Crustacea Decapoda: Species of the genera *Agononida* Baba & de Saint Laurent, 1996 and *Munida* Leach, 1820 (Galatheidae) from the KARUBAR Cruise

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ABSTRACT

Twenty six species of galatheid crustaceans belonging to the genera *Agononida* Baba & de Saint Laurent, 1995 and *Munida* Leach, 1820, were caught off the Molucca archipelago, during the KARUBAR Cruise (October-November, 1991). Three species are described as new: *A. emphereia, M. compacta* and *M. punctata.*

RÉSUMÉ

Crustacea Decapoda : Espèces des genres *Agononida* Baba & de Saint Laurent, 1995 et *Munida* Leach, 1820 (Galatheidae) récoltées lors de la campagne KARUBAR.

Les espèces des genres *Agononida* Baba & de Saint Laurent, 1995, et *Munida* Leach, 1820, récoltées dans l'archipel des Moluques sont au nombre de 26. Trois espèces (*A. emphereia, M. compacta* et *M. punctata*) sont nouvelles. *A. emphereia*, proche de *A. soelae* (Baba, 1986) et de *A. incerta* (Henderson, 1888) se différencie facilement par l'armature de la carapace. *M. compacta* est proche de *M. rhodonia* Macpherson, 1994, mais se différencie par la forme et l'armature des chélipèdes. *M. punctata* se distingue de *M. rubrodigitalis* Baba, 1994, par la forme du rostre.

INTRODUCTION

The genera *Agononida* Baba & de Saint Laurent, 1995 and *Munida* Leach, 1820 are represented in Indonesian waters by more than 15 species (BABA, 1988; BABA & de SAINT LAURENT, 1995; MACPHERSON, 1993, 1994; MACPHERSON & BABA, 1993). During a recent cruise (KARUBAR) carried out in October-November

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1991 to the Molucca Archipelago (Kai and Tanimbar islands) (see CROSNIER et all., 1997), numerous representatives of these genera were collected. The aim of this paper is to study this interesting collection.

The types of the new species and other material have been deposited in the collections of the Muséum national d'Histoire naturelle, Paris (MNHN), the Puslitbang Oseanologi-LIPI, Jakarta (POLIPI) and the National Museum of Natural History, Washington. When no information on the depository is provided, the material is held by the MNHN, Paris. Measurements given are of carapace length excluding rostrum, and the terminology used mainly follows previous papers (MACPHERSON & de SAINT LAURENT, 1991). In order to avoid repetitious descriptions, only distinctive characters have been included in the text.

LIST OF STATIONS

The abbreviations of the gears used are: DW = Waren dredge, CP = Beam trawl, CC = Otter trawl.

Station DW 1. — 22.10.1991, 05°46'S, 132°10'E, 156-305 m: *M. agave, M. caesura, Munida* sp.
Station DW 2. — 22.10.1991, 05°47'S, 132°13'E, 209-240 m: *M. leptitis, M. philippinensis, Munida* sp.
Station CP 5. — 22.10.1991, 05°49'S, 132°18'E, 296-299 m: *A. incerta, A. squamosa, M. caesura, M. leptitis, Munida* sp.
Station CP 6. — 22.10.1991, 05°49'S, 132°21'E, 287-298 m: *A. incerta, M. agave, M. striola, Munida* sp.
Station CP 9. — 23.10.1991, 05°23'S, 132°29'E, 368-389 m: *A. incerta, M. compacta, M. punctata, M. striola.*
Station CC 10. — 23.10.1991, 05°21'S, 132°30'E, 329-389 m: *A. incerta, A. similis, M. compacta.*
Station CP 12. — 23.10.1991, 05°23'S, 132°37'E, 413-436 m: *A. incerta, A. similis, M. compacta.*
Station DW 13. — 24.10.1991, 05°26'S, 132°38'E, 417-425 m: *M. compacta.*
Station DW 14. — 24.10.1991, 05°18'S, 132°38'E, 245-246 m: *M. caesura, M. leptitis.*
Station CP 15. — 24.10.1991, 05°17'S, 132°41'E, 212-221 m: *M. agave.*
Station CP 16. — 24.10.1991, 05°17'S, 132°50'E, 315-349 m: *A. incerta, M. caesura, M. striola.*
Station CP 17. — 24.10.1991, 05°15'S, 133°01'E, 439-459 m: *M. compressa.*
Station DW 18. — 24.10.1991, 05°18'S, 133°01'E, 205-212 m: *M. agave, M. caesura, M. hyalina, M. rufiantennulata.*
Station CP 19. — 25.10.1991, 05°15'S, 133°01'E, 576-605 m: *A. soelae, M. compacta.*
Station CP 20. — 25.10.1991, 05°15'S, 132°59'E, 769-809 m: *M. curvirostris, M. microps.*
Station CC 21. — 25.10.1991, 05°14'S, 133°00'E, 688-694 m: *A. emphereia, M. compacta, M. curvirostris.*
Station DW 22. — 25.10.1991, 05°22'S, 133°01'E, 85-124 m: *M. clinata, M. minuta.*
Station CP 25. — 26.10.1991, 05°30'S, 132°52'E, 336-346 m: *A. incerta, A. squamosa, M. caesura, M. leviantennata, M. punctata, M. rubrodigitalis.*
Station CP 26. — 26.10.1991, 05°34'S, 132°52'E, 265-302 m: *A. incerta.*
Station CP 27. — 26.10.1991, 05°33'S, 132°51'E, 304-314 m: *A. incerta, A. squamosa, M. caesura.*
Station DW 32. — 26.10.1991, 05°47'S, 132°51'E, 170-206 m: *M. japonica.*
Station CP 33. — 27.10.1991, 06°05'S, 132°38'E, 307-311 m: *A. incerta, M. striola.*
Station CP 35. — 27.10.1991, 06°08'S, 132°45'E, 390-502 m: *A. incerta, M. compacta, M. leviantennata, M. punctata.*
Station CP 36. — 27.10.1991, 06°05'S, 132°44'E, 210-268 m: *A. squamosa, M. caesura, M. striola.*
Station CP 39. — 28.10.1991, 07°47'S, 132°26'E, 466-477 m: *M. compacta.*
Station CC 40. — 28.10.1991, 07°46'S, 132°31'E, 443-468 m: *A. incerta, M. compacta.*
Station CC 41. — 28.10.1991, 07°45'S, 132°42'E, 393-401 m: *A. incerta, M. compacta.*
Station CC 42. — 28.10.1991, 07°53'S, 132°42'E, 350-354 m: *A. incerta, A. similis, M. caesura, M. compacta, M. striola.*
Station DW 44. — 29.10.1991, 07°52'S, 132°48'E, 291-295 m: *M. caesura.*
Station CP 45. — 29.10.1991, 07°54'S, 132°47'E, 302-305 m: *A. incerta., M. caesura.*
Station CP 46. — 29.10.1991, 08°01'S, 132°51'E, 271-273 m: *A. incerta, A. similis, M. caesura.*

Station CP 47. — 29.10.1991, 08°01'S, 132°55'E, 235-246 m: *A. incerta, A. similis, M. striola.*
Station DW 49. — 29.10.1991, 08°00'S, 132°59'E, 206-210 m: *M. japonica, M. leptitis, M. philippinensis.*
Station CC 56. — 31.10.1991, 08°16'S, 131°59'E, 549-552 m: *M. compacta.*
Station CC 57. — 31.10.1991, 08°19'S, 131°53'E, 603-620 m: *A. soelae, M. compacta.*
Station CC 58. — 31.10.1991, 08°19'S, 132°02'E, 457-461 m: *M. compacta.*
Station CP 59. — 31.10.1991, 08°20'S, 132°11'E, 399-405 m: *A. incerta, M. compacta.*
Station CP 62. — 01.11.1991, 09°01'S, 132°42'E, 246-253 m: *A. similis., M. compacta.*
Station CP 63. — 01.11.1991, 08°00'S, 132°58'E, 213-214 m: *A. similis, M. armata.*
Station CP 65. — 01.11.1991, 09°14'S, 132°27'E, 174-176 m: *M. armata, M. philippinensis.*
Station CP 66. — 01.11.1991, 09°01'S, 132°09'E, 211-217 m: *A. similis.*
Station CP 67. — 01.11.1991, 08°58'S, 132°06'E, 146-233 m: *A. similis, M. philippinensis, M. striola.*
Station CP 69. — 02.11.1991, 08°42'S, 131°53'E, 356-368 m: *A. incerta, M. compacta, M. leviantennata, M. striola.*
Station CP 70. — 02.11.1991, 08°41'S, 131°47'E, 410-413 m: *A. incerta, M. compacta.*
Station CP 71. — 02.11.1991, 08°38'S, 131°44'E, 477-480 m: *A. incerta, M. compacta.*
Station CP 72. — 02.11.1991, 08°36'S, 131°33'E, 676-699 m: *A. eminens.*
Station CP 75. — 03.11.1991, 08°46'S, 131°36'E, 451 m: *M. compacta.*
Station CP 76. — 03.11.1991, 08°50'S, 131°33'E, 400-401 m: *A. incerta, M. compacta.*
Station CP 77. — 03.11.1991, 08°57'S, 131°27'E, 346-352 m: *A. incerta, M. compacta, M. leviantennata.*
Station CP 78. — 03.11.1991, 09°06'S, 131°24'E, 284-295 m: *A. similis.*
Station CP 79. — 03.11.1991, 09°16'S, 131°22'E, 239-250 m: *A. similis, M. kuboi, M. striola.*
Station CP 82. — 04.11.1991, 09°32'S, 131°02'E, 215-219 m: *A. similis.*
Station CP 83. — 04.11.1991, 09°23'S, 131°00'E, 285-297 m: *A. incerta, A. similis, M. kuboi, M. philippinensis, M. striola.*
Station CP 84. — 04.11.1991, 09°23'S, 131°09'E, 246-275 m: *A. incerta, M. kuboi, M. philippinensis, M. striola.*
Station CP 85. — 04.11.1991, 09°22'S, 131°14'E, 240-245 m: *A. incerta, A. similis, M. rubrodigitalis, M. striola.*
Station CP 86. — 04.11.1991, 09°26'S, 131°13'E, 223-225 m: *A. similis.*
Station CP 87. — 05.11.1991, 08°47'S, 130°49'E, 1017-1024 m: *M. microps.*

SYSTEMATIC ACCOUNT

Genus *AGONONIDA* Baba & de Saint Laurent, 1995

Agononida emphereia sp. nov.

Fig. 1

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 21, 688-694 m: 1 ♂ 18,5 mm (MNHN-Ga 3947); 3 ♂ 18.2 to 21.4 mm; 1 ov. ♀ 20.5 mm (MNHN-Ga 3948).

TYPES. — The male of 18.5 mm from the Stn 21 (MNHN-Ga 3947) has been selected as holotype, the other specimens are paratypes.

ETYMOLOGY. — From the Greek, *emphereia*, likeness (considered here as a substantive in apposition), in reference to the similarity between the new species and other closely related species.

DESCRIPTION. — Carapace with numerous secondary striae and scales. One protogastric spine behind each epigastric spine (practically absent in one specimen). One small spine on hepatic region, usually on each side. Three or four spines in a row on each branchiocardiac boundary, anteriormost postcervical, larger than remainder.

Cardiac region with 1-2 spines (absent in one specimen). Posterior border of carapace unarmed. Anterolateral spine pronounced, situated at anterolateral angle of carapace. Branchial margins with 4 spines. Fourth to seventh thoracic sternites with numerous short arcuate striae. Second, third and fourth abdominal segments each with 4 spines on anterior transverse ridge; posterior ridge of fourth segment with strong median spine. Eye moderately large, maximum corneal diameter about 1/3 length of anterior border of carapace between bases of external orbital spines. Basal antennular segment (distal spines excluded) not exceeding eye, distolateral spine shorter than distomesial. Distomesial prolongation of first antennal segment well developed, reaching rostral tip; second segment with 2 strong distal spines, distomesial spine slightly overreaching third segment, 1-2 spines on mesial border; third segment unarmed. Flexor margin of merus of third maxilliped with median spine, extensor border with distal spine. Fingers of cheliped unarmed, fixed finger bifid distally. First walking leg about 3 times carapace length. Dactylus of walking legs about 2/3 propodus length, armed with small spine-like setae on median third of ventral border.

REMARKS. — The new species is closely related to *A. soelae* (Baba, 1986) from North-West Australia, New Caledonia and Indonesia and *A. incerta* (Henderson, 1888) (see below) in the general spination of the carapace. The three species have spines on the anterior and posterior ridges of the fourth abdominal. The new species differs from *A. soelae* in the following aspects:

— The carapace and sternal plastron are less rugose in *A. soelae* than in the new species.

— The distomesial prolongation of the first antennal segment is short in *A. soelae*, reaching the end of the second segment of the antennal peduncle; this prolongation is very long in the new species, clearly overreaching the antennal peduncle and reaching rostral tip.

— The posterior border of the carapace is unarmed in the new species, whereas *A. soelae* has 4-6 spines.

— The extensor border of the merus of the third maxilliped is armed with one distal spine in *A. emphereia*, unarmed in *A. soelae*.

The new species is distinguished from *A. incerta* by the following characters:

— Two protogastric spines in the new species, absent in *A. incerta*.

— One small hepatic spine, usually on each side, is present in *A. emphereia*, absent in *A. incerta*.

— The cardiac spines are always absent in *A. incerta*, whereas in *A. emphereia* they are usually present.

DISTRIBUTION. — Indonesia, between 688 and 694 m.

Agononida eminens (Baba, 1988)

Munida eminens Baba, 1988: 95, fig. 35; 1994: 11. — MACPHERSON, 1994: 456, fig. 72; 1995: 392.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 72, 676-699 m: 1 ♂ 15.8 mm.

DISTRIBUTION. —The species was described from specimens collected in the Philippines between 564 and 686 m (BABA, 1988). Since then the species has been cited in eastern Australia, New Caledonia, Loyalty Islands, Chesterfield Islands, Wallis and Futuna area and Indonesia, between 650 and 970 m (BABA, 1994; MACPHERSON, 1994; 1995). The present material has been collected from 676-699 m.

Agononida incerta (Henderson, 1888)

Munida incerta Henderson 1888: 130, pl. 13, fig. 4a. — BABA, 1988: 106; 1994: 12. — MACPHERSON, 1994: 478, fig. 74; 1995: 394.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 5, 296-299 m: 6 ♂ 17.4 to 27.0 mm; 12 ♀ 15.8 to 21.5 mm. — Stn 6, 287-298 m: 7 ♂ 14.5 to 31.0 mm; 3 ov. ♀ 21.6 to 25.4 mm; 16 ♀ 11.5 to 27.0 mm. — Stn 9, 368-389 m: 9 ♂ 11.8 to 20.0 mm; 8 ♀ 12.0 to 17.6 mm; 1 juv. 5.0 mm (POLIPI). — Stn 10, 329-389 m: 8 ♂ 13.3 to 30.7 mm; 5 ov. ♀ 21.3 to 23.8 mm; 3 ♀ 22.4 to 23.6 mm. — Stn 12, 413-436 m: 3 ♂ 12.4 to 29.3 mm; 3 ov. ♀

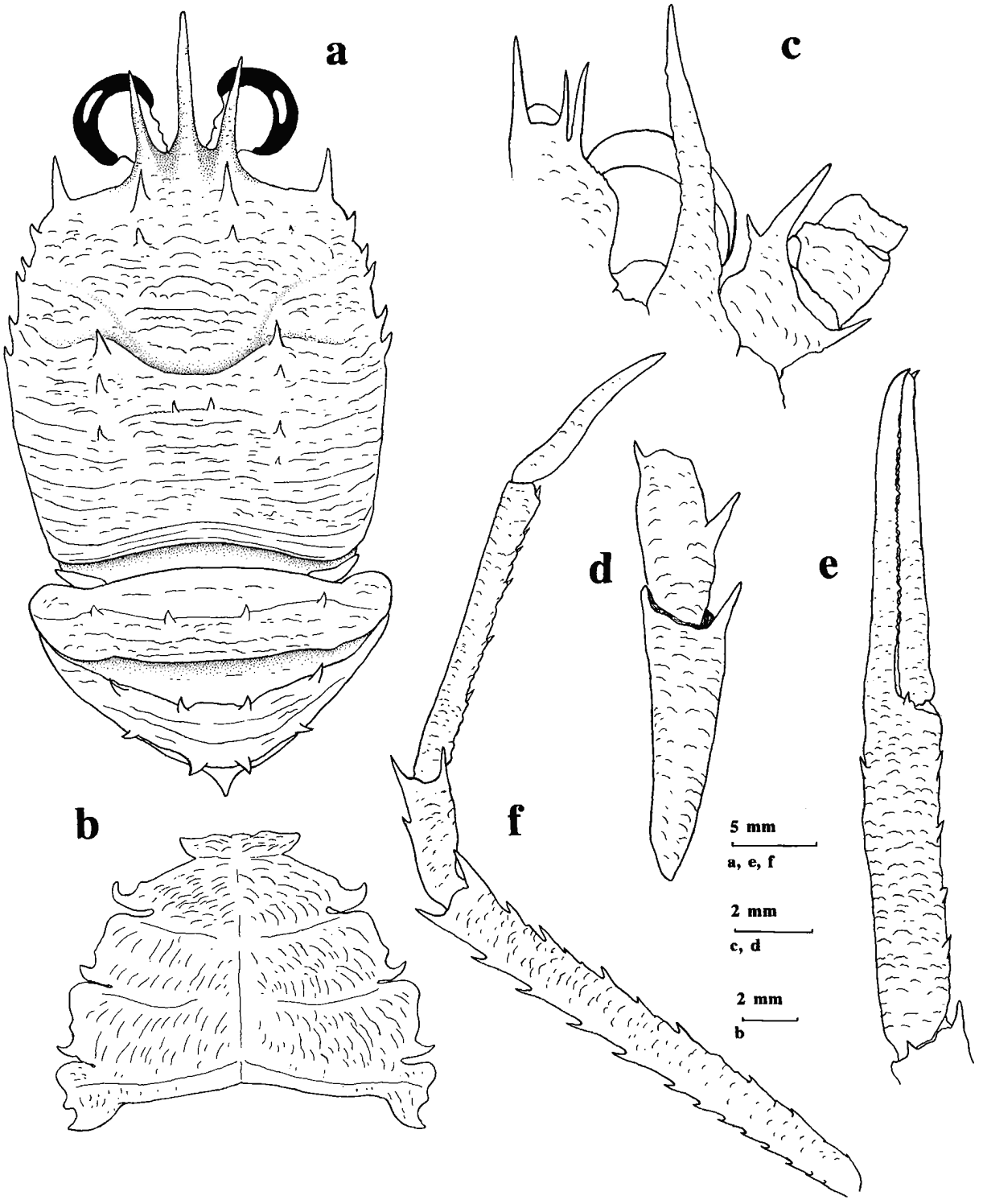

FIG. 1. — *Agononida emphereia* sp. nov., ♂ 18.5 mm, holotype from Stn 21: **a**, carapace and abdomen, dorsal view; **b**, sternal plastron; **c**, ventral view of cephalic region, showing antennular and antennal peduncles; **d**, right third maxilliped, proximal segments of endopod, lateral view; **e**, left chela, dorsal view; **f**, right first walking leg, lateral view.

20.0 to 24.0 mm; 4 ♀ 12.5 to 30.7 mm; 1 juv. 8.0 mm (POLIPI). — Stn 16, 315-349 m: 5 ♂ 17.6 to 24.6 mm; 2 ♀ 12.0 and 18.0 mm. — Stn 25, 336-346 m: 3 ♂ 11.8 to 27.0 mm; 5 ov. ♀ 11.0 to 23.0 mm; 1 juv. 5.6 mm. — Stn 26, 265-302 m: 1 juv. 5.3 mm. — Stn 27, 304-314 m: 1 ♂ 19.5 mm. — Stn 33, 307-311 m: 2 ♂ 14.8 and 15.0 mm; 1 ♀ 7.0 mm. — Stn 35, 390-502 m: 9 ♂ 11.5 to 27.0 mm; 3 ♀ 11.0 to 20.0 mm. — Stn 40, 443-468 m: 7 ♂ 18.3 to 35.8 mm; 3 ov. ♀ 25.2 to 36.8 mm; 12 ♀ 13.4 to 30.6 mm (POLIPI). — Stn 41, 393-401 m: 11 ♂ 13.8 to 40.4 mm; 4 ov. ♀ 21.3 to 30.5 mm; 5 ♀ 10.6 to 25.2 mm; 1 juv. 10.4 mm. — Stn 42, 350-354 m: 4 ♂ 15.0 to 20.6 mm; 2 ov. ♀ 24.1 and 24.4 mm; 2 ♀ 15.0 and 19.7 mm. — Stn 45, 302-305 m: 1 ♀ 9.5 mm. — Stn 46, 217-273 m: 2 ♂ 28.4 and 31.5. — Stn 47, 235-246 m: 3 ♂ 27.4 to 29.8 mm; 1 ov. ♀ 24.6 mm; 2 ♀ 17.5 to 26.4 mm. — Stn 59, 399-405 m: 6 ♂ 9.7 to 15.6 mm; 1 ov. ♀ 22.4 mm; 6 ♀ 14.7 to 15.0 mm (POLIPI). — Stn 69, 356-368 m: 2 ♂ 23.5 and 25.7 mm; 3 ov. ♀ 22.0 to 25.6 mm; 1 ♀ 16.8 mm. — Stn 70, 410-413 m: 3 ♂ 14.5 to 16.4 mm; 10 ♀ 15.0 to 18.4 mm (POLIPI). — Stn 71, 477-480 m: 3 ♀ 11.4 to 14.4 mm. — Stn 76, 400-401 m: 3 ♂ 9.7 to 18.5 mm; 4 ♀ 15.8 to 25.0 mm. — Stn 77, 346-358 m: 1 ♂ 23.0 mm; 1 ov. ♀ 25.8 mm (POLIPI). — Stn 83, 285-297 m: 1 ♂ 32.4 mm; 2 ov. ♀ 23.6 and 27.8 mm; 1 ♀ 16.3 mm. — Stn 84, 246-275 m: 2 ♂ 13.5 and 17.6 mm; 1 ♀ 6.8 mm. — Stn 85, 240-245 m: 8 ♂ 16.0 to 30.5 mm; 1 ♀ 25.0 mm.

DISTRIBUTION. — Known from east African coast, Japan, Philippines, Indonesia, eastern Australia, New Caledonia, Loyalty Islands, Chesterfield Islands, Wallis and Futuna, and Kiribati, between 17 and 720 m. The specimens examined were collected in 217-502 m.

Agononida similis (Baba, 1988)

Munida similis Baba, 1988: 129, figs 49-50.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 10, 329-389 m: 10 ♂ 16.0 to 23.6 mm; 2 ov. ♀ 20.0 and 20.7 mm; 6 ♀ 14.3 to 21.0 mm. — Stn 12, 413-436 m: 1 ♀ 12.6 mm. — Stn 42, 350-354 m: 1 ♂ 14.7 mm; 5 ♀ 11.6 to 13.3 mm. — Stn 46, 271-273 m: 1 ♀ 16.5 mm. — Stn 47, 235-246 m: 4 ♂ 14.0 to 21.0 mm; 3 ov. ♀ 19.0 to 22.4 mm; 7 ♀ 14.0 to 19.1 mm. — Stn 62, 246-253 m: 8 ♂ 11.8 to 22.0 mm; 1 ov. ♀ 19.1 mm; 6 ♀ 5.7 to 17.8 mm (POLIPI). — Stn 63, 214-215 m: 2 ♂ 18.0 and 19.1 mm; 1 ♀ 14.8 mm. — Stn 66, 211-217 m: 1 ♂ 13.6 mm; 2 ♀ 15.4 and 16.0 mm (POLIPI). — Stn 67, 146-233 m: 7 ♂ 7.8 to 20.4 mm; 5 ♀ 9.0 to 18.5 mm. — Stn 78, 284-295 m: 4 ♀ 5.6 to 8.4 mm. — Stn 79, 239-250 m: 9 ♂ 15.0 to 16.6 mm; 1 ov. ♀ 17.2 mm; 3 ♀ 8.0 to 17.5 mm (POLIPI). — Stn 82, 215-219 m: 1 ♂ 20.6 mm; 1 ov. ♀ 20.5 mm. — Stn 83, 285-297 m: 7 ♀ 5.6 to 8.0 mm. — Stn 84, 246-275 m : 2 ♀ 6.8 and 7.3 mm. — Stn 85, 240-245 m: 11 ♂ 12.5 to 22.0 mm; 4 ov. ♀ 17.7 to 18.0 mm; 5 ♀ 13.0 to 14.5 mm; 1 juv. 9.0 mm (POLIPI). — Stn 86, 223-225 m: 7 ♂ 15.4 to 21.7 mm; 4 ♀ 15.1 to 16.5 mm (POLIPI).

REMARKS. — *Agononida similis* is closely related to *A. squamosa* Henderson, 1885 (see below). Both species can be distinguishable by the shape of the rostrum and the mesiodistal spine of the first segment of the antennal peduncle (BABA, 1988). The specimens examined here always have the posterior border of the carapace without spines, whereas in all other specimens of *A. squamosa* examined two spines are present. Although BABA (1988) showed certain variations in the presence of these spines, the constancy here observed suggests that this character may have a specific value.

DISTRIBUTION. — Philippines and Indonesia in 263-494 m (BABA, 1988). The present material has been collected between 146 and 436 m.

Agononida soelae (Baba, 1986)

Munida soelae Baba, 1986: 2, fig. 3; 1988: 82 (key). — MACPHERSON, 1994: 530.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 19, 576-605 m: 1 ♂ 13.4 mm. — Stn 57, 603-620 m: 1 ♂ 19.0 mm.

DISTRIBUTION. — North-West Australia and New Caledonia, between 450 and 600 m (BABA, 1986; MACPHERSON, 1994). Indonesia, between 576 and 620 m.

Agononida squamosa (Henderson, 1885)

Munida squamosa Henderson, 1885: 409; 1888, 131, pl. 13, fig. 1. — MACPHERSON, 1993: 425, fig. 1 h-i; 1994: 537, fig. 96; 1995: 406. — BABA, 1994: 16.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 5, 296-299 m: 2 ♀ 11.6 and 12.0 mm; 1 ov. ♀ 16.2 mm; 1 ♀ 10.0 mm. — Stn 25, 336-346 m: 1 ov. ♀ 14.0 mm (USNM). — Stn 27, 304-314 m: 1 ♀ 13.5 mm; 1 ov. ♀ 14.7 mm; 1 ♀ 10.6 mm (POLIPI). — Stn 36, 210-268 m: 2 ♀ 7.7 and 9.4 mm.

DISTRIBUTION. — Japan, Indonesia, Admiralty Islands, northeastern Australia, New Caledonia, Loyalty Islands and Wallis Island, between 176 and 752 m (MACPHERSON, 1994, 1995). The material examined here was collected in 210-346 m.

Genus *MUNIDA* Leach, 1820

Munida agave Macpherson & Baba, 1993

Munida agave Macpherson & Baba, 1993: 387, figs 1-2.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 1, 156-305 m: 5 ♂ 4.0 to 8.0 mm; 5 ♀ 5.1 to 9.3 mm. — Stn 6, 289-298 m: 1 ♂ 10.7 mm. — Stn 15, 212-221 m: 2 ♀ 5.0 and 5.7 mm. — Stn 18, 212-221 m: 4 ♂ 5.0 to 6.3 mm; 2 ♀ 4.0 and 5.1 mm.

REMARKS. — The specimens examined are not well preserved and the antennular peduncles of many specimens are broken. Therefore, one of the important specific characters (the length of the distal spines) is often unknown. Most of the morphological characters agree quite well with the description of *M. agave*. However, the number of spines along the anterior border of the second abdominal segment is variable (0 to 6) and in one specimen the thoracic sternites are squamate (smooth in *M. agave*). As it was pointed out in the original description, probably more than one species are included in this complex. Therefore, in view of the difficulties in the correct identification, the present material is provisionally referred to *M. agave* until more specimens become available.

DISTRIBUTION. — Japan and Philippines in 89-197 m (MACPHERSON & BABA, 1993), Indonesia, between 156 and 305 m.

Munida armata Baba, 1988

Munida armata Baba, 1988: 86, fig. 31. — MACPHERSON, 1993: 427.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 63, 214-215 m: 5 ♂ 12.7 to 16.0 mm. — Stn 65, 174-176 m: 2 ♂ 16.0 and 16.2 mm; 2 ♀ 7.7 to 13.4 mm (POLIPI).

DISTRIBUTION. — Philippines in 182-216 m (BABA, 1988; MACPHERSON, 1993), Indonesia, between 174 and 215 m.

Munida caesura Macpherson & Baba, 1993

Munida caesura Macpherson & Baba, 1993: 388, fig. 3.

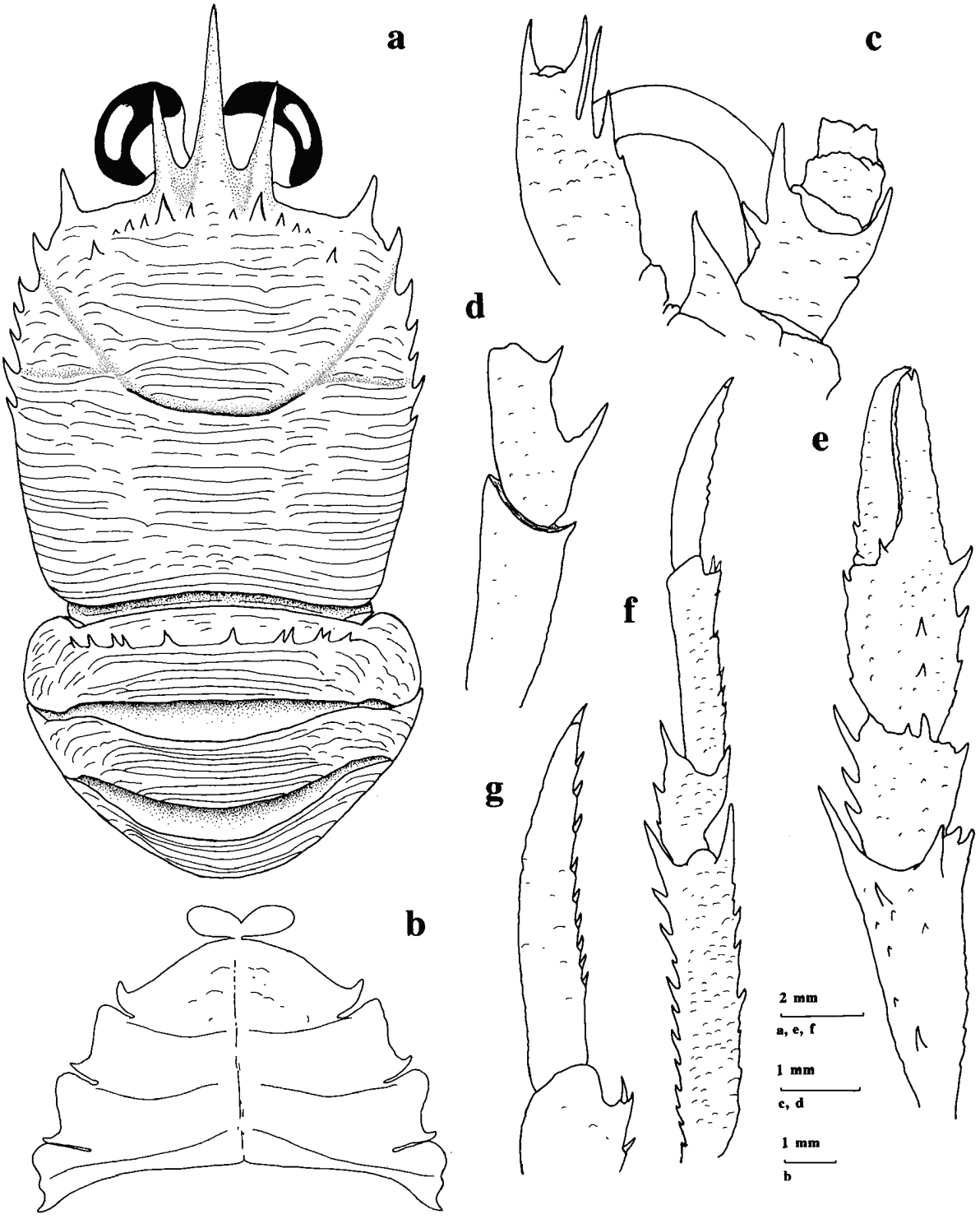

FIG. 2. — *Munida compacta* sp. nov. ov., ♀ 16.6 mm, holotype from Stn 69: **a**, carapace and abdomen, dorsal view; **b**, sternal plastron; **c**, ventral view of cephalic region, showing antennular and antennal peduncles; **d**, right third maxilliped, proximal segments of endopod, lateral view; **e**, right cheliped, dorsal view; **f**, right first walking leg, lateral view; **g**, dactylus of right first walking leg, lateral view.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 1, 156-305 m: 5 ♂ 4.7 to 8.6 mm; 6 ♀ 3.6 to 9.3 mm. — Stn 5, 296-299 m: 15 ♂ 7.6 mm to 17.5 mm; 20 ♀ 9.7 to 15.3 mm. — Stn 14, 245-246 m: 2 ♂ 9.0 and 12.4 mm; 3 ♀ 10.0 to 14.8 mm (USNM). — Stn 16, 315-349 m: 3 ♂ 9.0 to 10.5 mm (POLIPI). — Stn 18, 205-212 m: 10 ♂ 3.1 to 9.3 mm; 4 ♀ 4.0 to 8.5 mm. — Stn 25, 336-346 m: 1 ♂ 8.1 mm; 3 ♀ 9.0 to 14.4 mm. — Stn 27, 304-314 m: 2 ♂ 8.3 and 11.0 mm; 1 ♀ 12.5 mm. — Stn 36, 210-268 m: 1 ov. ♀ 15.2 mm; 2 ♀ 12.6 and 17.7 mm. — Stn 42, 170-206 m: 1 ♂ 10.8 mm. — Stn 44, 291-295 m: 3 ♀ 3.4 to 9.6 mm. — Stn 45, 302-305 m: 1 ♀ 9.3 mm. — Stn 46, 271-273 m: 4 ♂ 8.4 to 10.3 mm; 2 ov. ♀ 12.3 and 12.5 mm; 1 ♀ 8.9 mm (POLIPI).

DISTRIBUTION. — Japan, Philippines, Indonesia in 250-390m (MACPHERSON & BABA, 1993). The present material was collected in 156-346 m.

Munida clinata Macpherson, 1994

Munida clinata Macpherson, 1994: 457, fig. 11.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 22, 85-124 m: 4 ♂ 4.0 to 5.4 mm.

DISTRIBUTION. — *Munida clinata* was described from specimens collected in the Philippines, New Caledonia and Chesterfield Islands, between 28 and 245 m (MACPHERSON, 1994). The material from Indonesia was caught in 85-124 m.

Munida compacta sp. nov.

Fig. 2

Munida curvirostris Macpherson, 1993: 428 (in part).

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 9, 368-389 m: 23 ♂ 8.3 to 13.3 mm; 39 ♀ 10.1 to 17.4 mm (USNM). — Stn 10, 329-389 m: 17 ♂ 11.4 to 19.7 mm; 34 ♀ 9.0 to 17.3 mm. — Stn 12, 413-436 m: 6 ♂ 10.0 to 16.4 mm; 5 ♀ 11.8 to 17.5 mm (POLIPI). — Stn 13, 417-425 m: 1 ♂ 11.6 mm . — Stn 19, 576-605 m: 1 ♀ 6.2 mm. — Stn 21, 688-694 m: 6 ♂ 6.3 to 18.6 mm; 11 ♀ 5.7 to 16.5 mm. — Stn 35, 390-502 m: 7 ♂ 9.0 to 16.0 mm; 8 ♀ 12.7 to 19.0 mm. — Stn 39, 466-477 m: 9 ♂ 8.2 to 16.8 mm; 1 ov. ♀ 16.0 mm; 8 ♀ 7.4 to 15.4 mm. — Stn 40, 443-468 m: 12 ♂ 11.5 to 17.4 mm; 10 ♀ 12.2 to 21.0 mm (USNM). — Stn 41, 393-401 m: 6 ♂ 14.0 to 18.3 mm; 5 ♀ 9.0 to 18.1 mm. — Stn 42, 350-354 m: 6 ♂ 13.6 to 20.0 mm; 4 ov. ♀ 17.4 to 19.4 mm. — Stn 56, 549-552 m: 4 ♂ 12.7 to 15.0 mm; 1 ♀ 16.2 mm. — Stn 57, 603-620 m: 1 ♀ 8.7 mm. — Stn 58, 457-461 m: 1 ♂ 18.8 mm. — Stn 59, 399-405 m: 10 ♂ 8.8 to 19.4 mm; 2 ov. ♀ 16.6 and 17.5 mm; 13 ♀ 8.3 to 18.2 mm (POLIPI). — Stn 62, 246-253 m: 1 ♀ 12.0 mm. — Stn 69, 356-368 m: 13 ♂ 8.6 to 20.3 mm; 1 ov. ♀ 16.6 mm (MNHN-Ga 3949); 4 ov. ♀ 16.8 to 20.6 mm; 16 ♀ 8.7 to 22.8 mm. — Stn 70, 410-413 m: 1 ♂ 14.7 mm; 5 ♀ 9.8 to 18.4 mm. — Stn 71, 477, 480 m: 1 ♂ 9.7 mm; 6 ♀ 9.4 to 15.2 mm. — Stn 75, 451-452 m: 2 ♂ 14.0 and 15.3 mm; 3 ♀ 9.4 to 14.1 mm. — Stn 76, 400-401 m: 5 ♂ 10.0 to 15.0 mm; 3 ♀ 10.0 to 11.4 mm. — Stn 77, 346-352 m: 3 ♀ 18.3 to 19.0 mm (POLIPI).

TYPES. — The ovigerous female of 16.6 mm from Stn 69 (MNHN Ga 3949) has been selected as the holotype, the other specimens are paratypes.

ETYMOLOGY. — From the Latin, *compactus*, thick, in reference to the shape of the carapace.

DESCRIPTION. — Carapace with numerous secondary striae. Intestinal region with numerous scales. Anterolateral spine well developed, situated at anterolateral angle. Branchial margins with 5 well developed spines. Fourth thoracic sternite with a few short arcuate striae; fifth to seventh without striae. Abdominal segments with numerous transverse striae; second segment with 9-11 spines on anterior ridge. Eye large, maximum corneal diameter about 2/5 length of anterior border of carapace between bases of anterolateral spines of carapace. Basal segment of antennule (distal spines excluded) ending at same level of cornea, distal spines subequal. First segment of antennal peduncle with distomesial spine nearly reaching end of second segment; distomesial spine of second segment exceeding third segment, usually with accompanying small spine proximally. Extensor margin of merus of third maxilliped unarmed. Distomesial spine of cheliped merus well developed, reaching midpoint of carpus. Fixed finger with one distal spine; movable finger with basal spine. First walking leg

about twice carapace length; dactylus as long as propodus, with spine-like setae reaching distal part of ventral margin.

REMARKS. — *Munida compacta* is closely related to *M. curvirostris* Henderson, 1885 (see below). Both species have five spines on the lateral margins of the carapace behind the cervical groove, the front margins are transverse, the eyes are large, the abdominal segments have spines along the anterior ridge of the second tergite, the lateral portions of the posterior thoracic sternites have no granules, the distal spines on the basal antennular segment are subequal and the extensor margin of the merus of the third maxilliped is unarmed. However, the species are easily differentiable in several regards. The new species has numerous secondary striae and scales on the carapace and abdominal segments (more than 5 secondary striae on the second abdominal segment). These striae and scales are practically absent in *M. curvirostris* (less than 5 secondary striae on the second abdominal segment). Furthermore, in *M. compacta* the dactylus of the walking legs is as long as the propodus, whereas in *M. curvirostris* the dactylus is clearly shorter than the propodus.

The new species also resembles *Munida rhodonia* Macpherson, 1994, from New Caledonia, Loyalty and Chesterfield Islands (MACPHERSON, 1994).

However, they can be distinguished by several differences:

— The chelipeds are clearly different. They are more massive in *M. rhodonia* than in the new species and the spines on the dorsal side of the palm are very small in *M. rhodonia*, whereas they are well developed in the new species. Moreover, in the new species, the distomesial spine of the merus of the cheliped reaches or overreaches the midlength of the carpus; in *M. rhodonia*, this spine usually does not reach the midlength of this article.

— In *M. rhodonia* the dactylus of the first walking leg is clearly shorter than the propodus. In the new species the dactylus is as long as the propodus.

DISTRIBUTION. — Indonesia, between 246 and 694 m.

Munida compressa Baba, 1988

Munida compressa Baba, 1988: 91, figs 33-34. — MACPHERSON, 1993: 427.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 17, 439-459 m: 1 ♀ 14.4 mm.

DISTRIBUTION. — Japan, Southern China Sea, Philippines, Arafura and Molucca Seas in 180-668 m (BABA, 1988; MACPHERSON, 1994). The present specimen was collected between 439 and 459 m.

Munida curvirostris Henderson, 1885

Munida curvirostris Henderson, 1885: 412. — MACPHERSON, 1993: 428 (in part).

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 20, 769-809 m: 14 ♂ 7.2 to 15.6 mm; 5 ov. ♀ 13.5 to 18.7 mm; 20 ♀ 8.3 to 14.8 mm. — Stn 21, 688-694 m: 4 ♂ 5.6 to 18.3 mm; 2 ♀ 13.8 and 14.1 mm.

REMARKS. — A revision of *M. curvirostris* Henderson, 1885 is presently being prepared by BABA. Several samples from MUSORSTOM 1 (Station 50), MUSORSTOM 2 (Station 75) and CORINDON (Stations 209 and 276) cruises (see MACPHERSON, 1993) were incorrectly identified as *M. curvirostris*, belonging instead to *M. compacta* (see above).

DISTRIBUTION. — East coast of Africa, Arabian Sea, Maldives, Andaman Sea, Japan, Philippines, Indonesia, eastern Australia, between 141 and 1360 m (BABA, 1988; MACPHERSON, 1994). The present material was collected from 688-809 m.

Munida hyalina Macpherson, 1994

Munida hyalina Macpherson, 1994: 477, fig. 22.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 18, 205-212 m: 2 ♂ 3.6 and 4.1 mm.

REMARKS. — The specimens from Indonesia are similar to the type material. However, one specimen has 4 small spines on the branchial margins (3 spines in the types) and one transverse stria posterior to the median ridge on the second abdominal segment (absent in the types).

DISTRIBUTION. — New Caledonia and Chesterfield Islands, between 310 and 720 m (MACPHERSON, 1994) and Indonesia, between 205 and 212.

Munida japonica Stimpson, 1858

Munida japonica Stimpson, 1858: 252. — MACPHERSON & BABA, 1993: 399, fig. 9 (references and synonymy).

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 32, 170-206 m: 5 ♂ 3.2 to 9.5 mm; 1 ov. ♀ 9.6 mm; 3 ♀ 4.3 to 4.5 mm. — Stn 49, 206-209 m: 4 ♂ 4.3 to 14.2 mm; 1 ♀ 6.5 mm.

DISTRIBUTION. — *Munida japonica* has been previously cited in Japan and the Philippines in 102-220 m (MACPHERSON & BABA, 1993). The present material has been collected between 170 and 209 m.

Munida kuboi Yanagita, 1943

Munida kuboi Yanagita, 1943: 20, figs 5-6. — BABA, 1988: 109, fig. 40; 1990: 964. — MACPHERSON, 1993: 431.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 79, 239-250 m: 2 ♂ 11.0 and 11.8 mm; 1 ♀ 10.8 mm. — Stn 83, 285-297 m: 3 ♂ 10.6 to 14.0 mm; 6 ♀ 8.6 to 15.5 mm (POLIPI). — Stn 84, 246—250 m: 5 ♂ 10.1 to 13.2 mm; 1 ♀ 10.8 mm.

DISTRIBUTION. — South Africa, Madagascar, Japan, Philippines and Indonesia, between 78 and 405 m (BABA, 1988, 1990; MACPHERSON, 1994). The specimens examined here were collected between 239 and 297 m.

Munida leptitis Macpherson, 1994

Munida leptitis Macpherson, 1994: 487, fig. 27; 1995: 394, fig. 14.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 2, 209-240 m: 3 ♂ 4.8 to 5.3 mm; 2 ♀ 3.6 and 4.3 mm; 1 juv. 2.4 mm. — Stn 5, 296-299 m: 1 ♂ 4.0 mm. — Stn 14, 245-246 m: 3 ♂ 4.7 to 5.1 mm; 7 ♀ 4.0 to 5.1 mm. — Stn 49, 206-210 m: 4 ♂ 3.3 to 4.4 mm; 1 ov. ♀ 3.6 mm; 4 ♀ 3.0 to 4.0 mm.

REMARKS. — The specimens examined agree quite well with the type material. However, in some the movable finger of the chelipeds has some spines along the mesial border (only one basal spine in the types). Furthermore, the dactylus of the walking legs in the specimens from Stn 14 are unarmed on the terminal third of the ventral margin (armed with movable spines along the whole border in the types). These differences suggest the existence of several forms or species (see also MACPHERSON, 1995). *Munida leptitis* was described from only two specimens collected in New Caledonia and Loyalty Islands, therefore the discovery of additional topotypic specimens would be desirable in order to determine the variability of the species and to confirm the identity of the present material.

DISTRIBUTION. — New Caledonia and Loyalty Islands, between 21 and 440 m (MACPHERSON, 1994), Wallis and Futuna area (MACPHERSON, 1995). The specimens from Indonesia were collected between 206 and 299 m.

Munida leviantennata Baba, 1988

Munida leviantennata Baba, 1988: 111, figs 41, 42; 1994: 12, fig. 5. — MACPHERSON, 1994: 491; 1995: 395.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 25, 336-346 m: 1 ♂ 11.5 mm. — Stn 35, 390-502 m: 2 ♂ 16.3 and 16.7 mm; 1 ♀ 14.8 mm (POLIPI). — Stn 69, 356-368 m: 1 ♂ 7.7 mm. — Stn 77, 346-352 m: 1 ♂ 17.7 mm.

DISTRIBUTION. — Philippines, Indonesia, eastern Australia, New Caledonia, Chesterfield Islands and Wallis Island, between 300 and 660 m (BABA, 1988, 1994; MACPHERSON, 1994). The present material was obtained between 336 and 502 m.

Munida microps Alcock, 1894

Munida microps Alcock, 1894: 326. — BABA, 1988: 122; 1994: 13. — MACPHERSON, 1994: 496, fig. 32; 1995: 397.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 20, 769-809 m: 1 ♀ 15.0 mm. — Stn 87, 1017-1024 m: 1 ov. ♀ 13.7 mm.

DISTRIBUTION. — Previously known from Arabian Sea, Maldives Islands, Philippines, Indonesia, southeastern Australia, New Caledonia, Chesterfield Islands, Wallis and Futuna Islands, between 970 and 1240 m (MACPHERSON, 1994). The present material was collected between 686 and 1024 m.

Munida minuta Macpherson, 1993

Munida minuta Macpherson, 1993: 432, fig 3.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 22, 85-124 m: 2 ♂ 3.6 and 4.0 mm.

DISTRIBUTION. — Philippines in 92-97 m (MACPHERSON, 1993). The specimens from Indonesia were obtained in 85-124 m.

Munida philippinensis Macpherson & Baba, 1993

Munida philippinensis Macpherson & Baba, 1993: 410, fig. 16.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 2, 209-240 m: 1 ♂ 6.3 mm; 2 ♀ 4.0 and 5.3 mm. — Stn 49, 206-209 m: 1 ♂ 4.4 mm; 1 ov. ♀ 4.9 mm (USNM). — Stn 65, 174-176 m: 1 ♂ 5.0 mm. — Stn 67, 146-233 m: 2 ♂ 6.2 and 6.6 mm; 2 ov. ♀ 7.2 and 7.8 mm. — Stn 83, 285-297 m: 1 ov. ♀ 7.0 mm (POLIPI). — Stn 84, 246-275 m: 1 ♂ 6.6 mm (POLIPI).

DISTRIBUTION. — Philippines, in 170-220 m (MACPHERSON & BABA, 1993). Indonesia, between 146 and 297 m.

Munida punctata sp. nov.

Fig. 3

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 9, 368-389 m: 3 ♂ 8.2 to 11.0 mm; 2 ♀ 8.0 and 8.3 mm (MNHN-Ga 3952). — Stn 25, 336-346 m: 3 ♂ 8.6 to 10.5 mm (MNHN-Ga 3953). — Stn 35, 390-502 m: 1 ♂ 12.7 mm (MNHN-Ga 3950); 2 ♂ 10.5 to 12.4 mm; 2 ♀ 10.0 and 12.0 mm (MNHN-Ga 3951).

TYPES. — The male of 12.7 mm from Stn 35 (MNHN-Ga 3950) has been selected as holotype, the other specimens are paratypes.

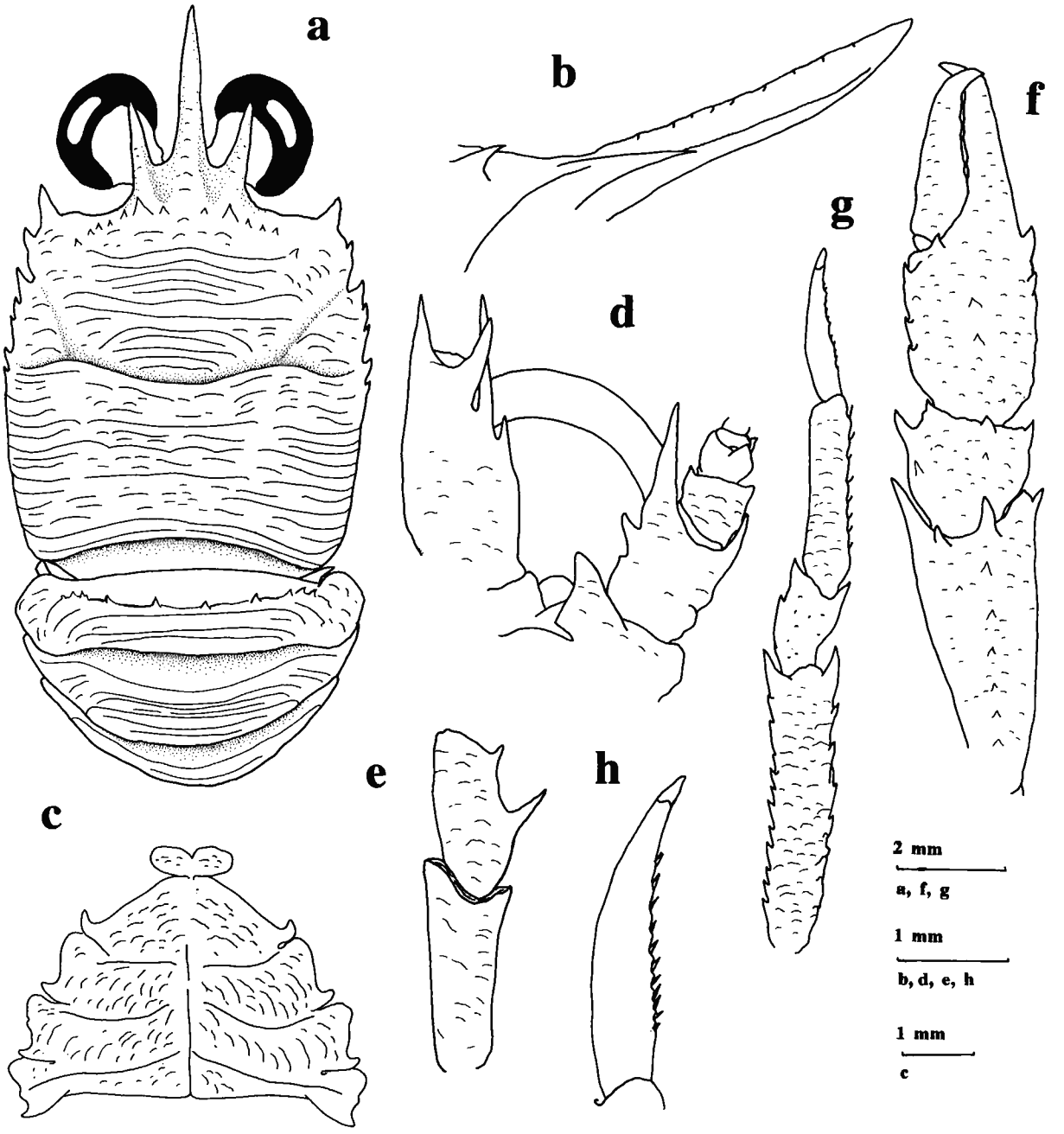

FIG. 3. — *Munida punctata* sp. nov., ♂ 12.7 mm, holotype from Stn 35: **a**, carapace and abdomen, dorsal view; **b**, rostrum, lateral view; **c**, sternal plastron; **d**, ventral view of cephalic region, showing antennular and antennal peduncles; **e**, right third maxilliped, proximal segments of endopod, lateral view; **f**, right cheliped, dorsal view; **g**, right first walking leg, lateral view; **h**, dactylus of right first walking leg, lateral view.

ETYMOLOGY. — From the Latin, *puncta*, point, puncture, in reference to the red point near the rostrum tip.

DESCRIPTION. — Carapace with numerous secondary striae. Intestinal region with some median scales. Rostrum spiniform, not laterally compressed. Anterolateral spine moderately short, situated at anterolateral angle,

not reaching level of sinus between rostrum and supraocular spine. Branchial margins with 5 small spines. Thoracic sternites with numerous short arcuate striae. Second abdominal segment with 8-9 spines along anterior transverse ridge. Second and third segments each with some transverse striae. Males with two gonopods on first and second abdominal segments. Eye large, maximum corneal diameter about 1/2 length of anterior border of carapace between bases of external orbital spines. Basal segment of antennule (distal spines excluded) ending at level of cornea, distal spines subequal. First segment of antennal peduncle with short distomesial spine, clearly not reaching end of second segment; distomesial spine of second segment long, barely exceeding antennal peduncle. Extensor margin of merus of third maxilliped unarmed. Distomesial spine of cheliped merus well developed, though not reaching midpoint of carpus. Movable finger of chelipeds with basal spine, fixed finger with terminal spine. First walking leg about twice carapace length. Dactyli of walking legs slightly shorter or as long as propodus, with spinules along entire ventral margin.

REMARKS. — The new species resembles *Munida rubrodigitalis* Baba, 1994, from northeastern Australia, New Caledonia, Loyalty Islands and Indonesia (BABA, 1994; MACPHERSON, 1994, see also below). Both species have five spines on the branchial margin, the second abdominal segment armed with spines along the anterior ridge, the distal spines on the basal antennular segment subequal, short chelipeds and a red, distal mark on the rostrum (specimens in preservative). However, they can be easily distinguished by the shape of the rostrum, which is laterally compressed in *M. rubrodigitalis*, whereas in the new species it is clearly spiniform.

DISTRIBUTION. — Indonesia, between 336 and 502 m.

Munida rubrodigitalis Baba, 1994

Munida rubrodigitalis Baba, 1994: 13, fig. 6.
Munida sp. — MACPHERSON, 1994: 558, figs 13b, 90.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 25, 336-346 m: 1 ♀ 9.0 mm (MNHN-Ga 3660). — Stn 83, 285-297 m: 1 ♂ 13.3 mm; 2 ♀ 11.6 and 12.5 mm.

DISTRIBUTION. — Eastern Australia, between 497 and 503 m (BABA, 1994), New Caledonia and Loyalty Islands in 466-650 m (MACPHERSON, 1994). Indonesia, between 285 and 346 m.

Munida rufiantennulata Baba, 1969

Munida rufiantennulata Baba, 1969: 23, fig. 7; 1988: 128; 1989: 131. — MACPHERSON, 1994: 523, figs. 46, 83.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 18, 205-212 m: 3 ♂ 4.3 to 9.4 mm; 7 ♀ 3.0 to 7.7 mm.

DISTRIBUTION. — Japan, Philippines, Indonesia, New Caledonia, Loyalty Islands, Mattew and Hunter Islands and Chesterfield Islands, between 379 and 610 m (BABA, 1969, 1988, 1989; MACPHERSON, 1994). The material examined here was collected in 205-212 m.

Munida striola Macpherson & Baba, 1993

Munida striola Macpherson & Baba, 1993: 416, fig. 20.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 6, 287-298, 1 ov. ♀ 10.3 mm. — Stn 9, 368-389 m: 1 ♂ 12.0 mm; 5 ♀ 10.8 and 11.5 mm. — Stn 16, 315-349 m: 1 ♀ 14.7 mm. — Stn 33, 307-311 m: 1 ♂ 10.3 mm. — Stn 36, 210-268 m: 1 ♀ 10.5 mm. — Stn 42, 350-354 m: 1 ♂ 15.5 mm. — Stn 47, 235-246 m: 1 ♂ 13.3 mm. — Stn 67, 146-233 m: 1 ♂ 8.0 mm. — Stn 69, 356-368 m: 5 ♂ 13.5 to 17.5 mm; 8 ov. ♀ 12.0 to 17.0 mm; 1 ♀ 15.0 mm. — Stn 79, 239-250 m: 8 ♂ 12.2 to 12.9 mm; 2 ov. ♀ 12.0 and 13.3 mm; 2 ♀ 12.0 and 13.4 mm. — Stn 83, 285-297 m: 8 ♂ 7.4 to

15.4 mm; 4 ov. ♀ 12.0 to 17.0 mm; 4 ♀ 7.7 to 13.6 mm. — Stn 84, 246-275 m: 5 ♂ 12.4 to 17.5 mm; 1 ov. ♀ 16.5 mm; 3 ♀ 12.1 to 14.0 mm. — Stn 85, 240-245 m: 2 ♂ 11.6 and 15.0 mm; 1 ov. ♀ 13.5 mm.

DISTRIBUTION. — *M. striola* has been cited in Japan, Philippines and Indonesia in 215-300 m (MACPHERSON & BABA, 1993). The material examined here was collected between 146 and 389 m.

Munida sp.

MATERIAL EXAMINED. — **Indonesia**. KARUBAR: stn 1, 156-305 m: 3 ov. ♀ 7.1 to 8.0 mm. — Stn 2, 209-240 m : 3 ♂ 8.5 to 10.7 mm. — Stn 5, 296-299 m: 7 ♂ 10.3 to 10.6 mm; 1 ov. ♀ 9.2 mm; 3 ♀ 8.3 to 8.5 mm. — Stn 6, 289-298 m: 11 ♂ 10.5 to 12.0 mm; 4 ov. ♀ 8.3 to 10.3 mm; 3 ♀ 10.3 to 11.5 mm.

REMARKS. — This species is actually being studied by K. BABA (Kumamoto University, Japan) and probably it belongs to a new genus (K. BABA, personnal communication).

DISTRIBUTION. — Indonesia, between 156 and 305 m.

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