

FAO Names: Bombay prawn (En), Bouquet bombay (Fr), Camarón de Bombay (Sp).

Literature: Kemp, 1917:225, Fig. 7.

Distribution: Indo-West Pacific: Bombay, India to Thailand and Indonesia.

Habitat: Brackish or marine habitats. Shallow water.

Size: Maximum total length 59 mm.

Interest to Fishery: The only record of the commercial importance of this species known to me is by Rai (1933:886) who listed the species among the prawns obtained by the fisheries near Bombay, India, where it occurs in large numbers.

Macrobrachium Bate, 1868

The genus *Macrobrachium* occurs throughout the tropics and in several subtropical areas. Almost all species pass at least part of their life in fresh water, in several the juveniles are found in brackish or salt water. Many of the species (there are about 125 known at present) are of good size and it is likely that most will be used as food wherever they occur. The present list only enumerates those species of which there are positive indications of their importance as food, and therefore of necessity must be quite incomplete.

Macrobrachium acanthurus (Wiegmann, 1836)

PALAEM Macro 1

Palaemon acanthurus Wiegmann, 1836, Arch.Naturgesch.Berlin, 2 (1):150

Synonymy: *Palaemon forceps* H. Milne Edwards, 1837; *Palaemon swainsonii* White, 1847; *Palaemon mexicanus* De Saussure, 1857; *Macrobrachium longidigitum* Bate, 1868; *Palaemon dasydactylus* Streets, 1871; *Palaemon sexdentatus* Streets, 1871; *Palaemon potiete* Müller, 1892; *Bithynis acanthurus* - M.J. Rathbun, 1900; *Bithynis forceps* - Young, 1900; *Palaemon (Eupalaemon) acanthurus* - De Man, 1912.

FAO Names: Cinnamon river prawn (En), Bouquet cannelle (Fr), Camarón canela (Sp).

Local Names: Langostino, Camarón prieto, Acamaya, Camarón de río (Mexico), Camarón de río, Camarón brazo largo (Venezuela), Camarao do rio (Pernambuco, Brazil), Camarão canela (N.E. Brazil).

Literature: Holthuis, 1952:45, Pl. 8, Fig. a,b; Chace & Hobbs, 1969:89, Figs. 20,25a,g.

Distribution: Atlantic America: from N. Carolina (U.S.A.) to S. Brazil and the West Indies.

Habitat: Fresh or brackish water (mesohaline and oligohaline), usually on muddy bottoms.

Size: Maximum total length 166 mm (♂), 110 mm (♀); maximum carapace length 36.5 mm (♂). 20.6 mm (♀).

Interest to Fishery: In Mexico the species is of secondary importance commercially. It is sold fresh as food. According to Carillo (1968:417) in 1966, 150 t of this species were caught in Veracruz State by a single fishing cooperative. In Venezuela "because of its size, it is without doubt of economic value" (Davant, 1963:108). Ewald (1969:771) indicated that this species has been found in commercial catches in Lake Maracaibo, Venezuela; Croker (1967:81) stated it to be of little commercial importance in Venezuela. In N.E. Brazil the species is of moderate importance as shown by Fausto Filho (1968:27). Locally it is of considerable importance there for the people living along the rivers. It is eaten as such or as part of regional dishes. In his assessment of shrimp

resources of S.E. Brazil, FAO (1964:11) pointed to the presence of small numbers of this species near Florianopolis (Santa Catarina). Aquaculture experiments with this species were undertaken in the U.S.A. and Mexico.

Macrobrachium aemulum (Nobili, 1906)

PALAEM Macro 2

Palaemon (Parapalaemon) aemulus Nobili, 1906, Bull.Mus.Hist.Nat.Paris, 12:258

FAO Names: Noumea river prawn (En), Bouquet nouméa (Fr), Camarón de Numea (SP).

Literature: J. Roux, 1926:221, Figs.47-51.

Distribution: Indo-West Pacific: New Caledonia.

Habitat: Depth 0 to 15 m. Fresh water.

Size: Maximum total length 83 mm (♂), maximum carapace length 33 mm (♀).

Interest to Fishery: Kamita (1967:8) dealt with specimens bought at the fish market at Nouméa, but the extent of the commercial importance of the species is not known. Kamita reported that "the fresh prawns are procurable from the fish market to which they are carried out from the localities near Nouméa city".

Macrobrachium amazonicum (Heller, 1862)

PALAEM Macro 3

Palaemon amazonicus Heller, 1862, S.B.Akad.Wiss.Wien, 45 (1):418

Synonymy: *Palaemon ensiculus* Smith, 1869; *Palaemon dieperinkii* De Man, 1879; *Bithynis ensiculus* - Young, 1900; *Palaemon (Eupalaemon) amazonicus* - Nobili, 1901; *Bithynis amazonicus* - Moreira, 1912.

FAO Names: Amazon river prawn (En), Bouquet amazone (Fr), Camarón amazónico (Sp).

Local Names: Camaroncito de río (Venezuela), Camarão sossêgo (N.E. Brazil).

Literature: Holthuis, 1952:18, Pl. 2, Figs. a-h.

Distribution: Atlantic drainage of South America from Venezuela to Paraguay.

Habitat: Fresh water.

Size: Maximum total length 150 mm.

Interest to Fishery: Longhurst (1970:296) remarked that less important stocks of this species are present in Guyana, Surinam and N. Brazil. Ewald (1967:773) as well as Davant (1963:44), Pericchi (1965:25) and Croker (1967:81) mentioned the species as of some economic importance in Venezuela. Fausto Filho (1963:27) listed it among the species that in N.E. Brazil are of moderate commercial importance. Laboratory aquaculture experiments with this species have been carried out in Brazil.

Macrobrachium americanum Bate, 1868

PALAEM Macro 4

Macrobrachium americanum Bate, 1863, Proc.Zool.Soc.Lond., 1868:363

Synonymy: *Palaemon americanus* - Thallwitz, 1891.

FAO Names: Cauque river prawn (En), Bouquet cauque (Fr), Camarón cauque (Sp).

Local Names: Langostino, Langostino del Pacifico, Camarón de agua dulce (Mexico), Cauque, Acamaya (Sonora and Sinaloa States, Mexico).

Literature: Holthuis, 1952:128, Pl. 31, Figs. d,e.

Distribution: Pacific slope of America between Baja California (Mexico) and N. Peru; also at Cocos and Galapagos Islands.

Habitat: Fresh water; part of the development is passed in brackish or salt water. Bottom sand or stones.

Size: Maximum total length 250 mm (♂), 193 mm (♀).

Interest to Fishery: In Mexico the commercial importance of the species is considerable, although it is exploited on a limited scale. It is considered a good possibility for artificial cultivation. It is sold fresh and frozen. According to Bate (1868:364) "a considerable number [of this species] are procured [from Lake Amatitlan, Guatemala] and brought to the markets in Guatemala". Holthuis (1954:10) mentioned a specimen bought (as a curio) by Dr. M. Boeseman on the market of San Salvador, El Salvador. Sanchez (1976:1) reported that the present species and *M. tenellum* are the only *Macrobrachium* that are of commercial importance in El Salvador.

Macrobrachium australe (Guérin, 1838)

PALAEM Macro 5

Palaemon australis Guérin, 1838, In Duperrey, Voyage Coquille, Zool., 2(2):37

Synonymy: *Palaemon sundaicus* Heller, 1862; *Palaemon danae* Heller, 1865; *Palaemon dispar* von Martens, 1868; *Palaemon alphonsianus* Hoffmann, 1674; *Palaemon parvus* Hoffmann, 1874; *Palaemon maillardi* Richters, 1680; *Palaemon (Eupalaemon) dispar* - De Man, 3892; *Palaemon (Eupalaemon) ustulatus* Nobili 1899; *Palaemon (Eupalaemon) danae* - Coutière, 1900; *Leander lepidus* De Man, 1915; "*Palaemon sundaicus*" of most authors refers to *Macrobrachium equidens* (Dana).

FAO Names: Koua river prawn (En), Bouquet koua (Fr), Camarón kúa (Sp).

Local Names: Orana, Camarón (Madagascar; general name for *Macrobrachium* species), Koua (Marquesas; general name for *Macrobrachium* species), Ainehu (Fatuhiva, Marquesas).

Literature: Holthuis, 1950:124, Figs. 27-30.

Distribution: Indo-West Pacific: Madagascar and the Seychelles to Polynesia.

Habitat: Fresh water, part of the early development is passed in salt and brackish water.

Size: Maximum total length 105 mm (♂), 77 mm (♀).

Interest to Fishery: Longhurst (1970:288) indicated that in Fiji fishing for this and other *Macrobrachium* species is quite heavy; the fishery there is a subsistence fishery. Adamson (1935:18) listed three species of *Macrobrachium* (among which the present) as being caught by the natives of the Marquesas Islands "with nets and spears, usually with a light at night". Louvel (1930:19) mentioned some *Macrobrachium* species (including the present) that are fished for as food in Madagascar by the natives.

Macrobrachium birmanicum (Schenkel, 1902)

PALAEM Macro 6

Palaemon spinipes birmanicus Schenkel, 1902, Verh.Naturforsch.Ges.Basel, 13:503

Synonymy: *Palaemon choprai birmanicus* - Tiwari, 1955.

FAO Names: Birma river prawn (En), Bouquet birman (Fr), Camarón birmano (Sp).

Local Names: Shul icha, Najari icha (Bangladesh).

Literature: Schenkel, 1902:503, Pl. 9, Fig. 8; Ahmad, 1957:24, Pl. 7, Fig. 20.

Distribution: Indo-West Pacific: Eastern India; Bangladesh; lower Ganges basin and lower Irawaddy basin, Birma,

Habitat: Fresh and brackish water.

Size: Maximum total length 315 mm (♂), 147 mm (♀).

Interest to Fishery: The species is listed by Ahmad (1957:24) among the economic prawns of Bangladesh.

Macrobrachium caledonicum (J. Roux, 1926)

PALAEM Macro 7

Palaemon (Macrobrachium) caledonicus J.Roux, 1926, Nova Caledonia, 4(2):224

FAO Names: New Caledonia river prawn (En), Bouquet néocalédonien (Fr), Camarón de Nueva Caledonia (Sp).

Distribution: Indo-West Pacific: New Caledonia.

Habitat: Fresh-water.

Size: Maximum carapace length 43 mm.

Interest to Fishery: Kamita (1967:6) reported that the species is sold fresh on the Nouméa fish market.

Macrobrachium carcinus (Linnaeus, 1758)

PALAEM Macro 8

Cancer carcinus Linnaeus, 1758, Syst.Nat., (ed. 10)1:631

Synonymy: *Astacus carcinus* - Fabricius, 1775; *Cancer (Astacus) jamaicensis* Herbst, 1792; *Palaemon carcinus* - Weber, 1795; *Palaemon jamaicensis* - Olivier, 1811; *Palaemon brachydactylus* Wiegmann, 1836; *Palaemon punctatus* Randall, 1840; *Palaemon brevicarpus* De Haan, 1849; *Palaemon aztecus* De Saussure, 1857; *Palaemon montezumae* De Saussure, 1857; *Palaemon laminatus* Von Martens, 1869; *Bithynis jamaicensis* - Pocock, 1889; *Bithynis aztecus* - Young, 1900; *Bithynis montezumae* - Young, 1900; *Macrobrachium jamaicense* - Pearse, 1915; *Palaemon omatus* Torralbas, 1917; *Palaemon (Macroterochair) jamaicensis* - De Man, 1925; *Periclimenes portoricensis* Schmitt, 1933.

FAO Names: Painted river prawn (En), Bouquet pintade (Fr), Camarón pintado (SP).

Local Names: Langostino, Camarón de agua dulce, Cauque, Chacal (Mexico), Acamaya (Veracruz, Mexico), Camarón de río, Langostino de río (Venezuela), Stone Sara-Sara (Surinam), Pitu, Camarão pitu (N.E. Brazil), [Potipema (Recife, Brazil, according to Marcgraf, 1648)], Camarão de rio (S.E. Brazil).

Literature: Holthuis, 1952:114, Pls. 30,31, Figs. a-c.

Distribution: Atlantic America: Florida (U.S.A.) to S.E. Brazil.

Habitat: Fresh water, part of the early development is passed in salt and brackish water. Bottom sand and stones.

Size: Maximum total length 233 mm (♂), 170 mm (♀).

Interest to Fishery: In Mexico the species is of considerable importance. It is sold there fresh and frozen. Davant (1963:55) indicated that the species is fished for and highly appreciated as food in Venezuela. Also in Surinam the species is greatly esteemed, because of its size and excellent flavour, but it does not play an important part in the diet of the population (Holthuis, 1959:96). In N.E. Brazil the species is of considerable commercial importance; it is eaten as such by the people living along the rivers or it is used as an ingredient for a regional dish; specimens are also transported to the towns and sold on the market. FAO (1964:11) mentioned the species in his assessment of shrimp resources near Florianópolis (S.E. Brazil). The species is evidently fished for food wherever it occurs, but as large specimens often are not too frequent, the caught animals are mostly used by the fishermen for their own consumption and less frequently sold. Chace & Hobbs (1969:98) described the catching of these animals in Dominica. I myself witnessed this in Curaçao. Gundlach (1887:133) said that in Puerto Rico it was "estimado por su carne". The great size of the adult animals makes the species attractive for aquaculture, and at several places in the U.S.A., Mexico, Puerto Rico and Barbados experiments to this effect are under way.

Macrobrachium choprai (Tiwari, 1949)

PALAEM Macro 9

Palaemon choprai Tiwari, 1949, Rec.Indian Mus., 45:333

Synonymy: Tiwari (1955:233) considered *Palaemon spinipes birmanicus* Schenkel, 1902, a subspecies of the present species. If this is correct, the name of the present form should be *Macrobrachium birmanicus choprai* (Tiwari).

FAO Names: Ganges river prawn (En), Bouquet du haut Gange (Fr), Camarón del rio Ganges (SP).

Literature: Tiwari, 1949:333, Fig. 2.

Distribution: Indo-West Pacific: "The Indo-Gangetic plain in the Ganges and Brahmaputra River systems in the plains of U.P., Bihar & Assam", India (Tiwari, 1955:233).

Habitat: Fresh water.

Size: Maximum total length 183.5 mm (♂), 130.5 mm (♀).

Interest to Fishery: Part of the type material was obtained at the fish market in Banaras, India.

Macrobrachium dayanum (Henderson, 1893)

PALAEM Macro 10

Palaemon dayanus Henderson, 1893, Trans.Linnean Soc.London, (Zool.), (2)5:443

FAO Names: Kaira river prawn (En), Bouquet kaira (Fr), Camarón kaira (Sp).

Local Names: Kaira icha, Daiya chingri (Bangladesh).

Literature: Chopra & Tiwari, 1949:215, Fig. 1

Distribution: Indo-West Pacific: Pakistan; India; Bangladesh.

Habitat: Fresh water.

Size: Maximum total length 92 mm (♂), 84 mm (♀).

Interest to Fishery: Listed by Ahmad (1957:20) among the commercial prawns of Bangladesh.

Macrobrachium dux (Lens., 1910)

PALAEM Macro 11

Palaemon (Eupalaemon) dux Lenz, 1910, Wiss.Ergeb.Dtsch.Zentral-Afrika-Exped., 1907-08, 3:129

Synonymy: *Palaemon (Eupalaemon) lenzii* De Man, 1911; *Palaemon (Eupalaemon) dux congoensis* De Man, 1912; *Palaemon (Eupalaemon) dux tenuicarpus* De Man, 1925.

FAO Names: Congo river prawn (En), Bouquet congolais (Fr), Camarón congoleño (Sp).

Literature: Schmitt, 1962a:33,65, Pl. 4, Fig. 2, Pl. 5, Pl. 6, Fig. 1.

Distribution: Eastern Atlantic: West Africa from Rio Muni to Zaire.

Habitat: Fresh water.

Size: Maximum carapace length 55 mm (♂), 30 mm (♀).

Interest to Fishery: Darteville (1950a:24) indicated that the species is found "assez rarement au marché de Poisson de Léopoldville" [Kinshasa, Zaire].

Macrobrachium equidens (Dana, 1852)

PALAEM Macro 12

Palaemon equidens Dana, 3352, Proc.Acad.Nat.Sci.Phila., 6:26

Synonymy: *Palaemon sundaicus bataviana* De Man, 1897; *Palaemon (Eupalaemon) sundaicus brachydactyla* Nobili, 1899; *Palaemon (Eupalaemon) acanthosoma* Nobili, 1899; *Palaemon (Eupalaemon) sundaicus baramensis* De Man, 1902; *Palaemon (Eupalaemon) nasutus* Nobili, 1903; *Palaemon sulcatus* Henderson & Matthai, 1910. In older literature the species usually is (incorrectly) indicated as '*Palaemon sundaicus*'.

FAO Names: Rough river prawn (En), Bouquet chagrin (Fr), Camarón Iija (Sp).

Literature: Holthuis, 1950:162, Fig. 36.

Distribution: Indo-West Pacific: Madagascar to S. China, New Britain and New Caledonia.

Habitat: Brackish and fresh water.

Size: Maximum total length 98 mm.

Interest to Fishery: Panikkar (1937:346) mentioned the species among those fished for at the Malabar coast of S.W. India. Kurian & Sebastian (1976:92) listed the species as commercially important in India, but at the same time stated that it is only found in Kerala and in small numbers. Also in Indonesia, especially in Java, the species is fished for (Djajadiredja & Sachlan, 1956:372). It is of secondary importance, usually only found mixed in catches for other species. Domantay (1956:363) listed the species (as *Palaemon sundaicus*) among the commercially important prawns of the Philippines. In Malaya it is "considered to be almost valueless" (Johnson, 1966:279).

Macrobrachium esculentum (Thallwitz, 1891)

PALAEM Macro 13

Palaemon esculentus Thallwitz, 1891, Zool.Anz., 14:98

Synonymy: *Palaemon dulcis* Thallwitz, 1891.

FAO Names: Sweet river prawn (En), Bouquet saveur (Fr), Camarón saborete (Sp).

Distribution: Indo-West Pacific: Celebes; Indonesia; Philippines.

Habitat: Fresh water.

Size: Maximum total length 79 mm; maximum carapace length 33 mm.

Interest to Fishery: Domantay (1956:363) listed the species among those that are commercially important in the Philippines. Although Thallwitz (1891) did not explain the derivation of the name "esculentus" it seems obvious that the collector (A.B. Meyer) gave him the information that the species is edible.

Macrobrachium formosense Bate, 1868

PALAEM Macro 14

Macrobrachium formosense Bate, 1868, Proc.Zool.Soc.Lond., 1868:364

Synonymy: *Palaemon longipes* De Haan, 1849; *Palaemon formosensis* - Ortmann, 1891; *Palaemon (Eupalaemon) longipes* - De Man, 1897; *Bithynis longipes* - M.J. Rathbun, 1902; *Macrobrachium longipes* - Maki & Tsuchiya, 1923.

FAO Names: Crane river prawn (En), Bouquet grue (Fr), Camarón grulla (Sp).

Distribution: Indo-West Pacific: Japan; Taiwan.

Habitat: Fresh water.

Size: Total length 60 to 106 mm.

Interest to Fishery: Ling & Costello (1976:2) listed this species as being the subject of laboratory experiments for aquaculture in Okinawa, Japan.

Macrobrachium geron Holthuis, 1950

PALAEM Macro 15

Macrobrachium geron Holthuis, 1950, Siboga Exped.Mon., 39(a9):258

Synonymy: *Cryphiops geron* - Johnson, 1966.

FAO Names: Greybeard river prawn (En), Bouquet barbegris (Fr), Camarón barbegrís (Sp).

Distribution: Indo-West Pacific: Southern Malaya; Banka (Indonesia).

Habitat: Fresh water.

Size: Maximum total length 61 mm.

Interest to Fishery: Johnson (1966:279) stated that the species is "common in 'tree-country' streams in southern Malaya [and is] sometimes collected and eaten by children and trippers". It is "excellent in flavour; but the productivity of such streams is so low that they can scarcely be regarded as a valuable reserve of food".

Macrobrachium grandimanus (Randall, 1840)

PALAEM Macro 16

Palaemon grandimanus Randall, 1840, J.Acad.Nat.Sci.Phila., 8:142

Synonymy: *Palaemon gracilimanus* Randall, 1840; *Palaemon acutirostris* Dana, 1852; *Bithynis grandimanus* - Bate, 1888.

FAO Names: Hawaii river prawn (En), Bouquet hawaïen (Fr), Camarón hauaiano (Sp).

Local Names: Opae (Hawaii).

Literature: Holthuis, 1950:230.

Distribution: Indo-West Pacific: Hawaiian Archipelago; Ryukyu Islands.

Habitat: Fresh and brackish water.

Size: Maximum total length 67 mm.

Interest to Fishery: The species is sold on the Honolulu market (Bate, 1888:794; M-J. Rathbun, 1906:928). The importance of the fishery is not known to me.

Macrobrachium heterochirus (Wiegmann, 1836)

PALAEM Macro 17

Palaemon heterochirus Wiegmann, 1836, Arch.Naturgesch.Berlin, 2(1):149

Synonymy: *Palaemon appuni* Von Martens, 1869.

FAO Names: Cascade river prawn (En), Bouquet cascade (Fr), Camarón de cascada (Sp).

Literature: Holthuis, 1952:69, Pl. 15, Figs. a,b, Pl. 16, Figs. a-c; Chace & Hobbs, 1969:106, Figs. 24,25e,k.

Distribution: Atlantic America: Mexico to S. Brazil; West Indies.

Habitat: In rapid fresh water streams, riffle areas and low cascades. Bottom sand and stones.

Size: Maximum total length 135 mm (♂), 73 mm (♀); maximum carapace length 34 mm (♂), 24 mm (♀).

Interest to Fishery: The species is of secondary commercial importance in N. and N.E. Brazil, being mostly used as bait there (Fausto Filho, 1968:28; Coelho & Ramos, 1968:3).

Macrobrachium idae (Heller, 1862)

PALAEM Macro 18

Palaemon idae Heller, 1862, S.B.Akad.Wiss.Wien, 45(1):416

Synonymy: *Palaemon (Eupalaemon) idae* - De Man, 1897; *Palaemon (Eupalaemon) ritsemae* De Man, 1897; *Palaemon (Eupalaemon) idae subinermis* Nobili, 1899; *Palaemon (Eupalaemon) mariae* Coutière, 1900; *Palaemon (Eupalaemon) robustus* De Man, 1902.

FAO Names: Orana river prawn (En), Bouquet orana (Fr), Camarón orana (Sp).

Local Names: Orana, Camaron (Madagascar).

Literature: Holthuis, 1950:142, Fig. 33.

Distribution: Indo-West Pacific: Madagascar to the Philippines, Indonesia and the Admiralty Islands.

Habitat: Fresh and brackish water.

Size: Maximum total length 110 mm.

Interest to Fishery: Louvel (1930:19) mentioned the present species among the species fished for by the local population in Madagascar and stated the species of the genus to be there "très recherchées des européens". Moulhéat & Vincke (1968:178) stated that the present species with *Metapenaeus monoceros* and *Palaemon concinnus* dominate in the fishery in the Madagascar "pangalanes". Jones (1967:1 337) mentioned its fishery in "Kerala backwaters area and other regions" in India. Chopra (1943:5) stated that this species is "of considerable economic importance in South India and especially in Travancore". . . . being "fished extensively in the backwaters of Travancore from September to December".

Macrobrachium idella (Hilgendorf, 1898)

PALAEM Macro 19

Palaemon (Eupalaemon) idae idella Hilgendorf, 1898, *Deutsch Ost-Afrika*, 4(7):29

Synonymy: *Palaemon (Eupalaemon) multidentis* Coutière, 1900.

FAO Names: Slender river prawn (En), Bouquet hâve (Fr), Camarón cenceño (Sp).

Literature: Henderson & Matthai, 1910:285, Pl. 15, Fig. 3, Pl. 16, Fig. 3 (as *Palaemon idae*).

Distribution: Indo-West Pacific: East Africa; Madagascar; India.

Habitat: Fresh water.

Size: Total length 42 to 111 mm.

Interest to Fishery: Bailey & Crichton (1971:7) reported this species as being caught for food in Tanzania, but considered it of only slight economic importance. Kurian & Sebastian (1976:93) mentioned a small fishery for this species in the southwestern region of India and near the east coast.

Macrobrachium intermedium (Stimpson, 1860)

PALAEM Macro 20

Leander intermedius Stimpson, 1860, Proc.Acad.Nat.Sci.Phila., 1860:41

Synonymy: *Palaemon (Leander) intermedius* - Miers, 1884.

FAO Names: Striped river prawn (En), Bouquet rayé (Fr), Camarón rayado (Sp).

Local Names: Striped prawn (S. Australia).

Literature: Hale, 1927:58, Fig. 53.