

FIG. 4. A, *Notopoides latus* Henderson, 1888, ♂, QM W11501; B, *Paromola japonica* Parisi, 1915, ♂, QM W10710. Scale divisions 1 mm.

branch of the supra-orbitals being slightly more pronounced.

Minor variation in spinulation is also apparent between our specimen and the type photograph by Parisi (1915, pl.3), however similar variation is also evident in other specimens collected from Sagami Bay, and whose identity is therefore fairly certain (cf. Sakai, 1976, pl.9; Guinot and Richer de Forges, 1981a, pl.8, fig. 4).

Our specimen is virtually identical (in carapace appearance) to the specimen from Sagami Bay (♂, 62 × 50 mm) pictured in Guinot and Richer de Forges, 1981a (pl.8, fig. 4) (determined by Sakai), the only discernible difference being that our specimen has slightly longer supraorbital spines. This could be explained by damage to the Japanese specimen, or variation of this character induced by differing sizes (our specimen can be considered sub-adult as the chelipeds have not taken on the enlarged swollen form of large males). The carapace is also covered in short hairs which extend around the bases of spines but not the tips, as described by Sakai (1976) for Japanese specimens.

Similar or greater variation is also evident if specimens recorded from other localities are considered i.e. specimens from the Loyalty Isles (Guinot and Richer de Forges, 1981a, pl.3, figs. 2

and 3 respectively); and from Hawaii (Edmonson, 1932, pl.1).

Our specimen agrees with that described as ? *Paromola japonica* by Guinot and Richer de Forges (1981a) from the Loyalty Isles in having the merus of p.5 relatively longer than figured and described for large specimens of *P. japonica*. It would seem probable that the lengths of the leg segments relative to carapace length varies with size. The meral segments of the legs also carry spines stronger than described for Japanese or Hawaiian specimens, as in the Loyalty Isles specimens. This character may also vary with size. Our specimen also agrees closely with other comments and description by Guinot and Richer de Forges (1981a) for their specimen from the Loyalty Isles e.g. dactylus and propodus of 5th leg same as Fig. 2G; 1st pleopod agrees well with Fig. 5C; basal antennal segment identical to Fig. 1D except that it is missing the distal outer spine. The 2nd pleopod is a little different from Fig. 5C1 however, which is a Madagascar specimen (see comments below).

The specimen from Madagascar mentioned by Guinot and Richer de Forges (1981a) as questionably belonging to this species could indeed be so, considering the amount of intraspecific variation. They suggest that the Madagascar specimen might

be *P. alcocki* (because of its geography), however this seems unlikely as Sakai (1976) gives the size range of this species as less than 60 mm. Sakai (1976) has figured a *P. alcocki* with enlarged chelae at 40 mm, whereas the Madagascar specimen still had not developed this secondary sex character at 90 mm. However in the light of the points raised, the confusion over the separation of *P. japonica* and *P. alcocki*, and the fact that our pleopod 2 differs a little from that figured by Guinot and Richer de Forges (1981a, fig. 5C1), we are not prepared to make any judgement.

Sakai (1976) considers *P. hawaiiensis* (Edmonson, 1932) to be a synonym of *P. japonica*. Our specimen, although much smaller than the individual described by Edmonson, agrees in general with his description, within the limits of the variation already discussed.

DISTRIBUTION

Japan, Hawaii, the Loyalty Isles and now Queensland, Australia.

Paromolopsis boasi Wood-Mason, 1891 (Fig. 1C)

Paromolopsis boasi Wood-Mason, 1891, p.268, fig. 5; Alcock, 1899a, p.11; 1899b, p.159; 1901, p.65, pl.5, fig. 23; Ihle, 1913, p.60, text-fig. 23B; Gordon, 1950, p.244, text-fig. 16C; Serène and Lohavanijaya, 1973, p. 29, figs 39-42, pl.3; Sakai, 1976, p.43, pl.15, fig. 2; Guinot and Richer de Forges, 1981a, p.540, text-figs 3B, 4L, pl.VI, figs 3, 3a.

MATERIAL EXAMINED

QM W10589, ♀ (39.4 mm), trawled 'Craigmin' survey, 23°15.3'S, 154°21.7'E, 549m, 4.x.1980, (Q.F.S.); QM W10590, 2 ♀ ovig. (37.2, 36.1 mm), trawled M.V. 'Iron Summer', 27°59.37'S, 154°00.12'E, 590m, 31.iii.1983, R. Morton (Q.F.S.); QM W10591, ♂ (36.0 mm), trawled M.V. 'Iron Summer', 27°15.33'S, 153°54.01'E, 535m, 31.iii.1983, R. Morton (Q.F.S.); QM W10592, ♂ (39.3 mm), trawled M.V. 'Iron Summer', 27°35.04'S, 153°57.32'E, 545 m, 31.iii.1983, R. Morton (Q.F.S.); QM W14911, ♂ (34.1 mm), trawled M.V. 'Iron Summer', 27°13.00'S, 153°52.53'E, 590 m, 9.v.1983, R. Morton (Q.F.S.); QM W14918, ♀ ovig. (35.1 mm), 27°12.83'S, 153°52.87'E, 555 m, 10.v.1983, R. Morton (Q.F.S.); QM W11225, ♂ (39.4 mm), trawled M.V. 'Southern Intruder', 23°21'S, 153°23'E, 410 m, 30.xi.1983, P. Davie; QM W11226, ♀ (33.0 mm), trawled M.V. 'Southern Intruder', 23°45'S, 153°07'E, 550m, 29.xi.1983, P. Davie; AM P26553, ♂ (17.2 mm), trawled F.R.V. 'Kapala', 29°52-55'S, 153°43-42'E, 275 fms, 23.viii.1977, N.S.W. State Fisheries; AM P21800, ♂ (34.0 mm), trawled F.R.V. 'Kapala', 29°20-26'S, 153°49-50'E, 250 fms, 12.x.1975, N.S.W. State

Fisheries; AM P21696, ♀ (33.7 mm), trawled F.R.V. 'Kapala', 29°41-32'S, 153°45-47'E, 222-226 fms, 10.x.1975, N.S.W. State Fisheries.

DISTRIBUTION

East India, Andaman Sea, Ceylon, Macassar Sea, Japan, Madagascar, and now within Australia from mid-eastern Queensland to northeast N.S.W.

Family RANINIDAE

Notopoides latus Henderson, 1888 (Fig. 4A)

Notopoides latus Henderson, 1888, pp. 29, 30, pl. 2, fig. 6; Gordon, 1963, pp. 53-4, fig. 13; 1966, p. 345-50, figs 2-4; Bruce and Serène, 1972, pp. 76-81, figs 1-3; Serène and Vadon, 1981, p. 121, pl. 1A; Goeke, 1985, pp. 221, 224, 227 (key), figs 9A-1.

MATERIAL EXAMINED

QM W11501, 1 ♂ (23.8 mm), trawled M.V. 'Southern Intruder', 22°00'S, 153°31'E, 270 m, 1.xi.83, M. Dredge (Q.F.S.).

DISTRIBUTION

Off Kenya and Tanganyika, east Africa; Little Kei Is, Indonesia; the Philippines; and now mid-eastern Queensland, Australia.

Ranilia tenuicellus sp. nov. (Figs 5a-g, 7B, 8d-f)

MATERIAL EXAMINED

HOLOTYPE: QM W10802, ♂ (19.2 cw., 23.8 cl.), trawled M.V. 'Iron Summer', 400 m, 26.0 n. miles off Pt. Danger, 15.xii.1982, G. Smith (Q.F.S.).

PARATYPES: QM W10803, ♂ (20.0 mm), ♀ (20.0 mm). Location data the same as holotype.

DESCRIPTION

Carapace resembles other species of the genus — strongly convex laterally, evenly convex longitudinally. Dorsal carapace surface anteriorly and antero-laterally finely but obviously granular; punctate and smooth posteriorly. Carapace otherwise with irregular-shaped scars or rugosities placed symmetrically either side of the median line. Carapace length 1.24 × breadth. Antero-lateral tooth strong, sharp, pointed forward and slightly outward.

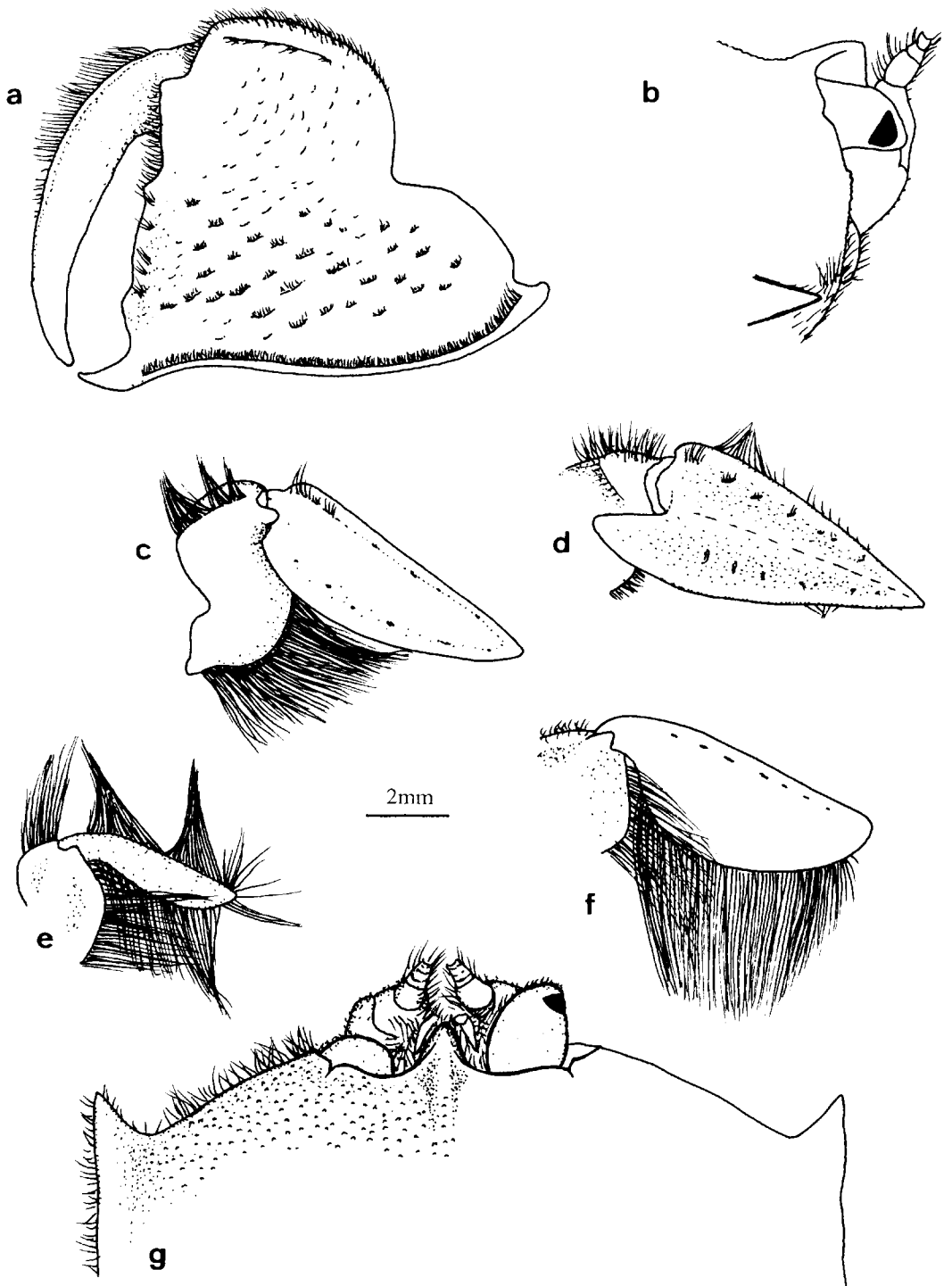


FIG. 5. *Ranilia tenuiocellus* sp. nov., Holotype ♂, QM W10802; a — left chela; b — anterior of carapace, lateral view; c-f — dactyli of first to fourth ambulatory legs; g — anterior of carapace, dorsal view.

Orbit without teeth, v-shaped fissure about level with middle of ocular peduncle, more or less lobed either side of this, raised tubercular ridge starting at level of tip of cornea and running obliquely downward. Rostrum sharply pointed, upturned; rostral carina and sulci project for short distances posteriorly. Rostrum with ventral septum separating ocular peduncles.

Eye peduncle flattened, ovate, folding obliquely downward and backward such that cornea is hidden from view. Cornea reduced, subterminal, triangular in outline. Anterior border of peduncle covered in minute granules and short tomentum. Antennules small, and concealed by the large basal segments of antennae. Third maxilliped slender with ischium smooth and bearing oblique row of longish hairs almost reaching internal edge, and a second row across the proximal internal corner; merus pitted with scattered bristles and short hairs arising from the pits, anterior border of ischium markedly concave.

Chelipeds large, deep, flattened, equal in size; carpus with small distal spine, anterior surface tuberculate, outer surface smooth, upper outer surface striated with short rows of small granules and bearing rows of short hairs; merus outer surface striated and with longish hairs; palm of chela compressed and deep; anterior edge with row of close set hairs, cutting margin sharp, with or without low teeth; fixed finger very short, smooth, and pointed; movable finger with dorsal row of hairs emerging from dorsal groove, curved and without differentiated teeth.

Legs fringed with long hairs; the second pair the longest, first and third subequal, the last the shortest and inserted dorsally. First pair with ischium bearing crest on ventral surface; leading edges of carpus and propodus sharp, and both bearing crests on upper anterior surfaces; dactylus blade-shaped with straight upper margin and convex lower margin. Segments of second pair with sharp leading edges but without additional anterior crests on upper surfaces; dactylus somewhat twisted at insertion and with low, smooth, central ridge on the outer face and strong, posterior distal lobe. Third pair stouter, with carapace and propodus having low anterior crests; merus with posterior border rounded proximally, straight in the distal two-thirds; carpus with strongly projecting distal lobe on posterior border; propodus broad; dactylus blade-shaped but truncated distally. Last pair with carpus deep, flattened, dactylus narrow and elongate.

Male pleopods as figured; first male pleopod

with distinctive calcified plates laterally, reminiscent of lepadid barnacles.

Colour after alcohol preservation pale biscuit.

REMARKS

R. tenuiocellus sp. nov. closely resembles *R. horikoshi* Takeda, and both species differ from all other members of the genus in having degenerated eyes. It is immediately distinguishable from *R. horikoshi* Takeda by the lack of orbital teeth. In this character it is different from all previously described species. *R. tenuiocellus* also differs from *R. horikoshi* Takeda in the following characters:

1. Carapace more finely granular anteriorly and anterolaterally, and posteriorly smooth and punctate rather than 'scaly'.

2. Cornea positioned more or less sub-terminally on ocular peduncle rather than terminally.

3. The shape of the first and second male pleopods differ noticeably from those figured by Takeda (1975, fig. 3a-d). In particular the tip of pleopod two in *R. tenuiocellus* has a more slender 'neck' and a much more pronounced, almost 'beaked' apex.

This species is closely allied to *R. horikoshi* Takeda, however we believe that the strong differences in dentition of the orbit warrants separate species rank.

ETYMOLOGY

The species name refers to the characteristic small corneas, and is derived from the latin *tenuis* meaning weak or feeble and *ocellus* meaning little eyes.

DISTRIBUTION

Off Pt Danger, southeast Queensland.

Ranilia trirufomaculata sp. nov.

(Figs 6a-h, 7A, 8a-c)

Notopus ovalis: Tyndale-Biscoe and George, 1962, pp. 90-1 (not *N. ovalis* Henderson, 1888).

MATERIAL EXAMINED

HOLOTYPE: WAM 348-60, ♂ (20.4 mm), 7 miles W. of Cape Contour, Bernier Is., Honolulu dredge, 70 m, sand 16.v.1960, R.W. George on 'Davena'.

PARATYPES: WAM 347-60, ♂, ♀ (18.0, 17.2 mm), 8 miles W. of Wooded Is, Eastern Group, Abrolhos Is., Honolulu dredge, 150 m, coral sand and shell fragments, 12.v.1960, R.W. George on 'Davena'; QM W11403, ♀ (24.9 cw.), trawled M.V. 'Southern Intruder', 22°00'S, 153°31'E, 270 m, 1.xi.1983, M. Dredge (Q.F.S.).

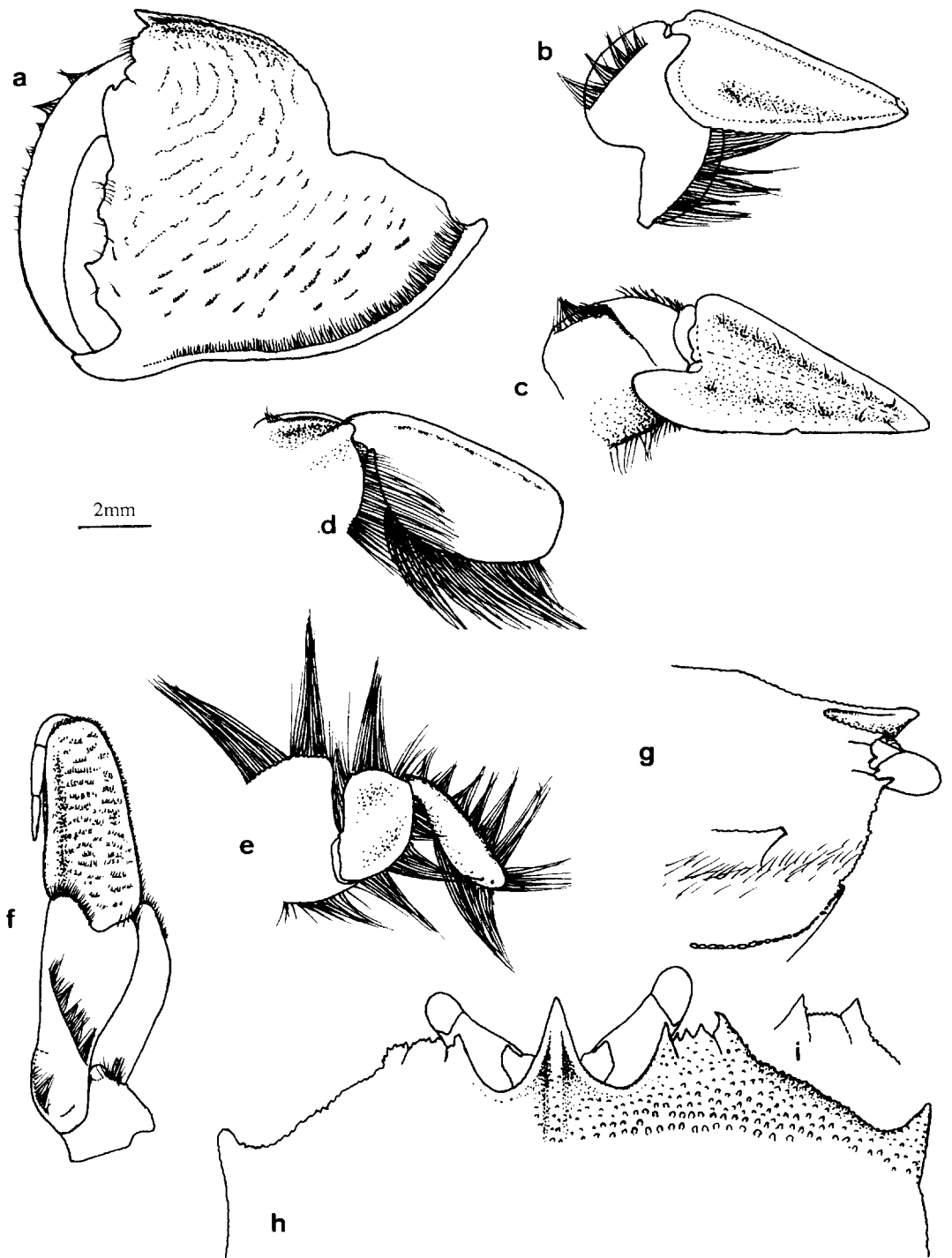


FIG. 6. *Ranilia trirufomaculata* sp. nov., Holotype ♂, WAM 348-60; a — left chela; b-e — dactyli of first to fourth ambulatory legs; f — third maxilliped; g — anterior of carapace, lateral view; h — dorsal view of same; i — more typical spination of supraorbital margin.

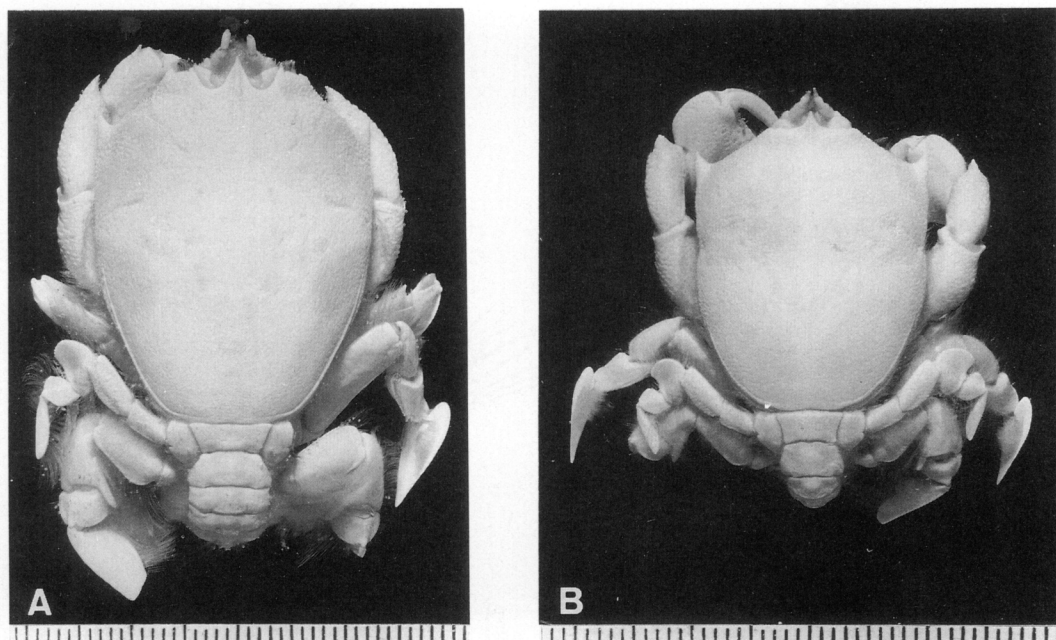


FIG. 7. A, *Ranilia trirufomaculata* sp. nov., Paratype ♀, QM W11403; B, *Ranilia tenuiocellus* sp. nov., Holotype ♂, QM W10802. Scale dimensions 1 mm.

DESCRIPTION

Carapace with dorsal surface finely but obviously tuberculate anteriorly and anterolaterally, becoming smooth and finely punctate posteriorly; irregular-shaped scars or rugosities placed symmetrically either side of the median line. Anterolateral teeth strong, sharp, pointed forward and slightly outward. Carapace length 1.27–1.29 × carapace breadth.

Orbit with short acute inner and outer teeth connected by a lower granular, sometimes spinous, square cut lobe. Rostrum sharply pointed, slightly upturned. Rostral carina and sulci project a short distance posteriorly. Rostrum with ventral septum separating ocular peduncles. Ratio of distance between external orbital angles and anterolateral teeth within the range 2.06–2.23.

Eye peduncle obliquely flattened although almost subparallel in dorsal view; folding obliquely downward and backward such that the cornea is hidden from view. Cornea well developed, terminal, and slightly less than half the length of the eyestalk. Peduncle covered in small granules and a short tomentum anteriorly.

Third maxillipeds of typical form, ischium slightly longer than merus, smooth with oblique row of longish hairs centrally and another short

row across the proximal internal corner. Merus pitted and finely haired, c. 2.17 × longer than broad.

Chelipeds large, deep, flattened, equal in size; merus with outer surface striated and with longish hairs centrally and down the leading edge bordering a smooth glabrous triangular area; carpus with smooth lower outer surface becoming striated along upper leading edge merging into sharp pointed granules dorsally, a sharp prominent spine present on upper distal margin. Palm of chela compressed and deep; prominent subdistal spine on upper margin; anterior edge with row of close set hairs; outer surface glabrous but indented with striations bearing small hairs; cutting margin sharp with low subacute teeth. Fixed finger very short, smooth and pointed; moveable finger curved with cutting margin sharp and without differentiated teeth, dorsal row of hairs emerging from dorsal groove.

Legs fringed with long hairs; the second pair the longest, first and third subequal, the last the shortest and inserted dorsally. First pair with ischium bearing crest in ventral view; leading edges of carpus and propodus sharp, and both bearing hairy crest on upper anterior surfaces; dactylus blade-shaped with straight upper margin and

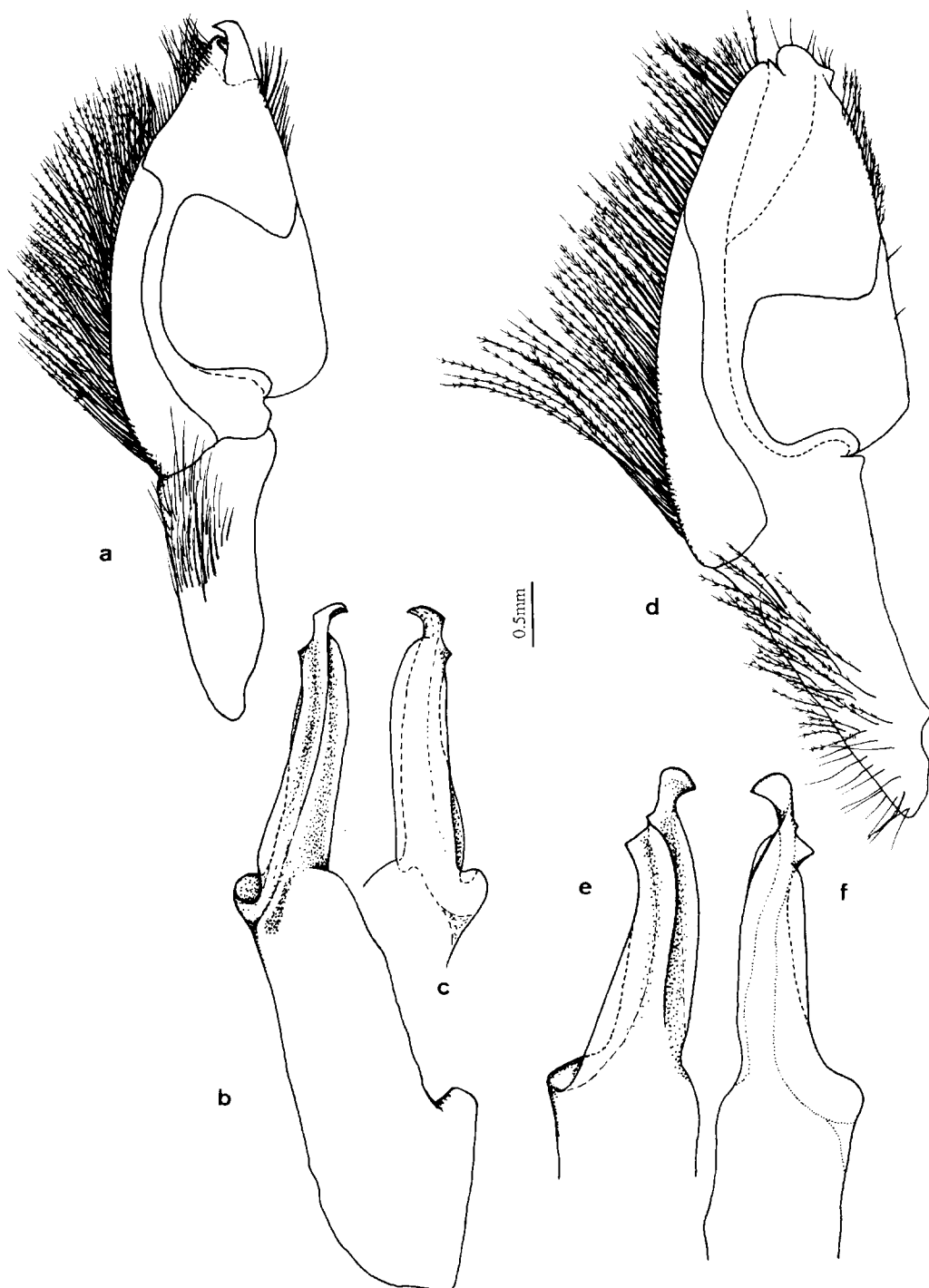


FIG. 8. *Ranilia trirufomaculata* sp. nov., Holotype ♂, WAM 348-60; a — first male pleopod; b — second male pleopod, inner view; c — outer view of same; *Ranilia tenuiocellus* sp. nov., Holotype ♂, QM W10802; d — first male pleopod; e — second male pleopod, outer view; f — inner view of same.

convex lower margin. Segments of second pair with sharp leading edges but without additional anterior crests on upper surfaces; dactylus twisted at insertion and bearing a low smooth central ridge on the outer face and a strong posterior distal lobe. Third pair stouter; merus, carpus and propodus with leading edges sharp; carpus with strongly projecting distal lobe on posterior border; propodus broad; dactylus with anterior border straight, posterior border convex, truncated distally. Last pair with carpus very deep and flattened; dactylus narrow and elongate.

Colour: pale biscuit (in alcohol) with two large rounded orange/red spots laterally and a much smaller spot anterior to these on the mid-line.

REMARKS

R. trirufomaculata is most closely related in form to *R. misakiensis* Sakai from Japan. It differs from that species in the following particulars (based on the type description and figures, and on figures presented by Serène and Umali, 1972):

1. The ratio of distance between the exorbital angles and the anterolateral angles varies from 2.06–2.23 whereas in *R. misakiensis* this is greater, being 2.56 for specimens examined by Serène and Umali (1972) and 2.43 for measurements taken from the figure of the type female.

2. The chelae have a sharp distal spine on the superior border of the palm, this is not described or apparent from available figures, and yet is strongly developed and obvious on our specimens.

3. In *R. misakiensis* the wrist is marked by a raised ridge, which is hairy along the inner upper border, no such ridge is present in any of the present specimens, the inner upper border being evenly rounded and without hairs.

4. The dactylus of the third walking leg seems to project more at the outer distal margin and the truncate terminal edge seems comparatively wider.

5. The ischium and merus of the fourth walking legs are comparatively stouter in *R. misakiensis*.

6. *R. misakiensis* does not have the distinctive red spots dorsally that are obvious on *R. trirufomaculata* even after 28 years in preservative.

7. Although the figures of the pleopod 1 given by Serène and Umali (1972) are very poor it is still apparent that the pleopod 1 of *R. trirufomaculata* is narrower distally, has a different apical configuration and also differs in the size and shape of the lateral calcified plates.

8. The merus of the third maxilliped of *R. misakiensis* appears to narrow distally much more markedly than in the present species (pl. 1, fig. 8 of Serène and Umali, 1972).

The female specimen from Queensland differs slightly from those from Western Australia in that the lateral red spots are situated a little more anteriorly, and the dactyl of the left 3rd walking leg is more sharply and obliquely truncate (that of the right leg is missing). In the absence of more material these differences do not seem enough to erect a separate species or even subspecies.

ETYMOLOGY

The species takes its name from the three large red spots on the dorsal surface of the carapace.

DISTRIBUTION

Only recorded from the vicinity of Abrolhos and Bernier Islands, Western Australia and from off southeastern Queensland. Depths range from 70–270 m.

KEY TO INDO-WEST PACIFIC SPECIES OF
RANILIA H. MILNE EDWARDS

The genus *Ranilia* now contains twelve species: six from the Atlantic and eastern Pacific — *R. muricata* H. Milne Edwards (type species), *R. constricta* (A. Milne Edwards) and *R. saldanhai* Rodrigues da Costa from the Atlantic Coast of the Americas, *R. angustata* Stimpson and *R. fornicata* (Faxon) from the Pacific coast of the Americas, *R. atlantica* Studer from the Atlantic Coast of Africa; and six from the Indo-west Pacific — *R. orientalis* Sakai, *R. misakiensis* Sakai and *R. ovalis* (Henderson) from Japan, *R. horikoshi* Takeda from the East China Sea, and *R. tenuiocellus* sp. nov. and *R. trirufomaculata* sp. nov. from Australia. The following key should serve to separate the Indo-west Pacific species.

1. Cornea of eye markedly reduced, and not visible when peduncle is retracted 2
- Cornea of eye of normal form 3
2. Supraorbital border with three conical teeth *R. horikoshii*
- Supraorbital border without teeth developed *R. tenuiocellus*
3. All four pairs of ambulatory legs hatchet-shaped *R. ovalis*
- Only first two pairs of ambulatory legs hatchet-shaped, third pair elongate, quadrangular in shape 4
4. Carapace broader, the breadth being more than 3/4 the total length. Fronto-orbital distance less than one half the breadth of carapace 5
- Carapace narrower, the breadth being less

- than 3/4 the total length. Fronto-orbital distance more than one half the breadth of carapace*R. orientalis*
5. Distance between antero-lateral angles 2.0–2.25 times the fronto-orbital distance; chelae with sharp distal spine on superior border of palm, and carpus without raised ridge on inner upper border; three red spots dorsally*R. trirufomaculata*
- Distance between anterolateral angles 2.4–2.6 times the fronto-orbital distance; chelae without spine on superior border of palm, and with raised ridge on inner upper border of carpus; carapace reddish-brown and without dorsal spots*R. misakiensis*

***Mursia microspina* sp. nov.**
(Figs 9a–g, 10)

MATERIAL EXAMINED

HOLOTYPE: QM W11437, 1 ♂ (cw. 27.9 mm, cb. excluding spines 26.7 mm, cl. 23.1 mm), trawled M.V. 'Iron Summer' 27°35'S, 153°50'E, 210 m, G. Smith (Q.F.S.), 15.xii.1982.

DESCRIPTION

Carapace broader than long (carapace width excluding spines 1.16 × carapace length); coarsely granulate over entire surface although more finely granulate on frontal and orbital regions; seven more or less distinct rows of tubercles radiating backwards from behind fronto-orbital region; front narrow (5.4 times in cl., 2.7 times in fronto-orbital width), three lobed, middle lobe projecting well beyond lateral lobes; anterolateral margins evenly convex, beaded with granules, and with 9–10 small lobes which are most prominent anteriorly becoming indistinct towards the lateral spine; lateral spine very short (c. 11 times in cl.), slender, curved upwards to horizontal in posterior view; posterolateral border noticeably shorter than anterolateral (0.84 times); posterior margin short (4.2 times in cl.), three lobed with laterals being pronounced while median is low and broad.

Inner suborbital lobe triangular with outer border much longer than inner border; separated from outer-orbital cup by a V-shaped sinus.

Merus of cheliped with three spines near distal outer margin, innermost low and rounded, outermost largest, prominent and sharply pointed (subequal or a little larger than lateral carapace spine). Outer face of wrist coarsely granulate, a row of three larger granular tubercles behind carpal/propodal joint, inner distal border pointed

triangular. Outer face of palm also coarsely granular, four or five slightly larger granules along lower border just prior to fixed finger, eleven low granular tubercles and one spine arranged in uneven oblique rows running from serrate crest backwards towards joint, the spine is situated towards proximal end of lower border and is much smaller than the adjacent meral spine. Upper border with high crest and cut into nine teeth, largest distally. Fixed finger deflexed. Inner face of palm smooth. Dactyl with row of 27 stridulatory tubercles.

Ambulatory legs and abdomen are missing.

First male pleopod stout, evenly tapering to a blunt tip; fine spinules distally. Second male pleopod long and slender, constricted from near the middle and markedly recurved distally.

No indication of live colouring or patterning persists on the alcohol preserved specimens.

REMARKS

M. microspina resembles *M. aspera* Alcock and *M. hawaiiensis* Rathbun and differs from all other species by having short lateral spines, and small inconspicuous teeth on the outer inferior border of the palm. It differs from *M. aspera* by: 1. having a broader front (c. 5 times in cl. compared with c. 8 times in cl.); 2. median lobe of front protruding markedly beyond laterals; 3. granules on carapace and chelae much finer; 4. the teeth on the inferior border are not subequal small and acuminate, the proximal one being spinous; 5. *M. aspera* is a large species being nearly three times larger than the present adult specimen.

It differs from *M. hawaiiensis* by:

1. The posterolateral border is more markedly shorter than the anterolateral border (0.84 × compared with 0.95 ×).

2. The length to breadth (excluding lateral spines) ratio differs, being 1.16 in *M. microspina* and c. 1.25 in *M. hawaiiensis* (measurements given by Rathbun (1893) and Sakai (1976) and derived from pl. 18, fig. 3 in Rathbun (1906)).

3. The tubercles of our new species are arranged in seven longitudinal rows as opposed to five and are not as distinctly separated from the surrounding granules (compared with the figure of Rathbun (1906) and her description of 1893).

4. The lateral frontal lobes are less protruberant.

5. The tubercles on the lower inferior border of the chela are small and well separated from each other with no indication of being 'elongated and crested, each rather continuous' as described by Sakai (1965a, p. 55), and appears to be the case from Rathbun's figure (1906, pl. 18, fig. 4).

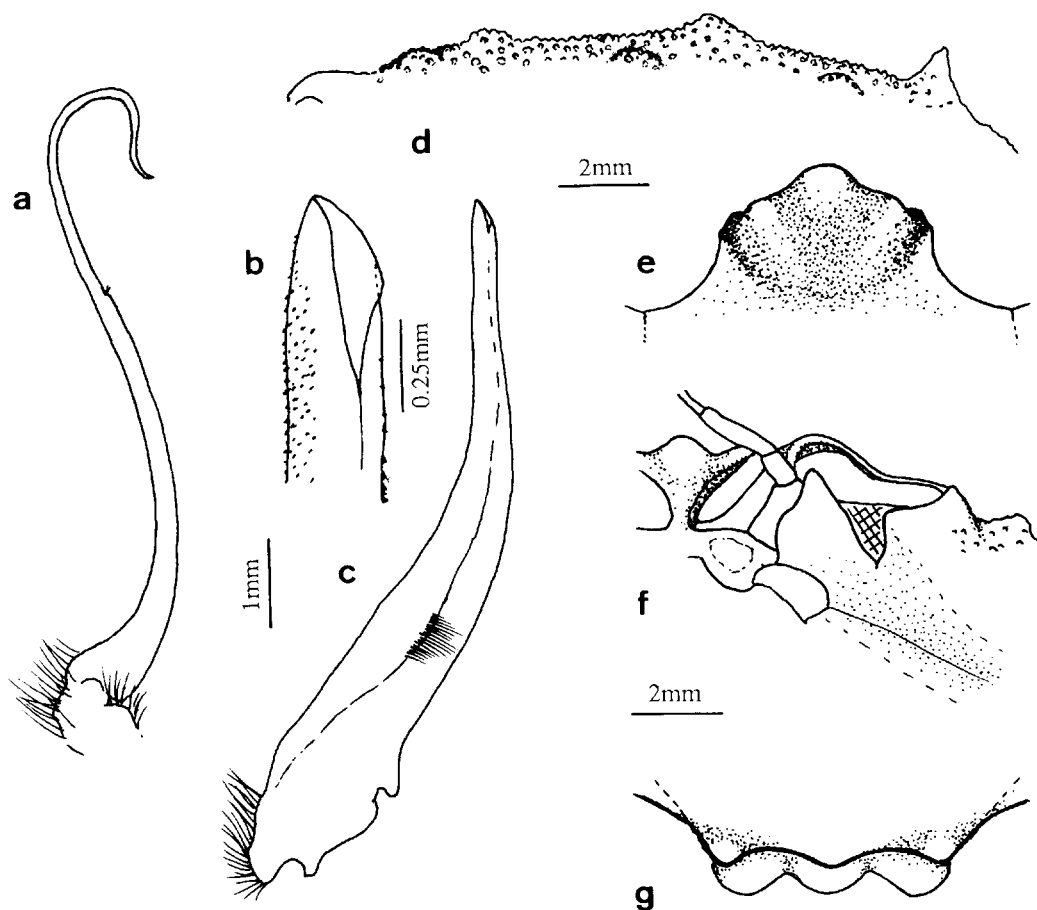


FIG. 9. *Mursia microspina* sp. nov., Holotype ♂, QM W11437; a — second male pleopod; b — view of the tip of first male pleopod; c — full view of same; d — outer-inferior portion of propodus of right cheliped; e — frontal view; f — ventral orbit; g — posterior carapace margin and first abdominal segment.

6. The tip of the second male pleopod is much less out-curved.

This species is very closely related to *M. hawaiiensis* but as only minor variation has been described within that species the divergences shown by the present specimen can be considered significant and justify its description as new.

ETYMOLOGY

The species derives its name from the relatively small lateral spines on the carapace.

DISTRIBUTION

Known only from the type locality, southeast Queensland, Australia.

Family LEUCOSIIDAE

Arcania undecimspinosa de Haan, 1841

Arcania undecimspinosa de Haan, 1841, p.135, pl.33, fig. 8; Alcock, 1896, p.266 (earlier literature); Sakai, 1937, p.124, figs 15b,16, pl.10, fig. 1; 1976, pp.90-1, pl.28, fig. 1; Holthuis and Sakai, 1970, p.119 (English), p.311 (Japanese), pl.11, fig. 2; Campbell, 1971, p.41.

Arcania granulosa Miers, 1877, p.240, pl.38, fig. 29.

MATERIAL EXAMINED

QM W10132, ♀ (23.0 mm), trawled 'Craigmin' survey, 22°56.1'S, 152°43.2'E, 360 m, 3.x.1980, Q.F.S.