

rather narrowly rounded. Telson with rather prominent posteromedian projection elevated above true posterior margin, sublateral pair of posterior spines longer than, but not appreciably overreaching, intermediate pairs. Stylocerite (Figure 12*f*) nearly reaching level of distal margin of basal segment of antennular peduncle. First pereopod (Figure 12*i*) with fingers longer than palm, carpus only slightly longer than palm, carpus only slightly longer than wide, deeply excavate for reception of chela. Third pereopod (Figure 12*k,l*) with dactyl less than 3 times as long as wide. Epipods on all but 5th pereopod. Eggs small, little more than 0.4 mm in major diameter. Maximum postorbital carapace length about 9 mm.

MATERIAL.—PHILIPPINES. Fish ponds across "Malabon" River at "Malabon," Luzon [14°12'N, 122°53'E], 12 Jul 1908: 1 ovig. female [5.4].—Vigo River near Port Tilic, Lubang Island [13°50'N], 15 Jul 1908: 1 ovig. female [6.5].—Calawagan River, 3 miles [4.8 km] from mouth, Mindoro [13°25'N, 120°28'E], 11 Dec 1908 (1500), 16' seine: 7 males [2.8–4.4] 5 females [2.8–6.8], 1 ovig. [6.8].—Malaga River, Hinunangan Bay, Leyte [10°24'N, 125°12'E], 30 Jul 1909: 3 males [4.5–5.0] 4 females [2.8–8.5], 3 ovig. [6.7–8.5].—Baganga River, Mindanao [7°35'N, 126°33'E], 13 May 1908 (1300): 2 males [2.8, 3.4], 2 ovig. females [4.8, 5.6].—Lake Ernestine, Cagayan Sulu Island [6°59'N, 118°31'E], 8 Jan 1909: 1 female [6.1].

RANGE.—Known previously only from the type locality.

REMARKS.—This species is probably a synonym of *C. typus* var. *longirostris* De Man, 1892:369, from Sulawesi (Celebes) and Selajar, Indonesia, and possibly, in turn, of *C. exilirostris* Stimpson, 1860:29, from the Ryukyu Islands, but the Philippine populations are so morphologically uniform that it seems best to call them by Blanco's name for the present.

41. *Caridina weberi* De Man, 1892

Caridina Weberi De Man, 1892:371, pl. 22: figs. 23–23g [type locality: Kotting, Flores, Indonesia].—Bouvier, 1925:242, figs. 562–571. *Caridina weberi* Edmondson, 1935b:8, figs. 3a–f, 4g,h.

DIAGNOSIS.—Rostrum not reaching as far as distal end of antennular peduncle, dorsal margin horizontal or slanting ventrad, armed with 7–20 teeth reaching nearly to apex, including 0–6 on carapace posterior to orbital margin, armed ventrally with 0–10 teeth. Suborbital angle indistinguishably fused with antennal spine; pterygostomian margin rounded. Stylocerite not reaching as far as distal margin of basal segment of antennular peduncle. First pereopod with carpus variably excavate for reception of chela. Eggs small, about 0.3 mm in major diameter. Maximum postorbital carapace length probably not exceeding 8 mm.

RANGE.—Indonesia and Polynesia as far east as the Marquesas Islands.

REMARKS.—Several varieties of this species (*celebensis* Schenkel, 1902; *keiensis* J. Roux, 1911; *papuana* Nobili, 1905a; *parvirostris* De Man, 1892; and *sumatrensis* De Man,

1892) are recognized by Bouvier (1925). They are characterized chiefly by the dentition and inclination of the rostrum, the form of the chela and carpus of the first pereopod, and the proportions of the distal segments of the fifth pereopod.

Edoneus Holthuis, 1978

Edoneus Holthuis, 1978b:219 [type species, by original designation: *Edoneus atheatus* Holthuis, 1978b:220; gender: masculine].

DIAGNOSIS.—Carapace without supraorbital or any other spines, pterygostomian margin broadly rounded. Telson with posterolateral angles not produced. Eyes unpigmented, degenerate. Pereopods without exopods, 2nd pair with carpus not noticeably excavate, fully 5 times as long as wide.

RANGE.—Known only from the Philippines; subterranean.

REMARKS.—Only one species is known.

42. *Edoneus atheatus* Holthuis, 1978

Edoneus atheatus Holthuis, 1978b:220, figs. 5, 6 [type locality: cave near Disilud, barrio Palasian, Aglipay municipality, Quirino province, N. Luzon, Philippines, 16°27'N, 121°38.5'E].—Balet and Holthuis, 1992:99.

DIAGNOSIS.—Characters of genus; maximum carapace length 5.5 mm.

RANGE.—Known only from the type locality, a cave in north central Luzon.

Paratya Miers, 1882

Paratya Miers, 1882:194 [type species, by monotypy: *Ephyra compressa* De Haan, 1844, pl. 46: fig. 7; gender: feminine]. *Xiphocaridina* Bouvier, 1909:1729 [type species, selected by Holthuis, 1955:21: *Ephyra compressa* De Haan, 1844, pl. 46: fig. 7; gender: feminine]. *Xiphatyoida* J. Roux, 1915:225 [type species, selected by J. Roux, 1926:196: *Paratya* (*Xiphatyoida*) *typa* J. Roux, 1926:196; gender: feminine].

DIAGNOSIS.—Carapace with supraorbital spine, pterygostomian margin rounded. Telson with posterolateral angles not produced. Eyes pigmented, not degenerate. All pereopods with exopods, 2nd pair with carpus not deeply excavate, distinctly longer than wide.

RANGE.—As noted by Holthuis (1970:103) and Carpenter (1977:42), the dozen or so species of *Paratya* occur in an arc extending from eastern Siberia, Korea, and Japan to Vietnam and the Lesser Sunda Islands to Australia, Lord Howe and Norfolk islands, New Zealand, and Chatham Island. It may be coincidental that all of these localities are situated to the west of the Andesite Line and all but Chatham Island are confined to the Eurasian and Indian-Australian lithospheric plates (see Springer, 1982).

43. *Paratya martensi* J. Roux, 1925

Paratya martensi J. Roux, 1925:146 [type locality: Adonara, Lesser Sunda Islands, Indonesia].

DIAGNOSIS.—Rostrum reaching level of distal end of antennal scale, armed dorsally with 6–10 teeth, ventrally with

1–3. First pereopod with carpus less than twice as long as wide. Second pereopod with carpus less than 5 times as long as wide. Third pereopod with propodus less than 2½ times as long as dactyl.

RANGE.—Known only from the type locality slightly east of Flores, Lesser Sunda Islands, Indonesia.

***EUGONATONOTIDAE Chace, 1937**

GOMPHONOTIDAE Chace, 1936:25.

EUGONATONOTIDAE Chace, 1937a:15.—Holthuis, 1955:39.

GONATONOTIDAE Gurney in Gurney and Lebour, 1941:122.

DIAGNOSIS.—Rostrum discrete grossly dentate extension of and inflexibly attached to remainder of carapace. Carapace with longitudinal lateral ridges, without longitudinal suture or cardiac notch in posterior margin. Eyes normal, neither unusually long nor concealed beneath carapace. Antennule with 2 flagella, neither with accessory branch. Mandible with 3-jointed palp, usually without incisor process, molar process subtruncate, not flared distally. Second maxilla with normal endite, scaphognathite produced proximally only moderately into branchial chamber. First maxilliped with exopod not abutting endite, not displacing palp out of plane, exopod without partially detached lobe, lash well developed, caridean lobe bluntly produced slightly, distinctly overreaching endite. Second maxilliped with exopod, endopod composed of 4 segments, not terminating in 2 segments attached side by side to preceding segment, terminal segment applied as narrow strip to mesial margin of penultimate segment. Third maxilliped with exopod, composed of 5 segments, slender, pereopod-like, antepenultimate segment fused with next proximal segment. Pereopods with exopods on all 5 pairs, with strap-like epipods (mastigobranchs) on 4 anterior pairs without naked appendix extending vertically into branchial chamber, with arthrobranches on 3 anterior pairs, 2 anterior pairs rather robust, fingers without terminal tuft of setae but bearing long lateral and terminal spines forming basket-like cage when closed, 1st pair subequal, stouter and shorter than 2nd pair, with 1 finger movable, 1 finger fixed. Second pair of pereopods subequal, fixed finger not curving subrectangularly around short, broad movable finger, carpus entire, undivided. Third pereopod with flexor margin of dactyl spinose. First pleopod of male with endopod laminar, not large or elaborately convoluted.

RANGE.—Indo-West Pacific from Japan and northwestern Australia to the Tonga Islands; 100–610 meter. Western Atlantic from off Georgia to Gulf of Mexico and Caribbean as far as Nicaragua and Grenada; 53–610 meters.

REMARKS.—Only one genus is known.

****Eugonatonotus* Schmitt, 1926**

Gonatonotus A. Milne-Edwards, 1881:10 [type species, by monotypy: *Gonatonotus crassus* A. Milne-Edwards, 1881:10; gender: masculine. Invalid junior homonym of *Gonatonotus* Adams and White, 1847:57 (Crustacea Brachyura)].

Eugonatonotus Schmitt, 1926: "Corrigenda et Addenda" [substitute name for *Gonatonotus* A. Milne-Edwards, 1881; type species: *Gonatonotus crassus* A. Milne-Edwards, 1881:10; gender: masculine].

Gomphonotus Chace, 1936:25 [substitute name for *Gonatonotus* A. Milne-Edwards, 1881; type species therefore *Gonatonotus crassus* A. Milne-Edwards, 1881:10; gender: masculine].

DIAGNOSIS.—See family "Diagnosis," above.

REMARKS.—Chan and Yu (1991) have listed the diagnostic characters of the two species recognized in the genus.

***44. *Eugonatonotus chacei* Chan and Yu, 1991**

FIGURES 13a–f, 14

Eugonatonotus chacei Chan and Yu, 1991:144, fig. 1 [type locality: Ta-Shi, I-Lan County, Taiwan].

DIAGNOSIS.—Rostrum (Figure 13a–f) unarmed dorsally for at least distal 3/10 of rostral length in adults, armed ventrally with 6–8 teeth. Third abdominal somite with median teeth about as long as marginal tooth on pleuron. Fifth tergite with paired dorsal ridges eroded, not sharply carinate, posterior margin armed with 4 teeth. Antennal spine not overreaching dorsal spine on basicerite. Ventral spine on basicerite not overreaching midlength of 2nd antennular segment. Third maxilliped (Figure 14u) with pair of distinct subdistal spines on flexor margin of antepenultimate segment in adult specimens. Two anterior pairs of pereopods with chelae heavily setose, especially on palm of 1st pair. Maximum postorbital carapace length 41.5 mm.

MATERIAL.—PHILIPPINES. Off Tawitawi Island, Sulu Archipelago: sta 5162, 5°10'N, 119°47'30"E, 421 m, coarse sand, broken shells, 11.6°C, 22 Feb 1908 (1031–1046), 12' Agassiz beam trawl, mud bag: 1 juvenile (?) [18.0].

INDONESIA. West of Halmahera: sta 5621, 0°15'00"N, 127°24'35"E, 545 m, gray and black sand, 28 Nov 1909 (0950–1010), 12' Agassiz beam trawl, mud bag: 1 juvenile (?) [17.0]; sta 5626, 0°07'30"N, 127°29'00"E, 485 m, gray mud, fine sand, 29 Nov 1909 (1534–1552), 12' Agassiz beam trawl: 1 female [24.0].—Southern end of Selat Patinti, southern Halmahera: sta 5629, 0°50'00"S, 128°12'00"E, 375 m, coral sand, 2 Dec 1909 (0643–0645), 12' Agassiz beam trawl (badly damaged): 2 juveniles (?) [15.7, 17.3].—South of Pulau Muna, Sulawesi (Celebes), sta 5645, 5°29'06"S, 122°36'06"E, 377 m, 16 Dec 1909 (0954–0955), 12' Agassiz beam trawl: 1 female [28.8].—West of Selat Salajar, southwestern Sulawesi (Celebes), sta 5661, 5°49'40"S, 120°24'30"E, 329 m, hard bottom, 10.3°C, 20 Dec 1909 (1624–1627), 12' Agassiz beam trawl (net torn below lead line): 1 juvenile (?) [17.8].

RANGE.—Extreme eastern Indian Ocean northwest of Australia and western Pacific from Japan, Taiwan, Philippines, Indonesia, off Queensland, Chesterfield Islands, New Caledonia, Iles Loyaute, and the Tonga Islands; 100–610 meters.

REMARKS.—Inasmuch as specific differences between the Indonesian and western Atlantic populations were finally recognized in 1972, after having been overlooked during the

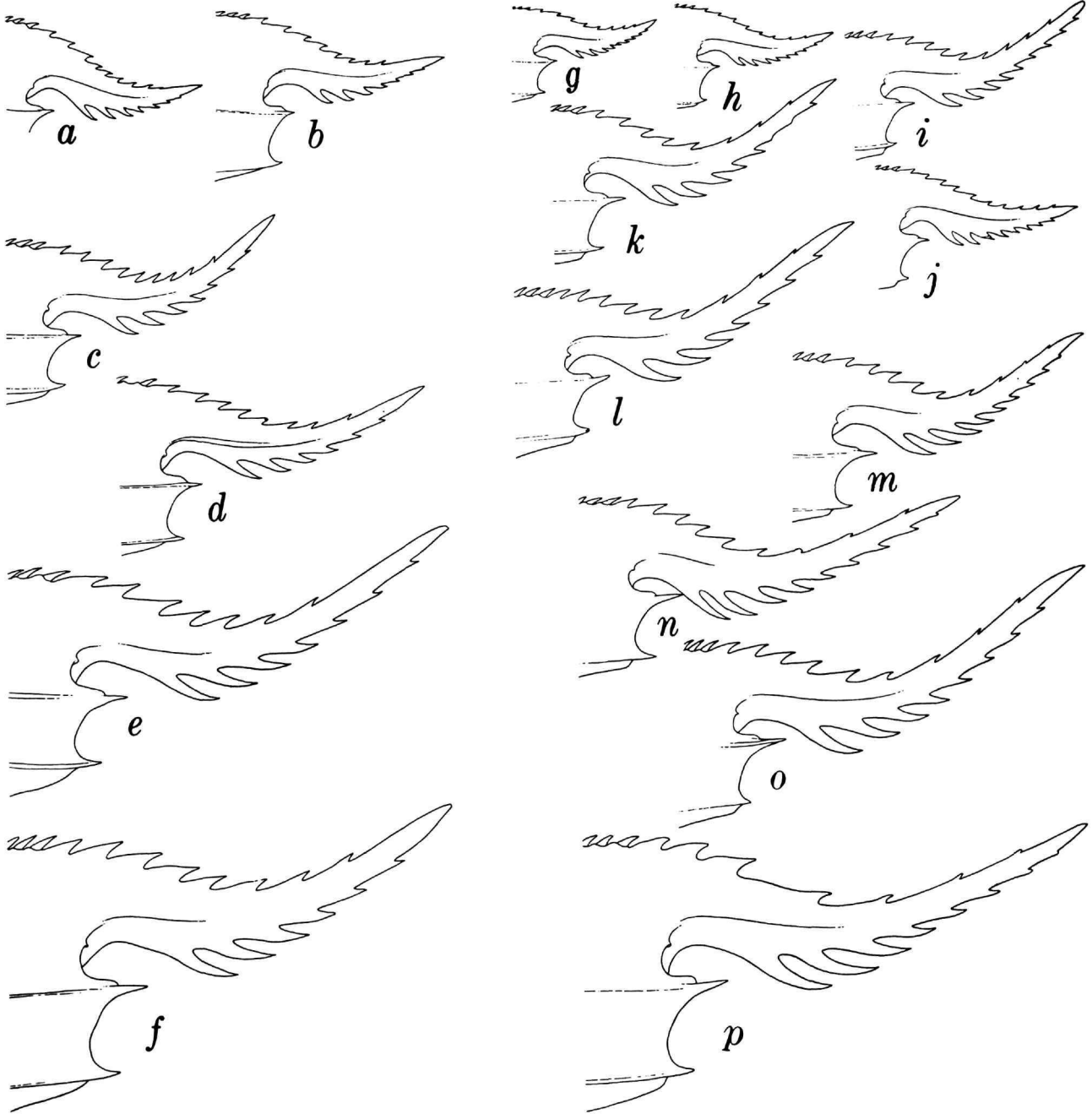


FIGURE 13.—Rostra of *Eugonatonotus*, a-f, *E. chacei*; g-p, *E. crassus*: a, juvenile (?) with carapace length of 15.7 mm from *Albatross* sta 5629; b, juvenile (?) with carapace length of 17.3 mm from *Albatross* sta 5629; c, female with carapace length of 17.8 mm from *Albatross* sta 5661; d, female with carapace length of 18.0 mm from *Albatross* sta 5162; e, female with carapace length of 24.0 mm from *Albatross* sta 5626; f, female with carapace length of 28.8 mm from *Albatross* sta 5645; g, juvenile (?) with carapace length of 10.9 mm from the Bahamas; h, juvenile (?) with carapace length of 11.7 mm from the Straits of Florida; i, juvenile (?) with carapace length of 13.3 mm from the Yucatan Channel; j, juvenile (?) with carapace length of 13.7 mm from southeast of the Dry Tortugas; k, female with carapace length of 17.5 mm from the Yucatan Channel; l, male with carapace length of 18.5 mm from the Straits of Florida; m, female with carapace length of 18.8 mm from east of Yucatan; n, male with carapace length of 21.0 mm from the Straits of Florida; o, female with carapace length of 21.1 mm from northwest of the Dry Tortugas; p, male with carapace length of 29.9 mm from northwest of the Dry Tortugas.

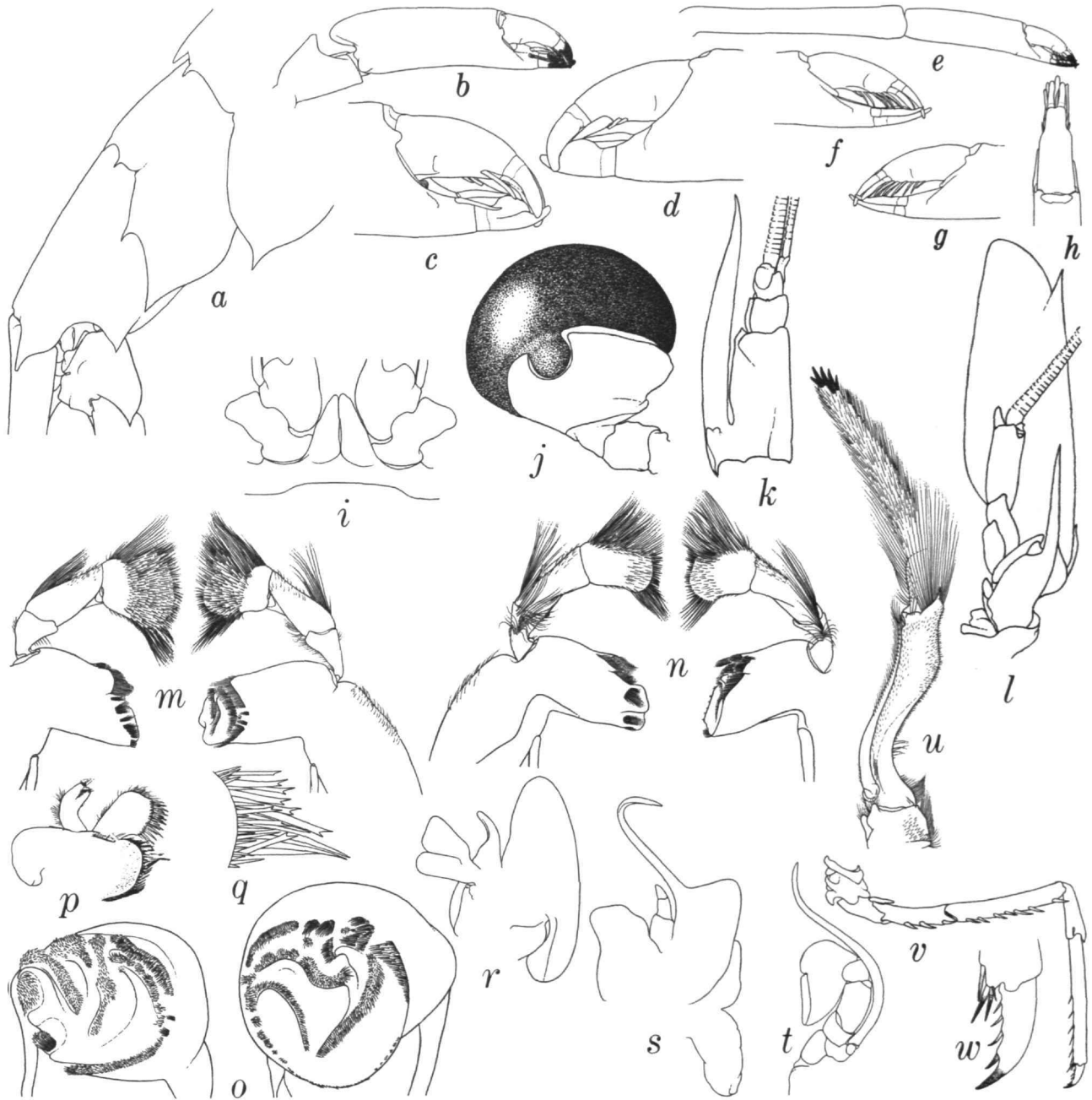


FIGURE 14.—*Eugonatonotus chacei*, a-i, female with carapace length of 28.8 mm from *Albatross* sta 5645; j-w, female with carapace length of 24.0 mm from *Albatross* sta 5626: a, 5th and 6th abdominal somites; b, chela and carpus of right 1st pereopod; c, same, fingers, lateral aspect; d, same, mesial aspect; e, chela and carpus of right 2nd pereopod; f, same, fingers, lateral aspect; g, same, mesial aspect; h, same, extensor aspect; i, paired processes on 5th sternal somite; j, left eye, dorsal aspect; k, left antennule, dorsal aspect; l, left antenna, ventral aspect; m, right and left mandibles, oral aspect; n, left and right mandibles, oral aspect; o, left and right mandibles, contact surfaces; p, right 1st maxilla; q, same, marginal setae on proximal endite; r, left 2nd maxilla; s, left 1st maxilliped; t, left 2nd maxilliped; u, left 3rd maxilliped; v, right 3rd pereopod; w, same, dactyl.

preceding 40 years that comparable collections were available to me, most of the illustrations that were prepared at that time are reproduced here for what they may be worth and, especially, for comparison with those of the species of *Rhynchocinetes* that follow.

It may be determined from the six examples of *E. chacei* and the 10 specimens of *E. crassus* illustrated in Figure 13 that the unarmed subapical portion of the dorsal margin of the rostrum ranges from 29 to 39 per cent of the rostral length in *E. chacei*, whereas that unarmed portion amounts to only 15 to 21 per cent of the total length in *E. crassus*. Also, in these examples, the number of ventral teeth is either six or seven in *E. chacei* versus seven to nine in *E. crassus*; Chan and Yu (1991, table 1) found seven or eight in *E. chacei*, eight or nine in *E. crassus*.

*RHYNCHOCINETIDAE Ortmann, 1890

RHYNCHOCINETIDAE Ortmann, 1890:459.

DIAGNOSIS.—Rostrum discrete grossly dentate extension of remainder of carapace but typically incompletely fused therewith. Carapace without longitudinal lateral ridges or suture or cardiac notch. Telson with 3 pairs of posterior marginal spines. Eyes normal, neither unusually long nor concealed beneath carapace. Antennule with 2 completely separate flagella, neither with accessory branch. Mandible with 3-jointed palp, rather broad incisor process, and molar process with transversely ridged grinding surface but not flared. Second maxilla with normal endite, scaphognathite produced proximally far into branchial chamber. First maxilliped with exopod

not abutting endite, not displacing palp out of plane, exopod without partially detached lobe, lash well developed, caridean lobe not produced distally, distinctly overreaching endite. Second maxilliped with exopod, endopod composed of 4 segments, not terminating in 2 segments attached side by side to preceding segment, terminal segment applied as narrow strip to much wider penultimate segment. Third maxilliped with exopod, composed of 5 segments, slender, pereopod-like, antepenultimate segment fused with next proximal segment. Pereopods without exopods, with strap-like epipods (masti-gobranchs) on 4 anterior pairs without naked appendix extending vertically into branchial chamber, with arthrobranchs on at least anterior pair, anterior pair subequal, stouter than second, with 1 finger movable, 1 finger fixed, 2nd pair subequal, fixed finger not curving subrectangularly around movable finger, carpus entire, undivided. Third pereopod with flexor margin of dactyl armed with few spines. First pleopod of male with endopod laminar, not unusually large or elaborately convoluted.

RANGE.—Throughout most tropical and several temperate regions of the world; littoral to 220 meters.

REMARKS.—Only one genus is recognized, but two seem justified, based on the first couplet in the following key to species.

**Rhynchocinetes* H. Milne Edwards, 1837

Rhynchocinetes H. Milne Edwards, 1837:168 [type species, by monotypy: *Rhynchocinetes typus* H. Milne Edwards, 1837:168; gender: masculine].

DIAGNOSIS.—See family "Diagnosis," above.

Key to Species of *Rhynchocinetes*

1. Two teeth in midline of carapace posterior to rostral articulation. Abdomen with all terga unarmed on posterior margin 2
- Three teeth in midline of carapace posterior to rostral articulation. Abdomen with prominent lateral tooth on posterior margin of 5th tergum at least 12
2. Supraorbital tooth represented by blunt nodule. Orbital margin continuous with antennal spine, not forming projecting lobe at base thereof
- *R. ikatere* (Yaldwyn, 1971:87)
(Bay of Plenty, New Zealand; 146–220 meters)
- Supraorbital tooth prominent, sharp. Orbital margin with distinct projecting lobe posterior to antennal spine 3
3. Rostrum with 16–21 ventral teeth 4
- Rostrum with 8–15 ventral teeth 5
4. Basal antennular segment with distolateral spine extending about as far as tip of stylocerite at level of distal margin of penultimate segment. Appendix interna on 2nd pleopod of male overreaching appendix masculina. Arthrobranch at bases of 3 anterior pereopods only 47. *R. durbanensis*
- Basal antennular segment with distolateral spine far overreaching stylocerite and extending nearly or quite to level of distal margin of ultimate segment. Appendix masculina on 2nd pleopod of male overreaching appendix interna
- *R. typus* (H. Milne Edwards, 1837:165)
(Peru, Chile)

5. First pleopod of male with prominent lobe on lateral margin of endopod opposite appendix interna 6
 First pleopod of male with lateral margin of endopod nearly entire, without prominent lobe 8
6. Antennal scale about 3 times as long as wide
 *R. kuiteri* (Tiefenbacher, 1983:121)
 (Victoria, Australia, and Tasmania)
 Antennal scale at least 4 times as long as wide 7
7. Sixth abdominal somite with posterolateral tooth flared laterad. Fifth pereopod without spine on ischium. Arthrobranch on each of 3 anterior pereopods
 *R. rugulosus* (Stimpson, 1860:36)
 (New South Wales, Australia)
 Sixth abdominal somite with posterolateral tooth not flared laterad. Fifth pereopod with spine on ischium. Arthrobranch on each of only 2 anterior pereopods
 *R. uritai* (Kubo, 1942:30)
 (Southern Korea and southern Japan)
8. Stylocerite overreaching 2nd antennular segment 9
 Stylocerite not overreaching 2nd antennular segment 10
9. Tegumental striae apparent. Arthrobranch on 2 anterior pairs of pereopods
 *R. australis* (Hale, 1941:270)
 (Victoria, South Australia, and Tasmania)
 Tegumental striae obscure. Arthrobranch on 1st pereopod only
 *R. balssi* (Gordon, 1936a:85)
 (New Zealand and Juan Fernandez)
10. Orbital angle rounded *45. *R. albatrossae*, new species
 Orbital angle acute 11
11. Third maxilliped with exopod not nearly reaching distal end of antepenultimate segment. First cheliped with fingers dentate on opposable margins, carpus and merus strongly dentate distally. Arthrobranch on 3 anterior pairs of pereopods
 46. *R. brucei*
 Third maxilliped with exopod nearly reaching distal end of antepenultimate segment. First cheliped with fingers unarmed on opposable margins, carpus and merus not strongly dentate distally. Arthrobranch on 2 anterior pairs of pereopods only
 *R. conspiciocellus* (Okuno and Takeda, 1992:64)
 (Southern Japan)
12. Rostrum with posterior 4 spines in ventral series isolated from much smaller spines anterior thereto, 3rd spine overreaching 4th spine [see Okuno, 1994b:69, figure 3A]
 *R. concolor* (Okuno, 1994:66)
 (Zanzibar, southern Japan,
 Papua New Guinea, Western Australia,
 and Queensland; 7–17 meters)
 Rostrum with ventral spines decreasing rather regularly in size anteriorly, 3rd spine not overreaching 4th 13
13. Third pereopod with dactyl bearing 3 stout spines on flexor margin, 3–4 spines on posterior margin of merus 14
 Third pereopod with dactyl bearing 2 spines on flexor margin, 1 or 2 spines on posterior margin of merus 15
14. Rostrum with 8–10 ventral teeth. Carapace with pterygostomian tooth. Stylocerite not reaching distal end of antennular peduncle. Antennal scale with distolateral tooth reaching level of distal margin of blade
 *R. hendersoni* (Kemp, 1925:265)
 (India eastward to Hawaii)
 (= *R. intermedius* Edmondson, 1952:72)
 (= *R. marshallensis* Edmondson, 1952:75)

- Rostrum with 11–13 ventral teeth. Carapace without pterygostomian tooth. Stylocerite reaching distal end of antennular peduncle. Antennal scale with distolateral tooth not nearly reaching level of distal margin of blade
 *R. striatus* (Nomura and Hayashi, 1992:199)
 (Ryukyu Islands, Japan, and Great Barrier Reef of Australia; shallow water)
15. Carapace with minute pterygostomian tooth. Third pereopod with 1 spine on posterior margin of merus *R. hiatti* (Holthuis and Hayashi, 1967:162)
 (Taiwan and Ryukyu and Caroline islands to Hawaii)
- Carapace without pterygostomian tooth. Third pereopod with 2 spines on posterior margin of merus *R. rigens* (Gordon, 1936a:76)
 (Eastern and western tropical and subtropical Atlantic and possibly western Pacific; littoral and sublittoral)

***45. *Rhynchocinetes albatrossae*, new species**

FIGURES 15, 16

DIAGNOSIS.—Rostrum (Figure 15*a,b*) overreaching antennal scale, movably attached to remainder of carapace, armed dorsally with 2 teeth in posterior $1/2$, 4 in cluster at tip, ventrally with 12 teeth. Integument with fine transverse striae. Carapace (Figure 15*a*) bearing 2 teeth in midline posterior to rostral juncture, sharp supraorbital tooth, and distinct pterygostomian tooth; orbital margin terminating ventrally in distinct rounded lobe at base of antennal spine. Abdomen (Figure 15*c*) without posterior tergal tooth on any somite; pleuron of 3rd somite with obscure marginal tooth, those of 4th and 5th somites acute at posteroventral angle; 6th somite with small posteroventral tooth not flared laterad. Telson with 3 pairs of dorsolateral and 3 pairs of posterior spines. Eye (Figure 15*d*) with prominent dorsal ocellus. Antennule (Figure 15*e*) with distolateral spine of basal segment slightly overreaching stylocerite and reaching nearly to distal margin of 2nd segment. Antennal scale (Figure 15*f*) nearly 5 times as long as wide, distolateral tooth far overreaching distally narrow blade. Mouthparts as illustrated (Figure 15*g–m*); 3rd maxilliped (Figure 15*l,m*) with cluster of 8 terminal and subterminal spines on ultimate segment, exopod nearly reaching distal end of antepenultimate segment. First pair of pereopods (Figure 16*a,b*) subequal; fingers not dentate on opposable margins, carpus and merus without unusually strong distal tooth. Second pereopod (Figure 16*c,d*) slender, no more robust than 3rd pereopod. Third pereopod (Figure 16*e,f*) with 2 spines on carpus, 3 on merus, and 1 on ischium. Fourth and 5th pereopods similarly armed. First pleopod of male with endopod (Figure 16*g*) distally acute, "appendix interna" with few distal cincinnuli, no distinct lobe on lateral margin. Appendix interna and appendix masculina on 2nd pleopod (Figure 16*h*) arising slightly distal to midlength of endopod, appendix interna distinctly overreaching appendix masculina.

Arthrobranch on each of 3 anterior pereopods only. Maximum postorbital carapace length 4.5 mm.

MATERIAL.—PHILIPPINES. Surigao Strait, east of Leyte, sta 5482, 10°27'30"N, 125°18'E, 123 m, broken shells, sand, and green mud, 30 Jul 1909 (0911–0935), 12' Agassiz beam trawl: 2 males [4.0, 4.5], larger is holotype (USNM 264046).

TYPE LOCALITY.—Surigao Strait, Philippines; 123 meters.

RANGE.—Known only from the holotype and paratype from Surigao Strait; 123 meters.

REMARKS.—Confirmation of the validity of this species may depend on the determination of the color pattern, which seems to be an essential character in many species of *Rhynchocinetes*. In combining two teeth in the midline of the carapace posterior to the rostral articulation, a sharp supraorbital spine, a projecting lobe on the orbital margin at the base of the antennal spine, a pterygostomian tooth, abdominal terga without posterior marginal teeth, the stylocerite not overreaching the second antennular segment, and lacking a distinct lobe on the lateral margin of the endopod of the male first pleopod, *R. albatrossae* differs from all previously recognized species except *R. durbanensis* from South Africa and *R. typus* from Peru and Chile. From both of those species, it may be distinguished by having only 12, rather than more than 15, ventral teeth on the rostrum. In addition, it apparently differs from *R. durbanensis* by having only two, rather than three, dorsal teeth on the posterior two-thirds of the rostrum and the lobe on the orbital margin rounded rather than angular. The unequal anterior pereopods noted by Gordon (1936a:85, 87) in a specimen of *R. durbanensis* in the British Museum undoubtedly resulted from regeneration; Barnard (1950:764) described a specimen, similar in size to the one recorded by Gordon, in which the first pereopods were equal. From *R. typus*, too, it disagrees by having the distolateral spine on the basal segment of the antennular peduncle reaching nearly to the distal margin of the ultimate segment, the appendix interna on the endopod of the male second pleopod overreaching the

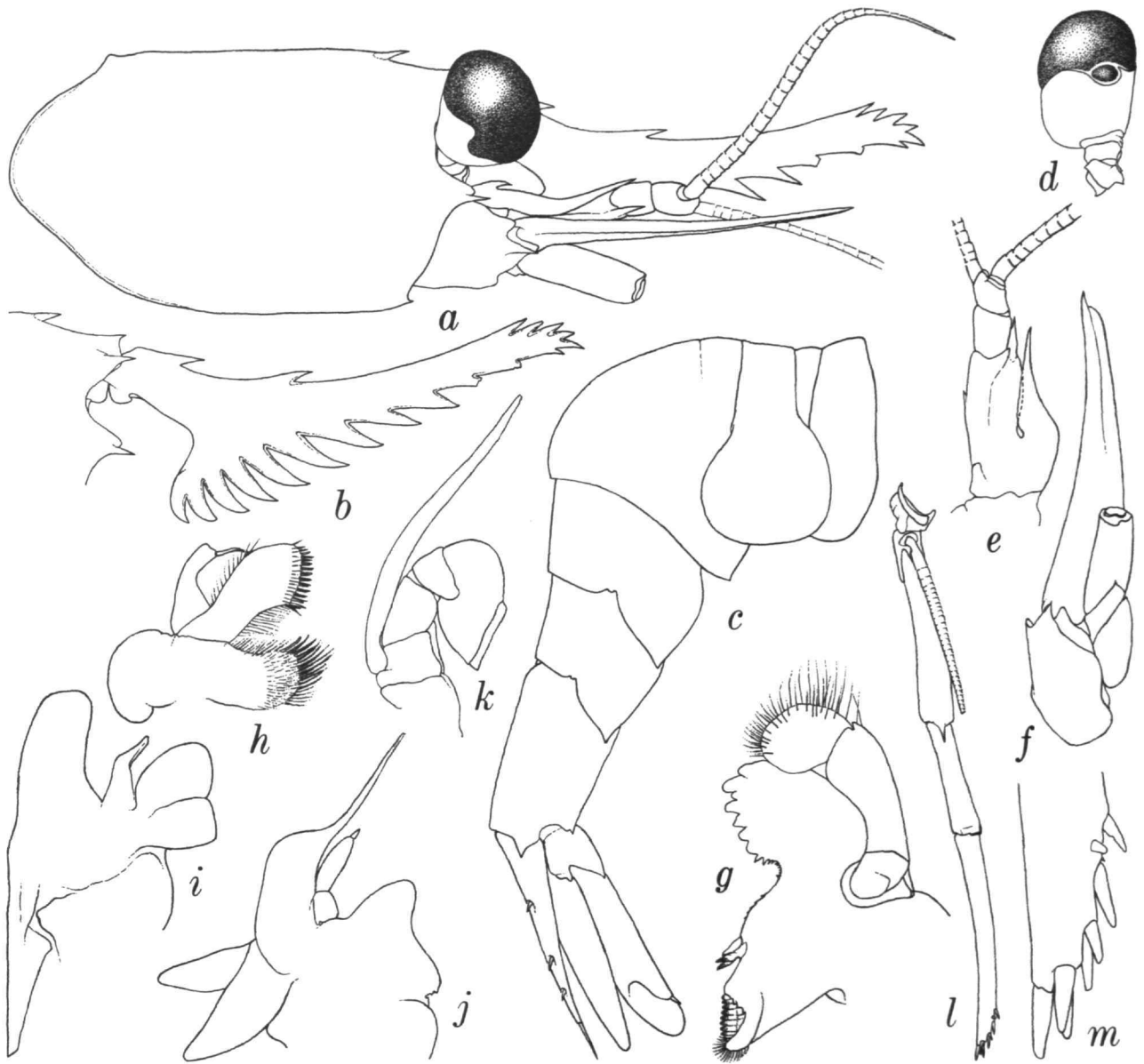


FIGURE 15.—*Rhynchocinetes albatrossae*, new species, male holotype from Surigao Strait, carapace length 4.5 mm: *a*, carapace and anterior appendages; *b*, rostrum; *c*, abdomen; *d*, right eye, dorsal aspect; *e*, right antennule, dorsomesial aspect; *f*, right antenna, ventral aspect; *g*, right mandible; *h*, right 1st maxilla; *i*, right 2nd maxilla; *j*, right 1st maxilliped; *k*, right 2nd maxilliped; *l*, right 3rd maxilliped, denuded; *m*, same, distal end.

appendix masculina, and the fourth pereopod without an arthrobranch.

ETYMOLOGY.—The species is named for the U.S. fisheries steamer that devoted the entire years of 1908 and 1909 to amassing the Philippine and Indonesian collections that are still yielding substantial information about the planet we live on.

46. *Rhynchocinetes brucei* Okuno, 1994

Rhynchocinetes brucei Okuno, 1994a:29, figs. 1–4, pl. 1.

DIAGNOSIS.—Rostrum overreaching antennal scale, movably attached to remainder of carapace, armed dorsally with 2 teeth in posterior $\frac{1}{2}$, 4–6 in cluster at tip, ventrally with 12–15

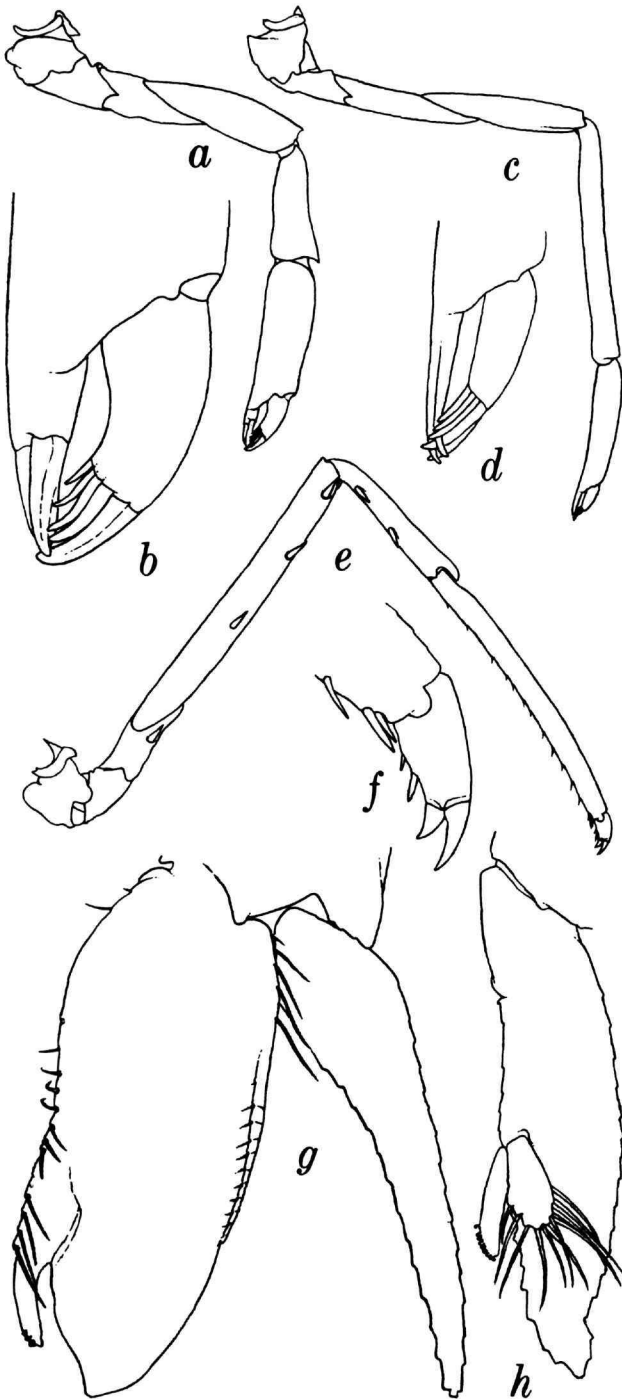


FIGURE 16.—*Rhynchocinetes albatrossae*, new species, male holotype from Surigao Strait, carapace length 4.5 mm: a, right 1st pereopod, denuded; b, same, fingers; c, right 2nd pereopod, denuded; d, same, fingers; e, right 3rd pereopod, denuded; f, same, dactyl; g, endopod and exopod of right 1st pleopod; h, appendix interna and appendix masculina on endopod of left 2nd pleopod.

teeth. Integument with fine transverse striae. Carapace bearing 2 teeth in midline posterior to rostral juncture, sharp supraorbital tooth, and blunt pterygostomial tooth; orbital margin terminating ventrally in acute angle at base of antennal spine. Abdomen without posterior tergal tooth on any somite; pleura of 3 anterior somites rounded, those of 4th and 5th somites acute posteroventrally; 6th somite with small posteroventral tooth. Telson with 3 pairs of dorsolateral and 3 pairs of posterior spines. Antennule with distolateral spine of basal segment slightly overreaching stylocerite and reaching nearly to distal margin of 2nd segment. Antennal scale about $4\frac{1}{2}$ times as long as wide, distolateral tooth far overreaching distally narrow blade. Third maxilliped with tip armed with 5–8 dark spines, exopod not nearly reaching distal end of antepenultimate segment. First pereopod with fingers dentate on opposable margins, carpus and merus with strong distal tooth. Third pereopod with 2 spines on carpus, 3 on merus, and 1 on ischium. First pleopod of male with endopod bearing small, acute distal lobe, without distinct lobe on lateral margin. Appendices interna and masculina on 2nd pleopod subequal. Arthrobranch on each of 3 anterior pereopods. Maximum postorbital carapace length 15.4 mm.

RANGE.—Hong Kong, Philippines, and Great Barrier Reef of Australia.

47. *Rhynchocinetes durbanensis* Gordon, 1936

Rhynchocinetes typus.—Stebbing, 1917:27, pl. 6 [not *R. typus* H. Milne Edwards, 1837].

Rhynchocinetes durbanensis Gordon, 1936a:83, figs. 5b,c, 7c,d [type locality: Durban, South Africa].—Okuno and Takeda, 1992b:85, figs. 1, 3–5 [right], 6–8.

DIAGNOSIS.—Rostrum overreaching antennal scale, movably attached to remainder of carapace, armed dorsally with 3 teeth in posterior $\frac{3}{5}$, 5–7 in cluster at tip, ventrally with 16–18 teeth. Integument with fine transverse striae. Carapace bearing 2 teeth in midline posterior to rostral juncture, sharp supraorbital spine, and sometimes indistinct pterygostomial tooth; orbital margin terminating ventrally in rather distinct lobe at base of antennal spine. Telson with 3 pairs of dorsolateral and 3 pairs of posterior spines. Antennule with distolateral spine of basal segment slightly overreaching stylocerite. Antennal scale about 4 times as long as wide, distolateral tooth far overreaching distally narrow blade. Third maxilliped with about 5 spines near apex of ultimate segment. Third pereopod with 3–5 small dark spines on dactyl, 3–4 on merus. First pleopod of male with endopod distally acute, without distinct lobe on lateral margin. Arthrobranch on each of 3 anterior pereopods. Maximum postorbital carapace length 12.7 mm.

RANGE.—Reputedly widely distributed in the Indo-Pacific region, but recorded with certainty only from South Africa, the Ryukyus, the Philippines, and Indonesia; sublittoral.

***BATHYPALAEONELLIDAE de Saint-Laurent, 1985**

BATHYPALAEONELLIDAE de Saint-Laurent, 1985:473.—Chace, 1992:71, 72, 78.

DIAGNOSIS.—Rostrum discrete, partially dentate extension of remainder of carapace, inflexibly attached thereto. Carapace without longitudinal lateral ridges, postantennal suture, or cardiac notch. Eystalks normal, neither unusually long nor concealed beneath carapace. Antennule with 2 completely separate flagella, neither with accessory branch. Mandible with palp, with molar and incisor processes not deeply divided, molar process subtruncate, with transversely ridged grinding surface, not flared. Second maxilla with endite normal, scaphognathite rounded proximally, not deeply produced into branchial cavity.

First maxilliped with epipod not abutting endite, not displacing palp out of line, exopod without partially detached lobe, lash well developed, caridean lobe not much produced distally but distinctly overreaching endite. Second maxilliped with exopod, endopod composed of 4 segments, not terminating in 2 segments attached side by side to preceding segment, terminal segment attached obliquely to penultimate segment. Third maxilliped with exopod, composed of 5 segments, slender, pereopod-like, antepenultimate segment fused with next proximal segment. Pereopods without exopods, epipods, if present, not terminating in naked appendix extending vertically into branchial chamber, with arthrobranches on 4 anterior pairs. Anterior pair subequal, slender, 1 finger movable, 1 fixed. Second pair unequal, fixed finger not curving subrectangularly around movable finger, carpus entire, undivided. Third pereopod with dactyl spinose on flexor margin. First pleopod of male with endopod laminar, not unusually large or elaborately convoluted.

RANGE.—Pantropical between latitudes 27°N and 13°S; 308–1463 meters.

REMARKS.—It is with gratitude to L.B. Holthuis (in correspondence) and embarrassing apologies to M. de Saint-Laurent that I relinquish the invalid authorship of this family (Chace, 1992:78).

***Bathypalaemonella Balss, 1914**

Bathypalaemonella Balss, 1914a:597 [type species, by monotypy];
Bathypalaemonella zimmeri Balss, 1914a:598; gender: feminine].

DIAGNOSIS.—See family “Diagnosis,” above.

REMARKS.—A key to the eight currently recognized species was included in Bruce (1986:263).

As noted by Crosnier and Forest (1973:154, footnote), there are minor discrepancies between the illustration published by Zarenkov (1968:60, fig. 4) and the original description of *B. humilis* Bruce, 1966. It seems probable, however, that the male and ovigerous female recorded by Zarenkov from off Vietnam at 15°07'00"N, 109°42.4'E, 310 m (locality kindly furnished by Zarenkov, in litt.), are correctly assigned to Bruce's species.

I have had the opportunity of examining type specimens of *B. pandaloides* (Rathbun, 1906), *B. serratipalma* Pequegnat, 1970, *B. texana* Pequegnat, 1970, and *B. delsolari* Wicksten and Mendez, 1983. Although the three female specimens recorded by Crosnier and Forest (1973:151) from off Morocco agree in most respects with the description of *B. serratipalma*, the holotype, allotype, and paratypes of that species deposited in the Smithsonian collections all have the rostrum considerably longer and upturned more noticeably than in the illustration offered by Crosnier and Forest (1973:152, fig. 45). Probably the acquisition of additional material from both the western and eastern Atlantic will be required to determine whether the two populations are specifically identical or not. Similarly, positive confirmation that the unique specimen of *B. texana* is specifically distinct and not an aberrant example of *B. serratipalma* (a juvenile specimen of which was collected at the same *Alaminos* station as was the holotype of *B. texana*) can be realized only by the study of additional specimens. Both forms have the major second chela peculiarly grooved on the extensor margin, as noted in the eastern Atlantic material by Crosnier and Forest, and at least one-half of the presumably eight posterior spines on the telson of the holotype of *B. texana* are missing; also, Pequegnat's belief that the complete rostrum of the latter specimen might have borne as many as ten ventral teeth is debatable.

The two paratypes of *B. delsolari* in the Smithsonian collections were received from Dr. Del Solar in 1976. Other commitments and misunderstandings about the availability of additional specimens, including a male, interfered with description of the species at that time. Among the numerous labels in the Smithsonian paratype lot is one inserted by Wicksten indicating that the specimens were paratypes of “*Bathypalaemonella peruviana* Wicksten and Mendez.” That evidence that the latter name was originally considered for the species undoubtedly accounts for the appearance of that nomen nudum among the “Remarks” following the description of *B. delsolari* in Wicksten and Mendez (1983:231).

***48. Bathypalaemonella pilosipes Bruce, 1986**

FIGURE 17

Bathypalaemonella pilosipes Bruce, 1986:257, figs. 6–10 [type locality: Australian Northwest Shelf, 13°33.8'S, 122°53.4'E; 390–394 meters].

DIAGNOSIS.—Rostrum (Figure 17a) overreaching antennal scale bearing 14 or 15 basally articulate, spine-like teeth on posterior 1/2 of dorsal margin, posteriormost nearly in line with posterior margin of orbit, unarmed on distal 1/2 except for fixed subapical tooth, armed with 7–9 teeth on posterior 2/3 of ventral margin, 5 or 6 posterior ones basally articulate (Figure 17b) less distinctly so than dorsal teeth. Carapace, proper, dorsally rounded, not carinate anteriorly. Telson (Figure 17e,f) with median posterior tooth, 2 lateral pairs in posterior 1/2 of length, and 3 pairs of posterior spines. Cornea broader than eyestalk, without ocellus or papilla on stalk. Antennal scale (Figure 17i)

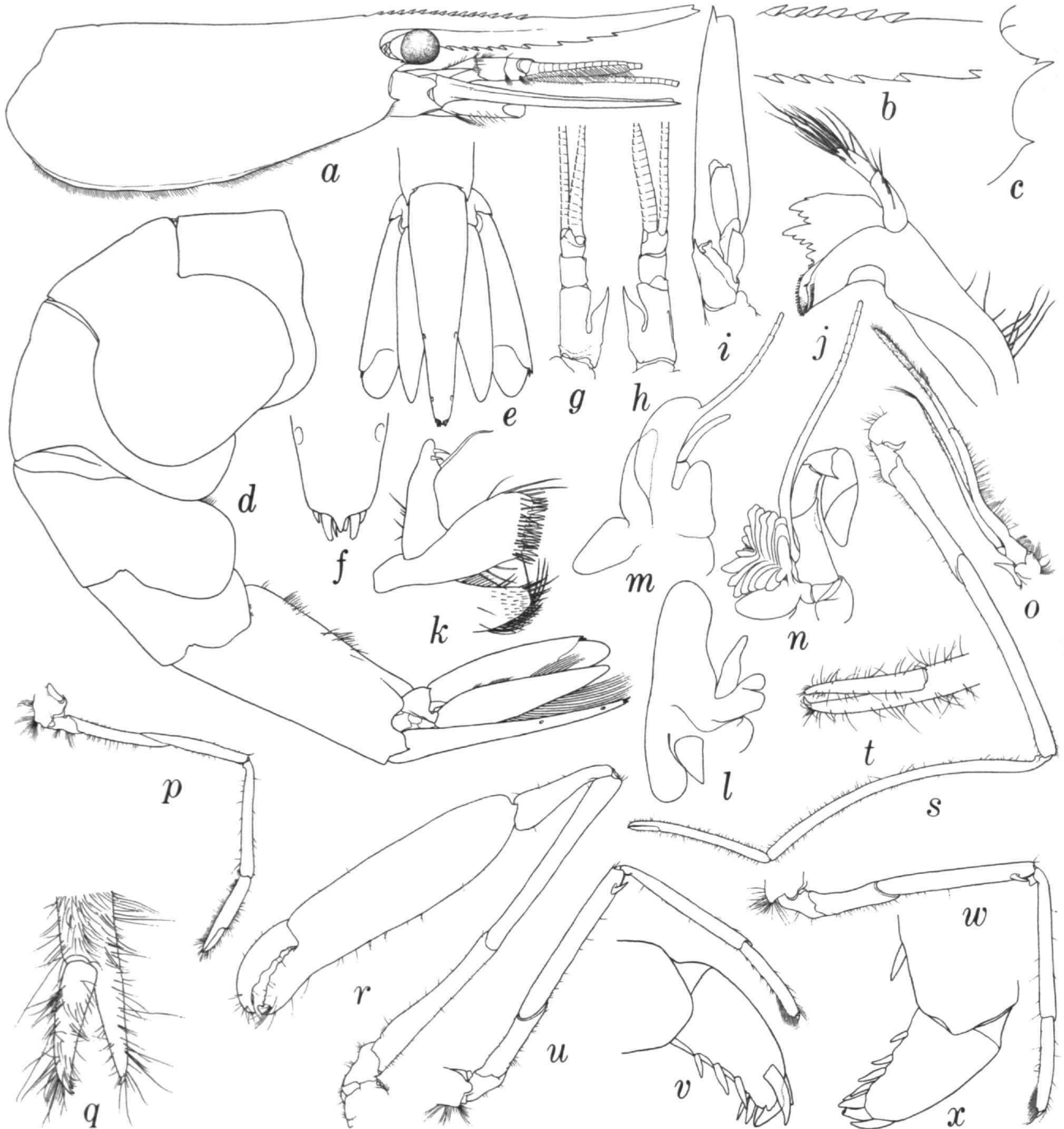


FIGURE 17.—*Bathypalaemonella pilosipes*, ovigerous female with carapace length of 9.5 mm from *Albatross* sta 5325: a, carapace and anterior appendages; b, central part of rostrum; c, anterior margin of carapace; d, abdomen; e, telson and uropods; f, posterior end of telson; g, right antennule, dorsal aspect; h, same, ventral aspect; i, right antennal scale, ventral aspect; j, right mandible; k, right 1st maxilla; l, right 2nd maxilla; m, right 1st maxilliped; n, right 2nd maxilliped; o, right 3rd maxilliped; p, right 1st pereopod; q, same, fingers; r, right 2nd pereopod; t, same, fingers; u, right 3rd pereopod; v, same, dactyl; w, right 4th pereopod; x, same, dactyl.

with lateral margin convex in distal 1/2. Major 2nd pereopod (Figure 17r) with fingers armed with broadly obtuse teeth on opposable margins, chela pinched and somewhat setose laterally at base of fixed finger, presumably representing adhesive mechanism. Third pereopod with dense growth of setae on distal 1/3 of flexor margin of propodus largely concealing numerous spinose dactyl. Maximum carapace length 9.5 mm.

MATERIAL.—PHILIPPINES. Babuyan Channel, north of Luzon: sta 5325, 18°34'15"N, 121°51'15"E, 410 m, green mud, 11.8°C, 12 Nov 1908 (1113–1132), 12' Tanner beam trawl, mud bag: 1 ovig. female [9.5].

RANGE.—Known previously only from the type locality on the Australian Northwest Shelf; 390–394 meters.

REMARKS.—There is little doubt that the *Albatross* specimen is conspecific with the ovigerous female holotype of *P. pilosipes* collected by the *Soela* on the Australian Northwest Shelf. Inasmuch as the Philippine specimen is in slightly better condition, the illustrations prepared when it was an undescribed species are furnished herewith for whatever value they may be to those who may be involved with the genus in the future. It may be noted that the entire rostrum is no longer than the incomplete one on the holotype and that its dentition is slightly different, the ventral teeth being less clearly articulate; that the complete telson displays a median acute tooth on the posterior margin that has not been noted in other species of the genus and that this projection is flanked by only three pairs of posterior spines and that the presumed locking mechanism on the major second chela is more sparsely clothed with far less conspicuous setae.

***PROCESSIDAE Ortmann, 1896**

NIKADEA De Haan, 1844, pl. N.

NIKIDAE Bate, 1888:xii, xli, 480, 503.

HECTARTHROPIDAE Bate, 1888:481, 883.

PROCESSIDAE Ortmann, 1896:415, 424.

DIAGNOSIS.—Rostrum discrete structure inflexibly attached to remainder of carapace, unarmed except (usually) pair of teeth delimiting terminal seta-filled notch. Carapace without longitudinal lateral ridges, complete postantennal suture, or cardiac

notch. Telson bearing 2 pairs of posterior marginal spines and 1 or more pairs of mesial setae. Eyestalks normal, neither abnormally long nor concealed beneath carapace. Antennule with 2 completely separate flagella, neither with accessory branch. Mandible without palp or incisor process, latter obliquely truncate, sometimes slightly flared. Second maxilla with endite reduced, scaphognathite with proximal lobe produced only moderately into branchial cavity. First maxilliped with exopod abutting endite and displacing palp out of plane, exopod without partially detached lobe, lash well developed, caridean lobe not much produced distally, not distinctly overreaching endite. Second maxilliped with exopod, endopod composed of 4 segments, not terminating in 2 segments attached side by side to preceding segment, terminal segment narrow strip attached obliquely to wide penultimate segment. Third maxilliped with exopod, composed of 5 segments, slender, pereopod-like, antepenultimate segment fused with next proximal segment. Pereopods without epipods, anterior pair more robust than 2nd pair, often asymmetrical, 2nd pair equal, with undivided carpus, fixed finger not curving subrectangularly around short, broad movable finger, fingers not concealed in dense setae. Third pereopod with dactyl simple, unarmed on flexor margin. First pleopod of male with endopod laminar, not unusually large or elaborately convoluted.

RANGE.—Pantropical and subtropical, occasionally temperate, except for the apparent absence of processid taxa on the west coast of South America. Many species are confined to shallow grass flats and tide pools, but others form a component of the offshore fauna, one living at a maximum depth of more than 566 meters.

REMARKS.—Of the five processid genera and 59 species, plus four subspecies, recognized herein, four genera and 18 species have been recorded from the Philippines and/or Indonesia, and they are accorded extended treatment below. The three species currently representing the atypical genus *Ambidexter* are confined to shallow American waters, from southern Florida in the Atlantic and southern California to Panama in the Pacific. The following key to the genera includes that genus, as well as two new genera that are represented in the Philippine-Indonesian region.

Key to Genera of Processidae

1. Rostrum broad, subequilaterally triangular in dorsal aspect, reaching at least to cornea of anteriorly extended eye. Telson with dorsolateral spines minute or absent. Mandible with molar process about 1/6 as wide as minimal length. (Third maxilliped without exopod. Anterior pereopods with 1 member (usually right) chelate, other with simple dactyl, without exopod. Shorter second pereopod with carpus subdivided into more than 6 articles.) **Hayashidonus*, new genus
- Rostrum slender in dorsal aspect, if not, very short, not nearly reaching cornea of anteriorly extended eye. Telson with dorsolateral spines distinct. Mandible with molar process more than 1/5 as wide as minimal length 2

2. Mandible exceptionally large and massive, subequal in overall length to that of antennal scale, molar process wider than minimal length. Second pereopods subequal, carpus subdivided into 6 articles *Clytomanningus*, new genus
Mandible not unusually large or massive, molar process no more than 1/2 as wide as minimal length. Second pereopods with carpus (of shorter member) subdivided into more than 6 articles. (Third maxilliped with exopod.) 3
3. Anterior pereopods with exopod (not both chlate) **Nikoides*
Anterior pereopods without exopod 4
4. Anterior pereopods symmetrically chelate
. *Ambidexter* Manning and Chace, 1971:3
Only 1 (usually right) member of anterior pair of pereopods chelate, other with simple dactyl **Processa*

***Clytomanningus*, new genus**

TYPE SPECIES.—*Processa molaris* Chace, 1955:11.

DIAGNOSIS.—Rostrum slender in dorsal aspect. Telson with distinct dorsolateral spines. Mandible exceptionally large and massive, subequal in overall length to that of antennal scale, molar process wider than minimal length. Anterior pereopods without exopod, not symmetrically chelate, 1 member of pair (usually left) simple, nonchelate. Second pereopods subequal, carpus subdivided into 6 articles.

RANGE.—Red Sea, Gulf of Aden, Kenya, Indonesia, Marshall Islands; littoral to 15 meters.

REMARKS.—As noted by Hayashi (1975a:125), the two species assigned to this genus apparently differ remarkably from the species of *Processa* in having the mandibles possibly proportionately more massive than in any other caridean shrimp now known and in having the carpus of the second pereopods subdivided into only six articles. By having the rostrum simple, instead of bifid or bearing a dorsal tooth at midlength, the two species differ from all but the following four of the other processid species: *Hayashidonus japonicus* (De

Haan, 1844), *Processa acutirostris* Nouvel and Holthuis, 1957, *P. hawaiiensis* (Dana, 1852a), and *P. macrognatha* (Stimpson, 1860). They may be distinguished from each other by the key offered below.

ETYMOLOGY.—The genus is named for Raymond B. Manning (with appropriate prefix from the Greek *klytos*, “heard of, famous, renowned”), who has skillfully synchronized extensive major contributions to our knowledge of stomatopod and decapod Crustacea (including the Processidae) with intense commitment to curatorial responsibility, the development of the innovative techniques of the “magnificent forager” of both study specimens and literature, and the promotion of carcinological research and zoological nomenclature; who has, since the occupation of the West Wing of the National Museum of Natural History in 1965, tolerated an open-door policy between our adjoining rooms that has been an advantage to me hopefully in excess of its annoyance to him; and who suggested the desirability of recognizing additional genera among the Indo-Pacific members of the Processidae. The gender of *Clytomanningus* is masculine.

Key to Species of *Clytomanningus*

- Rostrum overreaching anteriorly extended eyes. Telson with posterior median point.
Third maxilliped with well-developed exopod
. *C. coutierei* (Nobili, 1904:234), new combination
(Gulf of Aden and Kenya; to 15 meters)
- Rostrum not reaching level of distal margins of anteriorly extended eyes. Telson with rounded posterior margin. Third maxilliped without exopod
. 49. *C. molaris*, new combination

**49. *Clytomanningus molaris* (Chace, 1955),
new combination**

Processa molaris Chace, 1955:11, fig. 5 [type locality: Rongelap Atoll, Marshall Islands; intertidal].—Hayashi, 1975a:124, figs. 29, 30.

DIAGNOSIS.—Rostrum not reaching level of distal surfaces of anteriorly extended eyes. Telson with posterior margin rounded. Third maxilliped without exopod. Maximum postorbital carapace length 3.1 mm.

RANGE.—Red Sea and Kenya to Indonesia and Marshall Islands; littoral to 12 meters.

****Hayashidonus*, new genus**

TYPE SPECIES.—*Nika japonica* De Haan, 1844, pl. N; Pl. 46: fig. 6.

DIAGNOSIS.—Rostrum broad, subequilaterally triangular in dorsal aspect, reaching at least to cornea of anteriorly extended

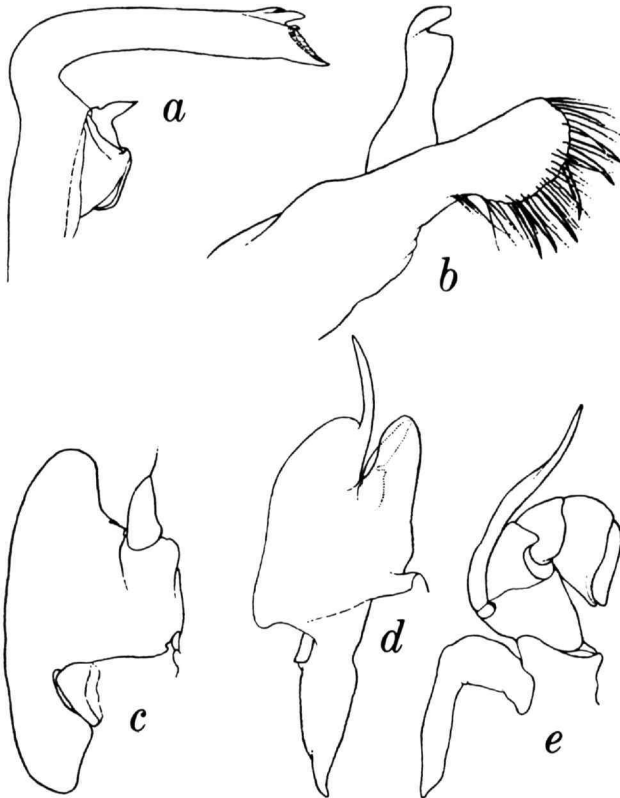


FIGURE 18.—*Hyashidonus japonicus*, ovigerous female with carapace length of 11.9 mm from Mogi, Japan, F.C. Dale, U.S.S. *Palos*, collector, USNM cat. no. 28520, mouthparts from right side: a, mandible; b, 1st maxilla; c, 2nd maxilla; d, 1st maxilliped; e, 2nd maxilliped.

eye. Telson with dorsolateral spines minute or absent. Mandible (Figure 18a) with molar process about $\frac{1}{6}$ as wide as minimal length. Third maxilliped without exopod. Pereopods without exopods, 1 member of anterior pair (usually right) chelate, other with simple dactyl. Second pereopods unequal, minor carpus subdivided into more than 6 articles.

RANGE.—Eastern Africa to Japan, Philippines, and Indonesia; to a depth of 150 meters.

REMARKS.—The broadly triangular rostrum, the obscure or absent dorsolateral spines of the telson, and the exceptionally long molar process of the mandible seem sufficiently unusual among the processids to justify the establishment of a separate genus for the single species generally known as *Processa japonica*.

ETYMOLOGY.—The generic name is proposed as an honorarium (Latin "donum") to Ken-Ichi Hayashi in recognition of his magnificent 1975 review of the Indo-West Pacific Processidae, containing the first modern key to all species then known in the genera *Nikoides* and *Processa*, thus all processid species except the three American species of *Ambidexter*. The gender of the generic name is masculine.

***50. *Hyashidonus japonicus* (De Haan, 1844),
new combination**

FIGURE 18

Nika japonica De Haan, 1844, pl. N; pl. 46: fig. 6; 1849:184 [type locality: Japan].

Processa japonica.—Parisi, 1919:88, fig. 8A.—De Man, 1920:208, pl. 18: fig. 53.—Gurney, 1937:88, pl. 1: figs. 16–19.—Hayashi, 1975a:110, fig. 24.—Noël, 1986:287, 296.

DIAGNOSIS.—Rostrum not overreaching eyes, not bifid, ventral margin nearly straight. Abdomen with pleural margin of 5th somite and lateral lobe of 6th somite unarmed. Antennular peduncle with 2nd segment longer than 3rd, twice as long as wide, stylocerite not truncate, unarmed. Antennular scale with distolateral tooth not overreaching blade. Basicerite unarmed. Longer 2nd pereopod with 41–50 carpal articles. Shorter 2nd pereopod with 15–19 carpal articles. Third pereopod with propodus more than 5 times as long as dactyl. Maximum postorbital carapace length about 16 mm.

MATERIAL.—PHILIPPINES. Off Tawitawi, Sulu Archipelago: sta 5161, 5°10'15"N, 119°53'E, 29 m, fine sand, 22 Feb 1908 (0907–0908), 9' Johnston oyster dredge, net fouled bottom: 1 male [6.5].

RANGE.—See "Range" of genus.

****Nikoides* Paulson, 1875**

Nikoides Paulson, 1875:98 [type species, by monotypy: *Nikoides Danae* Paulson, 1875:98; gender: masculine].

DIAGNOSIS.—Rostrum slender in dorsal aspect. Telson with distinct dorsolateral spines. Mandible with minimal length of molar process less than 5 times width. Third maxilliped with exopod. Anterior pereopods with exopod, only 1 of pair (usually right) chelate, other terminating in simple dactyl. Second pereopods unequal, shorter member with more than 6 carpal articles.

RANGE.—Red Sea and eastern Africa to Japan, Philippines, Indonesia, and eastern Australia to Hawaii, and western Atlantic from Florida to Guyana; littoral to about 150 meters.

REMARKS.—The fact that the two species of *Clytomanninus* differ most significantly in the presence or absence of an exopod on the third maxilliped suggests that Gurney (1937:89) was justified in believing that "the separation of the genus *Nikoides* can only be maintained as a simple matter of convenience," but that "convenience" will probably insure retention of the genus for some time to come. It may be noted that seven of the eight species of *Nikoides* are Indo-Pacific, five of them occurring in eastern Africa, and only one is found outside of the Indo-Pacific, in the western Atlantic, whereas more than half of the 45 species of *Processa* are Atlantic, 14 of them in the eastern Atlantic and Mediterranean, and only one is known from the Red Sea, two from eastern Africa, and four from South Africa.

A key to the eight currently recognized species of *Nikoides* may be found in Noël (1986:295). Six of the eight have been

recorded from the Philippine-Indonesian region and are treated individually below.

***51. *Nikoides danae* Paulson, 1875**

Nikoides Danae Paulson, 1875:98, pl. 14: figs. 5-5d [type locality: Red Sea].
Nikoides danae.—Hayashi, 1975a:53, figs. 1, 2.—Noël, 1986:263.

DIAGNOSIS. Rostrum long, often overreaching anteriorly extended eyes, apex distinctly bifid, dorsal tooth subdistal, ventral margin concave. Fifth abdominal somite with pleuron faintly angular, not pointed. Sixth abdominal somite with posterolateral lobe dentate. Telson with 2 pairs of dorsolateral spines, posterior margin pointed. Antennular peduncle with stylocerite armed with strong distolateral tooth. Antennal scale with distolateral tooth distinctly overreaching blade, basicerite bearing 1 pointed and 1 blunt process. Longer 2nd pereopod with 51-66 carpal articles, shorter with 21-32. Third and 4th pereopods with 2 spines on ischium. Maximum postorbital carapace length 7.4 mm.

MATERIAL.—PHILIPPINES. Reef off Cebu, 5 Apr 1908: 1 ovig. female [6.9].—Reef opposite Cebu, 7 Apr 1908: 1 ovig. female [6.2].

RANGE.—Red Sea, eastern Africa, Madagascar, India, Andamans, Japan, Philippines, Indonesia, Great Barrier Reef of Australia, and Hawaii; littoral to 37 meters.

52. *Nikoides gurneyi* Hayashi, 1975

Nikoides danae.—Gurney, 1937:89, pl. 1: figs. 20-25; pl. 2: figs. 26-29 [not *Nikoides danae* Paulson, 1875].

Nikoides gurneyi Hayashi, 1975a:58, figs. 3, 4 [type locality: Kikambala, Kenya; weedy pools inner reef flat at LWS].

DIAGNOSIS.—Rostrum long, sometimes overreaching anteriorly extended eyes, apex distinctly bifid, dorsal tooth subdistal, ventral margin nearly straight. Fifth abdominal somite with pleuron armed with small, acute tooth. Sixth abdominal somite with posterolateral lobe dentate dorsodistally. Telson with 2 pairs of dorsolateral spines, apex pointed. Antennular peduncle with stylocerite bidentate. Antennal scale with distolateral tooth reaching as far as or overreaching blade, basicerite with blunt process only. Longer 2nd pereopod with 47-72 carpal articles, shorter with 22-32. Third and 4th pereopods with 2 spines on ischium. Maximum postorbital carapace length 7.0 mm.

RANGE.—Red Sea, Kenya, Zanzibar, Mozambique, Philippines, and Indonesia; littoral to 27 meters.

REMARKS.—Noël (1986:296) suggested that *N. gurneyi* may be a synonym of *N. danae*.

53. *Nikoides longicarpus* Noël, 1986

Nikoides longicarpus Noël, 1986:264, figs. 1-8 [type locality: north of Lubang Island, southwest of Manila Bay, Philippines, 13°59'N, 120°10'E; 164-150 meters (MUSORSTOM I sta 16, teste: A. Crosnier, in litt.)].

DIAGNOSIS.—Rostrum long, overreaching anteriorly extended eyes, apex bifid, dorsal tooth reaching nearly as far as

tip of ventral one, ventral margin sinuous. Fifth abdominal somite with minute, obscure, blunt tooth on pleuron. Sixth abdominal somite with posterolateral lobe subtruncate, not dentate. Telson with 2 pairs of dorsolateral spines, posterior margin convex. Antennular peduncle with stylocerite rounded, unarmed. Antennal scale with distolateral tooth adpressed to and not reaching nearly as far as distal margin of blade, basicerite with feeble lateral tubercle only. Longer 2nd pereopod with 90-101 carpal articles, shorter with 28-33. Third and 4th pereopods with 2 spines on ischium. Maximum postorbital carapace length about 17 mm.

RANGE.—Known only from and near the type locality southwest of Manila Bay, Philippines; 136-164 meters

54. *Nikoides maldivensis* Borradaile, 1915

Nikoides maldivensis Borradaile, 1915:209 [type locality: Amirante Islands (see "Remarks")], 1917:411, pl. 58 fig. 11. Gurney, 1937:91, pl. 2 figs. 30-32.—Hayashi, 1975a:62, fig. 5

Processa Jacobsoni De Man, 1921:95 [type locality: Sinabang, Pulau Simeulue, Sumatra]

DIAGNOSIS.—Rostrum long, sometimes overreaching anteriorly extended eyes, apex acute, dorsal tooth strong, arising at about midlength, ventral margin sinuous. Fifth abdominal somite with pleuron obscurely dentate. Sixth abdominal somite with posterolateral lobe unequally bidentate. Telson with 2 pairs of dorsolateral spines, apex pointed. Antennular peduncle with stylocerite armed with strong distolateral tooth. Antennal scale with distolateral tooth distinctly overreaching blade, basicerite bearing 1 pointed and 1 blunt process. Longer 2nd pereopod with 55-56 carpal articles, shorter with 19-25. Third and 4th pereopods with 2 spines on ischium. Maximum postorbital carapace length about 6.7 mm.

RANGE.—Kenya, Amirante Islands, Sumatra, Caroline, Fiji, Samoa islands, and Hawaii; littoral.

REMARKS.—When Borradaile briefly described *N. maldivensis* in his 1915 "Notes on Carides," he cited the locality, quite logically, as "Maldiv Is." In his 1917 report "On Carides from the Western Indian Ocean" in the reports of The Percy Sladen Trust Expedition of 1905, he illustrated that species without adding significantly to the original description but introduced the account with the following statement: "A single specimen, taken at the Amirante Is., is closely related to *N. danae*." Manning and Chace (1971:8) cited both localities, in the belief that the Amirante specimen represented a second record for the species. Evidence kindly furnished by Richard Preece of the Department of Zoology at the University of Cambridge suggests that Borradaile might have been willing to hide his embarrassment behind such an assumption. The catalog entry covering the single type specimen in that institution bears the following information:

Amirante I. 25-28f - Gardiner Collⁿ
Ann. Mag. Nat. Hist.(8) xv. p. 209
Percy Sladen Trust Exp. XVII. pt 3. P. 411
Tube 1982 Accession no. AR 3, 1920.

***55. *Nikoides sibogae* De Man, 1918**

Nikoides Sibogae De Man, 1918:160 [type locality: Indonesia (the four specimens from *Siboga* stations 71, 274, and 282 recorded in this paper must be treated as syntypes)]; 1920:193, pl. 16: fig. 50 [the ovigerous female from station 260, designated as "the type" is unacceptable as a holotype or lectotype because it was not part of the type series recorded in the original description].—Hayashi, 1975a:65, figs. 6, 7.

DIAGNOSIS.—Rostrum long, reaching nearly to distal surface of anteriorly extended eye, apex distinctly bifid, dorsal tooth subdistal, ventral margin sinuous. Fifth abdominal somite with pleuron armed with inconspicuous tooth. Sixth abdominal somite with posterolateral lobe bidentate. Telson with 2 pairs of dorsolateral teeth, posterior margin truncately produced. Antennular peduncle with stylocerite truncate, not dentate. Antennal scale with distolateral tooth small, partially appressed to, and not reaching level of distal margin of blade, basicerite with small rounded process at ventrolateral angle. Longer second pereopod with 74–89 carpal articles, shorter one with 22–28. Third and 4th pereopods with 2 spines on ischium. Maximum postorbital carapace length 13.6 mm.

MATERIAL.—PHILIPPINES. Lingayen Gulf, western Luzon: sta 5442, 16°30'36"N, 120°11'06"E, 82 m, coral sand, 10–11 May 1909 (1858–0532), 25' Agassiz beam trawl (apparently drifted 15.5 miles [24.8 km] S, 12° from original position): 1 ovig. female [11.6].

RANGE.—Persian Gulf, Zanzibar Channel, Madagascar, India, Vietnam, Japan, Philippines, Singapore, Indonesia, Mariana and Marshall islands; littoral to 100 meters.

56. *Nikoides steinii* (Edmondson, 1935)

Processa steinii Edmondson, 1935b:3, fig. 1 [type locality: Maui, Hawaii; shoal water reef].

Nikoides nanus Chace, 1955:8, fig. 4 [type locality: Runit Island, Eniwetok [Enewetak] Atoll, Marshall Islands; intertidal].

Nikoides steinii Hayashi, 1975a:69, figs. 8, 9.

DIAGNOSIS.—Rostrum very short, not reaching base of eyestalk, apex simple or indistinctly bifid, ventral margin concave. Fifth abdominal somite with pleuron armed with small posteroventral tooth. Sixth abdominal somite with posterolateral lobe dentate. Telson with 2 pairs of dorsolateral spines, posterior margin pointed. Antennular peduncle slender, stylocerite acutely triangular. Antennal scale with distolateral tooth not overreaching blade, basicerite unarmed. Longer 2nd pereopod with 39–52 carpal articles, shorter one with 19–22. Third and 4th pereopods with 1 spine on ischium. Maximum postorbital carapace length 4.2 mm.

RANGE.—Kenya, Zanzibar, Japan, Irian Jaya, Palau and Marshall islands, and Hawaii; littoral.

****Processa* Leach, 1815**

Thalassalpes Bosc, 1813:233 [type species, selected by Holthuis, 1955:116: *Nika Edulis* Risso, 1816:85; gender: masculine].

Processa Leach, 1815: explanation of plate 41 [type species, by monotypy: *Processa canaliculata* Leach, 1815: explanation of plate 41; gender: feminine].

Nika Risso, 1816:84 [type species, selected by H. Milne Edwards, 1837, pl. 52: fig. 1: *Nika Edulis* Risso, 1816:85; gender: feminine].

Velocina Gistel, 1848:x [substitute name for *Processa* Leach, 1815; gender: feminine].

?*Chiereghina* Nardo, 1869:320 [type species, by monotypy: *Cancer pellucidus* Nardo, 1847:5; gender: feminine].

Hectarthropus Bate, 1888:889 [type species, selected by Holthuis, 1955:117: *Hectarthropus expansus* Bate, 1888:892; gender: masculine].

DIAGNOSIS.—Rostrum usually slender in dorsal aspect. Telson with distinct dorsolateral spines. Mandible with molar process more than 1/5 as wide as minimal length. Third maxilliped usually with exopod. Anterior pereopods without exopod, 1 member (usually right) chelate, other with simple dactyl. Second pereopods with shorter member composed of more than 6 carpal articles.

RANGE.—Red Sea and eastern and southern Africa to Japan, Philippines, Indonesia, and southern Australia to Hawaii, Gulf of California, and Clipperton Island; western Atlantic from North Carolina and Bermuda to Uruguay; eastern Atlantic and Mediterranean from the North Sea to Namibia; littoral to more than 566 meters.

REMARKS.—As mentioned in the "Remarks" on the genus *Nikoides*, more than half of the 45 species of *Processa* have been recorded from the Atlantic Ocean, with a slight majority of those from the eastern Atlantic. No species are common to the eastern Pacific and the Atlantic or to the western and eastern Atlantic, but an additional species from mid-Atlantic Ascension Island has been described by Manning and Chace (1990:24). Just one species, *P. compacta* Crosnier, 1971, has been suggested by Noël (1986:273) to occur in the eastern Atlantic (Congo) and the Indo-Pacific (South Africa, West Pakistan, India, and South Australia), a most unusual distribution (see Kensley, 1983). Nearly half of the 22 species now known from the Indo-Pacific region have been recorded from the Philippine-Indonesian area and are treated individually below.

A key to all species then recognized in *Processa* may be found in Noël (1986:296). With the herein proposed removal of *P. japonica* and *P. molaris* from the assemblage, only one species (*P. foresti*) may now represent the first half of the first couplet in that key (species lacking an exopod on the third maxilliped).

57. *Processa aequimana* (Paulson, 1875)

Nika aequimana Paulson, 1875:97, pl. 14: figs. 6, 6a [type locality: Red Sea]. *Processa aequimana*.—Hayashi, 1975a:80, figs. 10, 11.

DIAGNOSIS.—Rostrum not overreaching eyes, bifid, ventral margin slightly sinuous. Antennal spine prominent. Fifth abdominal somite with pleural margin unarmed. Sixth abdominal somite with posterolateral lobe dentate. Antennular peduncle with 2nd segment longer than 3rd, fully 3 times as long as wide, stylocerite subtruncate, unarmed. Antennal scale with distolateral tooth not overreaching blade, basicerite with single ventrolateral tooth. Second pereopods subequal, carpus composed of 9–11 articles. Third pereopod with propodus

about 4 times as long as dactyl. Maximum postorbital carapace length about 8.5 mm.

RANGE.—Red Sea, eastern and southern Africa, Vietnam, Japan, and Java; littoral.

58. *Processa affinis* Hayashi, 1975

Processa sp. De Man, 1920:203, pl. 17: fig. 52.

Processa affinis Hayashi, 1975a:85, fig. 12 [type locality: Teluk Sanana, Pulau Sanana, Kepulauan Sula, Indonesia; 22 meters].

DIAGNOSIS.—Rostrum not overreaching eyes, bifid, ventral margin concave. Antennal spine distinct. Fifth abdominal somite with pleural margin unarmed. Sixth abdominal somite with posterolateral lobe truncate. Antennular peduncle with 2nd segment longer than 3rd, fully 4.5 times as long as wide, stylocerite subtruncate, unarmed. Antennal scale with distolateral tooth reaching about to level of distal margin of blade, basicerite unarmed. Second pereopods unequal, longer one with about 20 carpal articles, shorter one with 15. Postorbital carapace length of holotype 5.0 mm.

RANGE.—Known only from the type locality in Kepulauan Sula, Indonesia, in 22 meters.

59. *Processa australiensis* Baker, 1907

Processa australiensis Baker, 1907:185, pl. 25: fig. 2 [type locality: South Australian coast].—Hayashi, 1975a:86, fig. 13.

DIAGNOSIS.—Rostrum not overreaching eyes, bifid, ventral margin slightly concave. Antennal spine usually absent. Fifth abdominal somite with pleural margin dentate. Sixth abdominal somite with posterolateral lobe unarmed. Antennular peduncle with 2nd segment no longer than 3rd, about as wide as long, stylocerite truncate, unarmed. Antennal scale with distolateral tooth not overreaching blade, basicerite with blunt projection at distoventral angle. Second pereopods unequal, longer one with 14–20 carpal articles, shorter one with 11–13. Third pereopod with propodus 3.7 times as long as dactyl. Maximum postorbital carapace length probably about 5 mm.

RANGE.—Seychelle Islands, Philippines, Singapore, Indonesia, and South Australia; littoral to 36 meters.

60. *Processa demani* Hayashi, 1975

Processa demani Hayashi, 1975a:98, figs. 19, 20 [type locality: Banda Elat, Kai Besar, Kepulauan Kai, Indonesia; 27 meters].

DIAGNOSIS.—Rostrum reaching to end of or beyond eye, unequally bifid, ventral margin faintly sinuous. Antennal spine prominent. Fifth abdominal somite with pleural margin unarmed. Sixth abdominal somite with posterolateral lobe obscurely bidentate. Antennular peduncle with 2nd segment longer than 3rd, more than 2.5 times as long as wide, stylocerite obliquely truncate, obscurely dentate. Antennal scale with distolateral tooth not overreaching blade, basicerite with small ventrolateral tooth. Second pereopods subequal in length, right one with 14–16 carpal articulations, left one with 10–12. Third

pereopod with propodus nearly twice as long as dactyl. Maximum postorbital carapace length about 5 mm.

RANGE.—Vietnam and Indonesia; 4–27 meters.

61. *Processa foresti* Noël, 1986

Processa foresti Noël, 1986:280, fig. 13 [type locality: north of Lubang Island, southwest of Manila Bay, Philippines, 13°59'N, 120°18'E; 187–205 meters].

DIAGNOSIS.—Rostrum not overreaching eyes, bifid, ventral margin slightly sinuous. Antennal spine prominent. Fifth abdominal somite with pleural margin unarmed. Sixth abdominal somite with posterolateral lobe dentate. Antennular peduncle with 2nd segment longer than 3rd, more than 2.5 times as long as wide, stylocerite tapering to sharp tooth. Basicerite with distinct ventrolateral tooth. Postorbital carapace length of holotype 7.5 mm.

RANGE.—Known only from the type locality southwest of Manila Bay, Philippines; 187–205 meters.

REMARKS.—The unique holotype of *P. foresti* lacks the third maxillipeds and all of the pereopods, except the right member of the anterior pair. Noël (1986:282) believed that the third maxilliped lacked an exopod because, "La mutilation des appendices s'opère le plus souvent au niveau de la ligne d'autotomie située à la base de l'ischion et laisse donc normalement en place les exopodites insérés sur le basis, s'ils sont présents." But he added, "Toutefois, étant donné la mutilation importante du spécimen en question, il est possible que les exopodites aient également été amputés." Inasmuch as the removal from the genus of *P. japonica* and *P. molaris*, the only other species without exopods on the third maxillipeds previously included in *Processa*, is proposed above, the opportunity to examine an intact specimen of *P. foresti* is of more than passing interest.

62. *Processa macrognatha* (Stimpson, 1860)

Nica macrognatha Stimpson, 1860:26 [type locality: Hong Kong].
Processa macrognatha.—Hayashi, 1975a:121, fig. 28.

DIAGNOSIS.—Rostrum not reaching nearly as far as cornea of anteriorly extended eye, not bifid, ventral margin somewhat sinuous. Antennal spine absent. Fifth abdominal somite with pleural margin unarmed. Sixth abdominal somite with posterolateral lobe unarmed. Antennular peduncle with 2nd segment slightly longer than 3rd, 1¹/₃ times as long as wide, stylocerite diagonally truncate, unarmed. Antennal scale with distolateral tooth minute, not overreaching blade, basicerite unarmed. Second pereopods subequal, carpus composed of 11 articles. Third pereopod with propodus about 3 times as long as dactyl. Maximum postorbital carapace length probably about 6 mm.

RANGE.—Hong Kong and Indonesia; 8–15 meters.

63. *Processa neglecta* Hayashi, 1975

Processa neglecta Hayashi, 1975a:127, figs. 31, 32 [type locality: Bay of Nha Trang, Vietnam; 11 meters].

DIAGNOSIS.—Rostrum not overreaching eyes, bifid, ventral margin slightly concave. Antennal spine small or absent. Fifth abdominal somite with pleural margin unarmed. Sixth abdominal somite with posterolateral lobe unarmed. Antennular peduncle with 2nd segment longer than 3rd, nearly $3\frac{1}{2}$ times as long as wide, stylocerite obliquely truncate, with minute lateral tooth or unarmed. Antennal scale with small distolateral tooth slightly overreaching blade, basicerite with distinct ventrolateral tooth. Second pereopods subequal, carpus composed of 12 or 13 articles. Third pereopod with propodus slightly less than 3 times as long as dactyl. Maximum postorbital carapace length 3.1 mm.

RANGE.—Vietnam, Sulu Archipelago, Philippines, and Indonesia; 9–54 meters.

64. *Processa philippinensis* Noël, 1986

Processa philippinensis Noël, 1986:288, fig. 18 [type locality: north of Lubang Island, southwest of Manila Bay, Philippines, 13°53'N, 120°08'E; 134–129 meters].

DIAGNOSIS.—Rostrum not quite overreaching eyes, bifid, ventral margin slightly sinuous. Antennal spine strong. Fifth abdominal somite with pleural margin unarmed. Sixth abdominal somite with posterolateral lobe acute, not otherwise dentate. Antennular peduncle with 2nd segment little longer than 3rd, not quite 3 times as long as wide, stylocerite transversely subtruncate mesially with strong tooth laterally. Antennal scale with distolateral tooth reaching about to level of distal margin of blade, basicerite with distinct ventrolateral tooth. Second pereopods unequal, longer one with 25 or 26 carpal articles, shorter one with 15–18. Third pereopod with propodus about 3 times as long as dactyl. Maximum postorbital carapace length 10 mm.

RANGE.—Known only from southwest of Manila Bay, Philippines; 129–205 meters.

65. *Processa processa* (Bate, 1888)

Nika processa Bate, 1888:527 [type locality: Ambon, Indonesia; 27 meters].
Processa processa Hayashi, 1975a:132, fig. 33.

DIAGNOSIS.—Rostrum bifid. Antennal spine absent. Fifth abdominal somite with pleural margin unarmed. Sixth abdominal somite with posterolateral lobe truncate. Stylocerite truncate. Basicerite unarmed. Second pereopods unequal, longer one with 20 or 21 carpal articles. Postorbital carapace length of holotype about 9 mm.

RANGE.—Known with certainty only from Ambon, Indonesia; 27 meters.

*66. *Processa sulcata* Hayashi, 1975

Processa sulcata Hayashi, 1975a:134, fig. 34 [type locality: Ainosshima, Fukuoka Prefecture, Kyushu, Japan; littoral].

DIAGNOSIS.—Rostrum not overreaching eyes, bifid, ventral margin slightly concave. Antennal spine distinct. Fifth abdominal somite with pleural margin dentate. Sixth abdominal somite

with posterolateral lobe unarmed. Antennular peduncle with 2nd segment slightly longer than 3rd, nearly $1\frac{1}{2}$ times as long as wide, stylocerite obliquely truncate, unarmed. Antennal scale with distolateral tooth not overreaching blade, basicerite unarmed. Second pereopods unequal, longer one with 21–30 carpal articles, shorter one with 10–14. Third pereopod with propodus about 4 times as long as dactyl. Maximum postorbital carapace length 7.6 mm.

MATERIAL.—PHILIPPINES. Surigao Strait, east of Leyte: sta 5482, 10°27'30"N, 125°18'E, 123 m, broken shells, sand, green mud, 30 Jul 1909 (0917–0935), 12' Agassiz beam trawl: 2 ovig. females [4.5, 4.6].—Off Jolo Island, Sulu Archipelago: sta 5145, 6°04'30"N, 120°59'30"E, 42 m, coral sand, shells, 15 Feb 1908 (1344–1359), 12' Agassiz beam trawl, mud bag: 1 ovig. female [4.0].

RANGE.—Southern Arabia, South America, Madagascar, Vietnam, Japan, and Indonesia; 0–123 meters.

*HIPPOLYTIDAE Bate, 1888

LYSMATINAE Dana, 1852a:16, 20.

THORINAE Kingsley, 1878a:64.

HIPPOLYTIDAE Bate, 1888:xii, xli, 480, 503, 574, 576 [determined in Opinion 470 of The International Commission on Zoological Nomenclature to be given precedence over the family-group names Lysmatinae and Thorinae by those who consider the genera *Hippolyte*, *Lysmata*, and/or *Thor* to belong to the same family-group taxon].

LATREUTIDAE Ortmann, 1896:415, 424.

HIPPOLYSMATIDAE Reish, 1972:80.

ALOPIDAE Christoffersen, 1987:350, 354.

BARBOURIDAE Christoffersen, 1987:350, 352, 353 [corrected to Barbouriidae by Christoffersen, 1990:96].

NAUTICARIDIDAE Christoffersen, 1987:350.

BYTHOCARIDIDAE Christoffersen, 1987:350, 354, 355.

MERGUIIDAE Christoffersen, 1990:96, 97.

MERHIPPOLYTIDAE Christoffersen, 1990:96, 97.

THORELLINAE Christoffersen, 1990:97.

DIAGNOSIS.—Rostrum usually discrete, uninflated extension of remainder of carapace. Carapace without cardiac notch (except in *Saron*). Eyes fully exposed, not unusually elongate. Mandible usually composed of incisor and molar processes and palp. Second maxilla with proximal endite reduced, scaphognathite proximally rounded or bluntly angular. First maxilliped with exopod distally flagellate, not abutting endite. Second maxilliped with exopod, endopod composed of 4 serially arranged segments, terminal segment attached diagonally or transversely to preceding segment, not abutted by slender, sickle-shaped extension from latter. Third maxilliped composed of fewer than 7 segments. Neither 1st nor 2nd pair of pereopods bearing terminal tufts of setae on fingers. First pair more robust than 2nd pair, usually subequal, not swollen, distinctly chelate, chela forming 1 movable and 1 fixed finger. Second pereopod with carpus subdivided into 2 or more articles. First pleopod of male with endopod laminar, not unusually large or elaborately convoluted.

RANGE.—Cosmopolitan, "arboreal" (*Merguia*), anchialine,

and marine to a depth of 3803 meters. Because most of the large hippolytid genera are confined chiefly to temperate and arctic seas, only 13 of 36 genera and only 32 of 270 species and 5 subspecies worldwide are known from the Philippine-Indonesian region.

REMARKS.—It is hoped that the errors of commission and omission will not be so numerous in the following checklist of genera and species and in the admittedly artificial key to the hippolytid genera as to make their inclusion deleterious rather than advantageous to carcinological colleagues. They were compiled as part of a personal effort to understand some of the relationships and the possible need for subdivision of the family Hippolytidae. A 107-character noncladistic analysis of the 40 genera originally assigned to the family seemed to support the concept of a reasonably homogeneous group, with the possible exception of *Leontocaris*, and the number of genera were eventually reduced to 37 because of my inability to find satisfactory generic characters to separate *Koror* and *Somersiella* from *Parhippolyte* and because of the transfer of *Yagerocaris* to the Alpheidae (Chace and Kensley, 1992). The

apparently consistent presence of one or more supraorbital teeth in eight of the 37 genera and their similarly constant absence in 26 others suggested the adoption of that reasonably distinct feature as the primary character in the opening couplet of the generic key. Because that consistency was lacking, however, in three of the genera (*Parallebbeus*, *Thor*, and *Tozeuma*) it became necessary to duplicate mention of those genera in both subsequent parts of the key. Although I found no clear evidence to support the superfamilial categories suggested by Christoffersen (1987), there is considerable reason to endorse his establishment of the family Barbouriidae, limited to the genera *Barbouria*, *Janicea*, and *Parhippolyte*, all of which are armed with a rather unique subocular tooth posterodorsal to the orbital angle; a similar but not identical tooth is present in *Latreutes*, but there is none in *Ligur*. Apologies are herewith tendered for the all-too-frequent absence of type-locality information in this list. Blame therefore may be charged to the time-consuming attribute of a thorough literature search and to a selfishly stronger desire for timely rather than posthumous publication.

Checklist of Genera and Species of Hippolytidae

(Valid genus- and species-group names in boldface,
synonyms and species inquirendae in lightface,
type localities in roman)

Aglaope Rafinesque, 1814:24 [not *Aglaope* Latreille, 1809]

Type species: *Aglaope striata*
= ***Lysmata***

Aglaope striata Rafinesque, 1814:24

= ***Lysmata seticaudata***

Alope White, 1847:123

Type species: *Alope palpalis* (= ***Alope spinifrons***)
Hetairocaris

Alope australis Baker, 1904:154

Smith's Bay, Kangaroo Island, South Australia
= ***Alope orientalis***

Alope orientalis (De Man, 1890)

Hetairocaris orientalis De Man, 1890:122, pl. 6: fig. 16
Ponape, Caroline Islands
Hippolyte ponapensis
Alope australis

Alope palpalis White, 1847:75

New Zealand
= ***Alope spinifrons***

Alope spinifrons (H. Milne Edwards, 1837)

Hippolyte spinifrons H. Milne Edwards, 1837:377
Coasts of New Zealand

Alope palpalis

Alpheus elongatus Risso, 1827:77

Maritime Alps; among fucus

? = ***Hippolyte inermis*** [Holthuis, in correspondence]

Alpheus ensiferus Risso, 1827; See ***Ligur ensiferus***

Alpheus marmoratus Latreille, 1806:53

? = ***Saron marmoratus*** [Holthuis, in correspondence]

Alpheus polaris; See ***Lebbeus polaris***

Amphiplectus Bate, 1888:622

Type species: *Amphiplectus depressus*

Not hippolytid, perhaps nematocarinid

Amphiplectus depressus Bate, 1888:623, pl. 110: fig. 3.

Off Recife, Brazil; 9°05'S, 34°50'W; 6640 meters

Angasia Bate, 1863:498

Type species: *Angasia pavonina*

= ***Tozeuma***

Angasia elongata; See ***Tozeuma elongatum***

Angasia kimberi; See ***Tozeuma kimberi***

Angasia pavonina; See ***Tozeuma pavoninum***

Angasia robusta Baker, 1904:150

Gulf of Saint Vincent, South Australia; 18–22 meters

= ***Tozeuma pavoninum***

Angasia Stimpsonii Henderson, 1893:437, pl. 40: figs. 18–20

Gulf of Martaban, India

= ***Tozeuma armatum***

Angasia tomentosa; See ***Tozeuma tomentosum***

Arno P. Roux, 1831:18, 19

Replacement name for ***AGLAOPE*** Rafinesque

= ***Lysmata***

Astacus coerulescens; See ***Hippolyte coerulescens***

Astacus Groenlandicus; See ***Lebbeus groenlandicus***

Astacus histrio Fabricius, 1775

Greenland

Species inquirenda (see Holthuis, 1947:20)

Astacus varius Fabricius, 1781

- “Oceano Norwagico”
= Probably *Lebbeus polaris* (see Holthuis, 1947:39)
- Barbouria* Rathbun, 1912:455
Type species: *Barbouria poeyi*
Barbouria antiguensis; See *Janicea antiguensis*
Barbouria cubensis (Von Martens, 1872)
Hippolyte cubensis Von Martens, 1872:136
Cuba
Barbouria poeyi
Barbouria poeyi Rathbun, 1912:455
“Cave near seashore, between Morro Castle and Cojimar,” Cuba
= *Barbouria cubensis*
- Bathyhippolyte* Hayashi and Miyake, 1970:41
Type species: *Bathyhippolyte yaldwyni*
Bathyhippolyte yaldwyni Hayashi and Miyake, 1970:42, figs. 1–16
Chatham Rise, New Zealand; 44°44'S, 175°42'E; 995–1110 meters
- Bellidia* Gosse, 1877:313
Type species: *Bellidia huntii*
= *Hippolyte*
- Bellidia huntii*; See *Hippolyte huntii*
- Birulaecaris* Dons, 1915:26
Type species: *Hippolyte mysis*
= *Lebbeus*
- Birulia* Brashnikov, 1903:xliv
Type species: *Birulia sachalinensis*
Paraspirontocaris
- Birulia kishinouyei* (Yokoya, 1930)
Paraspirontocaris kishinouyei Yokoya, 1930:536
Mutsu Wan, northern Honshu, Japan
- Birulia sachalinensis* Brashnikov, 1903:xliv
South and southwest coast of Sakhalin; 15–118 meters
- Bythocaris* G.O. Sars, 1870:149
Type species: *Bythocaris simplicirostris*
- Bythocaris akidopleura* Fransen, 1993:588, 595, figs. 41–62
West of Formigas, Azores; 37°17'N, 25°14'W; 2070–2120 meters
- Bythocaris biruli* Kobjakova, 1964
Bythocaris leucopsis biruli Kobjakova, 1964:326
Arctic; 475–2857 meters
? = *Bythocaris leucopsis*
- Bythocaris cosmetops* Holthuis, 1951:135
Off Sierra Leone; 7°29'N, 13°38'W; 74–78 meters
- Bythocaris cryonesus* Bowman and Manning, 1972:189
Arctic Ocean; 81°33.9'N, 157°12.5'W; 3803 meters
- Bythocaris curvirostris* Kobjakova, 1957:363
Arctic Basin, eastern sector; 3255 meters
- Bythocaris elegans* Bryazgin, 1982:603
Arctic Basin, USSR zone
- Bythocaris floridensis* Abele and Martin, 1989:29, fig. 1
Blake Plateau, east of Georgia; 31°09'N, 79°33'30"W;
- 644 meters
- Bythocaris gorei* Abele and Martin, 1989:38, fig. 2
Blake Plateau, east of St. Augustine, Florida; 29°41'N, 79°55'W; 682 meters
- Bythocaris gracilis* Smith, 1885:497
East of Cape Hatteras and New Jersey; 1908 and 1624 meters
- Bythocaris grumanti* Burukovsky, 1966:538, fig. 2
Off Spitsbergen; 76°42'N, 24°32'E; 50 meters
- Bythocaris irene* Retovskiy, 1946:298, fig. 1
Arctic Ocean
- Bythocaris leucopsis* G.O. Sars, 1879:427
Greenland Sea; 71.59°N, 11.40°W; 2030 meters
- Bythocaris leucopsis biruli*; See *Bythocaris biruli*
- Bythocaris miserabilis* Abele and Martin, 1989:41, fig. 3
Northern Straits of Florida; 27°11', 79°30'W; 677 meters
- Bythocaris nana* Smith, 1885:499
About 75 miles south of Marthas Vineyard, Massachusetts; 119–260 meters
- Bythocaris payeri* (Heller, 1875)
Hippolyte Payeri Heller, 1875:26, pl. 1: figs. 1–4
Arctic Ocean; 182 meters
- Bythocaris simplicirostris* G.O. Sars, 1870:149
Lofoten, Norway; 457 meters
Hippolyte panschi
Bythocaris spinipleura
- Bythocaris spinipleura* Squires, 1990:158, figs. 82–84
Off Bonavista Bay, Newfoundland (48°49'N, 51°30'W); 309 meters
= *Bythocaris simplicirostris*
- Calliasmata* Holthuis, 1973:37
Type species: *Calliasmata pholidota*
- Calliasmata pholidota* Holthuis, 1973:37, figs. 12, 13; pl. 1: fig. 2; pl. 2: fig. 1
Ras Muhammad Crack, near Ras Muhammad, southern tip of Sinai peninsula; in salt water in narrow crack in elevated coral rock about 150 meters from the sea
- Calliasmata rimolii* Chace, 1975:37, figs. 5–7
Cave 4 km from town of Estero Hondo (19°51'N, 71°11'W), Provincia de Puerto Plata, northern Dominican Republic; cave filled with slightly brackish water separated from sea by about 500 meters
- Cancer aculeatus* O. Fabricius, 1780:239
“Naularnak,” Greenland
= *Lebbeus groenlandicus*
- Cancer Astacus gibbosus* Montagu, 1808
Torcross, England
?= *Hippolyte longirostris* (see Holthuis, 1947:20)
- Cancer Nautilor* Herbst, 1796
Locality unknown
Species inquirenda (see Holthuis, 1947:21)
- Cancer Spinus*; See *Spirontocaris spinus*

- Caradina cincinnuli* Bate, 1863:500
St. Vincent Gulf, South Australia; 8 meters
= *Hippolyte ventricosa*
- Caradina tenuirostris* Bate, 1863:501
St. Vincent Gulf, South Australia; 8 meters
= *Hippolyte caradina*
- Caradina tenuis* Bate, 1866:28, pl. 2: fig. 1
Plymouth, England
= *Hippolyte varians*
- Caradina truncifrons* Bate, 1863:499
St. Vincent Gulf, South Australia
= *Latreutes compressus*
- Caricyphus acutus*; See *Hippocaricyphus acutus*
Caricyphus bigibbosus; See *Hippocaricyphus bigibbosus*
- Caridion* Goes, 1863:170
Replacement name for *DORYPHORUS* Norman
Doryphorus Norman, 1861 [not Cuvier, 1829]
- Caridion gordonii* (Bate, 1858)
Hippolyte Gordonii Bate, 1858:51
Off British shores; probably sublittoral
- Caridion monctoni* Citarella, 1993:15 [nomen nudum]
Off Buctouche, New Brunswick
Larva
- Caridion stevensi* Lebour, 1930:185
Bays in vicinity of Plymouth, England; rocky pools
under stones at low water, and between tide-marks
- Chorismus* Bate, 1888:577, 616
Type species: *Chorismus tuberculatus*
- Chorismus antarcticus* (Pfeffer, 1887)
Hippolyte antarctica Pfeffer, 1887:51, pl. 1: figs.
22-27
South Georgia; 13-17 meters
Hippolyte Romanchei
- Chorismus tuberculatus* Bate, 1888:617
Off Marion Island, Prince Edward Islands, south-
western Indian Ocean; 46°41'S, 38°10'E; 567 meters
- Concordia* Kingsley, 1880:413
Type species: *Concordia gibberosus*
= *Latreutes*
- Concordia gibberosus* Kingsley, 1880:414
Fort Macon [Beaufort Inlet], North Carolina
= *Latreutes parvulus*
- Cryptocheles* G.O. Sars, 1870:150
Type species: *Cryptocheles pygmaea*
- Cryptocheles abyssicola* M. Sars, 1868:262 [nomen
nudum]
= *Cryptocheles pygmaea*
- Cryptocheles pygmaea* G.O. Sars, 1870:150
Lofoten Islands, Norway; 220 meters
Cryptocheles abyssicola
- Cyclorhynchus* De Haan, 1849:173, 174, 175 [not
Cyclorhynchus Kaup, 1829, *Cyclorhynchus* Sunde-
vall, 1836, or *Cyclorhynchus* Macquart, 1841]
Type species: *Hippolyte planirostris*
- = *Latreutes*
- Doryphorus* Norman, 1861:276 [not *Doryphorus* Cuvier,
1829]
Type species: *Hippolyte Gordonii*
= *Caridion*
- Eretmocaridion* Bate, 1888:894
Type species: *Eretmocaridion remipes*
= *Lysmata*
- Eretmocaridion corniger* Bate, 1888:900, pl. 145: fig. 4
Cape Verde
= *Lysmata*, sp. (larva)
- Eretmocaridion dolichops* Ortmann, 1893:79, pl. 5: fig. 1
Near Boa Vista, Cape Verde Islands
= *Lysmata*, sp. (larva)
- Eretmocaridion longicaulis* Bate, 1888:897, pl. 145: fig. 2
South of Japan; 17°29', 141°21'E; surface
= *Lysmata*, sp. (larva)
- Eretmocaridion remipes* Bate, 1888:895, pl. 145: fig. 1
South of Japan
= *Lysmata*, sp. (larva)
- Eretmocaridion stylorostris* Bate, 1888:898, pl. 145: fig. 3
Off Cape Verde Islands; surface
= *Lysmata*, sp. (larva)
- Eualus* Thallwitz, 1891b:23, 50
Type species: *Eualus obsus*
Helia
Spirontocarella
- Eualus avinus* (Rathbun, 1899)
Spirontocaris avina Rathbun, 1899:557
North of Unalaska Island, Alaska; 54°00'45"N,
166°53'50"W; 642 meters
- Eualus barbatus* (Rathbun, 1899)
Spirontocaris barbata Rathbun, 1899:556
Bering Sea southeast of Pribilof Islands; 56°18'N,
160°38'W; 157 meters
- Eualus berkeleyorum* Butler, 1971:1615, figs. 1, 2
Strait of Georgia; 49°09.0'N, 123°32.6'W; 384 meters
- Eualus biunguis* (Rathbun, 1902)
Spirontocaris biunguis Rathbun, 1902a:899
Off Cape St. James, Queen Charlotte Islands, British
Columbia; 51°23'00"N, 130°34'00"W; 1602 meters
- Eualus bulychevae* Kobayakova, 1955:238
South Kurile Straits
- Eualus ctenifer* (Barnard, 1950)
Spirontocaris ctenifera Barnard, 1950:696, fig. 129c-k
Algoa Bay, South Africa
- Eualus dozei* (A. Milne-Edwards, 1891)
Hippolyte Dozei A. Milne-Edwards, 1891:46
Isla Grevy, Chile.; 65 meters
- Eualus drachi* Noël, 1978:23
Banyuls-sur-mer, Mediterranean coast of France
- Eualus fabricii* (Krøyer, 1841)
Hippolyte Fabricii Krøyer, 1841:571
Greenland

- Eualus gaimardii*** (H. Milne Edwards, 1837)
Hippolyte Gaimardii H. Milne Edwards, 1837:378
 Seas of Iceland
Hippolyte gibba
Hippolyte lentiginosa
Hippolyte recurvirostris
Hippolyte Retzii
Hippolyte gracilis Lilljeborg, 1850
Hippolyte pandaliformis
Hippolyte belcheri
Eualus obses
Spirontocaris recurvirostris
Eualus geniculata var. *longirostris* Kobjakova, 1936:211, fig. 38
 = ***Heptacarpus geniculatus***
Eualus gracilipes Crosnier and Forest, 1973:163, fig. 50
 Sao Tiago, Cape Verde Islands; 1509–2750 meters
Eualus gracilirostris (Stimpson, 1860)
Hippolyte gracilirostris Stimpson, 1860:34
 Hakodate, Hokkaido, Japan; laminaria zone
Eualus kikuchii Miyake and Hayashi, 1967:261
 Tomioka Wan, Amakusa Shimo Jima, Kyushu, Japan
Eualus kinzeri Tiefenbacher, 1990:117, fig. 1
 Weddell Sea, Antarctica
Eualus kuratai Miyake and Hayashi, 1967:253
 Between Rebun To and Rishiri To, northwestern Hokkaido, Japan; 100–150 meters
Eualus lebourae Holthuis, 1951:124
 Off Guinea; 10°49'N, 16°39'W; 42 meters
Eualus leptognathus (Stimpson, 1860)
Hippolyte leptognatha Stimpson, 1860:34
 Hakodate-wan, Hokkaido, Japan; common on algal sand bottom, 4–11 meters
Spirontocaris japonica
 ?*Spirontocaris fabricii* var. *minuta*
Eualus lindbergi Kobjakova, 1955:240
 Okhotsk Sea, S. Sakhalin
Eualus lineatus Wicksten and Butler, 1983:3
 1.5 miles southwest of Gull Island, off Santa Cruz Island, California; 33°56'00"N, 119°50'55"W; 89 meters
Eualus longirostris; See *Eualus geniculata* var. *longirostris*
Eualus macilentus (Krøyer, 1841)
Hippolyte macilenta Krøyer, 1841:574
Spirontocaris stoneyi
Eualus macrophthalmus (Rathbun, 1902)
Spirontocaris macrophthalma Rathbun, 1902a:900
 Off Destruction Island, Washington; 47°46'00"N, 125°10'00"W; 325 meters
Eualus middendorffii Brashnikov, 1907:165
Eualus obses Thallwitz, 1891b:23
 Greenland
 = ***Eualus gaimardii***
- Eualus occultus*** (Lebour, 1936)
Spirontocaris occulta Lebour, 1936:96, pl. 1, pl. 2: figs. 2, 4, 5, 7, 8; pl. 3: figs. 2, 6–11; pl. 4: figs. 1–3, 8; pl. 5: figs. 1–3, 7, 12–14; pl. 6: figs. 1–4, 6, 9; pl. 7: fig. 3
 Plymouth, England
Eualus pax (Stebbing, 1915)
Spirontocaris pax Stebbing, 1915:91
 False Bay, South Africa; 34°11', 18°31'E; 37 meters
Eualus pusiolus (Krøyer, 1841)
Hippolyte pusiola Krøyer, 1841:576
 West coast of Norway
Hippolyte subula
Hippolyte vittata
Hippolyte Barleei
Hippolyte Andrewsii
Hippolyte Korenii
Eualus ratmanovi Makarov, 1941:125, 163
 Bering Sea
Eualus sinensis (Yu, 1931)
Spirontocaris sinensis Yu, 1931:514, fig. 2
 Chefoo, China
Eualus spathulirostris (Yokoya, 1933)
Spirontocaris spathulirostris Yokoya, 1933: fig. 10
 Off northeastern and southeastern Honshu, Japan; 110–285 meters
Eualus subtilis Carvacho and Olson, 1984:61, figs. 1, 2
 Punta Banda, southern limit of Bahía de Todos Santos, Baja California, Mexico; 30 meters in a bed of urchins,
Strongylocentrotus sp., on a rocky bottom
Eualus suckleyi (Stimpson, 1864)
Hippolyte Suckleyi Stimpson, 1864:154
 Puget Sound: "circumlittoral zone"
Eualus townsendi (Rathbun, 1902)
Spirontocaris townsendi Rathbun, 1902a:897
 Strait of Juan de Fuca, Washington; 48°22'00"N, 122°51'00"W; 88 meters
Exhippolysmata Stebbing, 1915:94
 Type species: *Hippolysmata ensirostris*
 67. ***Exhippolysmata ensirostris ensirostris*** (Kemp, 1914)
Hippolysmata ensirostris Kemp, 1914:113, 118
 Colombo, Sri Lanka
 68. ***Exhippolysmata ensirostris punctata*** (Kemp, 1914)
Hippolysmata ensirostris var. *punctata* Kemp, 1914:120
 "Sandheads," Ganges delta, India, and Amherst and Thongwa, Burma
Exhippolysmata hastatoides (Balss, 1914)
Mimocaris hastatoides Balss, 1914a:596
 Victoria, Cameroon; shallow water
Exhippolysmata oplophoroides (Holthuis, 1948)
Hippolysmata (Exhippolysmata) oplophoroides
 Holthuis, 1948:1106, figs. 2, 3.

- Mouth of Suriname River near De Resolutie, Surinam
Exhippolysmata tugelae Stebbing, 1915:94, pl. 89.
 Off Natal, South Africa; 22–47 meters
- ****Gelastocaris*** Kemp, 1914:106
 Type species: *Latreutes Paronae*
- *69. ***Gelastocaris paronae*** (Nobili, 1905)
Latreutes Paronae Nobili, 1905b:2
 Zanzibar
- Gelastreutes*** Bruce, 1990a:138
 Type species: *Gelastreutes crosnieri*
- Gelastreutes crosnieri*** Bruce, 1990a:139
 Off New Caledonia; 19°08'30"S, 163°29'30"E; 65–120 meters
- Helia*** Thallwitz, 1891b:24, 50 [not *Helia* Huebner, 1818]
 Type species: *Hippolyte Fabricii*
 = *Eualus*
- Heptacarpus*** Holmes, 1900:195
 Type species: *Hippolyte palpator*
- Heptacarpus brachydactylus*** (Rathbun, 1902)
Spirontocaris brachydactyla Rathbun, 1902a:898
 Off Santa Cruz Island, California; 33°55'30"N,
 119°41'30"W; 487 meters
- Heptacarpus brevirostris*** (Dana, 1852)
Hippolyte brevirostris Dana, 1852a:24
 Strait of Juan de Fuca near Dungeness, Washington
- Heptacarpus camtschaticus*** (Stimpson, 1860)
Hippolyte camtschatica Stimpson, 1860:33
 Type locality not indicated
- Heptacarpus carinatus*** Holmes, 1900:202
 Monterey Bay, California; shallow water
- Heptacarpus commensalis*** Hayashi, 1979:14, figs. 1, 2
 Shirahama, Wakayama Prefecture, Japan; associated
 with *Acropora*, sp.
- Heptacarpus decorus*** (Rathbun, 1902)
Spirontocaris decora Rathbun, 1902a:896
 Off Santa Cruz Island, California; 33°58'00"N,
 119°30'45"W; 274 meters
- Heptacarpus flexus*** (Rathbun, 1902)
Spirontocaris flexa Rathbun, 1902a:896
 North of Bird Island, Shumagin Islands, Alaska;
 54°52'00"N, 154°46'00"W; 38 meters
- Heptacarpus franciscanus*** (Schmitt, 1921)
Spirontocaris franciscana Schmitt, 1921:60
 1/4 mi off Bonita Point Light, San Francisco Bay,
 California; 9–13 meters
- Heptacarpus fuscimaculatus*** Wicksten, 1986:47, figs. 1, 2
 Big Fisherman's Cove, Santa Catalina Island, California;
 33°27'N, 118°28'W; among algae on floating
 dock
- Heptacarpus futillirostris*** (Bate, 1888)
Nauticaris futillirostris Bate, 1888:606
 Akashi Kaikyo, Inland Sea of Japan; 34°38'N,
 135°01'E; 91 meters
- Heptacarpus geniculatus*** (Stimpson, 1860)
Hippolyte geniculata Stimpson, 1860:34
 Hakodate-wan, Hokkaido, Japan; among stones to a
 depth of 4 meters
- Spirontocaris alcimede*
Eualus geniculata var. *longirostris*
- Heptacarpus grebnitzkii*** (Rathbun, 1902)
Spirontocaris grebnitzkii Rathbun, 1902b:44
 Muroan, Hokkaido, Japan
- Heptacarpus herdmani*** (Walker, 1898)
Spirontocaris herdmani Walker, 1898:277
 Puget Sound
- Heptacarpus igarashii*** Hayashi and Chiba, 1989:71, figs.
 1–3
 Toni Bay, Kamaishi City, Iwate Prefecture, Japan
- Heptacarpus jordani*** (Rathbun, 1902)
Spirontocaris jordani Rathbun, 1902b:44
 Hakodate, Hokkaido, Japan
- Heptacarpus kincaidi*** (Rathbun, 1902)
Spirontocaris kincaidi Rathbun, 1902a:899
 Off Santa Cruz, Monterey Bay, California; 36°55'10"N,
 122°04'00"W; 38 meters
- Heptacarpus littoralis*** Butler, 1980:220
 Bunsby Islands, Vancouver Island, Canada; 50.06°N,
 127.32°W; 2–9 meters [T.H. Butler, in correspon-
 dence]
- Heptacarpus maxillipes*** (Rathbun, 1902)
Spirontocaris maxillipes Rathbun, 1902a:898
 Off Seguam Island, Aleutian Islands, Alaska;
 52°06'00"N, 171°45'00"W; 518 meters
- Heptacarpus minutus*** (Yokoya, 1930)
Spirontocaris minutus Yokoya, 1930:531
 Off "Arito", Mutsu Wan, northern Honshu, Japan; 35
 meters
- Heptacarpus moseri*** (Rathbun, 1902)
Spirontocaris moseri Rathbun, 1902a:897
 Off Seguam Island, Aleutian Islands, Alaska;
 52°06'00"N, 171°45'00"W; 518 meters
- Heptacarpus palpator*** (Owen, 1839)
Hippolyte palpator Owen, 1839:89
 Monterey, California
Hippolyte? *Hemphillii*
- Heptacarpus paludicola*** Holmes, 1900:201
 Humboldt Bay, Shelter Cove, and Bodega Bay,
 California
- Heptacarpus pandaloides*** (Stimpson, 1860)
Hippolyte pandaloides Stimpson, 1860:34
 Hakodate-wan, Hokkaido, Japan; among stones to a
 depth of 4 meters
- Spirontocaris propugnatrix*
- Heptacarpus pugettensis*** Jensen, 1983:314
 Alki Point, Seattle, Washington; 47°34'N, 122°25'W;
 low intertidal, under rock
- Heptacarpus rectirostris*** (Stimpson, 1860)
Hippolyte rectirostris Stimpson, 1860:33

- Hakodate, Hokkaido, Japan; deep sea
Heptacarpus sitchensis (Brandt, 1851)
Hippolyte sitchensis Brandt, 1851:116
 Sitka, Alaska
Hippolyte picta
Heptacarpus stimpsoni Holthuis, 1947:13, 44
 Replacement name for *Hippolyte cristata* Stimpson, 1860 [not *Hippolyte cristata* De Haan, 1841]
Heptacarpus stylus (Stimpson, 1864)
Hippolyte stylus Stimpson, 1864:154
 Strait of Juan de Fuca, Washington
Hippolyte esquimaltiana
Heptacarpus taylori (Stimpson, 1857)
Hippolyte taylori Stimpson, 1857:500
 Monterey, California
Heptacarpus tenuissimus Holmes, 1900:203
 Monterey, California
Hippolyte gracilis Stimpson, 1864 [not Lilljeborg, 1850]
Hippolyte amabilis
Heptacarpus tridens (Rathbun, 1902)
Spirontocaris tridens Rathbun, 1902a:896
 Admiralty Inlet to Puget Sound, Washington;
 48°12'00"N, 122°49'00"W; 73 meters
Heptacarpus yaldwyni Wicksten, 1984:241
 South of Puerto Angel [apparently not "Off Salina Cruz"], Oaxaca, Mexico; 14°47'N, 96°19'W - 14°50.5'N, 96°13'W; 1052–1145 meters
Hetairocaris De Man, 1890:120
 Type species: *Hetairocaris orientalis*
 = ***Alope***
Hetairocaris orientalis; See ***Alope orientalis***
Hetairus Bate, 1888:577, 610
 Type species: *Alpheus Polaris*
 = ***Lebbeus***
Hetairus brandti; See ***Lebbeus brandti***
Hetairus brevipes; See ***Lebbeus brevipes***
Hetairus debilis Bate, 1888:615, pl. 109: fig. 4
 South of Halifax, Nova Scotia; 43°03'N, 63°39'W; 155 meters
 = ***Lebbeus polaris***
Hetairus fasciata; See ***Lebbeus fasciatus***
Hetairus grandimana; See ***Lebbeus grandimana***
Hetairus heterochaela; See ***Lebbeus heterochaela***
Hetairus japonicus; See *Hetairus unalaskensis japonicus*
Hetairus longidactyla; See ***Lebbeus longidactyla***
Hetairus longipes; See ***Lebbeus longipes***
Hetairus ochotensis; See *Hetairus unalaskensis ochotensis*
Hetairus schrencki; See ***Lebbeus schrencki***
Hetairus spinirostris; See ***Lebbeus spinirostris***
Hetairus tenuis Bate, 1888:613, pl. 109: fig. 3
 South of Halifax, Nova Scotia; 43°03'N, 63°39'W; 155 meters
 = ***Lebbeus polaris***
Hetairus unalaskensis japonicus Kobjakova, 1936:202 (*japonia*), 204, 210, 218, 222, pl. 2: fig. 14
 = ***Lebbeus unalaskensis***
Hetairus unalaskensis ochotensis Kobjakova, 1936:191, 194, 210, 218, 222, pl. 2: fig. 15
 = ***Lebbeus unalaskensis***
Hetairus ushakovi; See ***Lebbeus ushakovi***
Hetairus zebra Makarov, 1935:319, fig. 1
 Ostrov Bering, off Mys Olyutorskiy, and "Awatscha-Golf" near "Bucht Betschewinskaja"; littoral to 32 meters
 = ***Lebbeus fasciatus***
Hippocarycyphus Coutière, 1907
 Type species: *Hippocarycyphus acutus*
Hippocarycyphus acutus (Coutière, 1905)
Carycyphus acutus Coutière, 1905:21. fig. 7
 Near the Azores
 Hippolytid larva
Hippocarycyphus bigibbosus (Coutière, 1905)
Carycyphus bigibbosus Coutière, 1905:26, fig. 8
 Near the Azores
 Hippolytid larva
Hippolite armata Owen, 1839:88
 = ***Lebbeus groenlandicus***
Hippolite cornuta Owen, 1839:89
 = ***Lebbeus groenlandicus***
Hippolysmata Stimpson, 1860:26
 Type species: *Hippolysmata vittata*
 = ***Lysmata***
Hippolysmata acicula Rathbun, 1906:912, pl. 24: fig. 6
 Puolo Point, Kauai, Hawaii; S.51°30'E 4.9'
 = ***Lysmata ternatensis***
Hippolysmata amboinensis; See *Hippolysmata vittata* var. *amboinensis*
 = ***Lysmata amboinensis***
Hippolysmata californica; See ***Lysmata californica***
Hippolysmata dentata Kemp, 1914:117, pl. 6: fig. 5
 Off mouth of Irrawaddy River, Burma; 15°20'N, 94°55'E; 37 meters
 = ***Lysmata kempii***
Hippolysmata durbanensis Stebbing, 1921a:20, pl. 5
 Durban Bay, South Africa
 = ***Lysmata vittata***
Hippolysmata ensirostris; See ***Exhippolysmata ensirostris***
Hippolysmata (Exhippolysmata) ensirostris var. *punctata*;
 See ***Exhippolysmata ensirostris punctata***
Hippolysmata grabhami; See ***Lysmata grabhami***
Hippolysmata intermedia; See ***Lysmata intermedia***
Hippolysmata marleyi Stebbing, 1919:120
 Sezela, Natal, South Africa
 = ***Lysmata kuekenthalii***
Hippolysmata moorei; See ***Lysmata moorei***

- Hippolysmata (Hippolysmata) morelandi* Yaldwyn, 1971:90; See *Lysmata morelandi*
- Hippolysmata multiscissa*; See *Lysmata multiscissa*
- Hippolysmata (Exhippolysmata) oplophoroides*; See *Exhippolysmata oplophoroides*
- Hippolysmata paucidens* Rathbun, 1906:913, pl. 24: fig. 4
Waikiki Beach, Oahu, Hawaii
= *Lysmata trisetacea*
- Hippolysmata Porteri*; See *Lysmata porteri*
- Hippolysmata punctata*; See *Exhippolysmata ensirostris punctata*
- Hippolysmata rhizophorae*; See *Merguia rhizophorae*
- Hippolysmata subtilis*; See *Hippolysmata vittata subtilis*
= *Lysmata vittata*
- Hippolysmata vittata*; See *Lysmata vittata*
- Hippolysmata vittata* var. *amboinensis*; See *Lysmata amboinensis*
- Hippolysmata vittata subtilis* Thallwitz, 1891b:22
Cebu, Philippines
= *Lysmata vittata*
- **Hippolyte* Leach, 1814:431
Type species: *Hippolyte Varians*
Nectoceras
Virbius
Bellidia
- Hippolyte acuminatus* Dana, 1852a:24
North Atlantic Ocean with Sargassum
= *Hippolyte coerulescens*
- Hippolyte acuta* (Stimpson, 1860)
Virbius acutus Stimpson, 1860:35
Ryukyu Islands; on weed-covered littoral rocks
?= *Hippolyte ventricosa*
- Hippolyte affinis* Owen, 1939:90, pl. 27: fig. 4
Monterey, California
Species inquirenda (see Holthuis, 1947:21)
- Hippolyte amabilis* Lenz, 1901:432
Bare Island, San Juan County, Washington; 48°43.8'N,
123°0.7'W.
= *Heptacarpus tenuissimus*
- Hippolyte Amazo* Pfeffer, 1886:46
= *Lebbeus polaris*
- Hippolyte amboinensis*; See *Thor amboinensis*
- Hippolyte Andrewsii* Kinahan, 1857 [reference unascertained]
Ireland
= *Eualus pusiolus*
- Hippolyte antarctica*; See *Chorismus antarcticus*
- Hippolyte armoricana*; See *Hippolyte longirostris armoricana*
- Hippolyte Barleei* Bate, 1852
Shetland Islands
= *Eualus pusiolus*
- Hippolyte belcheri* Bell, 1855:402
Arctic
= *Eualus gaimardii*
- Hippolyte bermudensis*; See *Hippolyte pleuracantha bermudensis*
- ?= *Hippolyte zostericola*
- Hippolyte bidentatus* Bate, 1888:591
Atlantic Ocean; on gulf-weed and surface among gulf-weed; 32°07'–35°29'N, 50°53'–52°32'; surface among gulf weed
= *Hippolyte coerulescens*
- Hippolyte bifidirostris* (Miers, 1876)
Virbius bifidirostris Miers, 1876:81, pl. 2: fig. 1
New Zealand
- [*Hippolyte bispinosa* De Haan, 1844 = *Sicyonia bispinosa*]
- Hippolyte borealis* Ross, 1835:lxviii
= *Lebbeus polaris*
- Hippolyte brevirostris*; See *Heptacarpus brevirostris*
- Hippolyte Bunseni* Neumann, 1878:36 [accredited to Pagenstecher by Neumann]
Palma, Majorca
= *Thoralus cranchii*
- Hippolyte californiensis* Holmes, 1895:576
Bodega Bay, California
- Hippolyte camtschatica*; See *Heptacarpus camtschaticus*
- Hippolyte capensis* (Lenz and Strunck, 1914)
Virbius capensis Lenz and Strunck, 1914:319, pl. 20: figs. 1–4
Simons Bay, South Africa
- Hippolyte caradina* Holthuis, 1947:14, 54
Replacement name for *Caradina tenuirostris* Bate, 1863 [not *Hippolyte tenuirostris* H. Milne Edwards, 1837]
Caradina tenuirostris Bate, 1863
- Hippolyte Carneus* P. Roux, 1831:28 [Risso identification]
= *Ligur ensiferus*
- Hippolyte clarki* Chace, 1951:37, fig. 1f–p
Friday Harbor, Washington; in eel grass
- Hippolyte coerulescens* (Fabricius, 1775)
Astacus coerulescens Fabricius, 1775:414
“Pelago inter Tropicos”
Palaemon pelasgicus
Hippolyte tenuirostris
Hippolyte acuminatus
Hippolyte bidentatus
Hippolyte Martiali
- Hippolyte commensalis* Kemp, 1925:331
Coral reef off Reed Point, Nancowry Island, Nicobar Islands
- Hippolyte consobrinus* A. Milne-Edwards, 1891:47, pl. 5: fig. 4
Bahia Orange, Isla Hoste, Chile
= *Nauticaris magellanica*
- [*Hippolyte costata* Leuckart, 1847 = *Pontophilus*, sp.?]
Hippolyte Cranchii; See *Thoralus cranchii*