

## Family GNATHOPHYLLIDAE

Gnathophyllinae Dana, 1852, Proc. Acad. nat. Sci. Phila. 6: 16.

Hymenoceridae Ortmann, 1890, Zool. Jb. Syst. 5: 511.

Gnathophyllidae Ortmann, 1890, Zool. Jb. Syst. 5: 537.

Hymenocerinae Ortmann, 1896, Zool. Jb. Syst. 9: 424.

Drimoidae Ortmann, 1896, Zool. Jb. Syst. 9: 425.

The four genera of this family may be distinguished as follows:

1. The last two joints of the third maxilliped less than half as broad as the antepenultimate joint; the latter about as broad as the joint preceding it. Dactylus of second leg not serrate above; carpus and merus of that leg without anterior spines . . . . . 2
- The last two joints of the third maxilliped almost as broad as or broader than the antepenultimate joint; the latter distinctly broader than the joint preceding it. Dactylus of second leg serrate above; carpus and merus of that leg with strong spines on the anterior margin . . . . . 3
2. Exopod of third maxilliped shorter than endopod. Dactylus of last three legs biunguiculate, without tubercles on the lower margin. Outer antennular flagellum bifid . . . . . *Gnathophyllum*
- Exopod of third maxilliped much longer than endopod. Dactylus of last three legs ending in a simple claw, with blunt tubercles on the lower margin. Outer antennular flagellum simple . . . . . *Gnathophylloides*
3. Outer antennular flagellum normal in shape, thread-like. Chelae of second legs broad and flat, but not leaf-shaped. Last two joints of third maxilliped, though broad, not broader than antepenultimate joint. . . . . *Phyllognathia*
- Outer antennular flagellum deformed by the extreme broadening of the larger part of its joints to a broad, flat, leaf-shaped appendage. Chelae of second legs also leaf-shaped in that the lower border is produced to a large thin flap. Last two joints of third maxilliped distinctly broader than the antepenultimate joint. . . . . *Hymenocera*

**Gnathophyllum** Latreille, 1819 (fig. 51)

*Gnathophyllum* Latreille, 1819, Nouv. Dict. Hist. nat. (ed. 2) 30: 72. Type species, selected by H. Milne Edwards, 1837, Cuvier's Règne anim. (ed. 4, Discip. ed.) 18: pl. 52 fig. 2, : *Alpheus Elegans* Risso, 1816, Hist. nat. Crust. Nice: 92. Gender: neuter.

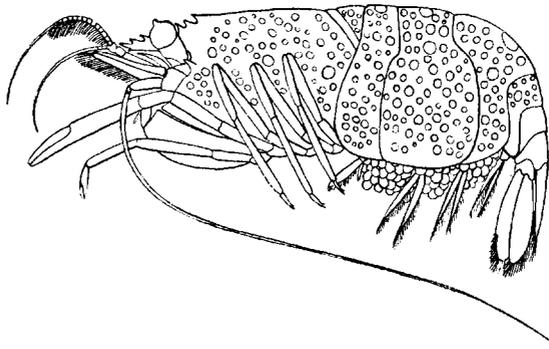


Fig. 51. *Gnathophyllum panamense* Faxon. After Faxon, 1895.

*Gnathophyllum* Desmarest, 1823, Dict. Sci. nat. 28: 322, 323, 324. Emendation of *Gnatophyllum* Latreille, 1819.

*Drimo* Risso, 1826, Hist. nat. Europ. mérid. 5: 70. Type species, by monotypy: *Alpheus Elegans* Risso, 1816, Hist. nat. Crust. Nice: 92. Gender: masculine.

*Gnatophilum* Cocco, 1832, Effem. Sci. Lett. Sicilia 2: 204. Erroneous spelling of *Gnathophyllum* Latreille, 1819.

*Gnathophyllium* Burmeister, 1837, Handb. Naturgesch. 2: 565. Erroneous spelling of *Gnathophyllum* Latreille, 1819.

*Gnathophillum* H. Milne Edwards, 1837, Cuvier's Règne anim. (ed. 4, Discip. ed.): explan. pl. 52. Erroneous spelling of *Gnathophyllum* Latreille, 1819.

*Gnathoptylus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: xxxv. Erroneous spelling of *Gnathophyllum* Latreille, 1819.

*Gnathophylum* Bate, 1888, Rep. Voy. Challenger, Zool. 24: xxxvii. Erroneous spelling of *Gnathophyllum* Latreille, 1819.

*Gnathophyllum* Condorelli, 1899, Boll. Soc. Rom. Stud. Zool. 8: 39. Erroneous spelling of *Gnathophyllum* Latreille, 1819.

*Gnatophillum* Magri, 1923, Natural. Sicil. 24: 90. Erroneous spelling of *Gnathophyllum* Latreille, 1819.

*Gnathopyllum* Zariquiey Cenarro, 1935, Butll. Inst. Catal. Hist. nat. 35: 95. Erroneous spelling of *Gnathophyllum* Latreille, 1819.

**Gnathophylloides** Schmitt, 1933 (fig. 52)

*Gnathophylloides* Schmitt, 1933, Amer. Mus. Novit. 662: 5. Type species, by monotypy: *Gnathophylloides mineri* Schmitt, 1933, Amer. Mus. Novit. 662: 7. Gender: masculine.

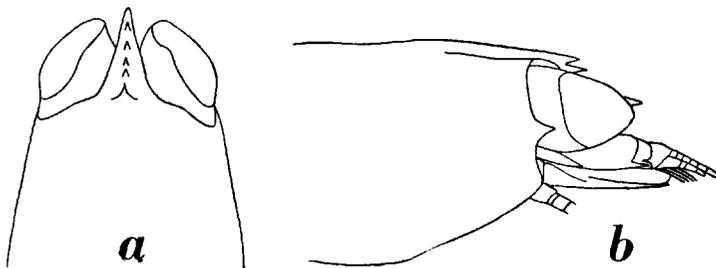


Fig. 52. *Gnathophylloides mineri* Schmitt. Anterior part of carapace: a, dorsal view; b, lateral view. Original.

**Phyllognathia** Borradaile, 1915 (fig. 53)

*Phyllognathia* Borradaile, 1915, Ann. Mag. nat. Hist. (8)15: 205, 206. Type species, by monotypy: *Hymenocera*(?) *ceratophthalma* Balss, 1913, Zool. Anz. 42: 236. Gender: feminine.

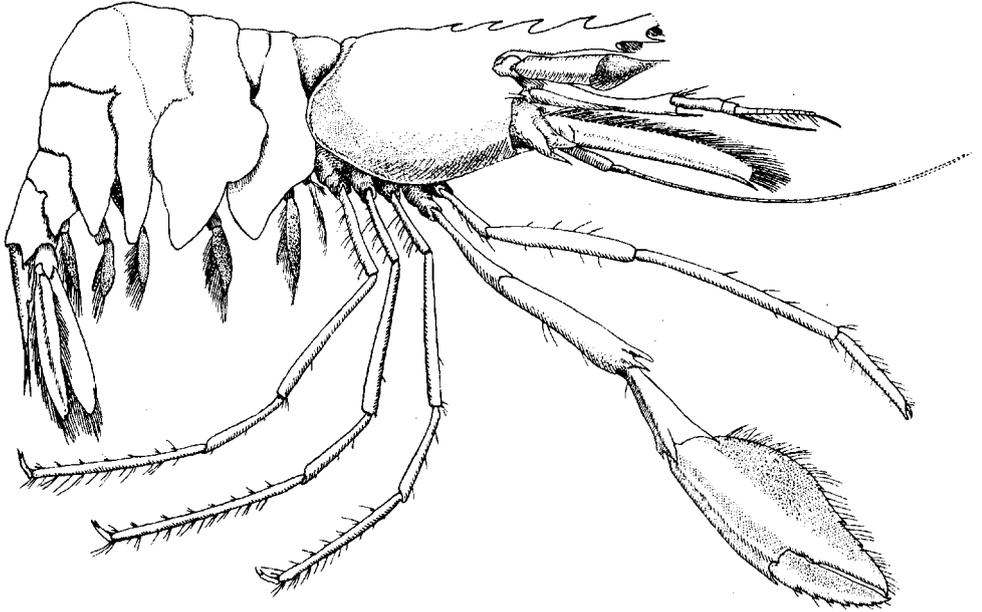


Fig. 53. *Phyllognathia ceratophthalma* (Balss). After Balss, 1914.

**Hymenocera** Latreille, 1819 (fig. 54)

*Hymenocera* Latreille, 1819, Nouv. Dict. Hist. nat. (ed. 2) 30: 71. Type species, designated under the plenary powers of the International Commission on Zoological Nomenclature: *Hymenocera picta* Dana, 1852, U. S. Explor. Exped. 13: 593. Gender: feminine.

*Nematophyllum* Bleeker, 1856, Reis Minahassa Moluksch. Archip. 2: 37. Type species, selected by Holthuis, 1952, Bull. zool. Nomencl. 6: 345, : *Hymenocera picta* Dana, 1852, U. S. Explor. Exped. 13: 593. Gender: neuter. Invalid junior homonym of *Nematophyllum* Milne Edwards & Haime, 1850, Brit. foss. Corals (1)lxxi (Coelenterata).

## Superfamily PSALIDOPODOIDA

Psalidopodoida Alcock, 1901, Descr. Catal. Indian Deep Sea Crust. Macr. Anom.: 56.

Psalidopodia Fowler, 1912, Ann. Rep. New Jersey State Mus. 1911: 557.

Psalidopoda Balls, 1927, Kükenthal & Krumbach, Handb. Zool. 3(1): 1001.

Only one family with one genus.

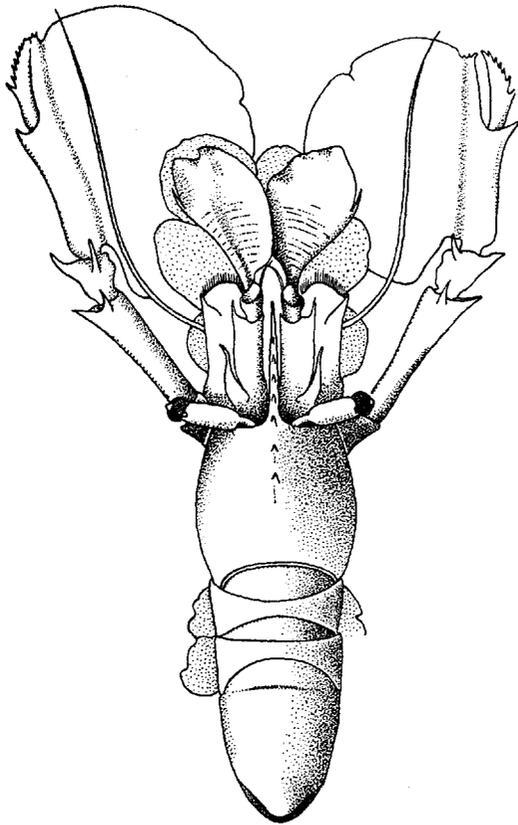


Fig. 54. *Hymenocera elegans* Heller. After Barnard, 1950.

Family PSALIDOPODIDAE Wood Mason & Alcock, 1892

Psalidopodidae Wood Mason & Alcock, 1892, Ann. Mag. nat. Hist. (6)9: 265.

**Psalidopus** Wood Mason & Alcock, 1892 (fig. 55)

*Psalidopus* Wood Mason & Alcock, 1892, Ann. Mag. nat. Hist. (6)9: 266.

Type species, by present selection: *Psalidopus Huxleyi* Wood Mason & Alcock, 1892, Ann. Mag. nat. Hist. (6)9: 273. Gender: masculine.

Superfamily ALPHEOIDA nov.

Three of the families contained in the present superfamily, viz., the Alpheidae, the Ogyrididae, and the Hippolytidae, were placed by Borradaile (1907, Ann. Mag. nat. Hist. (7)19: 467) and Balss (1927, Kükenthal & Krumbach, Handb. Zool. 3(1): 1002) in the superfamily Palaemonoidea.

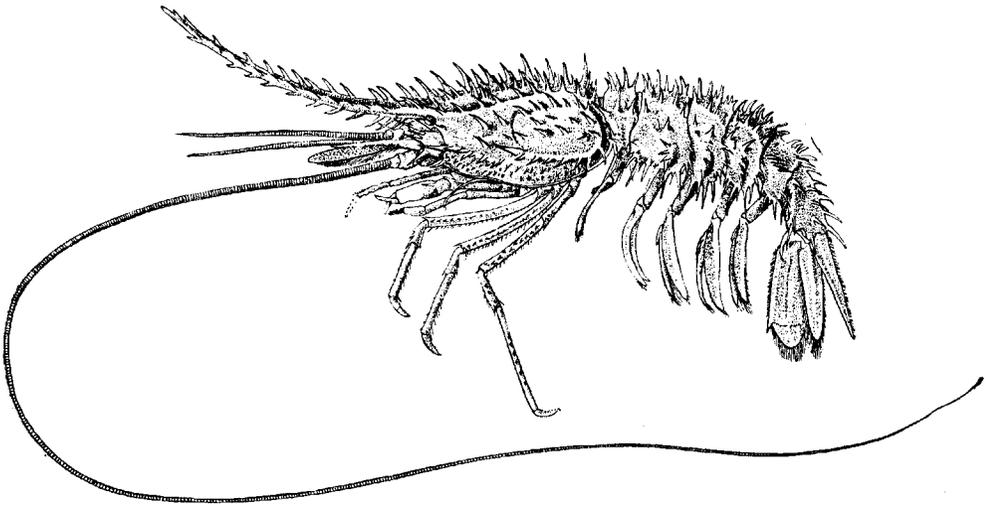


Fig. 55. *Psalidopus huxleyi* Wood Mason & Alcock. After Alcock & McArdle, 1901.

However, the Alpheoidea differ from the Palaemonoidea s.s. in several characters, which in my opinion justify their separation as an independent superfamily. The Palaemonoidea always have the second leg more robust than the first and the carpus of that leg undivided; in the Alpheoidea the second leg practically always is slender with the carpus subdivided, while the first leg often is very heavy, being more robust than the second. In my opinion the Processidae are so closely related to the Hippolytidae, especially to the *Lysmata* section of that family, that they cannot be placed in a different superfamily. Both Borradaile and Balss assigned the Processidae to the superfamily Crangonoidea, but this certainly is incorrect.

#### Family ALPHEIDAE

- Alphidia Rafinesque, 1815, Anal. Nature: 98.  
 Alpheens H. Milne Edwards, 1837, Hist. nat. Crust. 2: 339, 345.  
 Alpheidae Randall, 1839, Journ. Acad. nat. Sci. Phila. 8: 140.  
 Alpheadae Bell, 1846-1851, Hist. Brit. stalk-eyed Crust.: 270.  
 Alpheidea De Haan, 1849, Fauna Japon., Crust. (6): 168, 173.  
 Alpheana Gibbes, 1850, Proc. Amer. Ass. Adv. Sci. 3: 196.  
 Alpheinae Dana, 1852, Proc. Acad. nat. Sci. Phila. 6: 16, 21.  
 Alpheidi Acloque, 1899, Faune de France, Thysan.-Protoz.: 155, 161.  
 Crangonidae Rathbun, 1904, Proc. biol. Soc. Wash. 17: 172.  
 Autonomaeidae Borradaile, 1907, Ann. Mag. nat. Hist. (7)19: 467, 472.  
 Alphaeidae Balss, 1915, Denkschr. Akad. Wiss. Wien 91: 20.  
 Synalpheidae Verrill, 1922, Trans. Conn. Acad. Arts Sci. 26: 35.  
 Synalpheidae Verrill, 1922, Trans. Conn. Acad. Arts Sci. 26: 60.  
 Alpheuidae Yu, 1936, Chin. Journ. Zool. 2: 91.  
 Crangoninae Ward, 1942, Mauritius Inst. Bull. 2(2): 58.

The genera of the present family may be distinguished with the help of the following key, which is based in part on an unpublished key prepared by Dr. Fenner A. Chace, Jr., curator of the Division of Marine Invertebrates, U. S. National Museum, Washington, D. C., that Dr. Chace with his usual kindness placed at my disposal.

- 1. Thoracic and abdominal pleurae laid out horizontally, much broadened. Pleurae of first abdominal segment covering a large part of the carapace. . . . . *Pterocaris*
- Thoracic and abdominal pleurae normal, not laid out horizontally and not unusually broadened. Pleurae of first abdominal segment covering at most a very small part of the posterolateral corners of the carapace. . . . . 2
- 2. Epipods present on at least the first two pairs of pereopods. . . . . 3
- No epipods on the pereopods. . . . . 17
- 3. Sixth abdominal segment with a movable plate articulated at the posterolateral angle . . . . . 4
- No articulated plate at the posterolateral angle of the sixth abdominal segment. . . . . 11
- 4. Rostrum prominent . . . . . 5
- Rostrum absent or indistinct. . . . . 10
- 5. Rostrum slender, pointed in lateral view.. . . . 6
- Rostrum with a broad vertical lamella ventrally, tip of rostrum broadly rounded. . . . . 9
- 6. An arthrobranch present at the base of the third maxilliped, or at that of the first pereopod . . . . . 7
- Both third maxilliped and first pereopod without arthrobranch . . . . . 8
- 7. Large chela carried extended. Posterior margin of telson straight or slightly arcuate. *Alpheopsis*
- Large chela carried flexed. Posterior margin of telson ending in an acute triangular median tooth . . . . . *Nealpheopsis*
- 8. Epipods on first three pairs of pereopods. Carpus of second legs 5-jointed . . . . .
- Epipods on the first two pairs of pereopods only. Carpus of second legs 4-jointed. *Athanas*
- 9. Dactyli of last three pairs of pereopods simple. Eyes almost completely hidden from dorsal view . . . . . *Arete*
- Dactyli of last three pereopods biunguiculate. Eyes largely free and uncovered. *Athanopsis*
- 10. Telson broad, distally rounded . . . . . *Areteopsis*
- Telson slender, terminating distally in an acute median triangular point. *Betaeus*
- 11. Movable finger of larger chela without a large molar-shaped tooth. Eyes always visible in anterior view . . . . . 12
- Movable finger of larger chela with a large molar-shaped tooth that fits into a cavity in the fixed finger. Eyes often entirely covered by the carapace, even anteriorly . . . . . 14
- 12. Eyes dorsally fully exposed. Rostrum, if present, not reaching the end of the eyestalks . . . . . *Parabetaeus*
- Eyes in dorsal view completely or almost completely covered by the carapace. Rostrum present, reaching far beyond the eyes. . . . . 13
- 13. Arthrobranch present on third maxilliped . . . . . *Salmoneus*
- No arthrobranch on third maxilliped . . . . . *Metabetaeus*
- 14. Carapace concealing the eyes from dorsal but not from anterior view. First pair of pereopods folded beneath the body. . . . . *Amphibetaeus*
- Carapace more or less completely covering the eyes, anteriorly as well as dorsally. First pair of legs not folded beneath the body. . . . . 15

15. Body strongly compressed. Abdominal segments with a dorsal carina. Carapace with a median dorsal carina over its entire length . . . . . *Racilius*  
 — Body not strongly compressed. Abdominal segments not carinated. Carina on carapace, if present, not extending over the full length of the carapace. . . . . 16
16. Cardiac notch present in the posterior margin of the carapace. Exopods of uropods with a transverse suture . . . . . *Alpheus*  
 — Cardiac notch absent. Exopods of uropods without transverse suture. . . . . *Thunor*
17. Movable finger of larger chela without a molar-shaped tooth. Dactylus of last three pereopods simple. Chela of second legs very long with unusually short fingers. . . . . *Batella*  
 — Movable finger of larger chela with a molar-shaped tooth that fits in a socket in the fixed finger. Dactylus of last three pereopods bi- or trianguiculate. Chela of second legs normal. . . . . 18
18. Third maxilliped with ischio-meral segment greatly expanded to form an operculum over the mouthparts. . . . . *Pomagnathus*  
 — Third maxilliped normal in shape . . . . . *Synalpheus*

**Pterocaris** Heller, 1862 (fig. 56)

*Pterocaris* Heller, 1862, S. B. Akad. Wiss. Wien 45(1):395. Type species, by monotypy: *Pterocaris typica* Heller, 1862, S. B. Akad. Wiss. Wien 45(1):398. Gender: feminine.

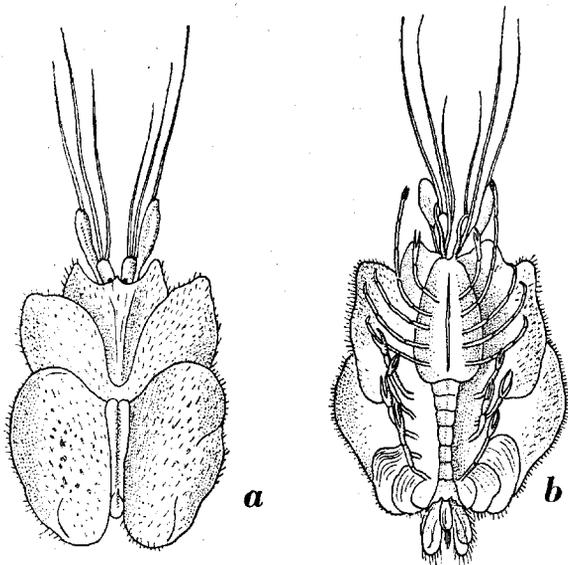


Fig. 56. *Pterocaris typica* Heller. a, dorsal view; b, ventral view. After Heller, 1862.

**Alpheopsis** Coutière, 1897 (fig. 57a, b)

*Alpheopsis* Coutière, 1897, Bull. Mus. Hist. nat. Paris 2:382. Type species, by present selection: *Betaeus trispinosus* Stimpson, 1860, Proc. Acad. nat. Sci. Phila. 1860:32. Gender: masculine.

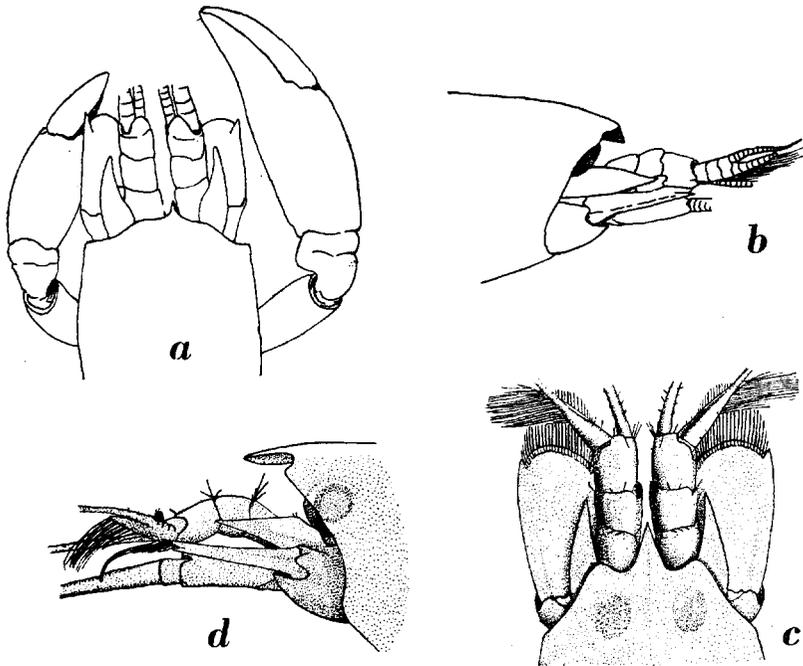


Fig. 57a, b. *Alpheopsis equalis truncatus* Coutière. Anterior part of body: a, dorsal view; b, lateral view. After Coutière, 1905.

Fig. 57c, d. *Neoalpheopsis hiatti* Banner. Anterior part of body: c, dorsal view; d, lateral view. After Banner, 1953.

**Neoalpheopsis** Banner, 1953 (fig. 57c, d)

*Neoalpheopsis* Banner, 1953, Pacific Sci. 7: 10, 20. Type species, by original designation: *Neoalpheopsis hiatti* Banner, 1953, Pacific Sci. 7: 21. Gender: masculine.

**Athanas** Leach, 1814 (fig. 58)

*Athanas* Leach, 1814, Edinb. Encycl. 7(2): 432. Type species, by monotypy: *Palaemon nitescens* Leach, 1814, Edinb. Encycl. 7(2): 401. Gender: masculine.

*Athanasus* H. Milne Edwards, 1837, Hist. nat. Crust. 2: 352. Erroneous spelling of *Athanas* Leach, 1814.

*Athanas* d'Urban, 1884, Zoologist, London (3)8: 152. Erroneous spelling of *Athanas* Leach, 1814.

*Athanus* Hale, 1927, Crust. S. Aust. 1: 47. Erroneous spelling of *Athanas* Leach, 1814.

*Athas* Bulgurkov, 1938, Arb. biol. Meeressta. Varna 7: 86. Erroneous spelling of *Athanas* Leach, 1814.

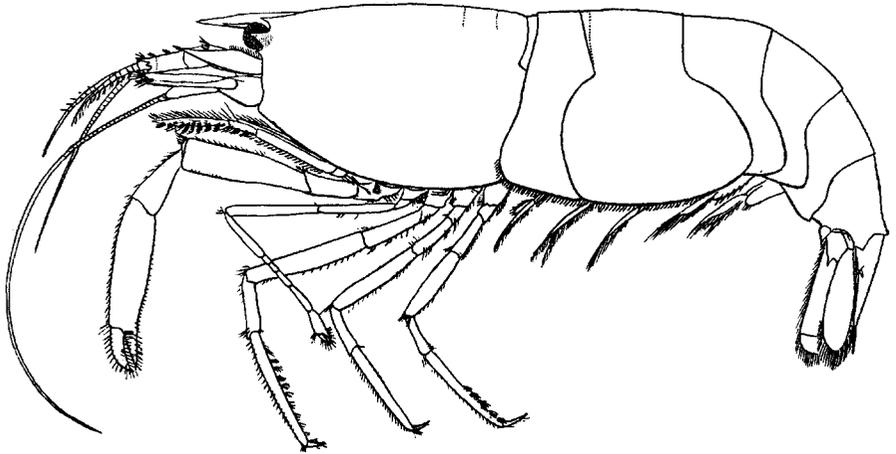


Fig. 58. *Athanas nitescens* (Leach). After Kemp, 1910.

**Arete** Stimpson, 1860 (fig. 59a, b)

*Arete* Stimpson, 1860, Proc. Acad. nat. Sci. Phila. 1860: 32. Type species, by monotypy: *Arete dorsalis* Stimpson, 1860, Proc. Acad. nat. Sci. Phila. 1860: 32. Gender: feminine.

**Athanopsis** Coutière, 1897 (fig. 59c, d)

*Athanopsis* Coutière, 1897, Bull. Mus. Hist. nat. Paris 3: 301. Type species, by monotypy: *Athanopsis platyrhynchus* Coutière, 1897, Bull. Mus. Hist. nat. Paris 3: 301. Gender: masculine.

**Aretopsis** De Man, 1910 (fig. 59e, f)

*Aretopsis* De Man, 1910, Tijdschr. Nederl. dierk. Ver. (2)11: 310. Type species, by monotypy: *Aretopsis amabilis* De Man, 1910, Tijdschr. Nederl. dierk. Ver. (2)11: 311. Gender: masculine.

Fig. 59a, b. *Arete dorsalis* Stimpson. Anterior part of body: a, dorsal view; b, lateral view. After Coutière, 1905.

Fig. 59c, d. *Athanopsis platyrhynchus* Coutière. Rostrum: c, dorsal view; d, lateral view. After Coutière, 1899.

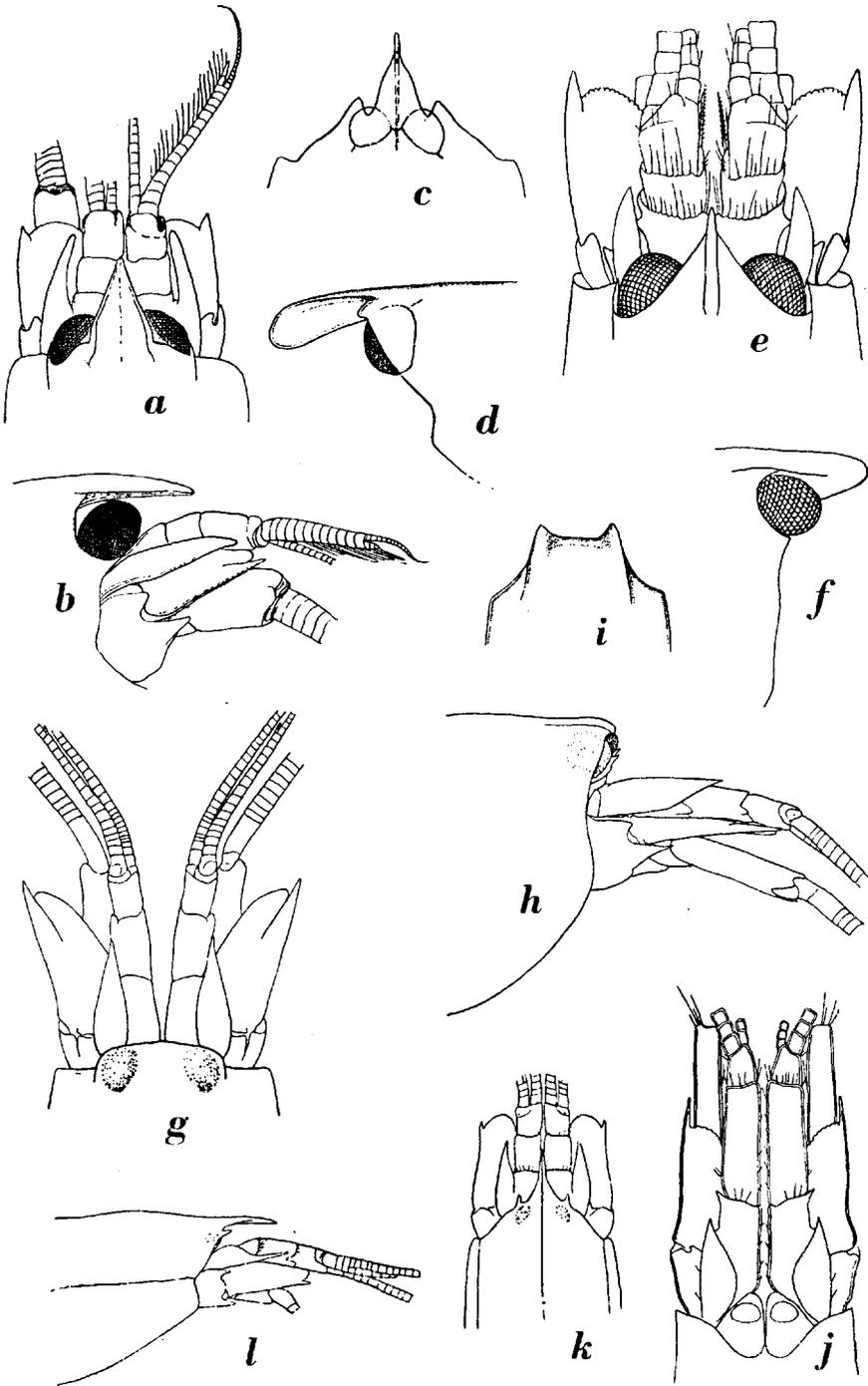
Fig. 59e, f. *Aretopsis amabilis* De Man. e, anterior part of body in dorsal view; f, rostrum in lateral view. After De Man, 1915.

Fig. 59g, h. *Betaeus truncatus* Dana. Anterior part of body: g, dorsal view; h, lateral view. After Holthuis, 1952c.

Fig. 59i. *Parabetaeus culliereti* Coutière. Rostrum in dorsal view. After Coutière, 1899.

Fig. 59j. *Automate anacanthopus* De Man. Anterior part of body in dorsal view. After De Man, 1915.

Fig. 59k, l. *Salmoneus jarli* (Holthuis). Anterior part of body: k, dorsal view; l, lateral view. After Holthuis, 1951a.



**Betaeus** Dana, 1852 (fig. 59g, h)

*Betaeus* Dana, 1852, Proc. Acad. nat. Sci. Phila. 6: 16. Type species, selected by Fowler, 1912, Ann. Rep. New Jersey State Mus. 1911: 558. : *Betaeus truncatus* Dana, 1852, Proc. Acad. nat. Sci. Phila. 6: 23. Gender: masculine.

**Parabetaeus** Coutière, 1897 (fig. 59i)

*Parabetaeus* Coutière, 1897, Bull. Mus. Hist. nat. Paris 2: 383. Type species, by monotypy: *Parabetaeus Culliereti* Coutière, 1897, Bull. Mus. Hist. nat. Paris 2: 383. Gender: masculine.

**Automate** De Man, 1888 (fig. 59j)

*Arethusa* De Man, 1888, Arch. Naturgesch. 53(1): 216. No type species indicated. Nomen nudum.

*Automate* De Man, 1888, Arch. Naturgesch. 53(1): 529. Type species, by monotypy: *Automate dolichognatha* De Man, 1888, Arch. Naturgesch. 53(1): 529. Gender: feminine.

*Automata* Anonymus, 1888, Zool. Anz. 11: 461. Erroneous spelling of *Automate* De Man, 1888.

**Salmoneus** Holthuis, 1955 (fig. 59k, l)

*Jousseamea* Coutière, 1897, Bull. Mus. Hist. nat. Paris 2: 381. Type species, selected by Holthuis, 1955, Bull. zool. Nomencl. 11 (in press): *Jousseamea serratidigitus* Coutière, 1897, Bull. Mus. Hist. nat. Paris 2: 382. Gender: feminine. Invalid junior homonym of *Jousseaumia* Sacco, 1894, Moll. terz. Piemonte Liguria 15: 8 (Mollusca).

*Salmoneus* Holthuis, 1955, Bull. zool. Nomencl. 11 (in press). Substitute name for *Jousscaumea* Coutière, 1897. Gender: masculine.

**Metabetaeus** Borradaile, 1899 (fig. 60a)

*Metabetaeus* Borradaile, 1899, Proc. zool. Soc. Lond. 1898: 1014. Type species, by monotypy: *Betaeus minutus* Whitelegge, 1897, Mem. Aust. Mus. 3: 147. Gender: masculine.

**Amphibetaeus** Coutière, 1897 (fig. 60b, c)

*Amphibetaeus* Coutière, 1897, Bull. Mus. Hist. nat. Paris 2: 384. Type species, by monotypy: *Betaeus Jousseamei* Coutière, 1896, Bull. Mus. Hist. nat. Paris 2: 236. Gender: masculine.

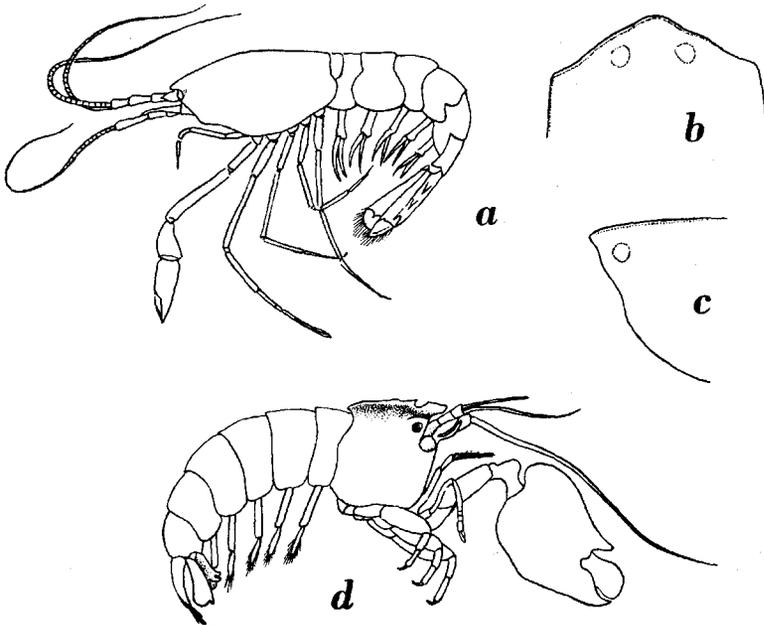


Fig. 60a. *Metabetaeus minutus* (Whitelegge). After Whitelegge, 1897.

Fig. 60b, c. *Amphibetaeus jousseaumei* Coutière. Rostrum: b, dorsal view; c, lateral view. After Coutière, 1899.

Fig. 60d. *Racilius compressus* Paulson. After Paulson, 1875.

**Racilius** Paulson, 1875 (fig. 60d)

*Racilius* Paulson, 1875, Issljed. Rakoobr. Krasn. Morja (Stud. Crust. Red Sea): 107. Type species, by monotypy: *Racilius compressus* Paulson, 1875, Issljed. Rakoobr. Krasn. Morja (Stud. Crust. Red Sea): 107. Gender: masculine.

**Alpheus** Fabricius, 1798 (fig. 61)

*Crangon* Weber, 1795, Nomencl. entomol.: 94. Type species, by monotypy: *Astacus Malabaricus* Fabricius, 1775, Syst. Entomol.: 415. Gender: feminine.

*Alpheus* Fabricius, 1798, Suppl. Ent. Syst.: 380, 404. Type species, selected by Latreille, 1810, Consid. gén. Crust. Arachn. Ins.: 422.; *Alpheus avarus* Fabricius, 1798, Suppl. Ent. Syst.: 404. Gender: masculine. Junior homonym of *Alpheus* Weber, 1795, Nomencl. entomol.: 91 (Crustacea Brachyura).

*Alphaeus* Bosc, 1802, Hist. nat. Crust. 1: 18. Erroneous spelling of *Alpheus* Fabricius, 1798.

*Cryptophthalmus* Rafinesque, 1814, Préc. Découv. somiol.: 23. Type species, by monotypy: *Cryptophthalmus ruber* Rafinesque, 1814, Préc. Découv. somiol.: 23 (= *Cancer glaber* Olivii, 1792, Zool. Adriat.: 51). Gender: masculine.

*Autonomaea* Risso, 1816, Hist. nat. Crust. Env. Nice: 166. Type species, by monotypy: *Autonomaea Olivii* Risso, 1816, Hist. nat. Crust. Env. Nice: 166 (= *Cancer glaber* Olivii, 1792, Zool. Adriat.: 51). Gender: feminine.

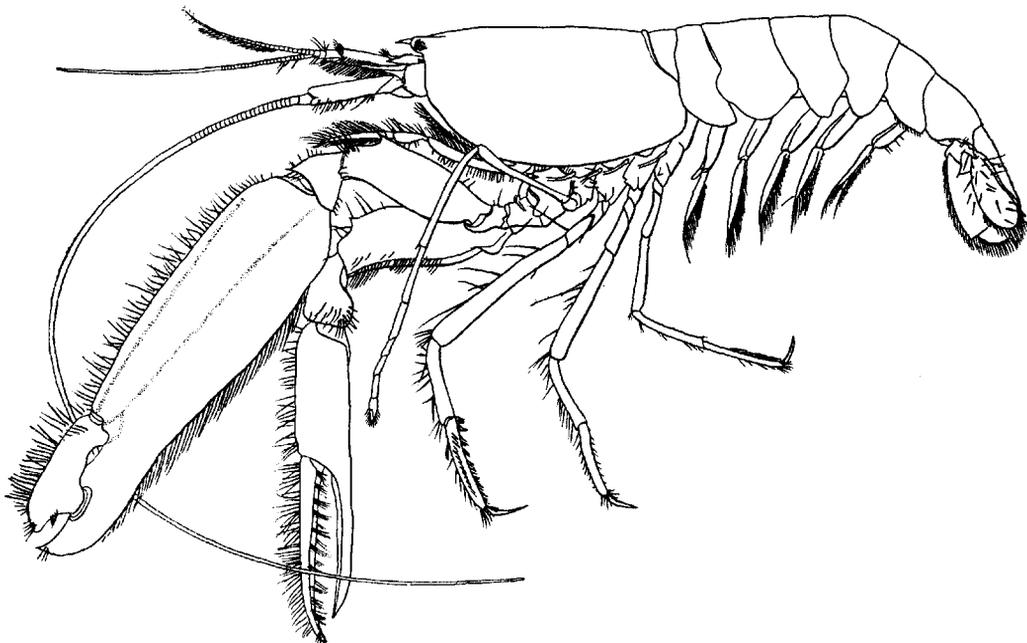


Fig. 61. *Alpheus glaber* (Olivii). After Kemp, 1910.

*Autonomea* Desmarest, 1823, Dict. Sci. nat. 28: 326, 421. Erroneous spelling of *Autonomaea* Risso, 1816.

*Cryptophthalmus* P. Roux, 1831, Mém. Class. Crust. Salic.: 18. Erroneous spelling of *Cryptophthalmus* Rafinesque, 1814.

*Cryptophthalmus* P. Roux, 1831, Mém. Class. Crust. Salic.: 18. Erroneous spelling of *Cryptophthalmus* Rafinesque, 1814.

*Asphalius* P. Roux, 1831, Mém. Class. Crust. Salic.: 22. Type species, by monotypy: *Palaemon brevirostris* Olivier, 1811, Encycl. méthod. Hist. nat. 8: 664. Gender masculine.

*Alphheus* P. Roux, 1831, Mém. Class. Crust. Salic.: 26. Erroneous spelling of *Alpheus* Fabricius, 1798.

- Cryptophthalmus* Westwood, 1835, in Hailstone, Mag. nat. Hist. 8: 274. Erroneous spelling of *Cryptophthalmus* Rafinesque, 1814.
- Dienecia* Westwood, 1835, Mag. nat. Hist. 8: 552. Type species, by monotypy: *Hippolyte? rubra* Hailstone, 1835, Mag. nat. Hist. 8: 272 (= *Hippolyte macrocheles* Hailstone, 1835, Mag. nat. Hist. 8: 395). Gender: feminine.
- Phleusa* Nardo, 1847, Sinon. modern. Spec. Lag. Golfo Veneto: 6. Type species, by monotypy: *Phleusa cynea* Nardo, 1847, Sinon. modern. Spec. Lag. Golfo Veneto: 6 (= *Cancer glaber* Olivi, 1792, Zool. Adriat.: 51). Gender: feminine.
- Halopsyche* De Saussure, 1857, Rev. Mag. Zool. (2)9: 100. Type species, by monotypy: *Halopsyche lutaria* De Saussure, 1857, Rev. Mag. Zool. (2)9: 100. (= *Alpheus heterochaelis* Say, 1818, Journ. Acad. nat. Sci. Phila. 1: 243). Gender: feminine.
- Automea* Nardo, 1869, Mem. Ist. Venet. Sci. Lett. Art. 14: 21, 45. Erroneous spelling of *Autonomea* Risso, 1816.
- Alpheoides* Paulson, 1875, Issljed. Rakoobr. Krasn. Morja (Stud. Crust. Red Sea): 105. Type species, by present selection: *Alpheus insignis* Heller, 1861, Verh. zool.-bot. Ges. Wien 11: 26. Gender: masculine.
- Automea* Bate, 1878, Journ. Roy. Inst. Cornwall 5(19): 396. Erroneous spelling of *Autonomea* Risso, 1816.
- Antonomea* Kingsley, 1880, Proc. Acad. nat. Sci. Phila. 1879: 422. Erroneous spelling of *Autonomea* Risso, 1816.
- Alpheodes* Sowinsky, 1882, Zapiski Kiev. Obshch. 6: 220, 225, 226, 244. Erroneous spelling of *Alpheoides* Paulson, 1875.
- Paralpheus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 567. Type species, by monotypy: *Palaemon diversimanus* Olivier, 1811, Encycl. method. Hist. nat. 8: 663. Gender: masculine.
- Metalpheus* Coutière, 1908, Bull. Soc. philom. Paris (9)10: 213. Type species is not named in original publication, nor is any species assigned to the genus by later authors. Genus provisionally identified by Coutière, 1908, with *Alpheus* Fabricius, 1798. Gender: masculine.
- Criptophtalmus* Magri, 1911, Atti Accad. gioen. Sci. nat. Catania (5)4(14): 27. Erroneous spelling of *Cryptophthalmus* Rafinesque, 1814.
- Cragon* Hilton, 1916, Journ. Entom. Zool. Pomona Coll. 8: 67. Erroneous spelling of *Crangon* Weber, 1795.
- Alphous* Torralbas, 1917, An. Acad. Ci. méd. fis. nat. Habana 53: 612. Erroneous spelling of *Alpheus* Fabricius, 1798.
- Alphens* Miranda y Rivera, 1921, Bol. Pescas Madrid 6: 183. Erroneous spelling of *Alpheus* Fabricius, 1798.

*Crangon* Yu, 1935, Chin. Journ. Zool. 1: 57, 60, 61. Erroneous spelling of *Crangon* Weber, 1795.

**Thunor** Armstrong, 1949 (fig. 62a)

*Thunor* Armstrong, 1949, Amer. Mus. Novit. 1410: 12. Type species, by monotypy: *Crangon rathbunae* Schmitt, 1924, Univ. Iowa Stud. nat. Hist. 10(4): 74. Gender: masculine.

**Batella** nom. nov. (fig. 62b)

*Cheirothrix* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 532. Type species, by monotypy: *Cheirothrix parvimanus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 533. Gender: feminine. Invalid junior homonym of *Cheirothrix* Pictet & Humbert, 1866, Poissons foss. Liban.: 51 (Pisces).

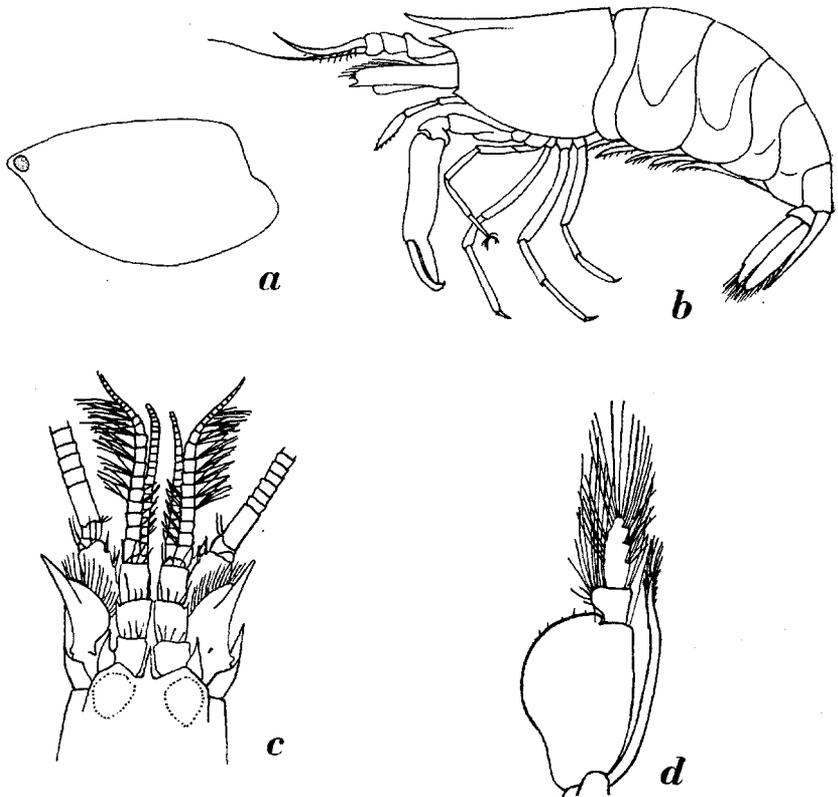


Fig. 62a, *Thunor rathbunae* (Schmitt). Carapace. After Armstrong, 1949.

Fig. 62b, *Batella parvimanus* (Bate). After Bate, 1888.

Fig. 62c, d, *Pomagnathus corallinus* Chace. c, anterior part of body in dorsal view; d, third maxilliped. After Chace, 1937.

**Pomagnathus** Chace, 1937 (fig. 62c, d)

*Pomagnathus* Chace, 1937, Zoologica New York 22: 124. Type species, by monotypy: *Pomagnathus corallinus* Chace, 1937, Zoologica, New York, 22: 124. Gender: masculine.

**Synalpheus** Bate, 1888 (fig. 63)

*Homaralpheus* Bate, 1876, Proc. Roy. Soc. Lond. 24: 378. Nomen nudum.

*Homaralpheus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: lxxx, 539. Type species, by present selection: *Alpheus minus* Say, 1818, Journ. Acad. nat. Sci. Phila. 1: 245. Gender: masculine.

*Homaralpheus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 231. Erroneous spelling of *Homaralpheus* Bate, 1888.

*Synalpheus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 572. Type species, by monotypy: *Synalpheus falcatus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 574 (= *Alpheus Comatularum* Haswell, 1882, Proc. Linn. Soc. New S. Wales 6: 762). Gender: masculine.

*Alpheinus* Borradaile, 1899, Willey's Zool. Res. 4: 415. Type species, by monotypy: *Alpheinus tridens* Borradaile, 1899, Willey's Zool. Res. 4: 415. Gender: masculine.

*Sinalpheus* Porter, 1917, Bol. Mus. Nac. Chile 10: 98. Erroneous spelling of *Synalpheus* Bate, 1888.

Family OGYRIDIDAE

Ogyridae Hay & Shore, 1918, Bull. U. S. Bur. Fish. 35: 388.

The only genus contained in this family is:

**Ogyrides** Stebbing, 1914 (fig. 64)

*Ogyris* Stimpson, 1860, Proc. Acad. nat. Sci. Phila. 1860: 36. Type species, by monotypy: *Ogyris orientalis* Stimpson, 1860, Proc. Acad. nat. Sci. Phila. 1860: 36. Gender: feminine. Invalid junior homonym of *Ogyris* Westwood, 1851, in Doubleday & Westwood, Gen. diurn. Lep.: pl. 75 (Lepidoptera).

*Ogyrides* Stebbing, 1914, Ann. S. Afr. Mus. 15: 31. Substitute name for *Ogyris* Stimpson, 1860. Gender: masculine.

Family HIPPOLYTIDAE

Lysmatinae Dana, 1852, Proc. Acad. nat. Sci. Phila. 6: 16, 20.

Thorinae Kingsley, 1878, Bull. Essex Inst. 10: 64.

Hippolytidae Bate, 1888, Rep. Voy. Challenger, Zool. 24: xii, xli, 480, 503, 574, 576.

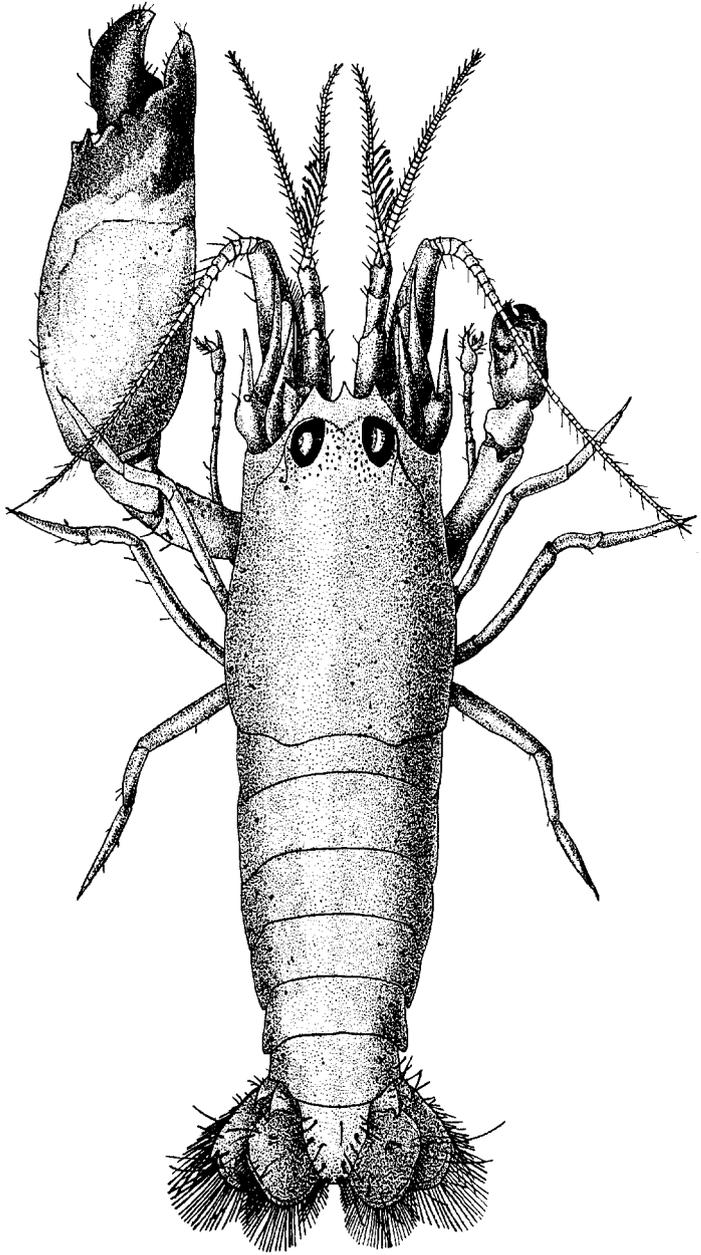


Fig. 63. *Synalpheus brevicarpus* (Herrick). After Brooks & Herrick, 1893.

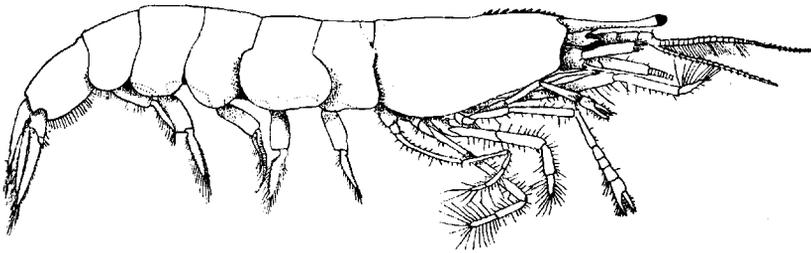


Fig. 64. *Ogyrides striaticauda* Kemp. After Kubo, 1951.

Latreutidae Ortmann, 1896, Zool. Jb. Syst. 9:415, 424.  
 Hippolytinae Perrier, 1899, Traité Zool. 3:1030.  
 Hippolyidae Yu, 1935, Chin. Journ. Zool. 1:43, 45, 47, 49, 51, 53.  
 Hyppolitidae Dohrn, 1950, Pubbl. Sta. zool. Napoli 22:257, 259, 261, 263, 265, 267, 269, 271.

The Hippolytid genera may be distinguished as follows:

- |   |                      |
|---|----------------------|
| 1. Arthrobranchs present at the bases of the first four pairs of pereopods.   | 2                    |
| — Bases of the pereopods without arthrobranchs.   | 5                    |
| 2. An articulated plate at the posterolateral angle of the sixth abdominal segment.                                 | 3                    |
| — No articulated plate at the posterolateral angle of the sixth abdominal segment.                                  | 4                    |
| 3. Mandible with incisor process  | <i>Saron</i>         |
| — Mandible without incisor process  | <i>Nauticaris</i>    |
| 4. Mandible with incisor process.   | <i>Merhippolyte</i>  |
| — Mandible without incisor process  | <i>Ligur</i>         |
| 5. Mandible with palp   | 6                    |
| — Mandible without palp   | 16                   |
| 6. Supraorbital spines absent from carapace   | 7                    |
| — Carapace with one or more supraorbital spines   | 12                   |
| 7. Mandibular palp composed of three segments   | 8                    |
| — Mandibular palp composed of one or two segments   | 10                   |
| 8. Mandible without incisor process   | <i>Barbouria</i>     |
| — Mandible with incisor process   | 9                    |
| 9. Carpus of second pereiopod two-jointed   | <i>Caridion</i>      |
| — Carpus of second pereiopod with 9 to 12 joints  | <i>Chorismus</i>     |
| 10. Mandibular palp consisting of only one segment. Carpus of second pereiopod with 4 joints                        | <i>Leontocaris</i>   |
| — Mandibular palp consisting of two segments. Carpus of second pereiopod with seven joints                          | 11                   |
| 11. Third maxilliped provided with an exopod.   | <i>Eualus</i>        |
| — Third maxilliped without exopod   | <i>Heptacarpus</i>   |
| 12. Mandibular palp three-jointed.  | <i>Alope</i>         |
| — Mandibular palp two-jointed   | 13                   |
| 13. Carpus of second pereiopod two-jointed. Lateral surface of carapace with many scattered spines                  | <i>Trachycaris</i>   |
| — Carpus of second pereiopod seven-jointed. Lateral surface of carapace smooth (except for the supraorbital spines) | 14                   |
| 14. Carapace with two or more supraorbital spines at each side. Third maxilliped with an exopod                     | <i>Spirontocaris</i> |

- Carapace with only one supraorbital spine on each side. Third maxilliped without exopod . . . . . 15
- 15. Abdominal segments dorsally rounded. Both antennal and pterygostomial spines present. No branchiostegal spine . . . . . *Lebbeus*
- Abdominal segments 1 and 5 with two, 2, 3, and 4 with one dorsal carina. One large branchiostegal spine present on carapace, no antennal or pterygostomial spines. *Birulia*
- 16. Mandible with incisor process . . . . . 17
- Mandible without incisor process. . . . . 21
- 17. Carpus of second pereopod composed of 2 or 3 segments. . . . . 18
- Carpus of second pereopod composed of 6 or 7 segments. . . . . 19
- 18. Carpus of second pereopod two-jointed. . . . . *Phycocaris*
- Carpus of second pereopod three-jointed . . . . . *Hippolyte*
- 19. Dactylus of first pereopod less than  $\frac{1}{6}$  of the length of the propodus. Telson with about 20 spinules along each lateral margin. . . . . *Cryptocheles*
- Dactylus of first pereopod  $\frac{1}{3}$  or more of the length of the propodus. Telson with less than 5 pairs of lateral spinules; these are placed some distance from the lateral margin. . . . . 20
- 20. Epipods present on the first two pairs of pereopods. No movable plate at the anterior margin of the third segment of the antennular peduncle . . . *Thoralus*
- No epipods present at the bases of the pereopods. Third segment of the antennular peduncle with a broad movable plate at the upper part of the anterior margin. *Thor*
- 21. Carpus of second pereopod composed of three segments . . . . . 22
- Carpus of second pereopod multi-articulate . . . . . 25
- 22. Dactylus of last three pairs of pereopods bearing a cluster of large teeth. Outer margin of scaphocerite provided with small movable teeth. Lower border of abdominal pleurae denticulate . . . . . *Gelastocaris*
- Dactylus of last three pairs of pereopods normal in shape. Outer margin of scaphocerite without teeth. Abdominal pleurae without small marginal denticles. 23
- 23. Third maxilliped with exopod . . . . . *Latreutes*
- Third maxilliped without exopod . . . . . 24
- 24. Epipods on first four pereopods. Anterolateral angle of carapace with a series of small spines . . . . . *Paralatreutes*
- No epipods on the pereopods. Anterolateral angle of carapace entire. *Tozeuma*
- 25. Abdominal segments ending in large median posterior spines. Pleurae ending in one or two sharp points. Carapace with longitudinal carinae. . . *Mimocaris*
- Abdominal segments without large posterior spines. Pleurae rounded. Carapace smooth . . . . . 26
- 26. Supraorbital spines present on carapace. . . . . *Bythocaris*
- Supraorbital spines absent. . . . . 27
- 27. Third maxilliped without exopod . . . . . *Merguia*
- Third maxilliped with exopod. . . . . 28
- 28. Upper antennular flagellum biramous . . . . . *Lysmata*
- Upper antennular flagellum uniramous . . . . . *Hippolysmata*
- a. Rostrum longer than carapace, provided with a dorsal basal crest of teeth, which are placed close together. . . . . subgenus *Exhippolysmata*
- Rostrum shorter than carapace; teeth divided more or less regularly over its dorsal margin, never forming a basal crest. . . . . b
- b. Epipods present on first four pereopods. . . . . subgenus *Hippolysmata*
- No epipods at the bases of the pereopods. . . . . subgenus *Lysmatella*

**Saron** Thallwitz, 1891 (fig. 65a)

*Saron* Thallwitz, 1891, Zool. Anz. 14:99. Type species, by monotypy: *Hippolyte gibberosus* H. Milne Edwards, 1837, Hist. nat. Crust. 2:378 (= *Palaemon marmoratus* Olivier, 1811, Encycl. méthod. Hist. nat. 8:663). Gender: masculine.

**Nauticaris** Bate, 1888 (fig. 65b)

*Nauticaris* Bate, 1888, Rep. Voy. Challenger, Zool. 24:577, 602. Type species, selected by Calman, 1906, Ann. Mag. nat. Hist. (7)17:31, : *Nauticaris marionis* Bate, 1888, Rep. Voy. Challenger, Zool. 24:603. Gender: feminine.

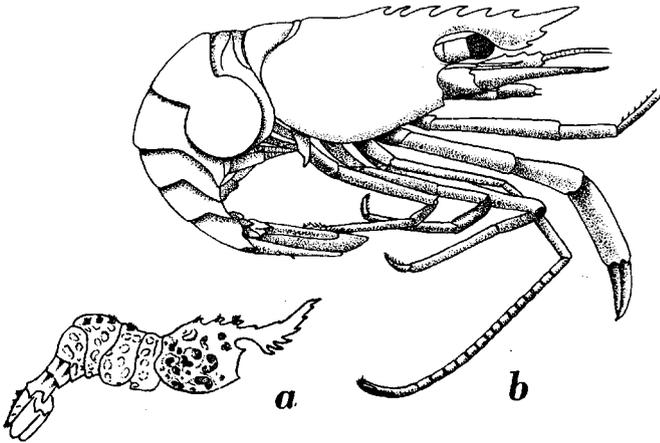


Fig. 65a. *Saron marmoratus* (Olivier). After Barnard, 1950.  
 Fig. 65b. *Nauticaris marionis* Bate. After Thomson, 1903.

**Merhippolyte** Bate, 1888 (fig. 66a)

*Merhippolyte* Bate, 1888, Rep. Voy. Challenger, Zool. 24:577, 618. Type species, by original designation: *Merhippolyte agulhasensis* Bate, 1888, Rep. Voy. Challenger, Zool. 24:619. Gender: feminine.  
*Merhyppolyte* Dohrn, 1950, Pubbl. Sta. zool. Napoli 22:257. Erroneous spelling of *Merhippolyte* Bate, 1888.

**Ligur** Sarato, 1885 (fig. 66b)

*Lybia* Hope, 1851, Catal. Crust. Ital.: 18. Type species, by monotypy: *Palaemon Ensiferus* Risso, 1816, Hist. nat. Crust. Nice: 106. Gender: feminine. Invalid junior homonym of *Lybia* H. Milne Edwards, 1834, Hist. nat. Crust. 1:431 (Crustacea Brachyura).

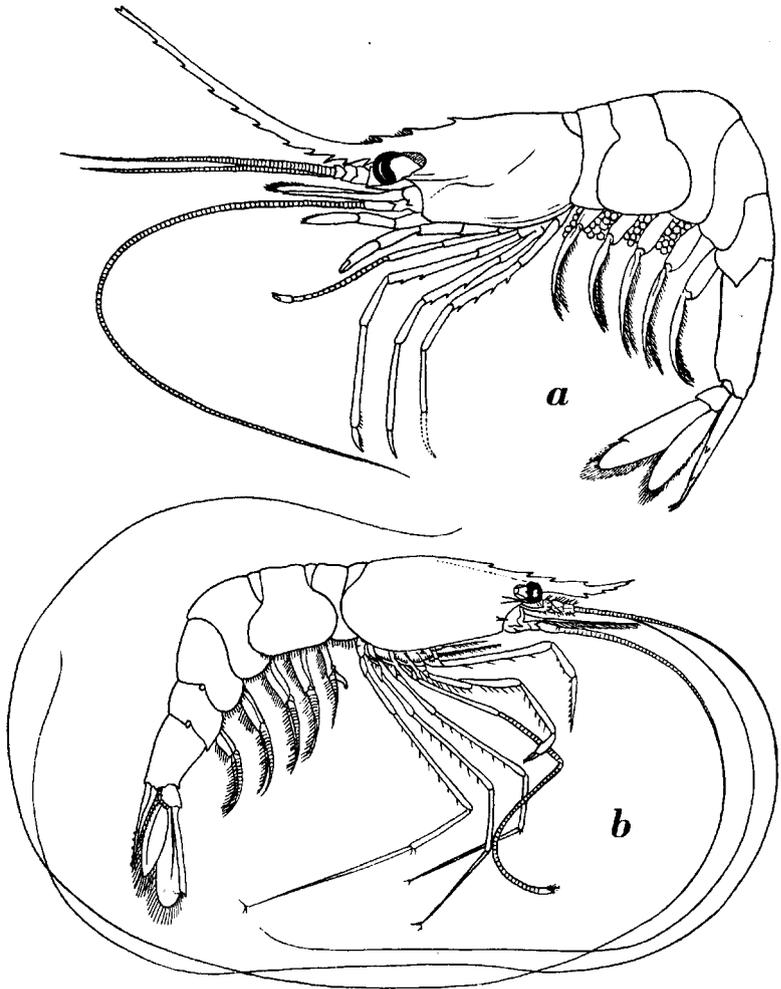


Fig. 66a. *Merhippolyte calmani* Kemp & Sewell. After Kemp & Sewell, 1912.

Fig. 66b. *Ligur ensiferus* (Risso). After Senna, 1903.

*Ligur* Sarato, 1885, *Moniteur des Étrangers Nice* 9(222): 2. Type species, by monotypy: *Ligur Edwardsii* Sarato, 1885, *Moniteur des Étrangers Nice* 9(222): 2 (= *Palemon Ensiferus* Risso, 1816, *Hist. nat. Crust. Nice*: 106). Gender: masculine.

*Ligur* Lucas, 1886, *Ann. Soc. entom. France* (6)5: ccix. Erroneous spelling of *Ligur* Sarato, 1885.

*Parhippolyte* Borradaile, 1899, *Wille's Zool. Res.* 4: 414. Type species, by

monotypy: *Parhippolyte wveae* Borradaile, 1899, Willey's Zool. Res. 4: 414. Gender: feminine.

**Barbouria** Rathbun, 1912 (fig. 67)

*Barbouria* Rathbun, 1912, Bull. Mus. comp. Zoöl. Harvard 54: 455. Type species, by monotypy: *Barbouria poeyi* Rathbun, 1912, Bull. Mus. comp. Zoöl. Harvard 54: 455 (= *Hippolyte Cubensis* Von Martens, 1872, Arch. Naturgesch. 38(1): 136). Gender: feminine.

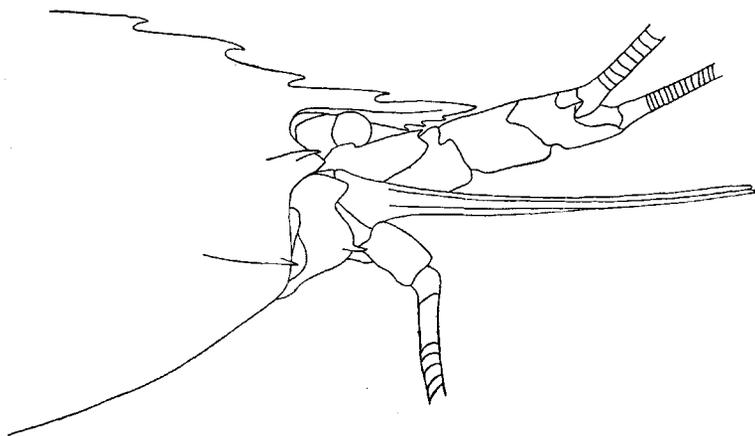


Fig. 67. *Barbouria cubensis* (Von Martens). Anterior part of body. Original.

**Caridion** Goës, 1863 (fig. 68a)

*Doryphorus* Norman, 1861, Ann. Mag. nat. Hist. (3)8: 276. Type species, by monotypy: *Hippolyte Gordonii* Bate, 1858, Nat. Hist. Rev. Proc. Soc. Dublin 5: iv. Gender: masculine. Invalid junior homonym of *Doryphorus* Cuvier, 1829, Règne anim. (ed. 2) 2: 34 (Reptilia).

*Caridion* Goës, 1863, Oefvers. K. Svensk. Vetensk. Akad. Förh. 20: 170. Substitute name for *Doryphorus* Norman, 1861. Gender: masculine.

*Caridium* Conseil Intern. Explor. Mer, 1909, Publ. Circ. 48: 134. Erroneous spelling of *Caridion* Goës, 1863.

**Chorismus** Bate, 1888 (fig. 68b)

*Chorismus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 577, 616. Type species, by monotypy: *Chorismus tuberculatus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 617. Gender: masculine.

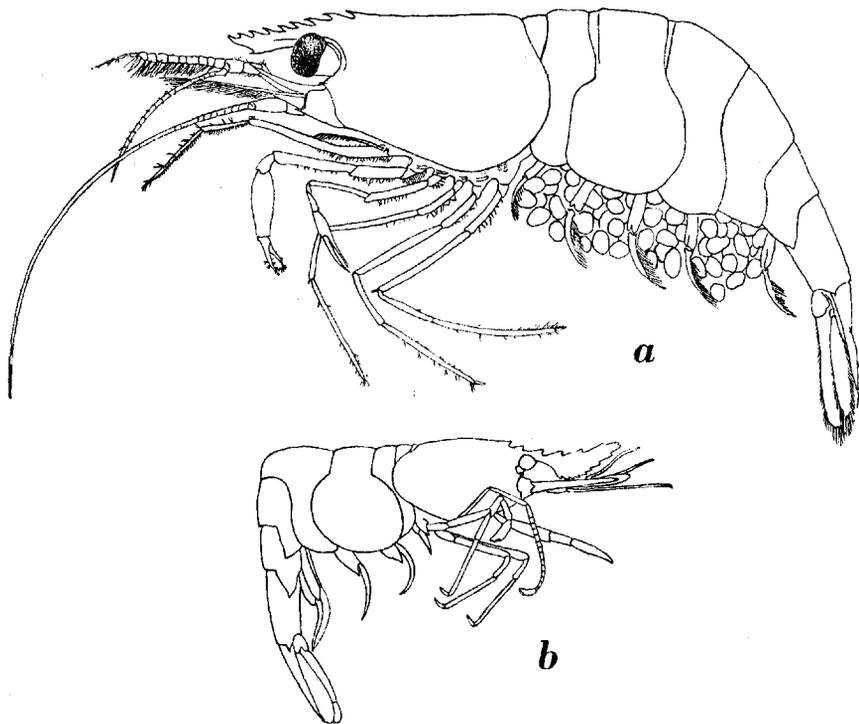


Fig. 68a. *Caridion gordonii* (Bate). After Kemp, 1910.

Fig. 68b. *Chorismus antarcticus* (Pfeffer). After Pfeffer, 1887.

**Leontocaris** Stebbing, 1905 (fig. 69a)

*Leontocaris* Stebbing, 1905, Mar. Invest. S. Afr. 4: 21, 98. Type species, by monotypy: *Leontocaris paulsoni* Stebbing, 1905, Mar. Invest. S. Afr. 4: 99. Gender: feminine.

**Eualus** Thallwitz, 1892 (fig. 69b)

*Eualus* Thallwitz, 1892, Abh. Ber. zool.-anthrop. Mus. Dresden 1890-91 (3): 23, 50. Type species, by monotypy: *Euales obses* Thallwitz, 1892, Abh. Ber. zool.-anthrop. Mus. Dresden 1890-91 (3): 23 (= *Hippolyte Gaimardii* H. Milne Edwards, 1837, Hist. nat. Crust. 2: 378). Gender: masculine.

*Euales* Thallwitz, 1892, Abh. Ber. zool.-anthrop. Mus. Dresden 1890-91 (3): 23. Erroneous spelling of *Eualus* Thallwitz, 1892.

*Helia* Thallwitz, 1892, Abh. Ber. zool.-anthrop. Mus. Dresden 1890-91 (3): 24, 50. Type species, by monotypy: *Hippolyte Fabricii* Krøyer, 1841,

*Spirontocarella* Brashnikov, 1907, Mém. Acad. Sci. Petersb. (8)20(6): 170.  
 Type species, by monotypy: *Hippolyte macilenta* Krøyer, 1841, Naturhist. Tidsskr. 3: 574. Gender: feminine.

**Heptacarpus** Holmes, 1900 (fig. 70a)

*Heptacarpus* Holmes, 1900, Occ. Pap. Calif. Acad. Sci. 7: 195. Type species, by original designation: *Hippolyte palpator* Owen, 1839, Zool. Beechey's Voy. Blossom: 89. Gender: masculine.

*Heptacartus* Kuznetsov, 1950, C. R. Acad. Sci. Moscow (n. ser.) 75: 316. Erroneous spelling of *Heptacarpus* Holmes, 1900.

*Heptacartus* Kuznetsov, 1950, C. R. Acad. Sci. Moscow (n. ser.) 75: 317. Erroneous spelling of *Heptacarpus* Holmes, 1900.

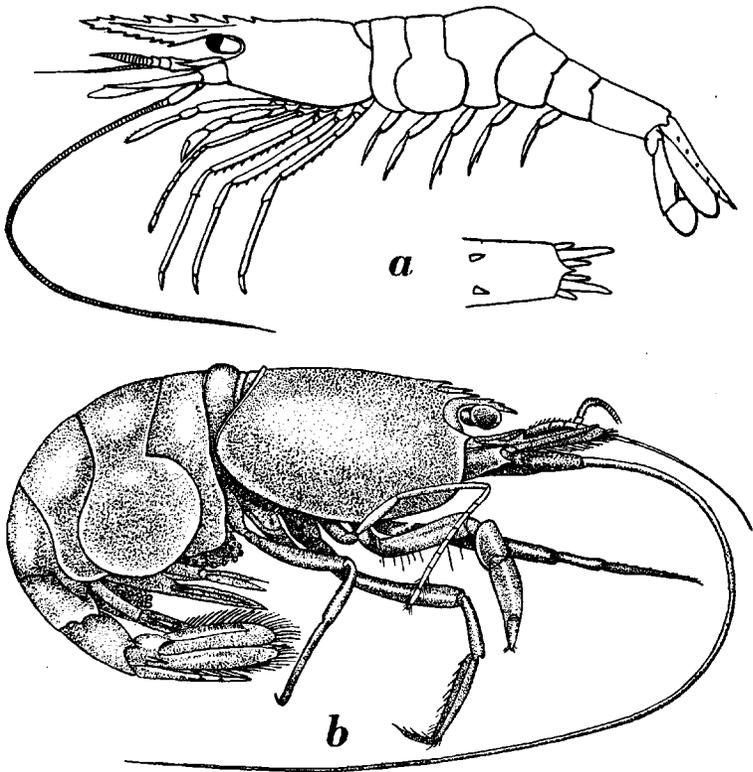


Fig. 70a. *Heptacarpus minutus* Yokoya. After Yokoya, 1930.

Fig. 70b. *Alope orientalis* (De Man). After De Man, 1890.

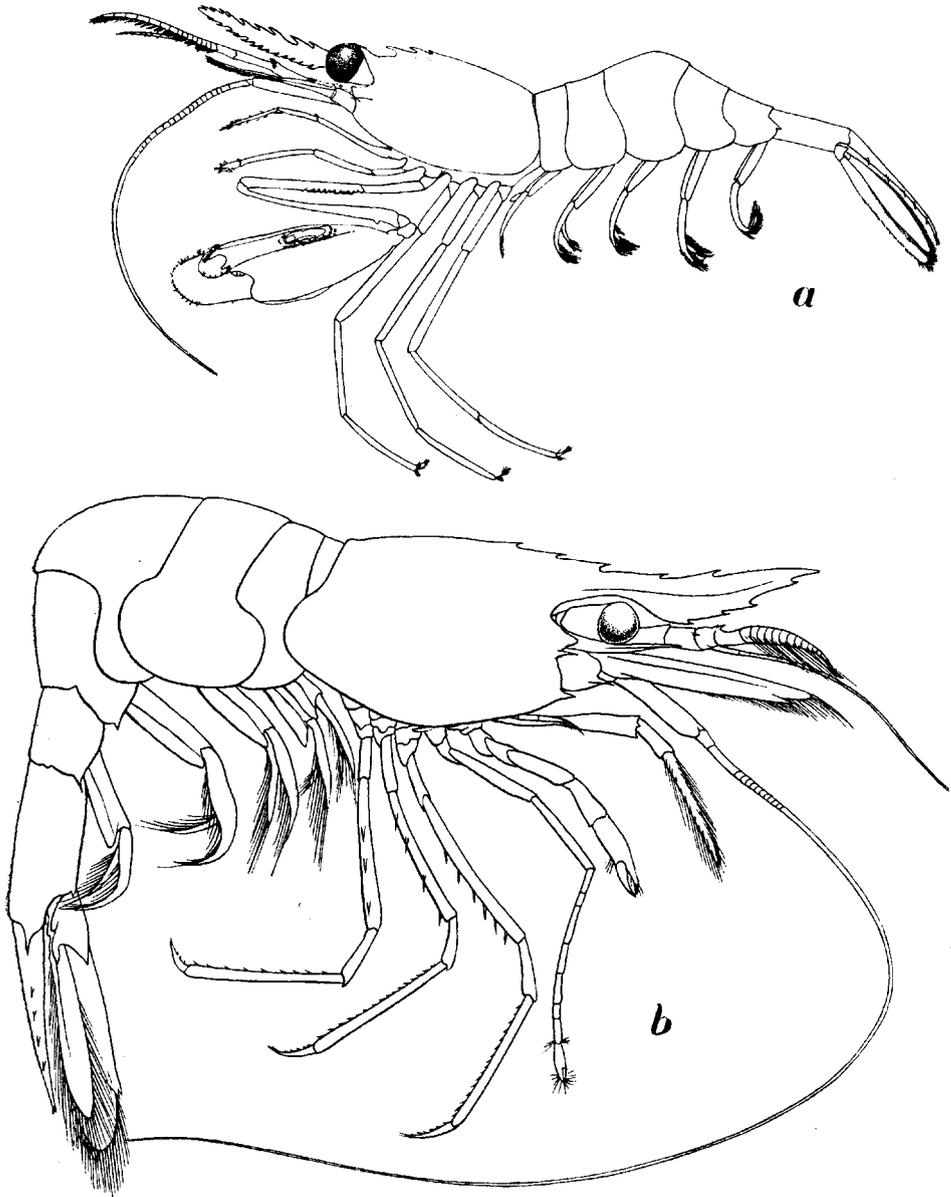


Fig. 69a. *Leontocaris lar* Kemp. After Kemp, 1910.

Fig. 69b. *Eualus gainardi* (H. Milne Edwards). After Holthuis, 1950.

Naturhist. Tidsskr. 3: 571. Gender: feminine. Invalid junior homonym of *Helia* Huebner, 1818, Zuträge Exot. Schmett. 1: 27, 29 (Lepidoptera).

**Alope** White, 1847 (fig. 70b)

*Alope* White, 1847, Proc. zool. Soc. Lond. 15: 123. Type species, by monotypy: *Alope palpalis* White, 1847, Proc. zool. Soc. Lond. 15: 124 (= *Hippolyte spinifrons* H. Milne Edwards, 1837, Hist. nat. Crust. 2: 377). Gender: feminine.

*Hetairocaris* De Man, 1890, Notes Leyden Mus. 12: 120. Type species, by monotypy: *Hetairocaris orientalis* De Man, 1890, Notes Leyden Mus. 12: 122. Gender: feminine.

**Trachycaris** Calman, 1906 (fig. 71a)

*Trachycaris* Calman, 1906, Ann. Mag. nat. Hist. (7)17: 31, 33. Type species, by monotypy: *Platybema rugosus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 579 (= *Hippolyte restrictus* A. Milne Edwards, 1878, Bull. Soc. philom. Paris (7)2: 231). Gender: feminine.

**Spirontocaris** Bate, 1888 (fig. 71b)

*Sowerbyus* Hoek, 1887, Tijdschr. Nederl. dierk. Ver. (2)1: ccviii. Type species, by monotypy *Sowerbyus spinus* Hoek, 1887, Tijdschr. Nederl. dierk. Ver. (2)1: ccviii (= *Cancer Spinus* Sowerby, 1805, Brit. Miscell. (4): 47). Gender: masculine. Nomen nudum.

*Spirontocaris* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 576, 595. Type species, by monotypy: *Cancer Spinus* Sowerby, 1805, Brit. Miscell. (4): 47. Gender: feminine.

*Spirontocharis* Clark, 1909, Zoologist, London (4)13: 306, 307. Erroneous spelling of *Spirontocaris* Bate, 1888.

*Spirontocanus* Taylor, 1912, Contr. Canad. Biol. 1906-1910: 196. Erroneous spelling of *Spirontocaris* Bate, 1888.

*Spirontocan's* Taylor, 1912, Contr. Canad. Biol. 1906-1910: 199. Erroneous spelling of *Spirontocaris* Bate, 1888.

*Spriontocaris* Cowles, 1930, Bull. U. S. Bur. Fish. 46: 356. Erroneous spelling of *Spirontocaris* Bate, 1888.

**Lebbeus** White, 1847 (fig. 72a)

*Lebbeus* White, 1847, List Crust. Brit. Mus.: 76, 135. Type species, by monotypy: *Lebbeus orthorhynchus* (Leach MSS) White, 1847, List Crust. Brit. Mus.: 76 (= *Alpheus Polaris* Sabine, 1824, Suppl. App. Parry's Voy. N. W. Pass.: ccxxxviii). Gender: masculine.

*Hetairus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 577, 610. Type species, designated under the plenary powers of the International Commission

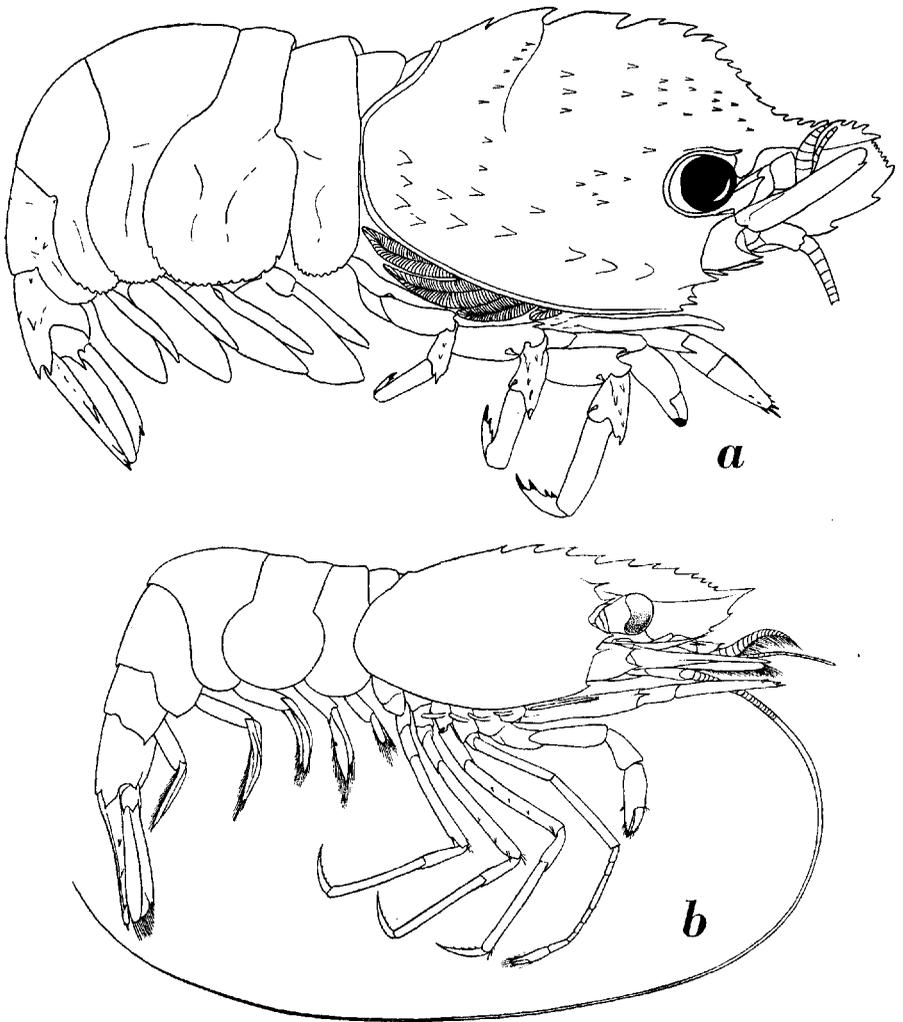


Fig. 71a. *Trachycaris restricta* (A. Milne Edwards). After Holthuis, 1949.

Fig. 71b. *Spirontocaris liljeborgi* (Danielssen). After Holthuis, 1950.

on Zoological Nomenclature: *Alpheus Polaris* Sabine, 1824, Suppl. App. Parry's Voy. N. W. Pass.: ccxxxviii. Gender: masculine.

*Hetavirus* Perrier, 1899, *Traité Zool.* 3: 1030. Erroneous spelling of *Hetairus* Bate, 1888.

*Birulaecaris* Dons, 1915, *Tromsø Mus. Aarsh.* 37: 26. Type species, by monotypy: *Hippolyte mysis* Birula, 1898, *Annu. Mus. zool. Petersb.* 3: 184

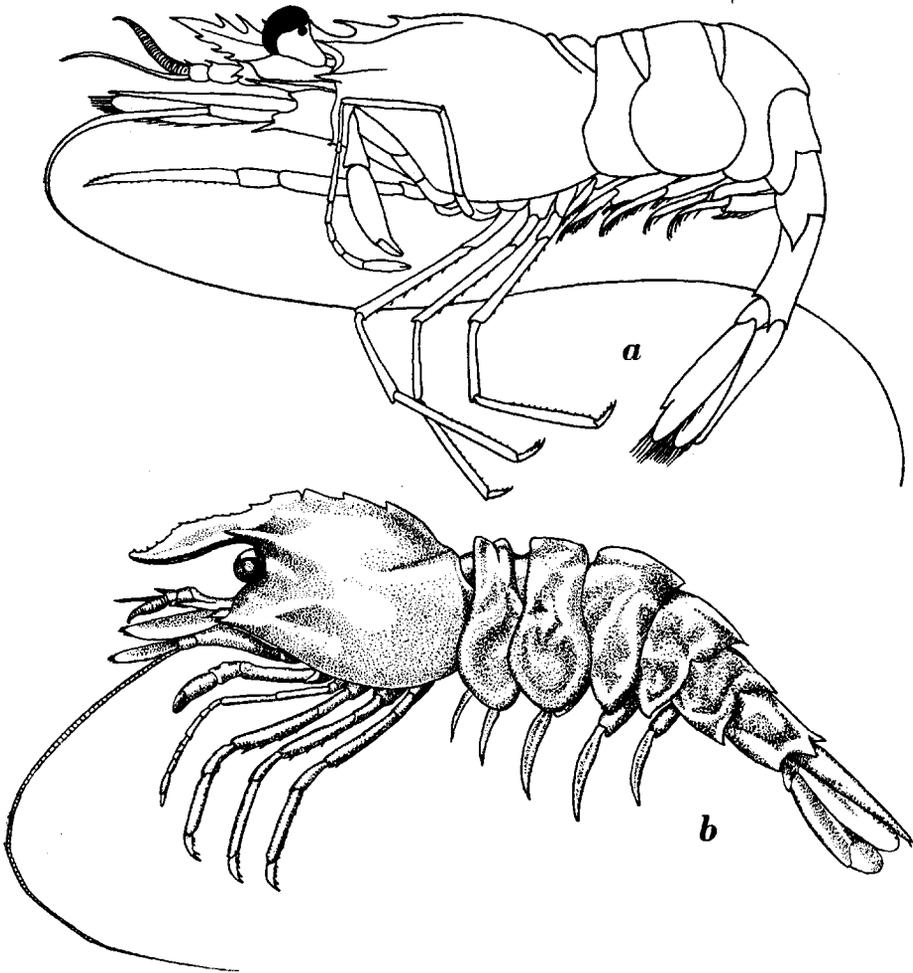


Fig. 72a. *Lebbeus polaris* (Sabine). After Bate, 1888.

Fig. 72b. *Birulia kishinouyei* (Yokoya). After Yokoya, 1930.

(= *Alpheus Polaris* Sabine, 1824, Suppl. App. Parry's Voy. N. W. Pass.: ccxxxviii). Gender: feminine.

*Heterius* Alpatov, 1923, Ber. wiss. Meeresinst. Moskau 1(7): 4, 5, 9, 33. Erroneous spelling of *Hetairus* Bate, 1888.

**Birulia** Brashnikov, 1903 (fig. 72b)

*Birulia* Brashnikov, 1903, Annu. Mus. zool. Petersb. 8: xlv. Type species, by monotypy: *Birulia sachalinensis* Brashnikov, 1903, Annu. Mus. zool. Petersb. 8: xlv. Gender: feminine.

*Paraspirontocaris* Yokoya, 1930, Sci. Rep. Tôhoku Imp. Univ. (4)5: 535. Type species, by monotypy: *Paraspirontocaris kishinouyei* Yokoya, 1930, Sci. Rep. Tôhoku Imp. Univ. (4)5: 536. Gender: feminine.

**Phycocaris** Kemp, 1916 (fig. 73)

*Phycocaris* Kemp, 1916, Rec. Indian Mus. 12: 391. Type species, by monotypy: *Phycocaris simulans* Kemp, 1916, Rec. Indian Mus. 12: 392. Gender: feminine.

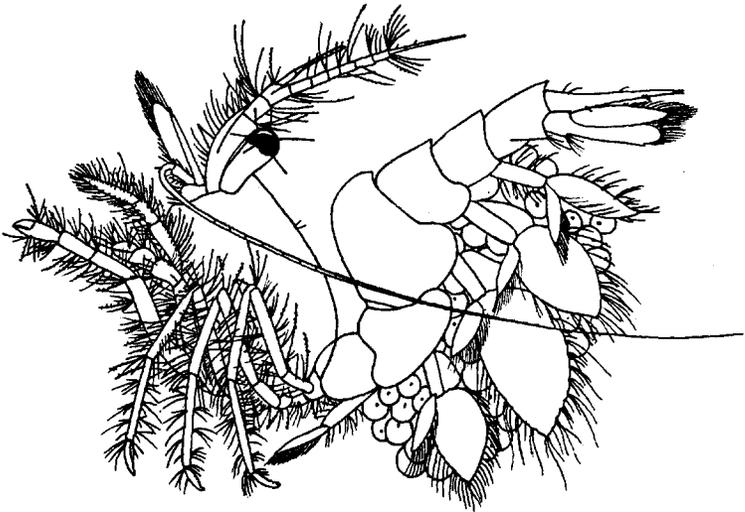


Fig. 73. *Phycocaris simulans* Kemp. After Kemp, 1916.

**Hippolyte** Leach, 1814 (fig. 74)

*Hippolyte* Leach, 1814, Edinb. Encycl. 7(2):431. Type species, by monotypy: *Hippolyte Varians* Leach, 1814, Edinb. Encycl. 7 (2): 431. Gender: feminine.

*Hippolyte* Leach, 1815, Trans. Linn. Soc. Lond. 11: 346. Erroneous spelling of *Hippolyte* Leach, 1814.

*Nectoceras* Rafinesque, 1817, Amer. monthly Mag. crit. Rev. 2: 41. Type species, by monotypy: *Nectoceras pelagica* Rafinesque, 1817, Amer. monthly Mag. crit. Rev. 2: 41 (= *Astacus coerulescens* Fabricius, 1775, Syst. Ent.: 414). Gender: neuter.

*Nectocerus* Desmarest, 1823, Dict. Sci. nat. 28: 421. Erroneous spelling of *Nectoceras* Rafinesque, 1817.

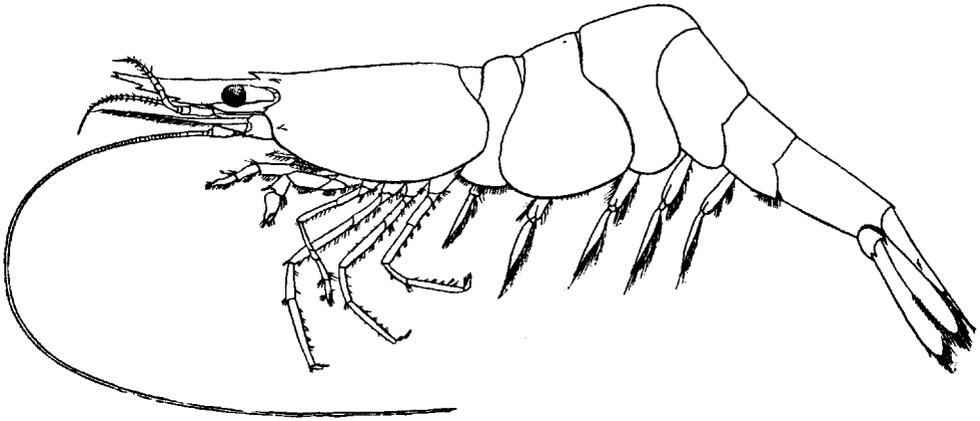


Fig. 74. *Hippolyte varians* Leach. After Kemp, 1910.

- Hippolytes* Risso, 1826, Hist. nat. Europ. mérid. 5: 78. Erroneous spelling of *Hippolyte* Leach, 1814.
- Hippolytus* Guérin, 1832, Expéd. sci. Morée, Zool. 2: 41. Erroneous spelling of *Hippolyte* Leach, 1814.
- Hippolite* J. C. Ross, 1835, J. Ross's App. Narrat. 2nd Voy. N. W. Pass.: lxxxiii. Erroneous spelling of *Hippolyte* Leach, 1814.
- Hippolyta* Burmeister, 1837, Handb. Naturgesch. 2: 565. Erroneous spelling of *Hippolyte* Leach, 1814.
- Hippolithe* Brullé, 1839, Webb & Berthelot's Hist. nat. Iles Canaries 2 (2, Entomol.): 18. Erroneous spelling of *Hippolyte* Leach, 1814.
- Hypolite* Veranyi, 1846, Catal. Anim. Golfo Genova: 8. Erroneous spelling of *Hippolyte* Leach, 1814.
- Virbius* Stimpson, 1860, Proc. Acad. nat. Sci. Phila. 1860: 35. Type species, selected by Kingsley, 1880, Proc. Acad. nat. Sci. Phila. 1879: 421, : *Hippolyte acuminatus* Dana, 1852, Proc. Acad. nat. Sci. Phila. 6: 24 (= *Astacus coerulescens* Fabricius, 1775, Syst. Ent.: 414). Gender: masculine.
- Bellidia* Gosse, 1877, Ann. Mag. nat. Hist. (4)20: 313. Type species, by monotypy: *Bellidia Huntii* Gosse, 1877, Ann. Mag. nat. Hist. (4)20: 313, 314. Gender: feminine.
- Verbius* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 587, 589, 942. Erroneous spelling of *Virbius* Stimpson, 1860.
- Hypolyte* Newcombe, 1898, Catal. Coll. Provinc. Mus. Brit. Columb.: 79. Erroneous spelling of *Hippolyte* Leach, 1814.
- Hippolytte* Valdés Ragués, 1909, Mis Trabajos Acad.: 182. Erroneous spelling of *Hippolyte* Leach, 1814.

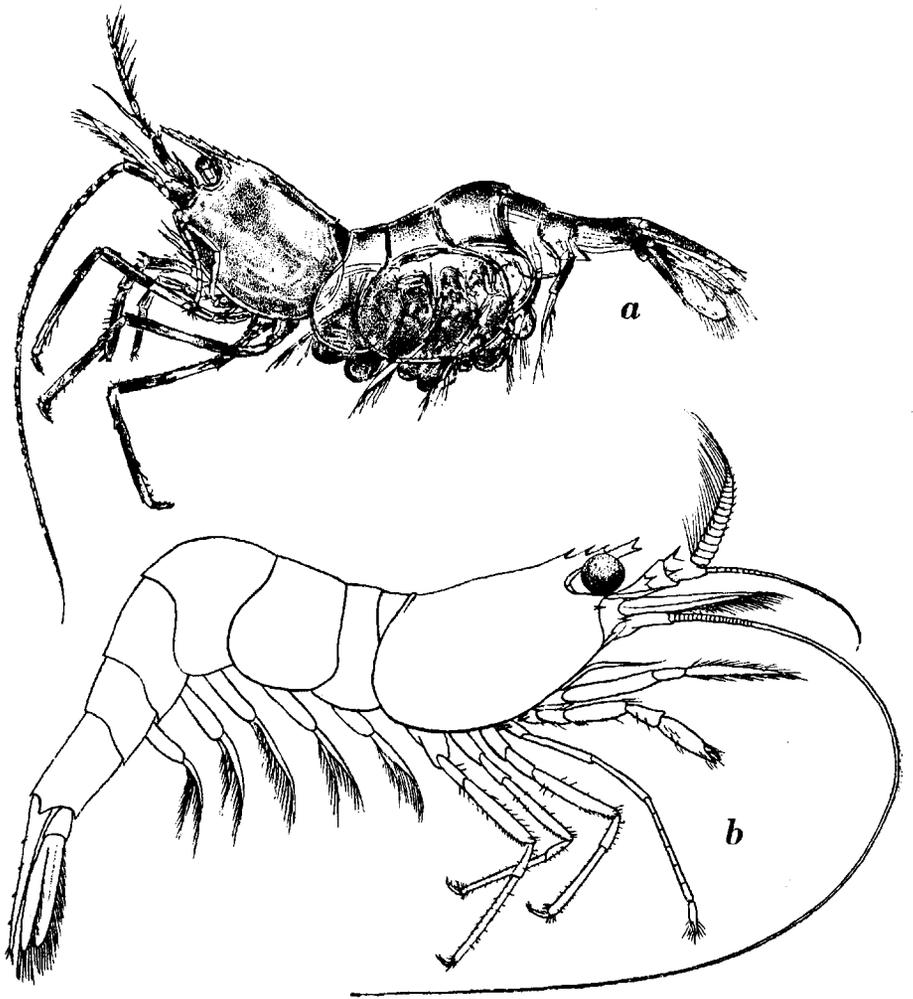


Fig. 75a. *Cryptocheles pygmaea* Sars. After Sars, 1912.

Fig. 75b. *Thoralus cranchi* (Leach). After Holthuis, 1950.

*Ippolyte* Magri, 1911, Atti Accad. gioen. Sci. nat. Catania (5)4(14): 25.

Erroneous spelling of *Hippolyte* Leach, 1814.

*Hyppolythe* Borcea, 1934, Ann. Univ. Jassy 29: 405. Erroneous spelling of

*Hippolyte* Leach, 1814.

*Vlrbius* Bulgurkov, 1938, Arb. biol. Meeressta. Varna 7: 86. Erroneous spelling of

*Virbius* Stimpson, 1860.

**Cryptocheles** Sars, 1870 (fig. 75a)

*Cryptocheles* Sars, 1870. Forh. Vidensk. Selsk. Christiania 1869: 150. Type species, by monotypy: *Cryptocheles pygmaea* Sars, 1870, Forh. Vidensk. Selsk. Christiania 1869: 150. Gender: feminine.

**Thoralus** Holthuis, 1947 (fig. 75b)

?*Vianellia* Nardo, 1847, Sinon. modern. Spec. Lag. Golfo Veneto: 8. Type species, by monotypy: *Vianellia dorsioculata* Nardo, 1847, Sinon. modern. Spec. Lag. Golfo Veneto: 8 (? = *Hippolyte Cranchii* Leach, 1817, Malac. Podophth. Brit. (16): pl. 38 figs. 17-21). Gender: feminine.

*Lysippe* Kinahan, 1858, Nat. Hist. Rev. Dublin 5: 266. Type species, by monotypy: *Hippolyte Cranchii* Leach, 1817, Malac. Podophth. Brit. (16): pl. 38 figs. 17-21. Gender: masculine. Generic name suppressed under the plenary powers of the International Commission on Zoological Nomenclature.

*Thoralus* Holthuis, 1947, Siboga Exped. 39(a8): 5, 14, 45. Type species, by original designation: *Hippolyte Cranchii* Leach, 1817, Malac. Podophth. Brit. (16): pl. 38 figs. 17-21. Gender: masculine.

**Thor** Kingsley, 1878 (fig. 76a)

*Thor* Kingsley, 1878, Proc. Acad. nat. Sci. Phila. 1878: 94. Type species, by monotypy: *Thor floridanus* Kingsley, 1878, Proc. Acad. nat. Sci. Phila. 1878: 95. Gender: masculine.

*Paschocaris* Nobili, 1905, Bull. Mus. Hist. nat. Paris 11: 395. Type species, by monotypy: *Hippolyte paschalis* Heller, 1862, S. B. Akad. Wiss. Wien 44(1): 276. Gender: feminine.

*Tor* Balss, 1915, Denkschr. Akad. Wiss. Wien 91: 25. Erroneous spelling of *Thor* Kingsley, 1878.

**Gelastocaris** Kemp, 1914 (fig. 76b)

*Gelastocaris* Kemp, 1914, Rec. Indian Mus. 10: 106. Type species, by monotypy: *Latreutes Paronae* Nobili, 1905, Boll. Mus. Zool. Anat. comp. Torino 20(506): 2. Gender: feminine.

**Latreutes** Stimpson, 1860 (fig. 77a)

*Cyclorhynchus* De Haan, 1849, Fauna Japon., Crust. (6): 173, 174, 175. Type species, by monotypy: *Hippolyte planirostris* De Haan, 1844, Fauna Japon., Crust. (6/7 p.p.): pl. 45 fig. 7. Gender: neuter. Invalid junior homonym of *Cyclorhynchus* Kaup, 1829, Skizz. Europ. Thierw.: 195 (Aves), *Cyclorhynchus* Sundevall, 1836, K. Svenska Vetensk. Akad.

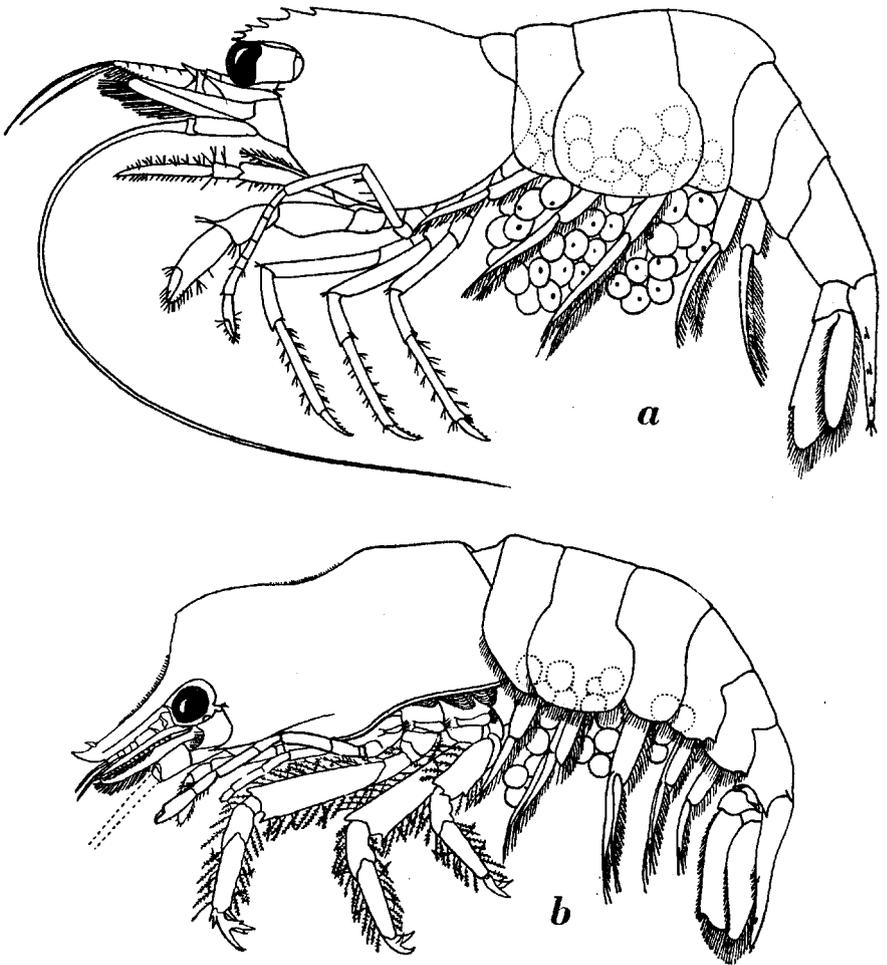


Fig. 76a. *Thor paschalis* (Heller). After Kemp, 1914.  
 Fig. 76b. *Gelastocaris paronae* (Nobili). After Kemp, 1914.

Handl. 1835: 83 (Aves), *Cyclorhynchus* Macquart, 1841, Mém. Soc. Sci. Lille 1840: 392 (Diptera).

*Latreutes* Stimpson, 1860, Proc. Acad. nat. Sci. Phila. 1860: 27. Type species, selected by Kingsley, 1880, Proc. Acad. nat. Sci. Phila. 1879: 413, : *Hippolyte ensiferus* H. Milne Edwards, 1837, Hist. nat. Crust. 2: 374 (= *Palaemon fucorum* Fabricius, 1798, Suppl. Ent. Syst.: 404). Gender: masculine.

*Rhynchocyclus* Stimpson, 1860, Proc. Acad. nat. Sci. Phila. 1860: 27. Substitute name for *Cyclorhynchus* De Haan, 1849. Gender: masculine. (In-

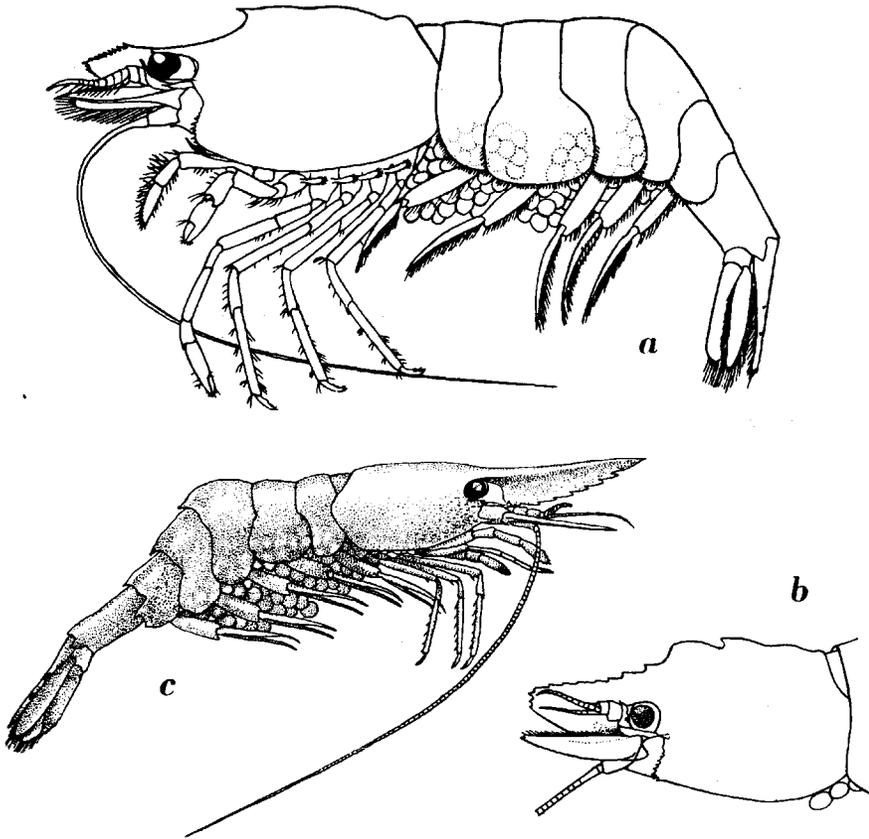


Fig. 77a. *Latreutes mucronatus* (Stimpson). After Kemp, 1914.

Fig. 77b. *Paralatreutes bicornis* Kemp. Anterior part of body. After Kemp, 1925.

Fig. 77c. *Tozeuma novae-zealandiae* Borradaile. After Borradaile, 1916.

valid junior?) homonym of *Rhynchocyclus* Cabanis & Heine, 1860, Mus. Hein. 2: 56 (Aves).

*Concordia* Kingsley, 1880, Proc. Acad. nat. Sci. Phila. 1879: 413. Type species, by monotypy: *Concordia gibberosus* Kingsley, 1880, Proc. Acad. nat. Sci. Phila. 1879: 414 (= *Rhynchocyclus parvulus* Stimpson, 1866, Proc. Chicago Acad. Sci. 1: 48). Gender: feminine.

*Platybema* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 576, 578. Substitute name for *Cyclorhynchus* De Haan, 1849, and *Rhynchocyclus* Stimpson, 1860. Gender: neuter.

*Clyclorhynchus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 578. Erroneous spelling of *Cyclorhynchus* De Haan, 1849.

*Conchordia* Cary & Spaulding, 1909, Contrib. mar. Fauna Louisiana Coast: 10. Erroneous spelling of *Concordia* Kingsley, 1880.

*Platyblema* Bouvier, 1918, Bull. Mus. Hist. nat. Paris 24:6. Erroneous spelling of *Platybema* Bate, 1888.

*Latreutes* Urita, 1921, Zool. Mag. Tokyo 33:216. Erroneous spelling of *Latreutes* Stimpson, 1860.

*Lateralutes* Urita, 1921, Zool. Mag. Tokyo 33:219. Erroneous spelling of *Latreutes* Stimpson, 1860.

**Paralatreutes** Kemp, 1925 (fig. 77b)

*Paralatreutes* Kemp, 1925, Rec. Indian Mus. 27:334. Type species, by monotypy: *Paralatreutes bicornis* Kemp, 1925, Rec. Indian Mus. 27:334. Gender: masculine.

**Tozeuma** Stimpson, 1860 (fig. 77c)

*Tozeuma* Stimpson, 1860, Proc. Acad. nat. Sci. Phila. 1860:26. Type species, by monotypy: *Tozeuma lanceolatum* Stimpson, 1860, Proc. Acad. nat. Sci. Phila. 1860:27. Gender: neuter.

*Angasia* Bate, 1863, Proc. zool. Soc. Lond. 1863:498. Type species, by monotypy: *Angasia pavonina* Bate, 1863, Proc. zool. Soc. Lond. 1863:498. Gender: feminine.

*Tizeuma* Perrier, 1886, Explor. sous-mar.: 81. Erroneous spelling of *Tozeuma* Stimpson, 1860.

**Mimocaris** Nobili, 1903 (fig. 78a)

*Mimocaris* Nobili, 1903, Boll. Mus. Zool. Anat. comp. Torino 18(447):5. Type species, by monotypy: *Mimocaris heterocarpoidea* Nobili, 1903, Boll. Mus. Zool. Anat. comp. Torino 18(447):6. Gender.: feminine.

**Bythocaris** Sars, 1870 (fig. 78b)

*Bythocaris* Sars, 1870, Forh. Vidensk. Selsk. Christiania 1869:149. Type species, by monotypy: *Bythocaris simplicirostris* Sars, 1870, Forh. Vidensk. Selsk. Christiania 1869:149. Gender: feminine.

**Merguia** Kemp, 1914 (fig. 78c)

*Merguia* Kemp, 1914, Rec. Indian Mus. 10:121. Type species, by monotypy: *Hippolyte oligodon* De Man, 1888, Journ. Linn. Soc. Lond. Zool. 22:277. Gender: feminine.

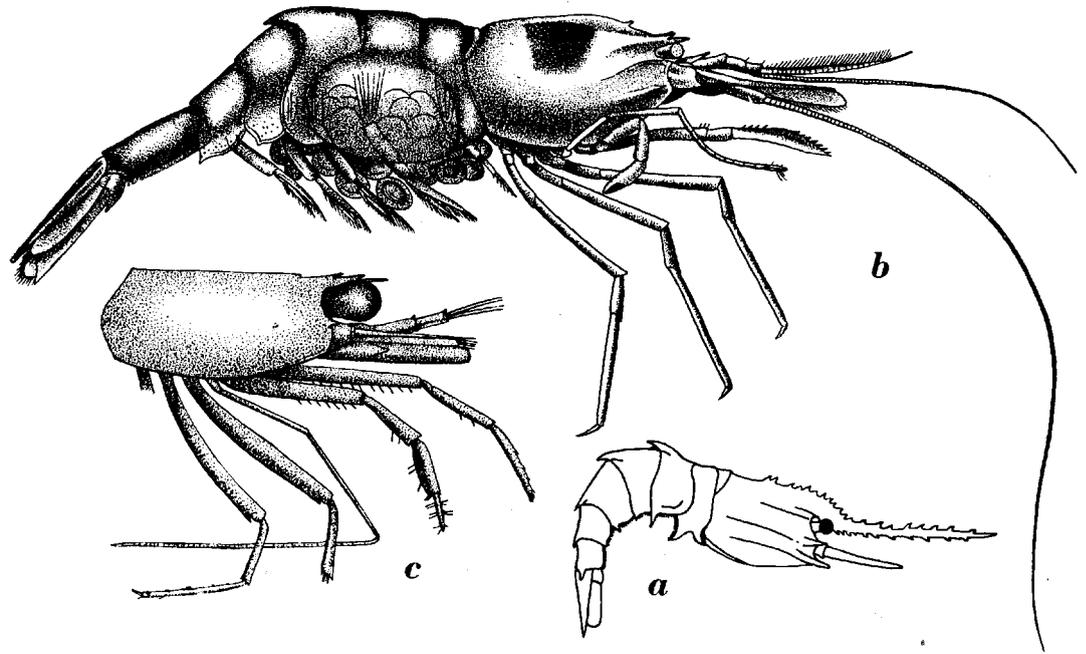


Fig. 78a. *Mimocaris heterocarpoides* Nobili, After Nobili, 1903.

Fig. 78b. *Bythocaris leucopis* Sars. After Sars, 1885.

Fig. 78c. *Merguia oligodon* (De Man). Anterior part of body. After De Man, 1888.

**Lysmata** Risso, 1816 (fig. 79a)

*Aglaope* Rafinesque, 1814, Préc. Découv. somiol.: 24. Type species, by monotypy: *Aglaope striata* Rafinesque, 1814, Préc. Découv. somiol.: 24 (= *Melicerta Seti Caudata* Risso, 1816, Hist. nat. Crust. Nice: 110). Gender: feminine. Invalid junior homonym of *Aglaope* Latreille, 1809, Gen. Crust. Ins. 4: 214 (Lepidoptera).

*Niphea* Rafinesque, 1815, Anal. Nature: 98. Substitute name for *Aglaope* Rafinesque, 1814. Gender: feminine.

*Melicerta* Risso, 1816, Hist. nat. Crust. Nice: 109. Type species, selected by H. Milne Edwards, 1837, Cuvier's Règne anim. (ed. 4, Discip. ed.) 18: pl. 54 fig. 3.: *Melicerta Seti Caudata* Risso, 1816, Hist. nat. Crust. Nice: 110. Gender: feminine. Invalid junior homonym of *Melicerta* Schrank, 1803, Fauna Boica 3(2): 302 (Vermes), and *Melicerta* Péron & Lesueur, 1810, Ann. Mus. Hist. nat. Paris 14: 352 (Coelenterata).

*Lysmata* Risso, 1816, Hist. nat. Crust. Nice: 175. Substitute name for *Melicerta* Risso, 1816. Gender: feminine.

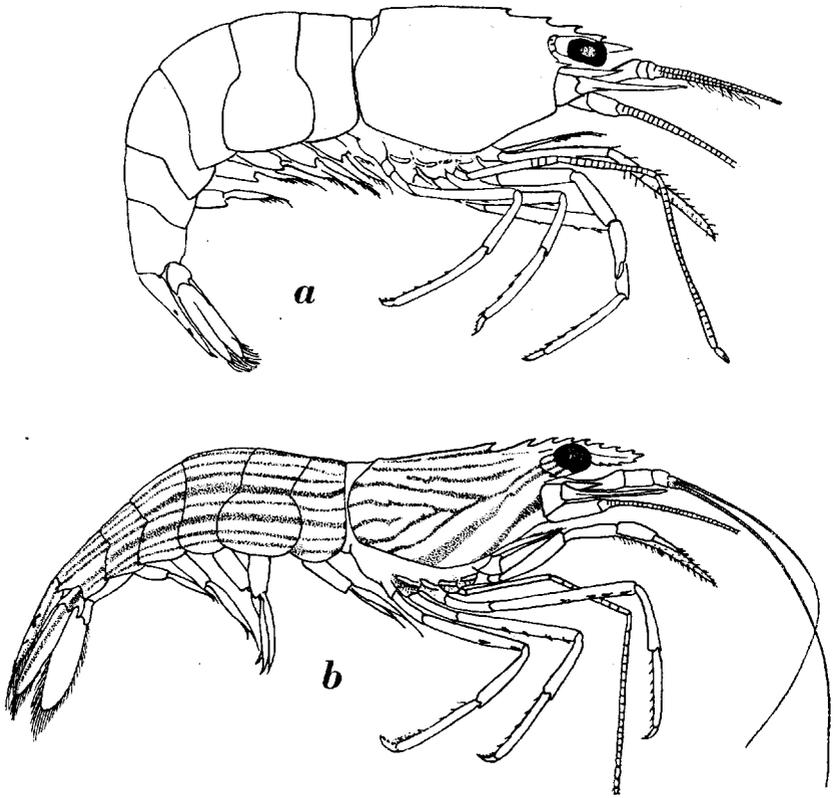


Fig. 79a. *Lysmata trisetacea* (Heller). After Kubo, 1940c.

Fig. 79b. *Hippolysmata (Hippolysmata) vittata* Stimpson. After Kubo, 1951.

*Arno* Roux, 1831, Mém. Class. Crust. Salic.: 18, 19. Substitute name for *Aglaope* Rafinesque, 1814. Gender: feminine.

*Lismata* Veranyi, 1846, Catal. Anim. Golfo Genova: 8. Erroneous spelling of *Lysmata* Risso, 1816.

*Lysimata* Nardo, 1869, Mem. Ist. Venet. Sci. Lett. Art. 14: 256. Erroneous spelling of *Lysmata* Risso, 1816.

*Eretmocarid* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 894. Type species, by present selection: *Eretmocarid stylorostris* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 898. Gender: feminine.

*Milicerta* Magri, 1911, Atti Accad. gioen. Sci. nat. Catania (5)4(14): 24, 31. Erroneous spelling of *Melicerta* Risso, 1816.

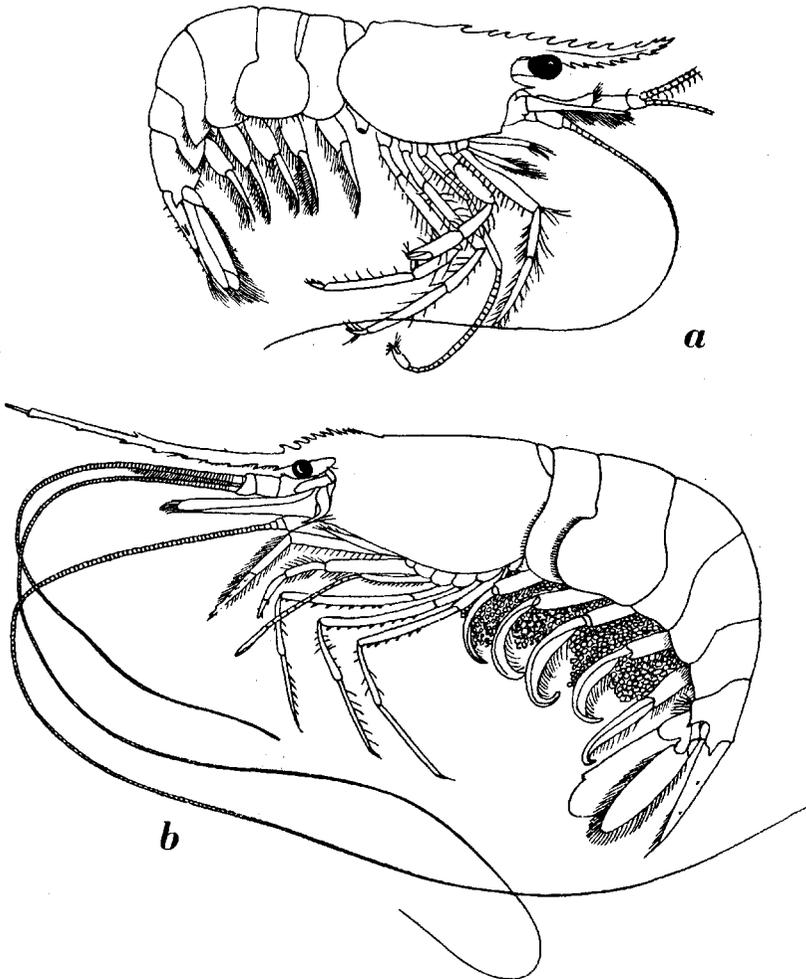


Fig. 80a. *Hippolysmata (Lysmatella) prima* (Borradaile). After Borradaile, 1917a.  
 Fig. 80b. *Hippolysmata (Exhippolysmata) ensirostris* Kemp. After Kemp, 1914.

**Hippolysmata** Stimpson, 1860 (figs. 79b, 80)

*Hippolysmata* Stimpson, 1860, Proc. Acad. nat. Sci. Phila. 1860: 26. Type species, by monotypy: *Hippolysmata vittata* Stimpson, 1860, Proc. Acad. nat. Sci. Phila. 1860: 26. Gender: feminine.

*Lysmatella* Borradaile, 1915, Ann. Mag. nat. Hist. (8)15: 206. Type species, by monotypy: *Lysmatella prima* Borradaile, 1915, Ann. Mag. nat. Hist. (8)15: 209. Gender: feminine.

*Exhippolysmata* Stebbing, 1915, Ann. S. Afr. Mus. 15: 94. Type species,

by present selection: *Hippolysmata ensirostris* Kemp, 1914, Rec. Indian Mus. 10: 118. Gender: feminine.

### Family PROCESSIDAE

Nikidae Bate, 1888, Rep. Voy. Challenger, Zool. 24: xii, xli, 480, 503.

Hectarthropidae Bate, 1888, Rep. Voy. Challenger, Zool. 24: 481, 883.

Processidae Ortmann, 1896, Zool. Jb. Syst. 9: 415, 424.

Processinae Ortmann, 1896, Zool. Jb. Syst. 9: 425.

Nikinae Perrier, 1899, Traité Zool. 3: 1031.

Nikiidae Yokoya, 1933, Journ. Coll. Agric. Tokyo 12: 30.

This family consists of two genera:

1. First pereopod without exopod. . . . . *Processa*
- An exopod present at the base of the first pereopod . . . . . *Nikoides*

### **Processa** Leach, 1815 (fig. 81)

*Thalassalpes* Bosc, 1813, Nouv. Bull. Sci. Soc. philom. Paris 3(66): 233.

Type species, by present selection: *Nika Edulis* Risso, 1816, Hist. nat.

Crust. Nice: 85. Gender: masculine.

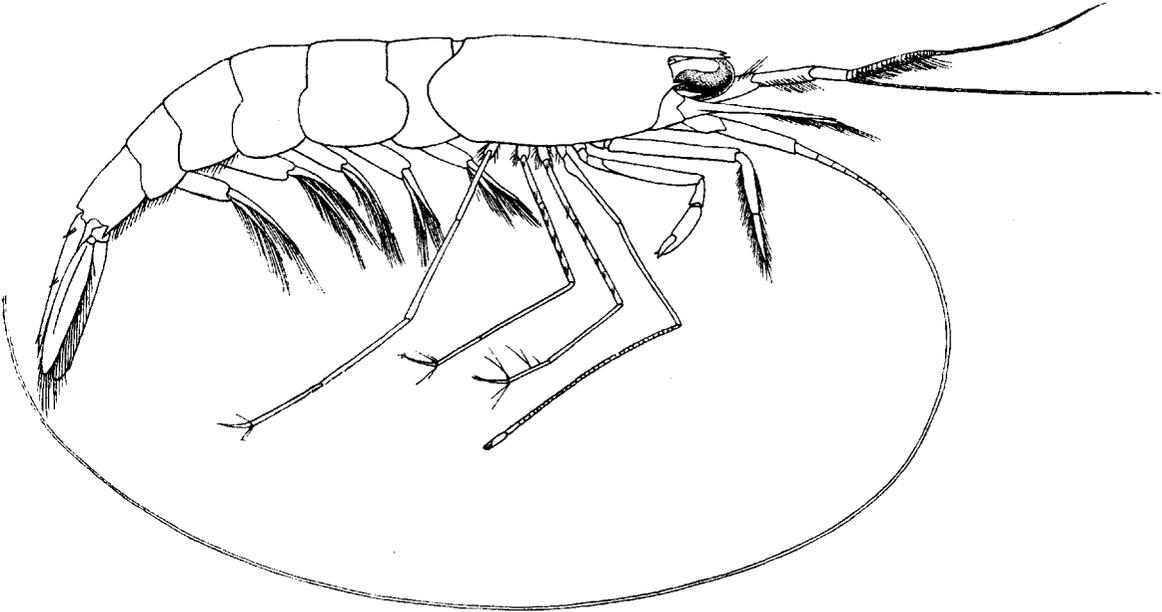


Fig. 81. *Processa canaliculata* Leach. After Holthuis, 1950.

*Processa* Leach, 1815, Malac. podophth. Brit. (4): explanation of pl. 41.

Type species, by monotypy: *Processa canaliculata* Leach, 1815, Malac. podophth. Brit. (4): explanation of pl. 41. Gender: feminine.

*Nika* Risso, 1816, Hist. nat. Crust. Nice: 84. Type species, selected by H. Milne Edwards, 1837, Cuvier's Règne anim. (ed. 4, Discip. ed.) 18: pl. 52 fig. 1.; *Nika Edulis* Risso, 1816, Hist. nat. Crust. Nice: 85. Gender: feminine.

*Nica* Berthold, 1826, Latreille's Nat. Fam. Thierreich: 586. Erroneous spelling of *Nika* Risso, 1816.

*Velocina* Gistel, 1848, Naturgesch. Thierr.: x. Substitute name for *Processa* Leach, 1815. Gender: feminine.

? *Chiereghina* Nardo, 1869, Mem. Ist. Veneto Sci. Lett. Art. 14: 320. Type species, by monotypy: *Cancer pellucidus* Nardo, 1847, Sinon. modern. Spec. Lag. Golfo Veneto: 5. Gender: feminine.

*Hectarthropus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 889. Type species, by present selection: *Hectarthropus expansus* Bate, 1888, Rep. Voy. Challenger, Zool. 24: 892. Gender: masculine.

*Niki* Watkin, 1925, Rep. Inv. Dept. Zool. Univ. Aberystw. (n. ser.) 1: 48. Erroneous spelling of *Nika* Risso, 1816.

**Nikoides** Paulson, 1875 (fig. 82)

*Nikoides* Paulson, 1875, Issljed. Rakoobr. Krasn. Morja (Stud. Crust. Red Sea): 98. Type species, by monotypy: *Nikoides Danae* Paulson, 1875, Issljed. Rakoobr. Krasn. Morja (Stud. Crust. Red Sea): 98. Gender: masculine.

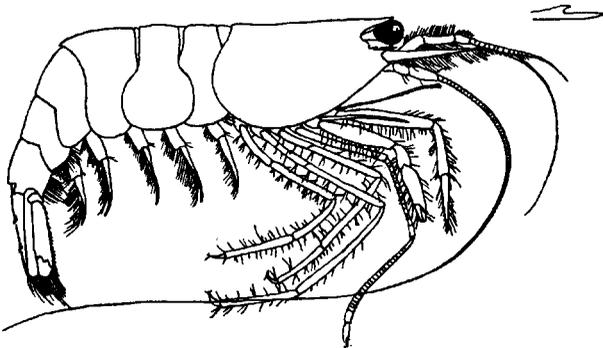


Fig. 82. *Nikoides maldivensis* Borradaile. After Borradaile, 1917a.

*Nicoides* Balss, 1915, Denkschr. Akad. Wiss. Wien 91: 32. Erroneous spelling of *Nikoides* Paulson, 1875.

Superfamily PANDALOIDA

Pandaloida Alcock, Descr. Catal. Indian Deep Sea Crust. Macr. Anom.: 55.

This superfamily consists of the three families Pandalidae, Thalassocarididae, and Physetocarididae.