1 mm.

Persephona affinis; Rathbun, 1910: 308; Laurie, 1915: 409 (pro parte).
not *Myra affinis*; Stimpson, 1858: 160; 1907: 153. [= *M. celeris* spec. nov.].
not *Myra affinis*; Miers, 1886: 315; Haswell, 1880: 50; 1882: 121; Campbell & Stephenson, 1970: 250, fig. 11. [= *M. mammillaris* Bell, 1855].
not *Myra affinis*; Nobili, 1906a: 165. [= *M. subgranulata* Kossmann, 1877].

Material.— Lectotype, 1 ♂ (31.6 mm cl), NHM 43.6, Philippines, Cebu Island, coll. Cuming, designated by Tyndale-Biscoe & George, 1962: 88.— **Philippines:** 1 ♀ (28.8 mm cl), NHM 43.6, Musbate Island, coll. Cuming.— **Indonesia**: 2 ♂ (15.0, 17.5 mm cl), 3 juveniles, ZMA 242034, Salawatti, 1°10.5'S 130°9'E, 18 m depth, 'Siboga' stn 162, 18.viii.1899; 1 ♂ (17.4 mm cl), 1 ♀ (20.7 mm cl), ZMA 242029, east coast of Sumbawa, Sapeh Bay, 8°30'S 119°7.5'E, 36 m depth, 'Siboga' stn 311, 12-13.ii.1900; 3 juveniles, ZMA 242028, Saleh Bay, 8°19'S 117°41'E, 36 m depth, 'Siboga stn 313, 14-16.ii.1900.— **Thailand**: 1 ♂ (21.8 mm cl), USNM 39639, Koh Kram, 55 m, 2-21.iii.1900, coll. Th. Mortensen, det. M. J. Rathbun as *Persephone affinis*; 4 ♂ (24.2-30.8 mm cl), 2 ♀ (23.7, 23.8 mm cl), RMNH D 38712, Chonburi province, Laem Chabang, near Si Racha, 10 m depth, 11.i.1991, colls. A.C.J. Burgers & L.B. Holthuis.— **Sri Lanka**: 1 ♂ (26.1 mm cl), NHM 1907.5.22.32, coll. W.A. Herdman; 3 ♂ (12.0-16.2 mm cl), 5 ♀ (17.1-25.4 mm cl), NHM 1907.5.22.33-37, Gulf of Manaar, Pearl Bank, coll. W. A. Herdmann; 3 juveniles, NHM 1934.1.16.36-37, Trincomalee, coll. Miss Herdman.

Description.— Carapace rounded, globose, dorsal surface prominently granulate. Front produced, upcurved, anterior margin v-shaped, granulate. Hepatic region

raised, bearing granulate line. Faceted subhepatic margin terminates in blunt, granulate denticle, separated from convex lateral margin by shallow notch. Lateral margins of carapace prominently beaded. Lateral posterior denticles rounded, granulate. Median posterior spine in male 0.1 as long as carapace; triangular, granulate, slightly upcurved.

Denticles on anterior margin of efferent branchial channel subequal. External maxillipeds minutely granulate.

Cheliped merus in male up to 0.75 as long as carapace, in female two-thirds carapace length; proximally set with perliform granules, granules smaller distally. Carpus and propodus minutely granulate. Dactyl three-quarters as long as upper margin of palm. Pereiopodal propodi ovate.

Third thoracic sternite in male anteriorly granulate in addition to horizontal granulate band. Subdistal margins of abdominal sulcus beaded. Laciniate denticle near distal margin of fused abdominal segments of male. Fused segments of female abdomen bearing granulate band proximally, margins unevenly granulate. Male first pleopod nearly straight, apical process digitate, curved distad.

Remarks.— *M. affinis* closely resembles *M. mammillaris* in having a prominently granulate carapace, the cheliped merus in male less than the carapace length and the cheliped dactyl 6 as long as the upper margin of the palm. The latter species is often mistaken for the former, especially when only immature specimens were available (Miers, 1886: 315; Tyndale-Biscoe & George, 1962: 88). *M. affinis* is easily distinguished from *M. mammillaris* as its median posterior carapacial denticle is acuminate rather than petaloid, the third thoracic sternite in the male bears an horizontal granulate band, and abdominal margins in female are granulate.

Distribution.— Philippines, Indonesia, Thailand, Sri-Lanka; 10-36 m depth.

Myra australis Haswell, 1880
(figs. 1b, 5)

Myra australis Haswell, 1880: 50, pl. 5, fig. 3; Haswell, 1882: 122; Miers, 1884: 251; Miers, 1886: 315; Calman, 1900: 27; Tyndale-Biscoe & George, 1962: 88, fig. 7.11; Serène, 1968: 44; Campbell & Stephenson, 1970: 250, fig. 12.

not *Myra australis*; Walker, 1887: 111; Henderson, 1893: 402; Lanchester, 1900: 766.

Material.— **Australia**: 2 ♂ (13.9, 13.1 mm cl), 1 juvenile, NHM 1882.7, Port Molle, 26 m depth, 'Alert' stn 93, coll. Coppinger, det. E. J. Miers; 1 ♀ (14.1 mm cl), NHM 1881.31, Queensland, Port Denison, 7 m depth, 'Alert' stn 122; 1 ♂ (15.3 mm cl), NHM 1882.7, Prince of Wales Channel, 13 m depth, 'Alert' stn 142, coll. Coppinger, det. E. J. Miers; 1 ♂ (12.5 mm cl), NHM 1882.7, Prince of Wales Channel, 16.5 m depth, 'Alert' stn 157, coll. Coppinger, det. E. J. Miers; 2 ♀ (19.0, 15.1 mm cl), NHM 1882.7, Thursday Island, 7-9 m depth, 'Alert' stn 165, coll. Coppinger, det. E. J. Miers; 1 ♂ (18.5 mm cl), NHM 1882.7, Thursday Island, 5.5-7 m depth, 'Alert' stn 177, coll. Coppinger, det. E. J. Miers; 1 ♂ (17.8 mm cl), NHM 1884.31, Torres Strait, 10°36.0'S 141°55.0'E, 11 m depth, 'Challenger' stn 187, det. E. J. Miers; 1 ♀ (19.0 mm cl), NHM 1954.9.14.88, Torres Strait, coll. A.C. Haddon, det. W.T. Calman; 2 ♀ (13.5, 15.8 mm cl), NHM 1931.4.14.31-32, Queensland, Albany passage, coll. M. Ward; 1 ♂ (16.4 mm cl), QM W12059, Moreton Bay, Peel Island, xi.1974; 1 ♂ (20.0 mm cl), 1 ♀ ovigerous (18.2 mm cl), QM W11834, Moreton Bay, Peel Island, 26.i.1985; 1 ♀ (20.7 mm cl), WAM c19112, Queensland, Port George, 5 m depth, 12.vii.1988; 1 ♀, 6 juveniles, QM W23326, North West Shelf, 19°55.9'S 117°55.5'E, 42-43 m depth, 26.vi.1983; 1 ♂ (9.6 mm cl), 1 ♀ (11.2 mm cl), WAM c7726, Dampier Archipelago, Steamboat Island,

27.v.1960; 1 ♂ (14.3 mm cl), WAM c7725, Eagle Hawk Island, 25.6 m depth, 14.vi.1960, coll. B.R. Wilson; 1 ♂ (17.3 mm cl), WAM c7727, Dampier Archipelago, 2.vi.1960.

Description.— Carapace rounded, globose; dorsal surface of carapace closely set with flattened granules. Front slightly produced, upturned, weakly bilobed. Protogastric region depressed, hepatic region swollen. Subhepatic margin rounded, subhepatic denticle prominent, granulate, separated from convex lateral margin by distinct notch. Lateral margins of carapace beaded. Lateral posterior denticles rounded, dorsoventrally flattened, granulate. Median posterior denticle triangular, as wide as long, granulate, distally upcurved. Intestinal region slightly swollen; juvenile specimens with prominent granule medially on intestinal region.

Denticles on anterior margin of efferent branchial channel subequal. External maxillipeds closely set with flattened granules.

Cheliped merus in male 0.7 as long as carapace, in female slightly less; granulate, granules smaller distally. Carpus, propodus minutely granulate; propodus basally swollen, upper margin ridged. Dactyl three-quarters as long as upper margin of palm, minutely granulate. Lower margin of pereiopodal meri, and upper margin of propodi granulate.

Thoracic sternum closely set with flattened granules, granules more prominent medially on third sternite. Fused segments of male abdomen bearing hoof-like denticle distally. Fused segments of female abdomen bearing granulate band proximally, margins granulate. Male first pleopod nearly straight, apical process ogival.

Colour.— "Carapace marked with variously disposed blotches of orange; the proximal half of the upper surface of the arm, and the articulations of the ambulatory limbs marked with the same colour, of which also two circular spots occur on the upper surface of the third joint of the ambulatory limb" (Haswell, 1880: 51).

Remarks.— *M. australis* is unique among its cogeners in having a rounded rather than faceted subhepatic margin, a hoof-like denticle distally on the fused segment of the male abdomen, and an ogival apical process on the first male pleopod.

Distribution.— Australia; 5-57 m depth.

Myra brevimana Alcock, 1896
(figs. 1c, 6)

Myra brevimana Alcock, 1896: 206; Alcock & Anderson, 1897, pl. 29, fig. 8; Borradaile, 1903: 438; Laurie, 1906: 361; Serène, 1968: 44 (pro parte).
Persephona brevimana; Rathbun, 1911: 201.
not *Myra brevimana*; Ihle, 1918: 258.[= *M. curtimana* spec. nov.]

Material.— **India**: 1 ♂ (16.9 mm cl), 1 ♀ ovigerous (18.2 mm cl), NHM 1896.9.8.18-19, ex. Indian Museum 915/10, Madras, 36.5-55 m depth.— **Sri Lanka**: 1 ♀ (26.6 mm cl), NHM 1907.5.22, coll. W.A. Herdman; 1 broken, NHM 1955.4.4.10, ex. Indian Museum, 62 m depth; 1 ♂ (16.4 mm cl), ZMUC, ex. Indian Museum, 62 m depth, v.1898, det. A. Alcock; 2 ♀ (17.6, 15.4 mm cl), NHM 1934.1.16.38, Gulf of Manaar, coll. Miss Herdman; 2 ♂ (15.6, 17.1 mm cl), 2 ♀ (12.1, 20.8 mm cl), NHM 1907.5.22.38, off Kaltura, coll. W.A. Herdman.— **Maldive Islands**: 1 juvenile, UMZC, Kolumadulu Atoll, coll. J.S. Gardiner; 1 ♂ (12.6 mm cl), UMZC, South Nilandu Atoll, coll. J.S. Gardiner.— **Seychelles**: 1 ♂ (15.5 mm cl), 1 ♀ (15.2 mm cl), MNHN B18985, 5°05.4'S 55°54.4'E, 58 m depth, REVES II stn 11, 7.ix.1980; 1 ♀ ovigerous (15.5 mm cl), MNHN B19009, 5°05.4'S 55°54.4'E, 58 m depth, REVES II stn 11, 7.ix.1980; 1 ♀ ovigerous (21.4

mm cl), MNHN, 5°44.8'S 56°39.1'E, 55 m depth, REVES II stn 17, 5.ix.1980; 2 juveniles, MNHN B18992, 5°16.3'S 55°58.2'E, 60 m depth, REVES II stn 22, 6.ix.1980; 1 ♂ (16.2 mm cl), MNHN B18997, 4°44.0'S 54°38.3'E, 56 m depth, REVES II stn 29, 9.ix.1980; 1 ♀ ovigerous (17.1 mm cl), MNHN B18984, 4°37.4'S 54°20.7'E, 50 m depth, REVES II stn 31, 9. ix.1980; 1 ♂ (14.0 mm cl), 1 ♀ ovigerous (20.8 mm cl), MNHN B19014, 4°31.6'S 56°09.7'E, 55-60 m depth, REVES II stn 42, 13. ix.1980; 1 ♀ ovigerous (20.4 mm cl), MNHN B19012, 4°03.8'S 55°59.5'E, 45-55 m depth, REVES II stn 47, 14. ix.1980; 1 ♀ ovigerous (17.1 mm cl), MNHN B18981, 3°54.7'S 55°50.6'E, 57 m depth, REVES II stn 49, 15. ix.1980; 1 juvenile, MNHN B19006, 3°52.8'S 55°25.3'E, 60 m depth, REVES II stn 52, 16.ix.1980.

Description.— Carapace rounded, globose; dorsal surface of carapace set with perliform granules. Front produced, upturned, minutely granulate, margin v-shaped. Hepatic region swollen, surmounted by granulate tubercle. Faceted subhepatic margin terminates in prominent, granulate denticle, separated from convex lateral margin by distinct notch. Lateral margins of carapace beaded. Lateral posterior denticles equilateral triangles, dorsoventrally flattened, granulate. Median posterior spine acuminate, longer than lateral denticles, basally granulate, distally upcurved. Juvenile specimens with 2 prominent granules on branchial margins, prominent granule medially on intestinal region.

External denticle on anterior margin of efferent branchial channel slightly prominent. External maxillipeds sparsely granulate.

Cheliped merus in male 0.9 times as long as carapace, in female 0.7 times as long as carapace; granulate, granules smaller distally. Carpus, propodus, and dactyl minutely granulate, propodus basally swollen, dactyl as long as superior margin of palm. Pereiopods nearly smooth.

Thoracic sternum of male laterally granulate, margins of abdominal sulcus beaded subdistally. Fused segments of male abdomen proximally granulate, bearing laciniate denticle medially near distal margin; telson 0.2 times as long as fused segments. Fused segments of female abdomen bearing granulate band proximally. Male first pleopod nearly straight, apical process sickle-shaped.

Colour (preserved specimens).— "Regions of carapace defined by broad orange-red markings, some broad orange-red cross-bands on chelipeds, one of which occupies the basal half or three-fourths of the fingers" (Alcock, 1896: 297).

Remarks.— *M. brevimana* differs from the closely allied *M. curtimana* spec. nov. in its more delicate granulation on the carapace and chelipeds, and the sickle-shaped apical process of the first male pleopod.

Distribution.— India, Sri Lanka, Maldive Islands, Seychelles; 36-80 m depth.

Myra celeris spec. nov.
(figs. 1d, 7)

Cancellus Anatum Tertius Rumphius, 1741: 27, pl. 10, fig. C.

Myra fugax; de Haan, 1841: 134, pl. 33, fig. 1; White, 1847: 49 (pro parte); Stimpson, 1858: 160; Herklots, 1861: 27; A. Milne Edwards, 1874: 45; Miers, 1886: 313; Ortmann, 1892: 581; Stimpson, 1907: 152; de Man, 1907: 397; Parisi, 1914: 295; Balss, 1922: 127; Rathbun, 1923: 136; Gee, 1925: 161; Shen, 1931: 108, pl. 10, fig. 2; Yokoya, 1933: 126; Boone, 1934: 39, pl. 12; Sakai, 1934: 285; Sakai, 1935: 57, pl. 10, fig. 2; Sakai, 1937: 134, pl. 14, fig. 5; Lin, 1949: 14; Uchida, 1949: 719, fig. 2081; Utinomi, 1956: 72, pl. 35, fig. 5; Holthuis, 1959: 104, pl. 8, fig. 5; Miyake, 1961a: 14; Miyake, 1961b: 170; Miyake et al., 1962: 126; Chang, 1963: 2; Sakai, 1965: 43, pl. 17, fig. 3; Holthuis & Sakai, 1970: 118, pl. 11, fig. 1;

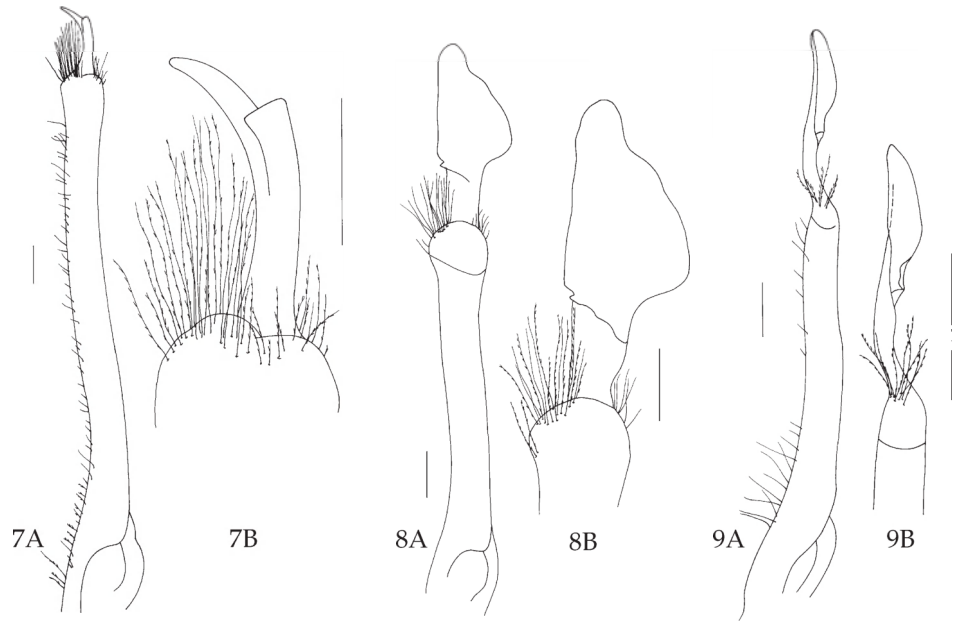

Fig. 7. *Myra celeris* spec. nov., holotype, 32.8 mm cl, ZMUC. A. first male pleopod, ventral view; B, first male pleopod, tip, ventral view. Scale 1 mm. Fig. 8. *Myra currax* spec. nov., holotype, 23.5 mm cl (NHM 1881.31). A, first male pleopod, ventral view; B, first male pleopod, tip, ventral view. Scale 1 mm. Fig. 9. *Myra curtimana* spec. nov., 20.6 mm cl, MNHN B18234. A, first male pleopod, ventral view; B, first male pleopod, tip, ventral view. Scale 1 mm.

Takeda & Miyake, 1970: 226; Takeda & Miyake, 1972: 73; Kim, 1973: 612; Takeda, 1973a: 32; Takeda, 1973b: 12; Sakai, 1976: 101, pl. 27, fig. 4; Yamaguchi et al., 1976: 34; Takeda, 1979: 153; Takeda, 1982a: 18; Takeda, 1982b: 99, fig. 289; Hill, 1982: 196, pl. 1, fig. a; Miyake, 1983: 62, pl. 2, fig. 6; Takeda, 1987: 10; Takeda, 1989: 139; Zarenkov, 1990: 64, pl. 2, fig. 8, pl. 6, figs 2-7; Dai & Yang, 1991: 78, pl. 8 fig. 6, fig. 36, (3); Yamaguchi & Baba, 1993: 320, fig. 102a, b; Huang, 1994: 579; Ng et al., 2001: 9.

Myra fugax var. *coalita*; Ortmann, 1892: 582 (pro parte).
Persephona fugax; Rathbun, 1902: 30; Rathbun, 1910: 308.
Myra affinis; Stimpson, 1858: 160; Stimpson, 1907: 153.
Myra fugax coalita; Sakai, 1937: 136, textfig. 23.
Myra coalita; Sakai, 1976: 101, textfig. 55; Huang, 1989: 311, fig. 2; Huang, 1994: 579.
Myra sp.; Hill 1982: 198, pl. 1, fig. b.

Material.— **Japan**: holotype, 1 ♂, dry, cl. 44.1 mm, 1824-1829, coll. and det. P.F. von Siebold 4 ♂, 3 ♀ paratypes, dry, RMNH D 43202, 1824-1829, coll. and det. P.F. von Siebold; 5 ♂, 3 ♀ paratypes, dry, RMNH D 43203, 1824-1829, coll. and det. P.F. von Siebold;1 ♂, 2 ♀ paratypes, dry, RMNH D 43204, 1824-1829, coll. and det. P.F. von Siebold; paratype, mouthparts, RMNH D 43206, 1824-1829, coll. and det. P.F. von Siebold; paratype, 1 ♂ (32.8 mm cl), ZMUC, Nagasaki, 1.vii.1911.— **China**: paratype, 1 ♂ (35.2 mm cl), dry, NHM 84.2.— **New Caledonia**: 1 ♂ (34.8 mm cl), MNHN B21278, Noumea, St Vincent Bay, 22°02.95'S 166°03.45'E, 20 m depth, 25.iv.1985; 2 ♂ (32.0, 34.6 mm cl), MNHN B21270, 22°04.95'S 166°05.25'E, 13-20 m depth, 29.iv.1985; 1 ♂ (29.9 mm cl), 1 ♀ (26.3 mm cl), MNHN B21274, 22°04.95'S 166°05.45'E, 29.iv.1985; 4 ♂ (31.7-40.4 mm cl), 1 ♀ ovigerous (37.0 mm cl), MNHN B21198,

20.viii.1985, coll. M. Kulbicki; 1 ♂ (40.9 mm cl), MNHN B21219, 21.viii.1985, coll. M. Kulbicki; 2 ♂ (34.6, 34.1 mm cl), 1 ♀ (27.0 mm cl), MNHN B2129621, viii.1985, coll. M. Kulbicki; 1 ♂ (38.5 mm cl), 1 ♀ ovigerous (36.8 mm cl), MNHN B21197, 21.viii.1985, coll. M. Kulbicki; 2 ♂ (35.9, 35.0 mm cl), 1 ♀ ovigerous (40.3 mm cl), MNHN B21199, 21.viii.1985, 5-15 m depth, coll. M. Kulbicki; 1 ♂ (40.4 mm cl), 1 ♀ (35.3 mm cl), MNHN B21276, 21°58.3'S 166°01.0'E, 7 m depth, stn 1, 6.xi.1984; 1 ♂ (41.0 mm cl), 1 ♀ (31.2 mm cl), MNHN B21272, 21°58.4'S 166°01.10'E, 5-12 m depth, stn 8, 30.iv.1985; 1 ♀ (36.0 mm cl), MNHN B21275, 21°57.9'S 166°00.5'E, 5-7 m depth, stn 9, 30.iv.1985; 1 ♀ (35.4 mm cl), MNHN B21277, 21°56.6'S 166°02.2'E, 4-6 m depth, stn 12,30.iv.1985; 2 ♀ (39.4, 35.4 mm cl), MNHN B21271, 21°57.55'S 166°02.6'E, 5-7 m depth, stn 15, 1.v.1985; 1 ♂ (35.6 mm cl), 1 ♀ (33.2 mm cl), MNHN B21273, 21°57.75'S 166°02.4'E, stn 16, 13-20 m depth, 1.v.1985; 1 ♀ (25.6 mm cl), MNHN B 18200, 21°41.4'S 166°23.2'E, Lagon Est, 15-20 m depth, stn 672, 8.viii.1986; 1 ♂ (28.0 mm cl), MNHN, Lagon Est, 20°49.8'S 165°17.7'E, 52-70 m depth, stn 863, 11.i.1987; 2 ♀ (29.0, 28.1 mm cl), MNHN, 20°44.8'S 164°22.6'E, Lagon Nord-Est, 7-10 m depth, stn 928, 27.iv.1988, coll. B. Richer de Forges; 2 ♂ (29.4, 36.5 mm cl), 1 ♀ (34.2 mm cl), MNHN, 20°21.6'S 164°06.7'E, Lagon Nord-Est, 12-16 m depth, stn 967, 29.iv.1988, coll. B. Richer de Forges.— **Australia**: 1 ♂ (28.0 mm cl), WAM c8691, Queensland, off Port Clinton, 25.xi.1963, coll. W. Goode; 1 ♂ (22.6 mm cl), NHM 1881.31, Claremont, Flinders, 20 m depth, coll. Dr. Coppinger.— **Arafura Sea**: 2 ♂ (16.6, 26.9 mm cl), 2 ♀ (19.7, 23.2 mm cl), NHM 1884.31, 9°59.0'S 139°42.0'E, 51 m depth, 'Challenger' stn 188, 10.ix.1874.— **New Guinea**: 1 ♂ (25.6 mm cl), RMNH D 25955, Padaido Islands, Mios Woendi, 9-16.5 m depth.— **Indonesia**: 2 ♂ (25.1, 27.7 mm cl), 1 ♀ (25.8 mm cl), 25 juveniles, MNHN B17144, 1°07.8'S 117°18.7'E, 49 m depth, CORINDON stn 205, 30.x.1980; 1 ♂ (25.9 mm cl), ZMUC, 5°23'S, 116°62'E, Java Sea, 60 m depth, 'Galathea' stn 454, 25.viii.1951.— **Japan**: 3 ♂ (20.0-29.5 mm cl), 1 ♀ ovigerous (27.4 mm cl), KMNH 8437, Amakusa, Kumamoto, Kyushu Island, vii-viii.1957.— **Taiwan**: 2 ♂ (32.2, 31.1 mm cl), 1 ♀ (20.9 mm cl), 1 juvenile, NTOU, Tai-shi, I-Lan, 24.x.1992.

Description.— Carapace rounded, globose, dorsal surface finely granulate. Front produced, upcurved, anterior margin v-shaped, minutely granulate. Hepatic region bearing granulate line. Faceted subhepatic margin terminates in obtuse, granulate denticle, separated from convex lateral margin by shallow notch. Lateral margins of carapace minutely beaded. Lateral posterior denticles triangular, dorsoventrally flattened, granulate. Median posterior spine in male 0.2 as long as carapace; proximally swollen, granulate; distally acuminate, slightly upcurved.

Denticles on anterior margin of efferent branchial channel subequal. External maxillipeds minutely granulate.

Cheliped merus in male up to 1.5 as long as carapace, in female slightly less than carapace length; sparsely granulate, granules smaller distally. Carpus, propodus minutely granulate. Dactyl half as long as upper margin of palm. Pereiopods smooth.

Thoracic sternites in male anterolaterally granulate, as well as subdistal margins of abdominal sulcus. Minute denticle subdistally on fused abdominal segments of male missing in larger specimens. Female abdomen smooth. Male first pleopod slightly sinuous, apical process curved distad, denticle on interior margin.

Colour.— "Reddish yellow and white, marbled and spotted" (Holthuis & Sakai, 1970: 119). "pale brick red above, clouded with bluish, below whitish" (Stimpson 1907: 153).

Remarks.— Rumphius' drawing of Cancellus Anatum Tertius (1741, pl. 10, fig. C) depicts the remarkably elongate chelipeds characteristic of *M. celeris* spec. nov.

M. celeris spec. nov. is distinguished from *M. fugax* by its longer cheliped merus, proportionally shorter fingers, granule-like subdistal denticle on the fused abdominal segment, and in the form of the apical process of the first male pleopod. It differs from *M. pernix* spec. nov. in having the median posterior spine in the male one fifth as long,

rather than one third as long as the carapace, and the lateral posterior denticles triangular rather than acuminate.

Distribution.— New Caledonia, Australia, Arafura Sea, New Guinea, Indonesia, Japan, China; 4-52 m depth.

Etymology.— *celeris* L., swift, alluding to its affinity to *M. fugax*.

Myra currax spec. nov.
(figs. 1e, 8)

Myra fugax; Tan, 1996: 1043, figs 6h-j.

Material.— **Australia**: holotype, 1 ♂ (23.5 mm cl) NHM 1881.31, Claremont, Flinders, 20 m depth, coll. Dr. R. Coppinger.— **Indonesia**: paratypes, 2 ♂ (23.1, 24.2 mm cl), 7 ♀ (21.2-24.2 mm cl), 2 ♀ ovigerous (19.0, 21.2 mm cl), 10 juveniles, ZMUC, Sumatra, Lampong Bay, 25-29 m depth, 1.viii.1922, coll. Th. Mortensen.

Description.— Carapace rounded, globose, dorsal surface finely granulate. Front produced, upcurved, anterior margin v-shaped, minutely granulate. Hepatic region bearing granulate line parallel with margin. Faceted subhepatic margin terminates in rounded, granulate denticle, separated from convex lateral margin by shallow notch. Lateral margins of carapace closely beaded. Lateral posterior denticles acuminate, distally upcurved, granulate. Median posterior spine in male third as long as carapace; proximally granulate; distally acuminate, upcurved.

External denticle on anterior margin of efferent branchial channel larger than median, interior denticles, visible in dorsal view. External maxillipeds minutely granulate, setose anteriorly.

Cheliped merus in male up to 1.4 as long as carapace, in female slightly less than carapace length; granulate, granules smaller distally. Carpus and propodus minutely granulate. Dactyl in male 0.7 as long as upper margin of palm. Pereiopods smooth.

Thoracic sternites in male anterolaterally minutely granulate, as well as subdistal margins of abdominal sulcus. Fused segments of male abdomen bearing small denticle subdistally. Female abdomen with beaded margins. Male first pleopod nearly straight, apical process with slender neck, distally lamellate, petaloid.

Remarks.— *M. currax* spec. nov. differs from *M. fugax* in its longer median posterior spine, and acuminate, rather than triangular, lateral posterior denticles. It is unique among its cogeners in bearing a lamellate, petaloid apical process on the first male pleopod.

Distribution.— Australia, Indonesia; 20-29 m depth.

Etymology.— *currax* L., swift, alluding to its affinity to *M. fugax*.

Myra curtimana spec. nov.
(figs. 1f, 9)

Myra brevimana; Ihle, 1918: 258.
Myrodes eudactylus; Tyndale-Biscoe & George, 1962: 87, fig. 7.8.

Material.— **New Caledonia**: holotype, 1 ♀ (26.0 mm cl), MNHN B21181, 22°42.8'S 166°45.2'E, 38 m

depth, stn 306, xi.1984, coll. B. Richer de Forges; paratype, 1 ♂ (21.4 mm cl), MNHN, 20°46.4'S 165°15.75'E, 57 m depth, stn 836,11.i.1987, coll. B. Richer de Forges.— **Indonesia**: paratype, 1 ♂ (23.5 mm cl), ZMA 242060, Molo strait, Madura Bay, 69-91 m depth, 'Siboga' stn 51, 19.iv.1899, det. by Ihle as *M. brevimana*; Paratypes, 1 ♂ (22.7 mm cl), 1 ♀ ovigerous (24.8 mm cl), 1 ♀ juvenile (13.5 mm cl), ZMA 242035, south coast of Timor, 9°0.3'S 126°24.5'E, 112 m depth, 'Siboga', stn 289, 20.i.1900 det. by Ihle as *M. brevimana*.— **Fiji**: 1 ♂ (18.1 mm cl), MNHN, 17°47.9'S 177°12.8'E, 32 m depth, SUVA 2, stn CP 65, 21.x.1998.— **New Caledonia**: 1 ♂ (15.9 mm cl), MNHN B21039,19°54.1'S, 163°72.9'E, 33 m depth, stn 9, 14.vi.1985; 1 ♂ (17.2 mm cl), 1 ♀ (12.3 mm cl), MNHN, 22°42'S 166°54.5'E, 45 m depth, stn 348, xi.1984, coll. B. Richer de Forges; 1 ♀ (17.3 mm cl), MNHN B21159, 22°34'S 167°06'E, 75-76 m depth, stn 376, 21.i.1985, coll. B. Richer de Forges; 1 ♀ (23.3 mm cl), MNHN B21150, 22°37'S 167°12'E, 71 m depth, stn 398, 23.i.1985, coll. B. Richer de Forges; 1 ♀ (17.6 mm cl), MNHN B21157, 22°34'S 167°14'E, 64 m depth, stn 400, 23.i.1985, coll. B. Richer de Forges; 1 ♂ (17.2 mm cl), MNHN B21162, 19°06'S 163°16'E, 40 m depth, stn 540, 6.iii.1985, coll. B. Richer de Forges; 1 ♂ (22.0 mm cl), MNHN B21142, 22°50'S 166°51'E, 32 m depth, stn 555, 16.vii.1985, coll. B. Richer de Forges; 1 ♀ (25.4 mm cl), MNHN B21191, 22°46'S 166°54'E, 43 m depth, stn 558, 16.vii.1985, coll. B. Richer de Forges; 1 ♂ (24.8 mm cl), MNHN B18234, 22°15.8'S 167°04.8'E, 78-80 m depth, stn 603, 5.viii.1986, coll. B. Richer de Forges; 1 ♂ (20.2 mm cl), MNHN B18198, 21°18.7'S 165°53.5'E, 42-45 m depth, stn 729, 12.viii.1986, coll. B. Richer de Forges; 1 ♂ (20.6 mm cl), MNHN B18234, 20°14.6'S 164°23.1'E, 40 m depth, stn 900, 14.i.1987, coll. B. Richer de Forges; 1 ♂ (15.5 mm cl), 1 ♀ (16.2 mm cl), MNHN, 20°44.9'S 164°14.9'E, 90-100 m depth, stn 933, 27.iv.1988, coll. B. Richer de Forges; 1 juvenile, MNHN, 20°36.7'S 164°15.5'E, 12 m depth, stn 939, 27.iv.1988, coll. B. Richer de Forges; 1 ♀ (24.8 mm cl), MNHN, 20°37.1'S 164°13.1'E, 15 m depth, stn 942, 28.iv.1988, coll. B. Richer de Forges; 1 ♂ (17.7 mm cl), MNHN, 20°32.2'S 164°08.8'E, 16 m depth, stn 948, 28.iv.1988, coll. B. Richer de Forges; 1 ♂ (16.4 mm cl), MNHN, 20°31'S 164°03'E, 15-17 m depth, stn 954, 28.iv.1988, coll. B. Richer de Forges; 1 ♂ (15.9 mm cl), MNHN, 20°23.7'S 163°59.7'E, 27 m depth, stn 973, 29.iv.1988, coll. B. Richer de Forges; 1 ♀ juvenile, MNHN, 20°08.7'S 163°53.4'E, 22-23 m depth, stn 1014, 30.iv.1988, coll. B. Richer de Forges; 1 ♂ (16.9 mm cl), 1 juvenile, MNHN, 19°52'S 163°58.4'E, 28 m depth, stn 1075, 23.x.1989, coll. B. Richer de Forges; 1 ♀ (16.9 mm cl), MNHN,19°15.9'S, 163°09.3'E, 50 m depth, stn 1168, 30.x.1989, coll. B. Richer de Forges.— **Philippines**: 1 ♂ (17.1 mm cl), WAM c24523, Panglao Island, off Bohol Island, 7.ii.1964, coll. M. King.

Description.— Carapace rounded, globose; dorsal surface of carapace set with perliform granules, younger specimens with minutely granulate, longitudinal carina medially on carapace. Front produced, upturned, minutely granulate, margin v-shaped. Hepatic region swollen, bearing a line of tall granules. Faceted subhepatic margin terminates in prominent, granulate denticle, separated from convex lateral margin by shallow notch. Lateral margins of carapace beaded. Lateral posterior denticles equilateral triangles, dorsoventrally flattened, granulate. Median posterior spine acuminate, longer than lateral denticles; basally granulate, distally upcurved. Juvenile specimens with prominent granule medially on intestinal region.

External denticle on anterior margin of efferent branchial channel slightly prominent. External maxillipeds sparsely granulate.

Chelipeds prominently granulate, granules smaller distally. Cheliped merus in male 3/4 as long as carapace, in female slightly less. Carpus, propodus, and dactyl minutely granulate, propodus basally swollen, dactyl 1.2 as long as superior margin of palm. Pereiopods nearly smooth.

Thoracic sternum of male anteriorly granulate, margins of abdominal sulcus beaded subdistally. Fused segments of male abdomen proximally granulate, bearing acuminate denticle medially near distal margin. Fused segments of female abdomen bearing granulate band proximally. Male first pleopod slightly sinuous, apical process with slender, curved neck, distally foliolate.

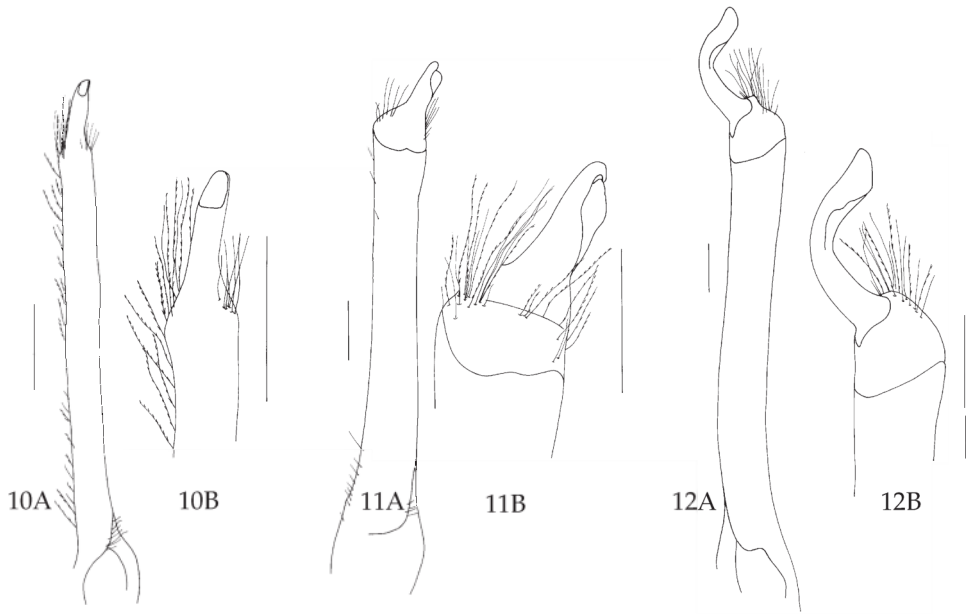

Fig. 10. *Myra elegans*, Bell, 1855, 14.4 mm cl, ZMUC. A, first male pleopod, ventral view; B, first male pleopod, tip, ventral view. Scale 1 mm. Fig. 11. *Myra eudactyla* (Bell, 1855), 20.3 mm cl, NHM 1911.1.17.70-71. A, first male pleopod, ventral view; B, first male pleopod, tip, ventral view. Scale 1 mm. Fig. 12. *Myra fugax* (Fabricius, 1798), holotype, 26.0 mm cl, ZMUC. A, first male pleopod, ventral view; B, first male pleopod, tip, ventral view. Scale 1 mm.

Colour.— Carapace pale brown with irregular darker patches and spots, front mauve, white crescent on intestinal region, median posterior spine white. Cheliped merus pale brown with broad darker bands medially and distally, two dark dots between the bands; dark bands proximally and distally on palms; fingers dark brown. Pereiopods with brown bands distally on meri, proximally on carpi, propodi.

Distribution.— Fiji, New Caledonia, Australia, Indonesia, Philippines; 12-112 m depth.

Etymology.— *curtus* L., short, *manus*, L., hand, alluding to its short cheliped merus and its affinity with *M. brevimana*.

Myra elegans Bell, 1855
(figs. 2a, 10)

Myra elegans Bell, 1855a: 364; Bell, 1855b: 297, pl. 32, fig. 4; Bell, 1855c: 12; Alcock & Anderson, 1894: 199; Alcock, 1896: 208; Ihle, 1918: 261; Chopra, 1934: 40, textfig. 4; Serène, 1968: 44; Serène & Soh, 1976: 12, fig. 9, pl. 3, fig. d; Serène & Vadon, 1976: 124; Chen, 1989: 223, fig. 19, pl. 1 fig. 12; 1996: 286, fig. 14; Tan, 1996: 1043.

Persephona elegans Rathbun, 1910: 309, pl. 1 fig. 12.

Material.— **Holotype**, 1 ♀ (14.6 mm cl), NHM 1847.21, Eastern Seas.— **Australia**: 1 ♂ (12.3 mm cl), QM W17396, Gulf of Carpentaria, 10°26.6'S 138°3'E, 51 m depth, 27.xi.1990.— **Papua-New Guinea:**: 1 ♀ (12.2

mm cl), 1 juvenile, USNM 273777 8°59.5'S 148°05.5'E, 64-69 m dept, 17.vi.1979.— **Philippines**: 7 ♂ (15.0-16.2 mm cl), 9 ♀ (14.0-17.8 mm cl), MNHN B18157, 14°28'N 120°42'E, 36 m depth, MUSORSTOM 1 stn 1, 18.iii.1976; 1 ♂ (14.7 mm cl), MNHN B18156, 14°02.8'N 120°18.8'E, 187 m depth, MUSORSTOM 1 stn 2, 19.iii.1976; 22 ♂ (14.5-16.1 mm cl), 34 ♀ (12.0-17.5 mm cl), MNHN B18012, 11°44.6'N 122°45.35'E, 44-40 m depth, MUSORSTOM 3 stn 141, 6.vi.1985; 2 ♀ (12.9, 15.1 mm cl), MNHN B18013, 11°47.3'N 123°03'E, 27-26 m depth, MUSORSTOM 3 stn 142, 6.vi.1985.— **Indonesia**: 8 ♂ (10.8-13.1 mm cl), 3 ♀ (10.5-14.4 mm cl), 1 ♀ ovigerous (14.0 mm cl), MNHN B17146, Makassar Strait, 1°09'S 117°08'E, 25 m depth, CORINDON stn 203; 1 ♀ (13.3 mm cl), MNHN B17147, 1.27'S, 117.02'E, CORINDON stn 295, 51-54 m depth; 1 ♀ ovigerous (13.4 mm cl), WAM c24524, Borneo, NW mouth of Abai River, 22 m depth, 12.iii.1964, coll. B.R. Wilson; 1 juvenile, ZMA 242030, 7°25'S, 113°16'E, Java, Madura Strait, 56 m depth, 'Siboga' stn 2, 8.iii.1889; 2 juveniles, ZMUC 3668, Java Sea, 5°12'S, 112°41'E, 66 m depth, 'Galathea' stn 455, 26.viii.1951; 2 ♂ (9.7, 14.9 mm cl), 1 ♀ (13.0 mm cl), 4 ♀ ovigerous (10.7-15.2 mm cl), ZMUC 3663, 5°53'S 107°02'E, 27 m depth, 8.viii.1951; 2 ♂ (11.5, 10.4 mm cl), 1 ♀ (11.8 mm cl), 1 juvenile, ZMUC 3664, Sunda Strait, 6°0'S 106°47'E, 22 m depth, 7.viii.1951; 1 ♂ (9.6 mm cl), 1 ♀ (10.7 mm cl), ZMUC, Sunda Strait, 6°28'S 105°38'E, 47 m depth, 29.vii.1922, coll. Th. Mortensen; 3 ♂ (9.5-11.0 mm c), 1 ♀ (12.2 mm cl), 1 ♀ ovigerous (12.5 mm cl), 2 juveniles, ZMUC 3662, 6°29'S 105°44'E, 30 m depth, 29.vii.1922, coll. Th. Mortensen; 1 ♀ (10.2 mm cl), ZMUC, Sumatra, Lampong Bay, 25 m depth, 1.viii.1922, coll. Th. Mortensen; 9 ♂ (12.4-13.6 mm cl), 4 ♀ (13.1-16.6 mm cl), ZMUC, NW Banga, 73 m depth, 7.iii.1914, coll. Th. Mortensen, det. J. Odhner.— **Thailand**: 2 ♂ (14.2, 14.4 mm cl), ZMUC, S Koh Kut, 31-36.6 m depth, 28.i.1900, coll. Th. Mortensen; 3 ♂ (11-13.8 mm cl), 1 ♀ ovigerous (15.2 mm cl), ZMUC, S Koh Samit, 36.6 m depth, 31.i.1900, coll. Th. Mortensen; 1 ♂ (10.8 mm cl), 1 ♀ ovigerous (15.8 mm cl), ZMUC, between Koh Chuen and Koh Chang, 27.5 m depth, 3.iii.1900, coll. Th. Mortensen; 3 ♂ (10.8-15.0 mm cl), 2 ♀ ovigerous (14.3, 15.2 mm cl), ZMUC, W Koh Chang, 36.6 m depth, 29.i.1900, coll. Th. Mortensen.— **Bay of Bengal**: 2 ♀ (13.1, 18.3 mm cl), ZMUC 3667, 20°51'N 87°58'E, 43-52 m depth, 'Galathea' stn 305, 26.iv.1951.

Description.— Carapace elongate, ovate, only slightly convex. Dorsal surface of carapace granulose on branchial, intestinal regions; granulate median carina running from gastric to intestinal region, granules larger posteriorly. Frontal lobes subquadrate, margin slightly emarginate, granulate, setose. Hepatic region bearing ridge of minute granules; lacking subhepatic denticle and branchial notch. Lateral posterior denticles small, triangular, heavily granulate; median spine in male 0.2 as long as carapace, robust, coarsely granulate proximally, slightly upcurved distally.

External denticle on anterior margin of efferent branchial channel spinose, much larger than median and interior denticles, visible in dorsal view. External maxillipeds very minutely granulate, setose.

Chelipeds prominently granulate. Cheliped merus in male 0.6 as long as carapace, slightly less in female; dactyl 1.3 as long as upper margin of palm. Pereiopodal meri granulate on upper, lower margins; propodi, dactyls setose.

Thoracic sternum minutely granulate. Margins of abdominal sulcus in male minutely granulate subdistally. Fused segments of male abdomen tapering gradually, bearing granulate band along basal margin, triangular denticle medially near distal margin; telson 0.3 as long as fused segment. Fused segments of female abdomen with granulate band proximally. Male first pleopod with straight shaft, apical process digitate, slightly curved interiorly.

Remarks.— *M. elegans* differs from its cogeners in its elongate, less globular carapace, lack of subhepatic denticle, subquadrate frontal lobes, and form of anterior margin of efferent branchial channel.

Distribution.— Australia, Papua-New Guinea, Philippines, Indonesia, South China Sea, Gulf of Thailand, Myanmar, Bay of Bengal; 5-187 m depth.

Myra eudactyla (Bell, 1855)
(figs. 2b, 11)

Myra dilatimanus White, 1847: 49 [*nomen nudum*].
Myrodes eudactylus Bell, 1855a: 364; Bell, 1855b: 299, pl. 32, fig. 6; Bell, 1855c: 13; Miers, 1886: 298; Ortmann, 1892: 576; Alcock, 1896: 255; Rathbun, 1910: 313; Ihle, 1918: 262; Estampador, 1937: 513; Serène, 1955: 201, fig. 9, pl. 10, figs 4-6, pl. 11. figs 5, 6; Serène, 1968: 44; Zarenkov, 1990: 67, pl. 5, fig. 13, pl. 6, figs 16-18; Chen, 1996: 288, fig. 15; Tan, 1996: 1044.
Myra eudactyla; A. Milne Edwards, 1874: 46, pl. 3, fig. 3; Haswell, 1882: 123.
Myrodes gigas Haswell, 1880: 52, pl. 5, fig. 5.
not *Myrodes eudactylus*; Tyndale-Biscoe & George, 1962: 87, fig. 7.8. [= *M. curtimana* spec. nov.].

Material.— **Philippines**: holotype, 1 ♀ (20.1 mm cl), dry, NHM 726, Corregidor Island, coll. Cuming, det. White as *Myra dilatimanus*.— **New Caledonia**: 1 ♂ (20.5 mm cl), MNHN B21029, Noumea, 22°18'S166°33'E, stn 30, 24 m depth, v.1984, coll. B. Richer de Forges; 3 ♂ (16.8-21.1 mm cl), MNHN B21151, Ile Ouen, Prony Bay, 22°23'S 166°32'E, 13 m depth, stn 69, viii.1984, coll. B. Richer de Forges; 1 ♂ (19.6 mm cl), MNHN B21143, St. Vincent Bay, 22°08'S 166°08'4'E, 22 m depth, stn 169, ix.1984, coll. B. Richer de Forges; 1 ♀ (18.2 mm cl), MNHN, St. Vincent Bay, 22°06'S 166°06'E, 17 m depth, stn 175, ix.1984, coll. B. Richer de Forges; 1 ♀ (26.4 mm cl), 1 ♀ ovigerous (26.6 mm cl), MNHN B21182, 22°04.5'S 166°03.4'E, 12 m depth, stn 177, ix.1984, coll. B. Richer de Forges; 1 ♀ (22.3 mm cl), MNHN B21148, Atoll de Huon, 18°07'S 162°55'E, 39 m depth, stn 439, 25.ii.1985, coll. B. Richer de Forges; 4 juveniles, MNHN B21139, Atoll de Surprise, 18°29'S 163°10'E, stn 469, 39 m depth, 1.iii.1985, coll. B. Richer de Forges; 1 ♀ (27.9 mm cl), MNHN B21180, Atoll de Surprise, 18°28'S 163°09'E, 41 m depth, stn 470, 1.iii.1985, coll. B. Richer de Forges; 1 ♀ (20.5 mm cl), MNHN, Lagon Est, 20°15.6'S 165°40.6'E, 26 m depth, stn 766, 8.i.1987, coll. B. Richer de Forges; 1 ♂ (14.8 mm cl), MNHN, Lagon Est, 21°55.5'S, 165°26.0'E, 38-50 m depth, stn 814, 10.i.1987, coll. B. Richer de Forges; 1 ♂ (23.0 mm cl), MNHN, Lagon Est, 20°15.5'S 164°26.8'E, stn 895, 16 m depth, 14.i.1987, coll. B. Richer de Forges; 1 ♂ (19.6 mm cl), MNHN, Lagon Nord-Est, 20°48.3'S 164°22.5'E, 14-15 m depth, stn 924, 27.iv.1988, coll. B. Richer de Forges; 1 ♀ (24.8 mm cl), MNHN, Lagon Nord-Est, 20°37.1'S 164°13.1'E, 15 m depth, stn 942, 28.iv.1988, coll. B. Richer de Forges; 1 ♂ (25.5 mm cl), MNHN, Lagon Nord-Ouest, 20°33.1'S 164°10.6'E, 12 m depth, stn 949, 28.iv.1988, coll. B. Richer de Forges.— **Chesterfield Islands**: 1 juvenile, MHNH, 19°18.50'S 158°36.55'E, 69 m depth, CORAIL 2 stn 51, 24.viii.1988, coll. B. Richer de Forges; 1 ♂ (20.8 mm cl), 1 ♀ ovigerous (27.6 mm cl), MNHN, 19°57'S 158°28'E, 19 m depth, CORAIL 2 stn 149, 1.ix.1988, coll. B. Richer de Forges.— **Australia**: 1 ♂ (19.5 mm cl), NHM 1937.9.21.307, Great Barrier Reef, Low Islands, 13 m depth, 15.ii.1928, det. F.A. McNeill; 1 ♀ (20.8 mm cl), 2 juveniles, QM W23323, North West Shelf, 20°01.4'S 116°57.3'E, 52 m depth, 22.ii.1983.— **New Guinea**: 1 ♀ (13.9 mm cl), NHM 1884.31, 9°59.0'S 139°42.0'E, 51 m depth, 'Challenger' stn 188, 10.ix.1874.— **Philippines**: 1 ♀ (17.3 mm cl), NHM 1847-21, dry, Luzon Island — **Indonesia**: 1 ♂ (26.9 mm cl), ZMA 242033, Kambaragi-Bay, 32 m depth, 'Siboga' stn 64, 4-5.iv.1899; 1 juvenile, ZMUC, Celebes [= Sulawesi], 35 m depth, 27.vi.1922.— **Vietnam**: 1 ♂ (21.6 mm cl), ZMUC, Nhatrang Bay, 5-11 m depth, 16.x.1959, coll. D. Inman.— **Thailand**: 2 ♂ (20.4, 19.4 mm cl), 2 ♀ (17.0, 20.8 mm cl), 1 ♀ ovigerous (23.5 mm cl), ZMUC, Koh Chien, 55 m depth, ii.1900, coll. Th. Mortensen; 1 ♀ (23.2 mm cl), ZMUC, S Koh Sakit, 16.5 m depth, 3.ii.1900, coll. Th. Mortensen; 2 ♂ (23.2, 19.1 mm cl), 1 ♀ (25.2 mm cl), 3 juveniles, ZMUC, Koh Kahdat, 7.3-9 m depth, 15-18.ii.1900, coll. Th. Mortensen; 1 ♀ juvenile, ZMUC, Koh Kram, 55 m depth, 20-21.iii.1900, coll. Th. Mortensen; 1 ♀ (17.4 mm cl), ZMUC, N Koh Kram, 27.5 m depth, 2.iii.1900, coll. Th. Mortensen; 3 juveniles, ZMUC, S Koh Mak, 9-11 m depth, 17.ii.1900, coll. Th. Mortensen.— **Andaman Islands**: 1 ♂ (20.3 mm cl), 1 ♀ ovigerous (25.6 mm cl), NHM 1911.1.17.70-71, ex. Indian Museum; 1 ♂ (15.1 mm cl), ZMUC, ex. Indian Museum, 23.ix.1899.

Description.— Carapace rounded, globose; dorsal surface of carapace covered with minute granules, more densely set laterally; young specimens with minutely

granulate, longitudinal carina medially on carapace, prominent granule medially on intestinal region. Front produced, upcurved, anteriorly emarginate, densely granulate, setose. Hepatic region slightly swollen, bearing ridge of minute granules. Faceted subhepatic margin terminates in prominent, granulate denticle, separated from convex lateral margin by shallow notch; subhepatic denticle followed by smaller denticle in young specimens. Lateral posterior denticles broad triangular, dorso-ventrally flattened; median spine nearly as wide as long, coarsely granulate, upcurved distally.

Denticles on anterior margin of efferent branchial channel coequal, rounded. External maxillipeds minutely granulate, setose.

Cheliped merus in male 2/3 as long as carapace, granulate; granules larger proximally, and on anterior, posterior margins. Palm greatly swollen, minutely granulate, granulation more prominent along upper, and lower margins. Dactyls slender, distally hooked, twice as long as upper margin of palm, densely granulate, denticles along inner margins increasing in size distally. Pereiopods smooth, propodi anteriorly carinate.

Margins of abdominal sulcus in male beaded distally. Fused segments of male abdomen bearing small triangular denticle near distal margin. Fused segments of female abdomen with three clusters of granules proximally. Male first pleopod straight, apical process digitate, bent interiorly.

Colour.— Carapace pale mauve with irregular brownish patches, front pale, mesogastric region purple. Cheliped merus brown, palm white, fingers dark. Brown bands distally on pereiopodal meri, proximally on carpi.

Remarks.— *M. eudactyla* is easily distinguished from its cogeners in possesing a pyriform palm and fingers twice as long as palm.

Distribution.— New Caledonia, Chesterfield Islands, Australia, Torres Strait, New Guinea, Arafura Sea, Indonesia, Philippines, Tonkin Bay, Vietnam, Thailand, Andamans, Gulf of Aden; 8-69 m depth.

Myra fugax (Fabricius, 1798)
(figs. 2c, 12)

Cancer punctatus Herbst, 1783: 89, pl. 2, figs 15, 16.

Leucosia fugax Fabricius, 1798: 351; Lichtenstein, 1816: 142 (pro parte); Bosc, 1830: 287; Latreille, 1802: 119, pl. 1, figs 1, 2.

Myra fugax Desmarest, 1825: 169, pl. 28, fig. 3; Alcock, 1896: 202 (pro parte); Serène, 1955: 182, fig. 7, pl. 8, figs 1-6; Zimsen, 1964: 651; Devi et al., 1988: 22; K. Sakai, 1999: 17, pl. 6, fig f.

not Cancellus Anatum Tertius Rumphius, 1741: 27, pl. 10, fig. C. [= *M. celeris* spec. nov.]

not *Myra fugax*; White, 1847: 49 (pro parte); Hilgendorf, 1878: 811; Richters, 1880: 157; Calman, 1926: 212; Klunzinger, 1906: 73; Nobili, 1906: 164; Lenz, 1910: 544; Balss, 1915: 15; Bouvier, 1920: 221; Fox, 1927: 218; Monod, 1930: 140, fig. 8; Gruvel, 1931: 427; Monod, 1932: 68; Bodenheimer, 1935: 466; Balss, 1936: 25, fig. 25; Bodenheimer, 1937: 281; Monod, 1938: 99; Bouvier, 1940: 214, pl. 8, fig. 3; Barnard, 1950: 373, fig. 71d, e; Tortonese, 1951: 221; Gottlieb, 1953: 440; Wirszubski, 1953: 17; Holthuis, 1956: 325; Holthuis & Gottlieb, 1958: 81, pl. 2, fig. 7; Gilat, 1963: 105; Gilat, 1964: 17; Por, 1971: 148; Ramadan & Dowidar, 1976: 131; Por, 1978: 97; Galil & Lewinsohn, 1979: 272; Galil & Lewinsohn, 1981: 347; Kensley, 1981: 39; Kocatas, 1981: 162; Manning & Holthuis, 1981: 57; Shiber, 1981: 867; Riedl, 1983: 492; Golani et al., 1983: 196; Almaça, 1985: 361; Duris, 1987: 643; Tirmizi & Kazmi, 1988, fig. 26k; Galil, 1989: 149; Tom & Galil, 1991: 81; Galil, 1992: 117; Emmerson, 1993: 181; Stevcic & Galil, 1994: 71; Enzenross & Enzenross, 1990: 292; Enzenross, 1995: 2; d'Udekem d'Acoz, 1999: 209; [= *M. subgranulata* Kossmann, 1877].

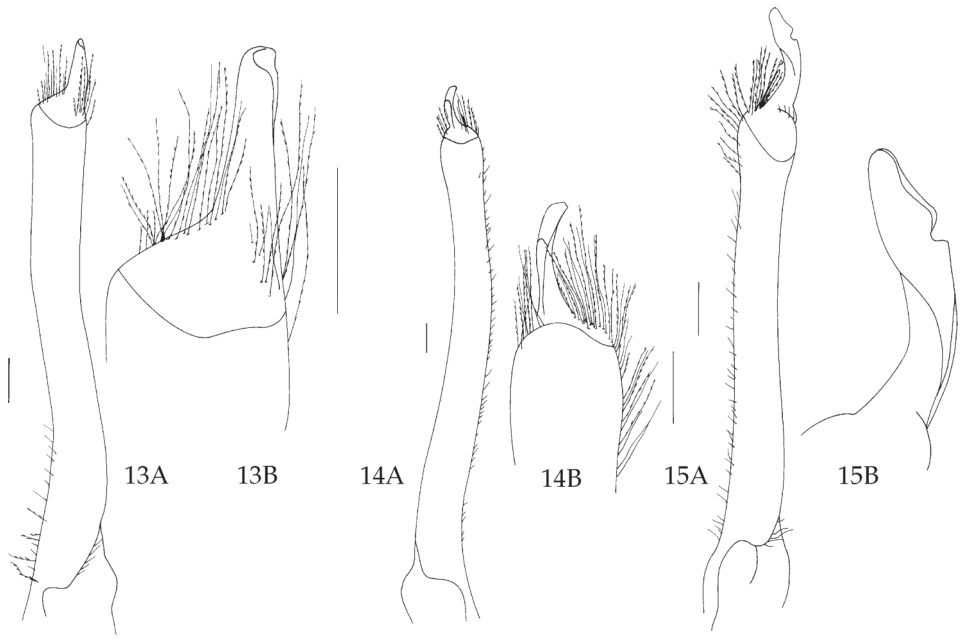

Fig. 13. *Myra grandis* Zarenkov, 1990, 28.0 mm cl, MNHN. A, first male pleopod, ventral view; B, first male pleopod, tip, ventral view. Scale 1 mm. Fig. 14. *Myra mammillaris* Bell, 1855, paratype, 40.6 mm cl, NHM 1846.50. A, first male pleopod, ventral view; B, first male pleopod, tip, ventral view. Scale 1 mm. Fig. 15. *Myra pernix* spec. nov., holotype, 24.5 mm cl, ZMUC. A, first male pleopod, ventral view; B, first male pleopod, tip, ventral view. Scale 1 mm.

not *Myra fugax* de Haan, 1841: 134, pl. 33, fig. 1; White, 1847: 49 (pro parte); Stimpson, 1858: 160; 1907: 152; Herklots, 1861: 27; Milne Edwards, 1874: 45; Miers, 1886: 313; Ortmann, 1892: 581; de Man, 1907: 397; Parisi, 1914: 295; Balss, 1922: 127; Rathbun, 1923: 136; Gee, 1925: 161; Shen, 1931: 108, pl. 10, fig. 2; Yokoya, 1933: 126; Boone, 1934: 39, pl. 12; Sakai, 1934: 285; Sakai, 1935: 57, pl. 10, fig. 2; Sakai, 1937: 134, pl. 14, fig. 5; Lin, 1949: 14; Uchida, 1949: 719, fig. 2081; Utinomi, 1956: 72, pl. 35, fig. 5; Holthuis, 1959: 104, pl. 8, fig. 5; Miyake, 1961a: 14; Miyake, 1961b: 170; Miyake et al., 1962: 126; Chang, 1963: 2; Sakai, 1965: 43, pl. 17, fig. 3; Holthuis & Sakai, 1970: 118, pl. 11, fig. 1; Takeda & Miyake, 1970: 226; Kim, 1973: 612; Takeda, 1973a: 32; Takeda, 1973b: 12; Sakai, 1976: 101, pl. 27, fig. 4; Yamaguchi et al., 1976: 34; Takeda, 1979: 153; Takeda, 1982a: 18; Takeda, 1982b: 99, fig. 289; Hill, 1982: 196, pl. 1, fig. a; Miyake, 1983: 62, pl. 2, fig. 6; Takeda, 1987: 10; Takeda, 1989: 139; Zarenkov, 1990: 64, pl. 2, fig. 8, pl. 6, figs 2-7; Dai & Yang, 1991: 78, pl. 8 fig. 6, fig. 36, (3); Yamaguchi & Baba, 1993: 320, fig. 102a, b; Huang, 1994: 579. [= *M. celeris* spec. nov.]

not *Myra fugax* var. *coalita* Ortmann, 1892: 582 (pro parte). [= *M. celeris* spec. nov.].

not *Myra fugax*; Alcock, 1896: 202 (pro parte); Stephensen, 1945: 72, fig 7b-c; Tirmizi & Kazmi, 1988: 89, fig. 26 (pro parte). [= *M. pernix* spec. nov.].

not *Persephona fugax* Rathbun, 1902: 30; Rathbun, 1910:308. [= *M. celeris* spec. nov.].

not *Persephona fugax*; Laurie, 1915: 428. [= *M. subgranulata* Kossmann, 1877].

not *Myra fugax coalita* Sakai 1937: 136, textfig. 23. [= *M. celeris* spec. nov.].

Material.— **India**: holotype, 1 ♂ (26.0 mm cl), ZMUC, "India orientalis", coll. I. K. Daldorff, det. J. Fabricius.— **Fiji**: 1 ♂ (29.1 mm cl), 1 ♀ (31.1 mm cl), 3 juveniles, MNHN, Viti Levu lagoon, 18°10.9'S 178°33.5'E, SUVA 2 stn CP 23, 26 m depth, 16.x.1998; 4 ♂ (31.0-31.8 mm cl), MNHN, 17°43.4'S

177°22.8'E, 17 m depth, SUVA 2 stn CP 57, 20.x.1998; 1 ♀ (34.3 mm cl), 1 ♀ ovigerous (30.7 mm cl), MNHN, 17°48.4'S 177°19.3'E, 17 m depth, SUVA 2 stn CP 69, 21.x.1998.— **Solomon Islands**: 4 ♂ (18.2-22.1 mm cl), 1 ♀ ovigerous (23.0 mm cl), AMS p1732.— **Vietnam**: 1 ♂ (31.8 mm cl), ZMUC, off Nhatrang, 9.5 m depth, 16.ii.1960, det. R. Serène.— **India**: 4 ♂ (20.8-24.2 mm cl), 1 ♀ (24.5 mm cl), dry, ZMUC, Tranquebar, ii.1846, det. H. Krøyer.— **Sri Lanka**: 1 ♂ (23.7 mm cl), 1 ♀ (24.9 mm cl), 3 juveniles, NHM 1934.1.16.31-35, Gulf of Manaar, Galle, coll. Miss Herdman.

Description.— Carapace rounded, globose, dorsal surface finely granulate. Front produced, upcurved, anterior margin v-shaped, minutely granulate. Hepatic region bearing granulate keel. Faceted subhepatic margin terminates in prominent, granulate denticle, separated from convex lateral margin by distinct notch. Lateral margins of carapace closely beaded. Lateral posterior denticles triangular, granulate. Median posterior spine in male 0.2 as long as carapace; proximally swollen, granulate; distally acuminate, slightly upcurved.

Denticles on anterior margin of efferent branchial channel subequal. External maxillipeds minutely granulate.

Cheliped merus in male 1.1 as long as carapace, in female slightly less than carapace length; prominently granulate, granules smaller distally. Carpus, propodus minutely granulate. Dactyl as long as upper margin of palm. Pereiopods smooth.

Thoracic sternites in male anterolaterally granulate, as well as subdistal margins of abdominal sulcus. Fused segments of male abdomen bearing small denticle near distal margin. Female abdomen smooth. Male first pleopod slightly sinuous, apical process curved distad, distally vulvate.

Colour.— "…. la carapace est d'une teinte générale de fond chamois franc avec des taches rouge brique pâle (terre de sienne); la région frontale est chamois; les régions hépatiques d'un bord à l'autre a travers toute la carapace et avec une extension postérieure de part et d'autre de la ligne médiane, la ligne médiane (carène), une bande courbe parallèle au bord postérieur et englobant les trois épines postérieures, sont rouge brique; le reste de la face dorsale de la carapace est chamois. Les merus des chelipèdes sont rouge brique; les autre articles chamois; les péreiopodes sont chamois avec des taches rouges brique pâle aux articulations des articles; celle de l'articulation mero-carpale est la plus grande." (Serène, 1955: 187).

Remarks.— Fabricius' laconic description of *Leucosia fugax* :"thorace oblongo postice tridentato: dente medio longiore recuruo, digitis dentatis" (1798: 351), fits many *Myra* species. Indeed, Fabricius himself failed to notice that *fugax* differs from the species (Cancellus Anatum Tertius) depicted by Rumphius (1741, pl. 10, fig. C). Fortunately Fabricius' type specimen is an adult male, and its examination allowed unravelling of long lists of synonymies.

M. fugax has the cheliped merus 1.1 times as long as the carapace, the fingers as long as the upper margin of the palm, and the apical process of the first male pleopod outcurved, distally vulvate. The closely allied *M. subgranulata* has the male cheliped merus 1.4 times as long as the carapace, the fingers 0.7 times as long as the palm, and the apical process of the first male pleopod curved distad, entire. *M. celeris* spec. nov., has the male cheliped merus up to 1.5 times as long as the carapace, the fingers half as long as the palm, and the apical process of the first male pleopod curved distad, bearing a denticle on the interior margin.

Distribution.— Fiji, Vietnam, Solomon Islands, India, Sri Lanka; 9.5-26 m depth.

Myra grandis Zarenkov, 1990
(figs. 2d, 13)

Myra grandis Zarenkov, 1990: 65, pl. 6, fig. 8-12.

Material.— **Marquesas Islands**: 1 ♂ (34.6 mm cl), MNHN, Eiao Island, 7°57.8'S 140°02.0'W, 49-55 m depth, MUSORSTOM 9 stn 1160, 23.viii.1997, colls. Bouchet, Dayrat, Richer; 1 ♂ (28.0 mm cl), MNHN, Nuku Hiva Island, 8°45'S 140°15' W, 300-302 m depth, MUSORSTOM 9 stn 1172, 25. viii.1997, colls. Bouchet, Dayrat, Richer; 1 juvenile, MNHN, Hiva Oa Island, 9°50.2'S 139°02.5'W, 85 m depth, MUSORSTOM 9 stn 1209, 29. viii.1997, colls. Bouchet, Dayrat, Richer; 1 juvenile, MNHN, Hiva Oa Island, 9°50.4'S 139°00.5'W, 98-100 m depth, MUSORSTOM 9 stn 1210, 29. viii.1997, colls. Bouchet, Dayrat, Richer; 1 juvenile, MNHN, Hiva Oa Island, 9°44.6'S 138°51.1'W, 115-120 m depth, MUSORSTOM 9 stn 1224, 30. viii.1997, colls. Bouchet, Dayrat, Richer; 1 juvenile, MNHN, Hiva Oa Island, 9°44.6'S 138°51.5'W, 107-108 m depth, MUSORSTOM 9 stn 1228, 30. viii.1997, colls. Bouchet, Dayrat, Richer; 1 juvenile, MNHN, Hiva Oa Island, 9°42'S 139°03'W, 105-285 m depth, MUSORSTOM 9 stn 1235, 31.viii.1997, colls. Bouchet, Dayrat, Richer.— **Madagascar**: 2 ♀ (37.1, 34.8 mm cl), MNHN B19741, 13°05'S 48°21'E, 50 m, 19.vi.1967, coll. A. Crosnier.

Description.— Carapace rounded, globose, dorsal surface smooth, shiny. Front produced, upcurved, anterior margin v-shaped, very minutely granulate. Hepatic region raised, mammilate. Faceted subhepatic margin terminates in pronounced, granulate denticle, separated from convex lateral margin by shallow notch. Lateral margins of carapace closely beaded. Lateral posterior denticles rounded, granulate; median posterior denticle triangular, 0.15 as long as carapace, granulate, upcurved. Young specimens with minutely granulate carapace, two prominent granules on branchial margins, prominent granule medially on intestinal region.

Denticles on anterior margin of efferent branchial channel subequal. External maxillipeds minutely granulate.

Chelipeds and pereiopods smooth, shiny. Cheliped merus in male 0.8, in female 0.7 as long as carapace, swollen proximally. Dactyl in male 0.8 as long, in female nearly as long as upper margin of palm.

Third thoracic segment in male sparsely granulate anteriorly. Margins of abdominal sulcus in male smooth. Laciniate denticle near distal margin of fused abdominal segments of male. Fused segments of female abdomen smooth, shiny. Male first pleopod slightly sinuous, apical process digitate.

Colour.— Carapace and legs of adult pale orange, pale bipartite patch on cardiac region, lateral posterior denticles pale, median posterior denticle orange proximally, white distally. Carapace of the young pale brown with irregular orange markings; legs with orange bands on meri and carpi.

Remarks.— *M. grandis* was known from a single female collected off Kenya (Zarenkov, 1990: 65).

M. grandis is distinguished from its cogeners in its smooth, shiny carapace, and smooth margins of the abdominal sulcus.

Distribution.— Marquesas Islands, Madagascar, Kenya; 49-302 m depth.

Myra mammillaris Bell, 1855
(figs. 2e, 14)

Myra mammillaris Bell, 1855a: 364;Bell, 1855b: 298, pl. 32, fig. 5; Bell, 1855c: 12; Miers, 1877: 239, pl. 38, figs. 25-27; Miers, 1884: 251; Haswell, 1880: 50; Haswell, 1882: 121; Hale, 1929: 197, fig. 197; Tyndale-Biscoe & George, 1962: 89, fig. 7.12; Serène, 1968: 44; Morgan & Jones, 1991: 490.
Myra affinis; Miers, 1886: 315; Campbell & Stephenson, 1970: 250, fig. 11.

Material.— **Australia**: lectotype, 1 ♂ (40.8 mm cl), NHM 1846.50, Adelaide; paralectotype, 1 ♂ (40.6 mm cl), NHM 1846.50, Adelaide.— **Australia**: 1 ♀ (19.3 mm cl), dry, NHM 58.172, Shark's Bay; 1 ♀ (16.8 mm cl), NHM 1884.31, Torres Strait, 5.5-20 m depth, 'Challeger', viii.1874, det. E.J. Miers as *Myra affinis*; 1 ♂ (28.5 mm cl), NHM, Port Denison, 7.3 m depth, 'Alert' stn 111, v.1881, coll. R. Coppinger; 1 ♀ (33.3 mm cl), NHM 1932.11.30.78, Roebuck Bay, coll. B. Grey; 1 ♂ (45.3 mm cl), QM W3372, NE Caloundra Lighthouse, 40 m, 5.iii.1970; 1 ♀ ovigerous (41.8 mm cl), QM W755, Queensland, Southport, vi.1931; 1 ♂ (38.5 mm cl), QM W2054, Tin Can Bay; 1 ♀ ovigerous (34.4 mm cl), QM W11834, Moreton Bay, near Peel Island, 26.i.1985; 1 ♂ (32.6 mm cl), WAM c14359, Townsville, Abbot Point, vi.1984, coll. J. Ottaway; 2 ♂ (29.9, 30.8 mm cl), 2 ♀ (26.2, 26.0 mm cl), 1 ♀ ovigerous (30.4 mm cl), WAM c8696, Western Australia, Broome, sand bar, 16.x.1962, coll. R.W. George; 3 ♂ (33.2-40.9 mm cl), 3 ♀ (32.4-36.4 mm cl), 1 ♀ ovigerous (37.3 mm cl), WAM, Broome, sand bar, 15.x.1962, coll. R.W. George; 1 ♂ (41.3 mm cl), WAM c4550, Perth, Leighton Beach, x.1931, coll. D. Watkins., 1 ♀ (37.9 mm cl), AMS p9999, Western Australia, Ninty Mile Beach, between Broome, Walla, 17°58'S 122°14'E, 13 m, 1931, coll. R. Boume; 1 ♂ (30.9 mm cl), AMS p58941, Queensland, Kurrimine Beach, 64 kms S Innisfail, 17°47'S 146°6'E, tidal flat, ix. 1963, det. D.J. Griffin as *M. affinis*.

Description.— Carapace rounded, globose, dorsal surface prominently granulate. Front produced, upcurved, anterior margin v-shaped, granulate. Hepatic region raised, bearing granulate line. Faceted subhepatic margin terminates in blunt, granulate denticle, separated from convex lateral margin by shallow notch. Lateral margins of carapace prominently beaded. Posterior denticles rounded, granulate, subequal.

Denticles on anterior margin of efferent branchial channel subequal. External maxillipeds granulate.

Cheliped merus in male nearly as long as carapace, proximally set with perliform granules, granules smaller distally. Carpus, propodus minutely granulate. Dactyl three-quarters as long as upper margin of palm. Pereiopodal propodi ovate, upper margin granulate.

Third thoracic sternite in male anteriorly granulate. Subdistal margins of abdominal sulcus prominently beaded. Laciniate denticle near distal margin of fused abdominal segments of male. Fused segments of female abdomen bearing granulate band proximally, margins smooth. Male first pleopod slightly sinuous, apical process digitate, curved distad.

Remarks.— *M. mammillaris* differs from *M. affinis* in lacking the horizontal granulate band on the third thoracic sternite in the male, the abdominal margins in the female are smooth, having rounded, subequal, posterior carapacial denticles, and a longer apical process on the male first pleopod.

Distribution.— Australia; intertidal to 20 m depth.

Myra pernix spec. nov.
(figs. 2f, 15)

Myra fugax; Alcock, 1896: 202 (pro parte); Stephensen, 1945: 72, fig 7b-c; Tirmizi & Kazmi, 1988: 89, fig. 26 (pro parte).
Myra affinis; Nobili, 1906b: 95.

Material.— **Thailand**: holotype, 1 ♂ (24.5 mm cl), ZMUC, 7°29'N 99°07'E, 16-22 m depth, 12.ii.1966; paratypes, 1 ♂ (23.6, mm cl), 1 ♀ ovigerous (24.4 mm cl), ZMUC, 7°29'N 99°07'E, 16-22 m depth, 12.ii.1966.— **Singapore**: 3 ♂ (14.0-19.2 mm cl), USNM 33009.— **Persian Gulf**: 1 ♂ (27 mm cl), ZMUC cru949, 26°23'N 53°4'E, 83 m, 23.iv.1937, det. K. Stephensen as *M. fugax*; 1 ♂ (18.2 mm cl), 1 juvenile, ZMUC cru950, off Kharg Island, 18 m, 15.iii.1937, det. K. Stephensen as *M. fugax*; 1 ♀ juvenile, ZMUC cru952, off Kharg Island, 16-17 m, 5.iii.1937, det. K. Stephensen as *M. fugax*; 2 juveniles, MNHN B17536, 25°10'N 55°10'E, 18-28 m depth, 1901, coll. J. Bonnier & Ch. Pérez, det. Nobili as *M. affinis*.

Description.— Carapace rounded, globose, dorsal surface finely granulate. Front produced, upcurved, anterior margin v-shaped, minutely granulate. Hepatic region bearing granulate line parallel with margin. Faceted subhepatic margin terminates in blunt, granulate denticle, separated from convex lateral margin by shallow notch. Lateral margins of carapace closely beaded. Lateral posterior denticles acuminate, distally upcurved, granulate. Median posterior spine in male third as long as carapace; proximally granulate; distally acuminate, upcurved.

External denticle on anterior margin of efferent branchial channel larger than median and interior denticles, visible in dorsal view. External maxillipeds minutely granulate, setose anteriorly.

Cheliped merus in male up to 1.2 as long as carapace, in female slightly less than carapace length; granulate, granules smaller distally. Carpus and propodus minutely granulate. Dactyl in male 0.7 times as long as upper margin of palm. Pereiopods smooth.

Thoracic sternites in male anterolaterally granulate, as well as subdistal margins of abdominal sulcus. Fused segments of male abdomen bearing small granule-like denticle subdistally. Female abdomen with granulate band proximally, abdominal margin beaded. Male first pleopod straight, apical process with curved neck, distally foliolate, interior margin medially notched.

Remarks.— The male first pleopod depicted by Stephensen (1945, fig 7b-c) clearly identifies his specimens as *M. pernix* spec. nov. The specimens from Karachi Harbour are described by Tirmizi & Kazmi (1988: 92, fig. 26h, h') as having pleopods similar to Stephensen's material, and "longer [posterolateral] spines....therefore referable to a distinct variety or species" (1988: 90). Examination of purported *M. fugax* specimens "from different localities in the Indo-West Pacific" convinced them that the pleopods of the species are "variable in shape" (Tirmizi & Kazmi, 1988: 92, fig. 26, j-o).

Distribution.— Singapore, Thailand, Pakistan, Persian Gulf; 5.5-83 m depth.

Etymology.— *pernix* L., swift, alluding to its affinity to *M. fugax*.

Myra subgranulata Kossmann, 1877
(figs. 3a, 16)

Myra subgranulata Kossmann, 1877: 65, pl. 1, fig. 7.

Myra fugax; White, 1847: 49 (pro parte); Hilgendorf, 1878: 811; Richters, 1880: 157; Klunzinger, 1906: 73; Nobili, 1906a: 164; Lenz, 1910: 544; Balss, 1915: 15; Bouvier, 1920: 221; Calman, 1927: 212; Fox, 1927: 218; Monod, 1930: 140, fig. 8; Gruvel, 1931: 427; Monod, 1932: 68; Bodenheimer, 1935: 466; Balss, 1936: 25, fig. 25; Bodenheimer, 1937: 281; Monod, 1938: 99; Bouvier, 1940: 214, pl. 8, fig. 3; Barnard, 1950: 373, fig. 71d, e; Tortonese, 1951a: 221; Gottlieb, 1953: 440; Wirszubski, 1953: 17; Holthuis, 1956: 325; Holthuis & Gottlieb, 1958: 81, pl. 2, fig. 7; Gilat, 1963: 105; Gilat, 1964: 17; Por, 1971: 148; Ramadan & Dowidar, 1976: 131; Por, 1978: 97; Galil & Lewinsohn, 1979: 272; Galil &

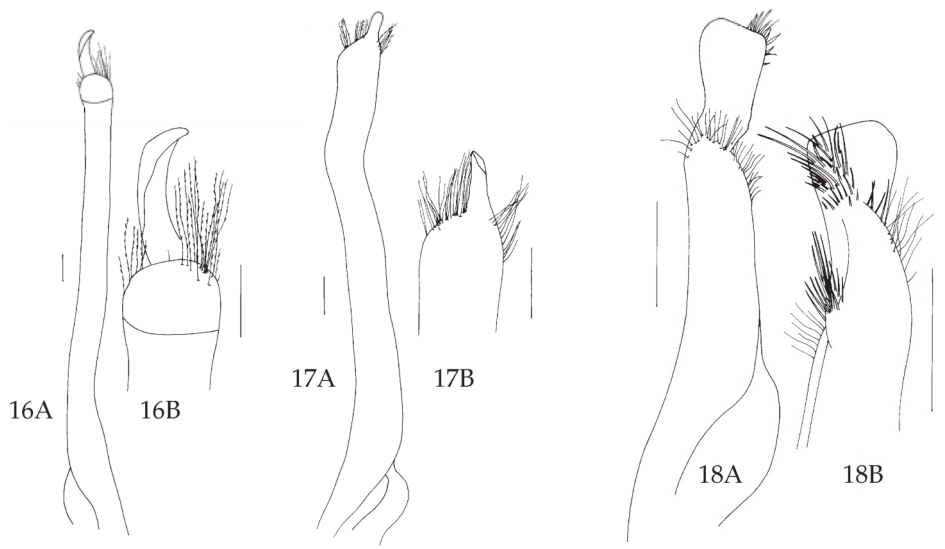

Fig. 16. *Myra subgranulata* Kossmann, 1877, 37.7 mm cl, MNHN B19728. A, first male pleopod, ventral view; B, first male pleopod, tip, ventral view. Scale 1 mm. Fig. 17. *Myra tumidospina* spec. nov., 31.0 mm cl, MNHN. A, first male pleopod, ventral view; B, first male pleopod, tip, ventral view; C, first male pleopod, tip, dorsal view. Scale 1 mm. Fig. 18. *Myrine acutidens* (Ihle, 1918), 11.9 mm cl, KBIN IG25715. A, first male pleopod, ventral view; B, first male pleopod, tip, dorsal view. Scale 1 mm.

Lewinsohn, 1981: 347; Kensley, 1981: 39; Kocatas, 1981: 162; Manning & Holthuis, 1981: 57; Shiber, 1981: 867; Riedl, 1983: 492; Golani et al., 1983: 196; Almaça, 1985: 361; Duris, 1987: 643; Tirmizi & Kasmi, 1988, fig. 26k; Galil, 1989: 149; Galil, 1992: 117; Tom & Galil, 1991: 81; Emmerson, 1993: 181; Stevcic & Galil, 1994: 71; Enzenross & Enzenross, 1990: 292; Enzenross & Enzenross, 1995: 2; d'Udekem d'Acoz, 1999: 209.

Myra coalita Hilgendorf, 1878: 812, pl. 10, figs 6, 7.

Myra affinis; Nobili, 1906a: 165.

Persephona fugax; Laurie, 1915: 428.

Myra cyrenae Ward, 1942: 67, pl. 5, fig. 1; Serène, 1968: 44.

Material.— **Mauritius**: 1 ♂ (22.9 mm cl), NHM 1883.18, Purchased M. Robillard.— **Madagascar**: 3 ♂ (26.8-33.7 mm cl), MNHN B18569, NW coast, Ambaro Bay, 5 m depth, 23.vii.1958, coll. A. Crosnier; 1 ♂ (37.7 mm cl), 1 ♀ ovigerous (30.6 mm cl), MNHN B19728, NW coast, Ambaro Bay, 5 m depth, ii.1959, coll. A. Crosnier; 1 ♀ (31.2 mm cl), MNHN B18568, NW coast, Pointe d'Ankity, coll. M. Chavane; 1 ♂ (23.4 mm cl), 2 ♀ ovigerous (30.1, 29.9 mm cl), MNHN B18580, NW coast, Ambaro Bay, 5 m depth, ii.1960, coll. A. Crosnier; 1 juvenile, MNHN B18575, Nosy be, Ile de morts, 8 m depth, 27.vi.1971, coll. M. Chavane; 1 ♀ ovigerous (29.9 mm cl), MNHN B16971, Tulear, det. H. Balss as *M. fugax*; 1 ♀ damaged, MNHN 18737, Grand Recif, Pte Serpent, 30.iv.1972, coll. B. Thomassin.— **Moçambique**: 1 ♀ ovigerous (34.6 mm cl), RMNH D 48676, Inhaca Island, 16 m depth, 5.i.1987, coll. J.H.C. Walenkamp.— **Red Sea**: 1 juvenile, MNHN B17537, 1897, coll. M. Jousseaume, det. Nobili as *M. affinis*; 1 juvenile, TAU, Dahlak Archipelago, 15°37'N 40°43'E, 27 m depth, 23.x.1965.— **Egypt**: 1 ♂ (36.4 mm cl), NHM 1926.1.26.13, Suez Canal, km. 54, 27.xi.1924, det. W.T. Calman as *M. fugax*.— **Israel**: 9 ♂ (32.3-40.2 mm cl), 13 ♀ ovigerous (28.2- 33.8 mm cl), 1 ♀ (35.9 mm cl), 1 juvenile, TAU, Palmahim, 38 m, 2.vi.2000, coll. B.S. Galil; 1 ♂ (33.2 mm cl), 1 ♀ ovigerous (32.0 mm cl), TAU, Haifa Bay, 40 m, 8.viii.2000, coll. B.S. Galil.

Description.— Carapace rounded, globose, dorsal surface finely granulate. Front produced, upcurved, anterior margin v-shaped, minutely granulate. Hepatic region bearing granulate line. Faceted subhepatic margin terminates in blunt, granulate denticle, separated from convex lateral margin by distinct notch. Lateral margins of carapace minutely beaded. Lateral posterior denticles triangular, dorsoventrally flattened, granulate. Median posterior spine in male 0.2 as long as carapace; proximally granulate; distally acuminate, slightly upcurved.

Denticles on anterior margin of efferent branchial channel subequal. External maxillipeds minutely granulate.

Cheliped merus in male up to 1.4 as long as carapace, in female slightly less than carapace length; sparsely granulate, granules smaller distally. Carpus, propodus minutely granulate. Dactyl in male 0.7 as long as upper margin of palm. Pereiopods smooth.

Thoracic sternites in male anterolaterally granulate, as well as subdistal margins of abdominal sulcus. Fused segments of male abdomen bearing small denticle subdistally. Female abdomen smooth. Male first pleopod slightly sinuous, apical process curved distad.

Colour.— "Pinkish, darker (maroon) on anterior portion of carapace"(Barnard, 1950: 373).

Remarks.— *M. subgranulata* was described by Kossmann (1877) from a juvenile specimen (10 mm cl.). *M. subgranulata* differs from *M. fugax* in having longer cheliped merus in adult males, and in the form of the apical process of first male pleopod.

M. subgranulata was recorded from the Suez Canal by Calman (1927) and Fox (1927). In 1929 it was collected off Jaffa, Israel (Monod, 1930), and successively recorded from Turkey (Monod, 1930), Egypt (Balss, 1936) and Lebanon (Shiber, 1981). It is common along the Mediterranean coast of Israel at depths of 20-60 m.

Distribution.— Mauritius, Madagascar, South Africa, Moçambique, Red Sea, Suez Canal, Egypt, Israel, Lebanon, Turkey; 5-130 m depth.

Myra tumidospina spec. nov.
(figs 3b, 17)

Material.— **Fiji Islands**: holotype, 1 ♂ (30.5 mm cl), MNHN, B27716, Viti Levu lagoon, 17°38.0'S 177°19.7'E, 36 m depth, SUVA 2 stn CP 80, 22.x.1998; paratypes, 5 ♂ (24.6-30.3 mm cl), 40 juveniles, MNHN, B 27717, 17°16.1'S 177°45.7'E, Bligh Water, 143-173 m depth, MUSORSTOM 10 stn CP 1323, 7.viii.1998. **Fiji Islands**: 7 juveniles, MNHN, 17°17.4'S 177°47.0'E, 102-104 m depth, MUSORSTOM 10 stn CP 1324, 7.viii.1998; 1 ♂ (27.8 mm cl), 2 ♀ ovigerous (32.0, 30.7 mm cl), 1 ♀ (29.7 mm cl), 3 juveniles, MNHN, Viti Levu Island, 18°12.4'S 178°33.0'E, 144-150 m depth, MUSORSTOM 10 stn CP 1363, 15.viii.1998; 3 ♂ (24.4-29.3 mm cl), 1 ♀ ovigerous (31.0 mm cl), 12 juveniles, MNHN, Viti Levu Island, 18°12.4'S 178°33.1'E, 149-168 m depth, MUSORSTOM 10 stn CP 1366, 15.viii.1998; 1 ♀ ovigerous (28.3 mm cl), 4 juveniles, MNHN, Viti Levu Island, 18°12.3'S 178°33.1'E, 113-123 m depth, MUSORSTOM 10 stn CP 1370, 16.viii.1998; 5 ♂ (22.2-31.0 mm cl), 1 ♀ ovigerous (32.4 mm cl), 6 juveniles, MNHN, Viti Levu Island, 18°12.4'S 178°32.8'E, 135-151 m depth, MUSORSTOM 10 stn CP 1371, 16.viii.1998; 1 ♀ (29.6 mm cl), MNHN, Viti Levu Island, 18°12'S 178°35'E, 100-122 m depth, SUVA 4 stn 4, 23.ix.1999; 1 ♂ (28.2 mm cl), MNHN, Viti Levu Island, 18°26.3'S 178°04.0'E, 48-50 m depth, SUVA 4 stn CP 19, 25.ix.1999.— **New Caledonia**: 1 ♂ broken, MNHN B21175, Grand Recif Sud, 22°33'S 167°04'E, 74 m depth, stn 359, xi.1984, coll. B. Richer de Forges; 1 ♂ (29.7 mm cl), MNHN, 20°35.30'S 164°58.77'E, 227-250 m depth, BATHUS 1 stn 691, 17.iii.1993, coll. B. Richer de Forges.— **Vanuatu**: 1 ♂ (27.9 mm cl), 14

juveniles, MNHN, 15°36.58'S 167°16.32'E, 182-215 m depth, MUSORSTOM 8 stn 1086, 5.x.1994, coll. B. Richer de Forges.— **Indonesia**: 2 juveniles, ZMUC, Java, 5°51'S 106°22'E, 35 m depth, 26.vii.1922.

Description.— Carapace rounded, globose, dorsal surface granulate. Front produced, upcurved, anterior margin v-shaped, granulate. Hepatic region slightly raised, bearing granulate line. Faceted subhepatic margin terminates in prominent, granulate denticle, separated from convex lateral margin by shallow notch. Lateral margins of carapace closely beaded. Lateral posterior denticles triangular, granulate. Median posterior spine in male 0.2 times as long as carapace; basally greatly swollen, coarsely granulate, distally attenuate, upcurved. Young specimens with minutely granulate, longitudinal carina medially on carapace, branchial margins trituberculate, granulate tubercle distally on posterolateral margin, prominent tubercle medially on intestinal region.

External denticle on anterior margin of efferent branchial channel prominent, visible in dorsal view. External maxillipeds minutely granulate.

Cheliped merus in male slightly longer than carapace, proximally set with perliform granules, granules smaller distally. Carpus and propodus minutely granulate. Dactyl as long as upper margin of palm.

Third thoracic sternite in male anteriorly granulate. Subdistal margins of abdominal sulcus prominently beaded. Fused abdominal segments of male narrowing distally, laciniate denticle near distal margin. Male first pleopod angled, apical process digitate.

Colour.— Carapace and chelipeds sand-colored with irregular brown markings, posterior denticles white; cheliped merus with two reddish bands distally; pereiopods with bright-red bands on meri, carpi.

Remarks.— *M. tumidospina* spec. nov. resembles *M. fugax*, *M. subgranulata* and *M. celeris* spec. nov. in having the median posterior spine in the male 0.2 times as long as the carapace and the lateral posterior denticles triangular; it is distinguished though by having the median posterior spine greatly swollen proximally; a prominent external denticle on the anterior margin of the efferent branchial channel; the distally convex lateral margins of the fused segment of the male abdomen; and the straight apical process on the first male pleopod.

Distribution.— Fiji, New Caledonia, Vanuatu, Indonesia; 35-250 m depth.

Etymology.— From *tumidus* L., swollen, and *spina* L., spine; for the swollen median posterior spine on the carapace.

Myrine gen. nov.

Type species: *Callidactylus kesslerii* Paulson, 1875, by monotypy; gender: feminine.

Description.— Carapace pyriform, globose; regions of carapace indistinct. Dorsal surface of carapace granulate. Front narrow, produced, corrugate. Antennular fossa continuous with orbit, partially sealed by basal plate on antennule; antennule folds obliquely within fossa. Antenna short, inserted between antennular fossa and orbit. Orbit small, outer orbital margin trisutured; lower orbital margin separated from anterior margin of efferent branchial channel by groove. Eyes retractible. Anterior margin of efferent branchial channel tridentate, median denticle narrower than lateral

denticles, visible in dorsal view. External maxillipeds concealing buccal opening; endopod merus triangulate, medially excavate, shorter than rectangular ischium; lacking vertical row of setae on endopod in adult female specimens. Lateral margins of carapace lacking line of closely-spaced granules. Rounded subhepatic margin separated from convex lateral margin by well defined notch. Posterior margin trilobate; lateral lobes on slightly lower plane than median lobe. Chelipeds slender, long, subequal, longer in adult male than in female specimens; fingers long, distally incurved, their inner margins ctenoid. Pereiopods slender, dactyls styliform, longer than propodi, setose along upper margins. Abdominal sulcus deep, elongate, nearly reaching buccal cavity. Male abdomen narrowly triangular, segments 3-6 fused, bearing preapical crochet, lateral margin bearing 3 indistinct ridges fitting into sutures between thoracic sternites; telson slender, 1/3 as long as fused segments. Female abdomen with segments 4-6 fused, greatly enlarged, shield-like, telson laciniate. First male pleopod with straight, stocky shaft, dorsoventrally flattened, bearing ruff of setae preapically. Second male pleopod short, apex shaped as dunce's cap.

Etymology.— After Myrine, a ancient sea-goddess worshipped in Asia Minor.

Remarks.— *Myrine* gen. nov. differs from the closely allied *Myra* in lacking a well-defined beaded line along the lateral margins; in lacking a subhepatic denticle; in lacking a vertical row of setae on the outer maxilliped endopod in the female; in having the anterior margin of the efferent branchial channel distinct, separated from the lower orbital margin by a groove, rather than forming a lower orbital margin.

Myrine acutidens (Ihle, 1918)
(figs 3c, 18)

Myra kesslerii var. *acutidens* Ihle, 1918: 260, text-fig. 139; Serène, 1955: 196; Romimohtarto, 1967: 15.
Myra acutidens; Ovaere, 1986: 121, figs 1-4; Tan, 1996: 1041, figs 6n-p, 4f.

Material.— **Indonesia**: 1 ♂ (12.9 mm cl), ZMA 242044, Kei Islands, Nuhu-Jaan, 5°36.5'S 132°55.2'E, 90 m depth, 'Siboga' stn 260, 16-18.xii.1899.— **Papua New Guinea**: 2 ♂ (11.8, 11.9 mm cl), 1 ♀ ovigerous (12.6 mm cl), 3 ♀ juveniles (9.4-10.1 mm cl), KBIN IG25715, 4°09.40'S 144°52.29'E, Madang Province, Hansa Bay, Duangit Reef, 30-50 m, i.1977, coll. J. Bouillon, det. A. Ovaere.

Description.— Dorsal surface of carapace minutely granulate, five granulate tubercles medially on carapace, one granulate tubercle medially on intestinal region. Front produced, upcurved, closely granulate, anterior margin sinuous, medially notched. Hepatic region slightly raised; subhepatic margin curved. Lateral posterior denticles petaloid, granulate basally; median denticle 0.25 as long as carapace, conic, granulate, slightly upcurved distally.

External maxillipeds minutely granulate.

Cheliped merus in male slightly longer than carapace, in female nearly as long as carapace; granulate; granules larger proximally. Carpus and propodus minutely granulate. Dactyl nearly 1.5 times as long as upper margin of palm, minutely granulate.

Thoracic sternum in male minutely granulate. Distal margins of abdominal sulcus minutely beaded. Fused abdominal segments of male bearing crochet at distal margin. Male first pleopod basally expanded; preapical ruff extending dorsally to subrectangular, lamellate apical process.

Colour.— "[C]arapace is marked by a variable ox-blood reticulation on a creamy white background. The same ox-blood is found in bandings on the chelipeds and walking legs" (Ovaere, 1986: 122).

Remarks.— *M. acutidens* differs from the closely related *M. kesslerii* in having a conic, rather than petaloid, median denticle on the posterior margin of the carapace; longer chelipeds; a prominent, subrectangular, rather than squat, apical appendix on the first male pleopod.

Distribution.— Papua-New Guinea, Indonesia, Philippines; 25-90 m.

Myrine kesslerii (Paulson, 1875)
(figs 3d, 19)

Callidactylus kesslerii Paulson, 1875: 85, pl. 11, fig. 1.

Myra darnleyensis Haswell, 1880: 52, pl. 5, fig. 4; Haswell, 1882: 122; Miers, 1886: 315; Alcock & Anderson, 1894: 199; Alcock, 1896: 207; Borradaile, 1903: 438; Laurie, 1906: 362; Estampador, 1937: 513.

Myra kesslerii; Nobili, 1906a: 165; Buitendijk, 1939: 228.

Persephona darnleyensis; Rathbun, 1911: 201.

Persephona kesslerii; Laurie, 1915: 409.

Myra kessleri; Ihle, 1918: 260 (pro parte); Serène, 1955: 192, fig. 8, pl. 10, fig. 3, pl. 11, figs 1-4; 1968: 44; Romimohtarto, 1967: 15, text-fig. 6, pl. 2, fig. d; Tyndale-Biscoe & George, 1962: 89, figs 7.9; Campbell, 1971: 39; Zarenkov, 1990: 64, pl. 6, figs 13-15; Dai & Xu, 1991: 6, fig. 4; Huang, 1994: 579.

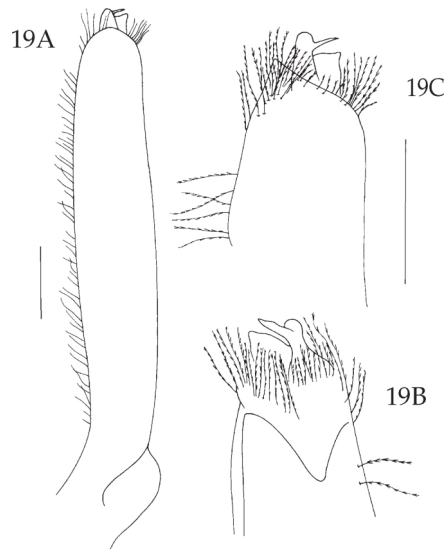

Fig. 19. *Myrine kesslerii* (Paulson, 1875), 13.5 mm cl, ZMUC. A, first male pleopod, ventral view; B, first male pleopod, tip, ventral view; C, first male pleopod, tip, dorsal view. Scale 1 mm.

Material.— **Fiji Islands**: 1 ♂ (18.6 mm cl), MNHN, Viti Levu Island, 17°48.5'S 178°46.7'E, 81-110 m depth, MUSORSTOM 10 stn DW 1357, 13.viii.1998.— **New Caledonia**: 1 ♀, RMNH D 46081, dry; 1 ♂ (14.4 mm cl), MNHN B21147, Noumea, 22°20'S 166°20'E, 15 m depth, stn 10, v.1984, coll. B. Richer de Forges; 1 ♂ (13.8 mm cl), MNHN, Noumea, 22°13'S 166°15'E, 25 m depth, stn 54, v.1984, coll. B. Richer de Forges; 1 ♂ (13.7 mm cl), 1 ♀ (16.1 mm cl), 5 juveniles, MNHN B21250, 21°23.90'S 158°59.60'E, Noumea, 55 m depth, CHALCAL stn 55, vii.1984; 2 ♂ (9.7, 10.5 mm cl), 2 ♀ (13.2, 12.1 mm cl), MNHN B21153, Ouen Island, Prony Bay, 22°30.5'S 166°27.7'E, 33 m depth, CHALCAL stn 80, viii.1984, coll. B. Richer de Forges; 1 ♂ (13.3 mm cl), 2 ♀ (14.3, 15.3 mm cl), MNHN B21194, Ouen Island, Prony Bay, 22°28'S 166°46'E, 20 m depth, CHALCAL stn 119, viii.1984, coll. B. Richer de Forges; 1 ♀ (14.3 mm cl), MNHN B21152, Ouen Island, Prony Bay, 22°34.8'S 166°43.4'E, 28 m depth, stn 232, x.1984, coll. B. Richer de Forges; 3 ♂ (13.2-14.2 mm cl), MNHN B21155, 22°20.8'S 166°23.7'E, 22 m depth, stn 252, xi.1984, coll. B. Richer de Forges; 3 ♂ (12.1-13.0 mm cl), 1 ♀ ovigerous (12.2 mm cl), 3 juveniles, MNHN B21146, Grand Recif Sud, 22°38'S 166°53.6'E, 47 m depth, stn 334, xi.1984, coll. B. Richer de Forges; 1 ♀ ovigerous (15.9 mm cl), MNHN, Grand Recif Sud, 22°38'S 167°20'E, 27 m depth, stn 405, 23.i.1985, coll. B. Richer de Forges; 1 ♂ (10.0 mm cl), 1 ♀ ovigerous (17.3 mm cl), MNHN B19233,

Grand Recif Sud, 22°40'S 167°25'E, 18 m depth, stn 408, 23.i.1985, coll. B. Richer de Forges; 1 ♂ (19.8 mm cl), MNHN B21201, Recif Alliance, 19°46.5'S 163°47.2'E, 37 m depth, stn 6, 14.vi.1985; 5 ♂ (11.4-14.7 mm cl), 1 juvenile, MNHN B21163, Grand Recif Sud, 22°50'S 166°51'E, 32 m depth, stn 555, 16.vii.1985, coll. B. Richer de Forges; 1 juvenile, MNHN B21286, Grand Recif Sud, 22°49'S 166°59'E, 62 m depth, stn 569, 17.vii.1985, coll. B. Richer de Forges; 1 ♀ (11.6 mm cl), 1 juvenile, MNHN B21142, Grand Recif Sud, 22°52'S 167°00'E, 65 m depth, stn 572,17.vii.1985, coll. B. Richer de Forges; 1 ♂ (12.3 mm cl), MNHN, 20°32.2'S 164°08.8'E, 15 m depth, stn 948, 28.iv.1988, coll. B. Richer de Forges; 1 ♂ (13.0 mm cl), 1 ♀ ovigerous (12.8 mm cl), 1 ♀ (11.0 mm cl), MNHN, Lagon Nord-Ouest, 20°10.4'S 163°58.1'E, 15 m depth, stn 1004, 2.v.1988, coll. B. Richer de Forges; 1 ♂ (18.0 mm cl), MNHN, Lagon Nord-Ouest, 20°07.8'S 163°55.4'E, 18 m depth, stn 1013, 3.iv.1988, coll. B. Richer de Forges; 1 ♂ (16.5 mm cl), MNHN, Lagon Nord-Ouest, 20°06.6'S 163°53.1'E, 21 m depth, stn 1018, 3.iv.1988, coll. B. Richer de Forges; 1 ♂ (11.6 mm cl), MNHN, Lagon Nord-Ouest, 20°14.9'S 163°53.0'E, 300-320 m depth, stn 1062, 5.v.1988, coll. B. Richer de Forges; 1 ♂ (10.3 mm cl), 1 ♀ (17.1 mm cl), MNHN, Lagon Nord, 19°57.3'S 163°52.8'E, 26 m depth, stn 1068, 23.x.1989, coll. B. Richer de Forges; 1 ♂ (18.5 mm cl), MNHN, Lagon Nord, 19°51'S 163°45.5'E, 35 m depth, stn 1084, 24.x.1989, coll. B. Richer de Forges; 1 ♂ (17.3 mm cl), MNHN, Lagon Nord, 19°47.7'S 163°51.2'E, 37 m depth, stn 1090, 24.x.1989, coll. B. Richer de Forges; 1 ♂ (13.4 mm cl), MNHN, Lagon Nord, 19°31.3'S 163°34.6'E, 40 m depth, stn 1134, 26.x.1989, coll. B. Richer de Forges; 1 ♂ (15.9 mm cl), MNHN, Lagon Nord, 19°28.2'S 163°40.4'E, 50 m depth, stn 1136, 26.x.1989, coll. B. Richer de Forges; 1 ♂ (15.7 mm cl), MNHN, 19°26.5'S 163°46.5'E, Lagon Nord, 42 m depth, stn 1138, 26.x.1989, coll. B. Richer de Forges; 1 ♀ (15.9 mm cl), (MNHN, Lagon Nord, 19°50.4'S 163°38.4'E, 30 m depth, stn 1216, 3.xi.1989, coll. B. Richer de Forges.— **Chesterfield–Bellona Plateau**: 3 ♂ (13.7-15.7 mm cl), 1 ♀ (13.4 mm cl), MNHN B21035, 20°34.80'S 158°47.30'E, 67 m depth, CHALCAL I stn 41, 23.vii.1984.— **Chesterfield Islands**: 1 juvenile, MHNH, 20°36.14'S 161°01'E, 86 m depth, CORAIL 2 stn 21, 22.vii.1988, coll. B. Richer de Forges; 1 ♀ ovigerous (10.8 mm cl), MHNH, 19°21.52'S 158°31'E, 52 m depth, CORAIL 2 stn 41, 23.vii.1988, coll. B. Richer de Forges; 1 ♂ (14.1 mm cl), MHNH, 19°21.49'S 158°25'E, 52 m depth, CORAIL 2 stn 43, 23.vii.1988, coll. B. Richer de Forges; 1 ♂ (12.5 mm cl), MHNH, 19°18.50'S 158°36.55'E, 69 m depth, CORAIL 2 stn 51, 24.viii.1988, coll. B. Richer de Forges; 1 juvenile, MHNH, 19°15.30'S 158°20'E, 32 m depth, CORAIL 2 stn 72, 25.viii.1988, coll. B. Richer de Forges; 1 juvenile, MHNH, 19°11.55'S 158°43.40'E, 58 m depth, CORAIL 2 stn 79, 25.viii.1988, coll. B. Richer de Forges; 1 ♂ (13.9 mm cl), MHNH, 19°03.02'S 158°57'E, 48 m depth, CORAIL 2 stn 89, 26.viii.1988, coll. B. Richer de Forges; 2 ♂ (13.6, 12.2 mm cl), 2 juveniles, MHNH, 19°24'S 158°21.59'E, 56 m depth, CORAIL 2 stn 120, 29.viii.1988, coll. B. Richer de Forges; 1 ♀ (10.9 mm cl), MHNH, 19°28.05'S 158°24.39'E, 54 m depth, CORAIL 2 stn 125, 29.viii.1988, coll. B. Richer de Forges; 1 ♀ (12.7 mm cl), MHNH, 19°57.00'S 158°28.00'E, 19 m depth, CORAIL 2 stn 149, 1.ix.1988, coll. B. Richer de Forges.— **Australia**: 3 ♂ (15.3-15.8 mm cl), 1 ♀ ovigerous (17.1 mm cl), QM W24551, 19°28.5'S, 118°55.3'E, North West Shelf, 40 m depth, 26.iv.1983; 1 ♂ (17.6 mm cl), WAM c7730, N Dampier Archipelago, 57 m depth, 2.vi.1960; 1 ♀ (15.0 mm cl), 1 ♀ ovigerous (17.0 mm cl), WAM c7729, N Dampier Archipelago, 57 m depth, 2.vi.1960; 1 ♂, WAM c8687, Bonaparte Archipelago, Troughton Island, 58.5 m depth, 23.x.1962, coll. R.W. George.— **Philippines**: 1 ♂ (13.5 mm cl), ZMUC, Sulu Archipelago, Jolo Island, 40 m depth, 17.iii.1914, coll. Th. Mortensen.— **Indonesia**: 1 ♀ (10.1 mm cl), 3 juveniles, ZMUC, Banda Sea, Kombis, 75-100 m depth, 3.vi.1922, coll. Th. Mortensen; 1 ♂ (14.6 mm cl), ZMUC, Amboina Bay, Amboina Island, 13-18 m depth, 28.ii.1922, coll. Th. Mortensen; 1 ♂ (25.8 mm cl), 3 ♀ (22.6-27.4 mm cl), 2 ovigerous ♀ (27.8, 28.4 mm cl), NHM 1884.31, Celebes Sea, 6°54'N 122°18'E, 18-36.5 m depth, 'Challenger' stn 212, det. E.J. Miers; 1 ♀ (25.2 mm cl), ZMUC, ex. British Museum, 18 m depth, 'Challenger', 26.viii.1891; 1 ♀ (13.5 mm cl), ZMUC, Sunda Strait, 5°40'S 106°21'E, 35 m depth, 28.vii.1922, coll. Th. Mortensen; 1 ♀ (12.5 mm cl), ZMUC, 5°51'S 106°22'E, 35 m depth, 26.vii.1922, coll. Th. Mortensen; 1 ♀ ovigerous (18.9 mm cl), ZMA 242066, Samau Island, 'Siboga' stn 303, 36 m depth, 2-5.ii.1899.— **Thailand**: 1 ♀ ovigerous (15.4 mm cl), ZMUC, 9°11'N 98°06'E, 30 m depth, 5.iii.1966.— **Sri Lanka**: 3 ♂ (10.4-13.8 mm cl), 2 ♀ (15.3, 14.4 mm cl), 2 ovigerous ♀ (11.4, 15.9 mm cl), NHM 1907.5.22.40-43, Gulf of Manaar, coll. W.A. Herdman .— **Comoro Islands**: 1 ♀ (12.1 mm cl), MNHN B18593, Mayotte lagoon, 55 m depth, viii.1960, coll. A. Crosnier; 1 ♀ (11.7 mm cl), MNHN B18590, 46 m depth, v.iii1959, coll. A. Crosnier; 1 ♀ (12.0 mm cl), MNHN B18591, 20 m depth, ix.1959, coll. A. Crosnier.— **Madagascar**: 1 ♂ (12.5 mm cl), MNHN B19739, NW coast, Nosy Iranja, 25 m

depth, coll. R. Plante; 1 ♂ (11.0 mm cl), MNHN B18592, 13°17.5'S 48°07'E, 30-35 m depth, 24.viii.1967, coll. R. Plante.— **Seychelles**: 2 ♀ (9.7, 13.3 mm cl), 1 ♀ ovigerous (12.2 mm cl), MNHN B19011, 4°57.2'S 55°36.5'E, 40-55 m depth, REVES II stn 9, 7. ix.1980; 2 ♂ (12.1, 12.3 mm cl), MNHN B18986, 5°05.4'S 55°54.4'E, 58 m depth, REVES II stn 11, 7. ix.1980; 1 ♀ ovigerous (11.9 mm cl), MNHN B19002, 5°05.4'S 55°54.4'E, 58 m depth, REVES II stn 11, 7. ix.1980; 1 ♀ ovigerous (13.0 mm cl), 2 juveniles, MNHN B18993, 5°16.3'S 55°58.2'E, 60 m depth, REVES II stn 22, 6. ix.1980; 1 ♂ (11.6 mm cl), 1 ♀ (11.4 mm cl), 1 ♀ ovigerous (12.2 mm cl), 2 juveniles, MNHN B19007, 4°37.4'S 54°20.7'E, 50 m depth, REVES II stn 31, 9. ix.1980; 2 ♂ (8.8, 12.6 mm cl), MNHN B19010, 4°40.7'S 55°12.7'E, 65 m depth, REVES II stn 36, 10. ix.1980; 1 ♀ ovigerous (15.0 mm cl), MNHN B18978, 4°35.8'S 55°03.10'E, 55-62 m depth, REVES II stn 37, 10.ix.1980; 1 juvenile, MNHN B19000, 4°44.0'S 56°15.1'E, 50 m depth m, REVES II stn 41, 13.ix.1980.— **Red Sea**: 1 ♀ (14.8 mm cl), NNM ex TAU NS1201, Gulf of Aqaba, Elat, 55 m depth, 7.ix.1966.

Description.— Dorsal surface of carapace minutely granulate. Front produced, upcurved, closely granulate, anterior margin ogive. Hepatic region slightly raised; subhepatic margin curved. Posterior denticles subequal, petaloid, granulate basally. Young specimens bear 3 prominent granules on branchial margin, granulate tubercle on posterolateral margin, five granulate tubercles medially on carapace, one granulate tubercle medially on intestinal region.

External maxillipeds minutely granulate.

Cheliped merus in male nearly as long as carapace, in female ? as long as carapace, granulate; granules larger proximally. Carpus and propodus minutely granulate. Dactyl nearly 1.5 as long as upper margin of palm, minutely granulate.

Thoracic sternum in male minutely granulate. Distal margins of abdominal sulcus minutely beaded. Fused abdominal segments of male bearing crochet at distal margin. Male first pleopod with small basal angle, apical process squat, bearing horizontal tendril distally.

Colour.— Carapace white, with two horizontal purplish undulating bands; frontal region bright orange; mesogastric region purple; purple band diagonally across hepatic region. Chelipeds with two reddish bands on merus, another band distally on palm. Pereiopodal meri with purple band distally. Young specimens bear similar markings in subdued colours.

Distribution.— From Fiji, New Caledonia, Australia, to Madagascar, Seychelles, Gulf of Aden, and the Red Sea; 15-320 m depth.

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