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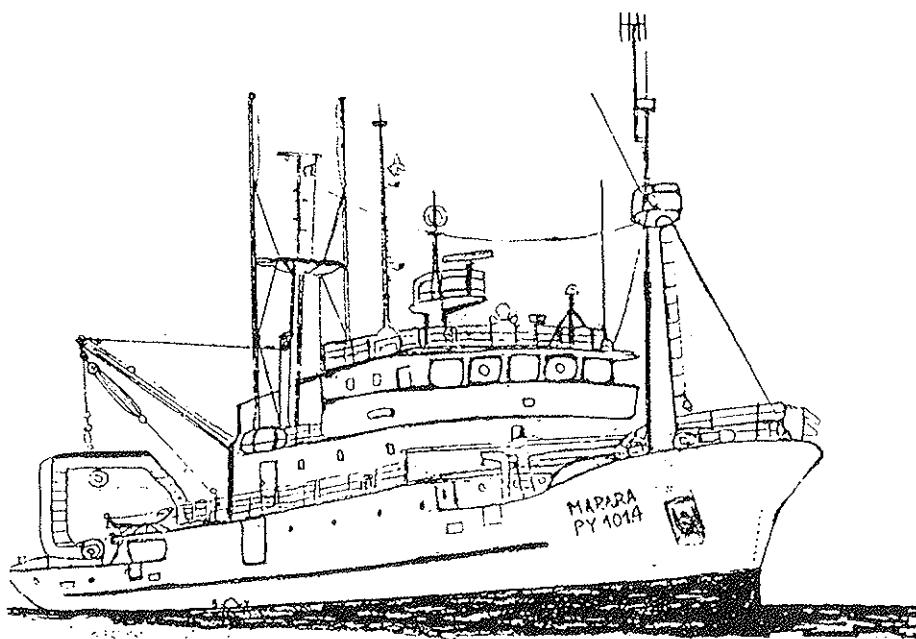
NO. 451

CRUSTACEA DECAPODA AND STROMATOPODA OF FRENCH POLYNESIA

BY

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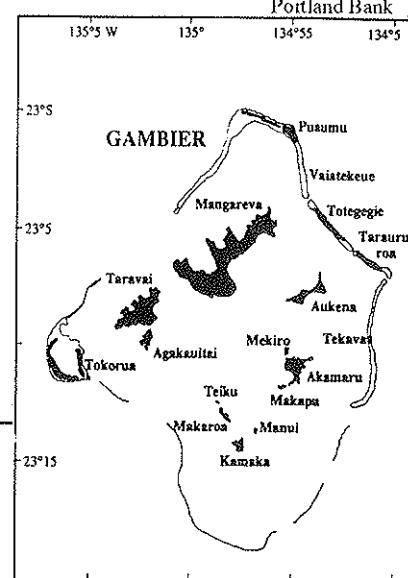
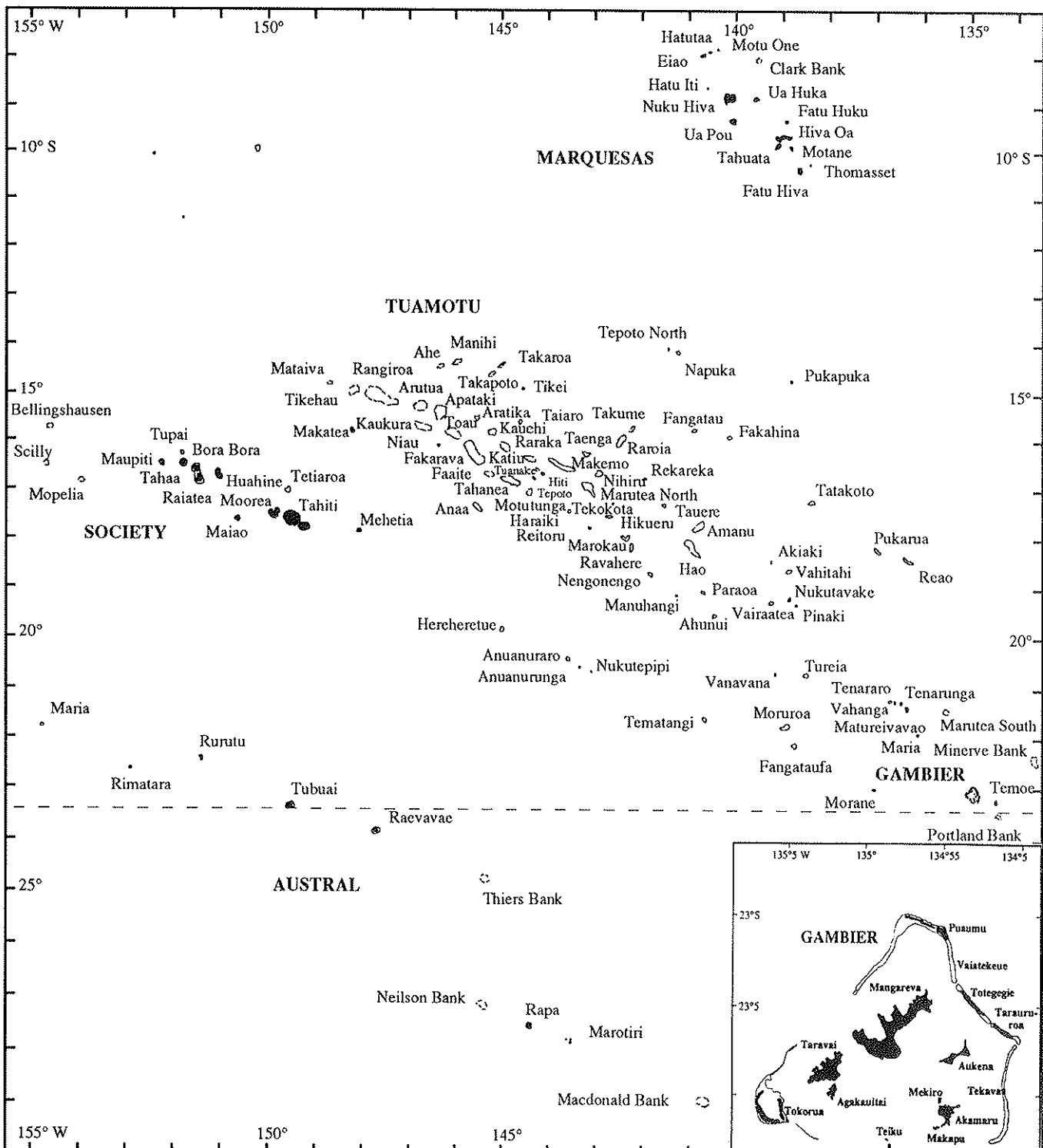


RV *Marara*, 43 m long; original drawing by a Polynesian
This vessel has operated in French Polynesia between 1973
and 1996, and realised important collections of Crustacea.

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CRUSTACEA DECAPODA AND STOMATOPODA
OF FRENCH POLYNESIA

(DENDROBRANCHIATA, STENOPODIDEA, CARIDEA, THALASSINIDEA, AND STOMATOPODA,
WITH ADDITIONS TO ASTACIDEA, PALINURIDEA, ANOMURA, AND BRACHYURA)

BY

JOSEPH POUPIN

A B S T R A C T

French Polynesian Decapoda, restricted to shrimps, and Stomatopoda are inventoried from literature and unpublished fields collections. Number of species is 205 for the shrimps and 26 for the Stomatopoda. Within the shrimps, Caridea dominate with 170 species, mainly Alpheidae (57 species), Palaemonidae (46 species), and Pandalidae (29 species). Full literature and distribution in French Polynesia are indicated for each species. When available a brief indication is also given on the biotop. New records include 23 species of the genera *Aristaeomorpha*, *Funchalia*, *Metapenaeopsis*, *Pelagopenaeus*, *Sicyonia*, *Nematocarcinus*, *Janicella*, *Stylocactus*, *Anchistus*, *Harpiliopsis*, *Jocaste*, *Paranchistus*, *Periclimenes*, *Philaricus*, *Vir*, and *Thor*, for the shrimps, and *Alima*, *Busquilla*, and *Gonodactylus*, for the Stomatopoda.

Modifications to the first documented checklist of the French Polynesian lobsters, hermit crabs, and crabs (POUPIN, 1996a) are also included with 28 additional species of the genera *Stereomastis* and *Panulirus* for the lobsters, *Calcinus*, *Dardanus*, *Catapagurus*, *Nematopagurus*, *Pylopaguropsis*, *Oncopagurus*, *Munida*, and *Albunea* for the hermit crabs, *Calappa*, *Mursia*, *Alainodaeus*, *Hexagonalia*, *Tetralia*, *Trapezia*, *Lithoscapus*, *Sphenomaia*, and *Utinomiella*, for the crabs.

The total number of French Polynesian Decapoda and Stomatopoda is now 758, mainly Brachyura (377 species), Caridea (170 species), and Anomura (126 species). Modern researches alone, *i.e.* published after 1980, have generated 322 new records. Despite these efforts, knowledge of the regional fauna remains incomplete, and it is estimated that the number of species will easily exceed 800 when recent collections from the Marquesas are fully studied (MUSORSTOM 9). A lot of genera still need a careful revision and groups like the Thalassinidea and Stomatopoda are obviously under-represented.

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I N T R O D U C T I O N

In complement to the first documented checklist dealing with the Astacidea, Palinuridea, Anomura, and Brachyura (POUPIN, 1996a), the present work considers the shrimps (Dendrobranchiata, Stenopodidae, Caridea, and Thalassinidea) and Stomatopoda of French Polynesia.

Deep shrimps, *i.e.* beyond 100m, were originally listed separately by POUPIN in: "Recent contributions to the deep sea decapod Crustacea of French Polynesia", submitted to the *Proceedings of the International Senckenberg Symposium*, Frankfurt, October 1993. However, as these Proceedings were never printed, they are again included here. This deep material mainly comes from investigations of the RV *Marara* (POUPIN, 1996b; POUPIN & BENARD, 1996).

Records from the literature are complemented by unpublished field collections. These were made by the author, during the RV *Marara* campaigns, or realised during the activities of the French ORSTOM research center, Tahiti.

Presentation follows POUPIN (1996a) and is briefly summarized here. Records are limited to French Polynesia, which includes five archipelagos: Marquesas, Society, Austral, Tuamotu, and Gambier Islands (see map). A single exception is for *Metapenaeopsis velutina*, recorded by CROSNIER (1991) from Pitcairn Island in the neighbourhood of the Gambier Islands. The unit of location is the Island, names of bays, rivers, or islets on the reef (Polynesian 'Motu') being ignored. It must be noted that distribution patterns of most of the species are well beyond French Polynesia but are strictly limited to French Polynesia in this report. As far as possible, we briefly mentioned the main characteristic of the biotop: freshwater, pelagic, bathypelagic, planktonic, sublittoral, deep, burrower, and association with other organisms (coral, echinoderm, sponge...). This information, for example depth range or kind of association, is restricted to observations made in French Polynesia. Arbitrarily, (see POUPIN, 1996a: 7) "Sublittoral" means between 10-100m, and "Deep" beyond 100m. When no depth range is indicated it means that the species is common in littoral shallow waters. A brief history of the collections is related under each Infra-Order section.

Abbreviations are: MNH, Museum of Natural History, London; BPBM, Bernice P. BISHOP Museum, Honolulu; CRIODE, Centre de Recherche Insulaire et Observatoire de l'Environnement, Moorea; MNHN, Muséum national d'Histoire naturelle, Paris; ORSTOM, Institut Français de Recherche Scientifique pour le Développement en Coopération; RMNH, Nationaal Natuurhistorisch Museum, Leiden; RV, Research Vessel; SME, Station Marine d'Endoume; USNM, National Museum of Natural History, Washington.

L I S T O F T H E S P E C I E S

ORDER DECAPODA

INFRA-ORDER DENDROBRANCHIATA

Dendrobranchiata reported here are mostly pelagic, bathypelagic, or deep species. Oldest collections were made by the HMS *Challenger* (BATE, 1881, 1888). Subsequent species were then collected by the

National Geographic Society SMITHSONIAN-BISHOP Museum Marquesas Expedition (REHDER, H.A., 1967¹, CROSNIER, 1991). Recent additions to the Dendrobranchiata mainly come from RV *Marara* collections (POUPIN *et al.*, 1990; POUVIN, 1996b) or material from the ORSTOM Center, Tahiti (coll. P. FROUIN, E. JOSSE, and RV *Alis* Marquesas Expedition, August/September 1997). This material has been determined by A. CROSNIER (MNHN) and includes 7 species reported for the first time: *Aristaeomorpha foliacea*, *Funchalia taanangi*, *F. villosa*, *Metapenaeopsis commensalis*, *M. hilarula*, *Pelagopenaeus balboe*, and *Sicyonia* sp.

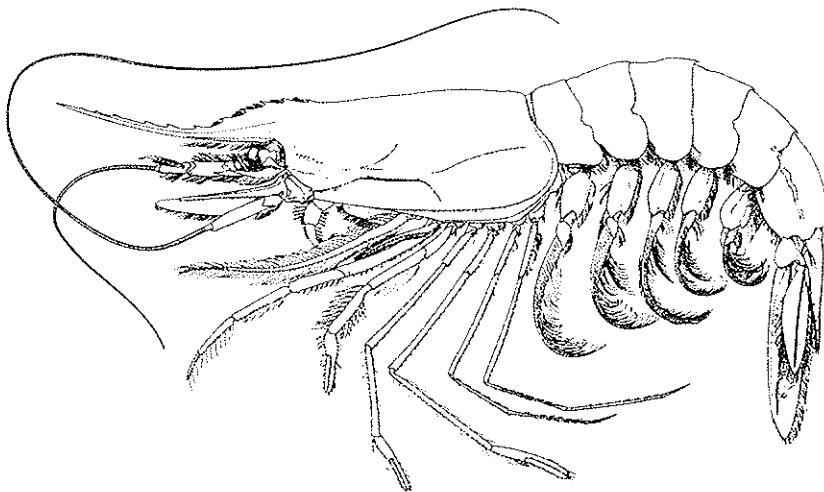


Figure 1 - *Aristaeomorpha foliacea* Risso, 1827
(Drawing by M.K. RYAN, in PÉREZ FARFANTE & KENSLEY, 1997)

FAMILY ARISTAEIDAE

Aristaeomorpha foliacea Risso, 1827

DISTRIBUTION. — Society (Maupiti) - Bathypelagic (718m).

REFERENCES. — *Aristaeomorpha foliacea* - NEW MATERIAL - Coll. RV *Marara*, det. A. CROSNIER (Maupiti MNHN Na13433; 718m).

Aristeus aff. mabahissae Ramadan, 1938

DISTRIBUTION. — Marquesas (Eiao, Hiva Oa) - Bathypelagic (600-630m).

REFERENCES. — *Aristeus aff. mabahissae* - POUPIN *et al.*, 1990: 15 (French Polynesia). — POUVIN, 1996b: 4, pl. 1a (Eiao, Hiva-Oa; 600-630m).

Plesiopenaeus armatus (Bate, 1881)

DISTRIBUTION. — Tuamotu - Bathypelagic (4300m).

REFERENCES. — *Aristeus armatus* - BATE, 1888: 312, pl. 45-46 (Northwest Tuamotu, Challenger st. 276, 16/09/1875, 13°28'S, 149°30'W). — *Plesiopenaeus armatus* - CROSNIER & FOREST, 1973: 294, fig. 99c-d (Syn.).

¹Erroneously mentioned as "HARALD, 1967" in POUPIN 1996a

FAMILY BENTHESICYMIDAE

Benthesicymus crenatus Bate, 1881

DISTRIBUTION. — Tuamotu - *Bathypelagic* (4300m).

REFERENCES. — *Benthesicymus crenatus* Bate, 1881: 191; 1888: 329, pl. 54-55 (Northwest Tuamotu, Challenger st. 276, 16/09/1875, 13°28'S, 149°30'W).

Benthesicymus investigatoris Alcock & Anderson, 1899

DISTRIBUTION. — Marquesas (Hiva Oa); Society (Huahine); Tuamotu (Makemo) - *Bathypelagic* (630-1025m).

REFERENCES. — *Benthesicymus investigatoris* - POUPIN et al., 1990: 15 (French Polynesia). — POUPIN, 1996b: 4, pl. 1b (Hiva Oa, Huahine, Makemo; 630-1025m).

Benthesicymus strabus Burkenroad, 1936

DISTRIBUTION. — Austral - *Bathypelagic* (4346m).

REFERENCES. — *Benthesicymus brasiliensis* Bate 1888: 332, pl. 57-fig. 1 (Southeast of Marotiri, Challenger st. 285, 14/10/1875, 32°36'S, 137°43'W, 4346m), Challenger specimens from the South Pacific are not *B. brasiliensis* Bate, 1888 but *B. strabus* nov. in BURKENROAD (1936: 29) — *Benthesicymus strabus* Burkenroad, 1936: 29, 32, 33, 42, 46, fig. 10, 23, 27, 34, 41, 46, 49 (BATE's material; Syn.).

FAMILY PENAEIDAE

Fenneropenaeus indicus (H. Milne Edwards, 1837)

DISTRIBUTION. — Society (Tahiti) - *Aquaculture*.

REFERENCES. — *Penaeus indicus* - AQUACOP & PATROIS, 1990: 67 (Imported for aquaculture; see remark). — *Fenneropenaeus indicus* - PÉREZ FARFANTE & KENSLEY, 1997: 80, fig. 41 (New combination).

REMARK. — Several other penaeoid shrimps had been imported for aquaculture purposes in Tahiti: *Penaeus monodon*, *Litopenaeus stylirostris* and *L. varnamei*.

Funchalia taanangi Burkenroad, 1940

DISTRIBUTION. — Society (Huahine, Maiao, Tahiti) - *Pelagic* (100-370m).

REFERENCES. — *Funchalia taanangi* - NEW MATERIAL - Coll. ORSTOM/Tahiti, 1997, fish stomach and pelagic trawl, det. A. CROSNIER (Society, off Huahine, Maiao, Tahiti; MNHN Na13426-28; pelagic 100-370m).

Funchalia villosa (Bouvier, 1905)

DISTRIBUTION. — Society (Tahiti) - *Pelagic* (50-700m).

REFERENCES. — *Funchalia villosa* - NEW MATERIAL - Coll. ORSTOM/Tahiti, E. JOSSE, fish stomach, det. J. POUPIN & A. CROSNIER (Tahiti; MNHN Na13436).

Melicertus canaliculatus (Olivier, 1811)

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Penaeus canaliculatus* - HELLER, 1865: 121 (Tahiti). — *Penaeus* (*Melicertus*) *canaliculatus* - HOLTHUIS, 1980: 47 (Catalogue). — *Melicertus canaliculatus* - PÉREZ FARFANTE & KENSLEY, 1997: 101 (New combination).

Metapenaeopsis commensalis Borradaile, 1898

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Metapenaeopsis commensalis* - NEW MATERIAL - Coll. ORSTOM/Tahiti, P. FROUIN, det. A. CROSNIER (Tahiti; MNHN Na13430).

Metapenaeopsis difficilis Crosnier, 1991

DISTRIBUTION. — Marquesas (Tahuata) - *Sublittoral* (64-79m).

REFERENCES. — *Metapenaeopsis difficilis* Crosnier, 1991: 255, fig. 65-67 (Tahuata; 64-79m).

Metapenaeopsis hilarula (de Man, 1911)

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Metapenaeopsis hilarula* - CROSNIER, 1991: 227, fig. 42-44, 45a-d, 46 (Tahiti).

Metapenaeopsis marquesas Crosnier, 1991

DISTRIBUTION. — Marquesas (Hiva Oa, Nuku Hiva, Tahuata, Ua Pou) - Sublittoral (45-80m).

REFERENCES. — *Metapenaeopsis marquesas* Crosnier, 1991: 244, fig. 57-59 (Hiva Oa, Nuku Hiva, Tahuata, Ua Pou; 45-80m).

Metapenaeopsis tarawensis Racek & Dall, 1965

DISTRIBUTION. — Society (Tahiti); Tuamotu (Marutea).

REFERENCES. — *Metapenaeopsis tarawensis* - CROSNIER, 1991: 241, fig. 54-56 (Marutea) - NEW MATERIAL - Coll. B. THOMASSIN & P. FROUIN, det. A. CROSNIER (Tahiti; MNHN Na13431-32).

Metapenaeopsis velutina (Dana, 1852)

DISTRIBUTION. — Pitcairn (neighbourhood of Gambier Islands) - Deep (113-124m).

REFERENCES. — *Metapenaeopsis velutina* - CROSNIER, 1991: 247, fig. 60-61 (Pitcairn; 113-124m).

Pelagopenaeus balboe (Faxon, 1893)

DISTRIBUTION. — Society (Maiao) - Pelagic.

REFERENCES. — *Pelagopenaeus balboe* - NEW MATERIAL - Coll. ORSTOM Tahiti 1997, fish stomach, det. A. CROSNIER (Society off Maiao; MNHN Na13425).

Penaeus monodon Fabricius, 1798

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Penaeus tahitensis* Heller, 1862: 528; 1865: 121, pl. 11, fig. 2 (Tahiti). — *Penaeus (Penaeus) monodon* - HOLTHUIS, 1980: 50 (Syn.).

FAMILY SOLENOCERIDAE

Hadropenaeus lucasii Bate, 1881

DISTRIBUTION. — Tuamotu (Hao) - Deep (522m).

REFERENCES. — *Hadropenaeus lucasii* - NEW MATERIAL - Coll. RV Marara, det. A. CROSNIER (Hao; MNHN Na13435; 522m).

Haliporus curvirostris Bate, 1881

DISTRIBUTION. — Austral - Deep (4346-4365m).

REFERENCES. — *Haliporus curvirostris* - BATE, 1888: 288, pl. 42, fig. 1 (North of Tubuai, Challenger, st. 281, 6/10/1875, 22°21'S, 150°17'W, 4365 m; Southeast off Marotiri, st. 285, 14/10/1875, 32°36'S, 137°43'W, 4346m). — CROSNIER, 1988a: 567, fig. 1a-b, 2a, f, 3a, 4, 5, 6a-c, 9a, 10a-b, 11a-c (BATE's material, st. 285).

Hymenopenaeus halli Bruce, 1966

DISTRIBUTION. — Tuamotu (Moruroa) - Deep (715m).

REFERENCES. — *Hymenopenaeus halli* - POUPIN, 1996b: 4, pl. 1c (Moruroa; MNHN Na13434; 715m).

FAMILY SICYONIIDAE

DISTRIBUTION. — Marquesas (Hatutu, Motu One) - Deep (416-460m).

REFERENCES. — *Sicyonia* sp. - NEW MATERIAL - Coll. RV Alis Marquesas Expedition, det. A. CROSNIER, to be included in a revision of the family (Hatutu, Motu One; 416-460m).

FAMILY LUCIFERIDAE

Only two Luciferidae are reported with certainty from French Polynesia, *Lucifer chacei* Bowan and *L. typus* H. Milne Edwards. A third species, *Lucifer pacificus* Dana, has been described from the surroundings

of Rangiroa, Tuamotu ($15^{\circ}20' S$, $148^{\circ} W$; see DANA, 1852: 673; 1855, pl. 45, fig. 2). This material is no more extant and with DANA's description alone the species is "completely unrecognizable" (cf. HANSEN, 1919: 49).

Lucifer chacei Bowman, 1967

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti); Tuamotu (Moruroa, Nukutipipi, Takapoto, Tikehau) - *Planktonic*.

REFERENCES. — *Lucifer chacei* - BOWMAN, 1967: 266, fig. 1-4 (Bora Bora, Moorea, Tahiti, Tikehau). — RENON, 1977: 223 (Takapoto); 1985: 391 (List of French Polynesian zooplankton); 1989: 78 (Syn.). — MERSCHARDT-SALVAT, 1991: 80, tab. K (Nukutipipi; larvae in the lagon). — *Lucifer sp.* - MICHEL, 1969: 122, tab. 5 (Moruroa).

Lucifer typus H. Milne Edwards, 1837

DISTRIBUTION. — Gambier (Mangareva); Society (Tahiti) - *Planktonic*.

REFERENCES. — *Lucifer reynaudii* - BATE, 1888: 466 (Tahiti). — *Lucifer batei* Borradaile, 1915: 228 (BATE's material). — *Lucifer typus* - NOBILI, 1907: 352, pl. 1, fig. 1 (Mangareva). — HANSEN, 1919: 49 (Syn.) - SYNONYM - *Lucifer batei* Borradaile, 1915 (*Lucifer reynaudii* H. Milne Edwards, 1837 is a species *Incertae sedis*, see HANSEN, 1919: 49 "...the name *L. Reynaudii* ought to be dropped").

FAMILY SERGESTIDAE

Sergia bigemmea (Burkenroad, 1940)

DISTRIBUTION. — Society ("off Tahiti") - *Bathypelagic*.

REFERENCES. — *Sergia bigemmea* - PÉREZ-FARFANTE & KENSLEY, 1997: 199 ("off Tahiti").

REMARK. — World-wide distributed sergestids shrimps are limited here to this single record although undoubtedly better represented in the area. *Sergestes fermerinkii* Bate, 1888 recorded in the surroundings of Raevavae (BATE, 1888: 419, pl. 76, fig. 4, *Challenger*, $24^{\circ}S$, $148^{\circ}W$) is a species *Incertae sedis*. HANSEN (1903: 67) when revising the *Sergestes* from the *Challenger* Expedition writes about it: "BATE has examined one specimen, captured in the Pacific Ocean, lat. $24^{\circ}S$, long. $148^{\circ} W$, and measuring 5 mm. The specimen is not to be found in the Museum collection [MNH]. According to the figure it is a very young *Mastigopus* belonging either to *S. diapontius* Bate, H.J.H., or to a closely-allied species of the same group."

INFRA-ORDER STENOPODIDEA

The very common *Stenopus hispidus* (Olivier, 1811) is the single species regularly reported from the area. SENDLER (1923: 46) also reports an undetermined species of the genus *Stenopusculus* (juvenile from Makatea, Tuamotu; det. DE MAN). Therefore, in addition to the *Stenopus* sp. nov. listed hereafter, three more Stenopodidae have been recognised during the recent RV *Alis* Marquesas Expedition (J. POUPIN field notes; material not studied, deposited in MNHN collections).

FAMILY STENOPODIDAE

Stenopus hispidus (Olivier, 1811)

DISTRIBUTION. — Society (Tahiti); Tuamotu (Hao, Makatea, Raraka, Raroia).

REFERENCES. — *Stenopus hispidus* - DANA, 1852: 607; 1855, pl. 40, fig. 8 (Raraka). — NOBILI, 1907: 366 (Hao). — SENDLER, 1923: 45 (Makatea). — HOLTHUIS, 1953a: 60 (Raroia). — MORRISON, 1954: 13 (Raroia). — SALVAT, 1986a: 23 (Text); 1986b: 71, photograph (French Polynesia). — BAGNIS & CHRISTIAN, 1983: 109, photograph (Tuamotu). — *Stenopus* - PARDON, 1992: 81, photograph (Tahiti; according to the photograph, must be *S. hispidus*). — *Stenopus* ? - CHABOIS L. & F., 1954: pl. 44 (French Polynesia).

Stenopus sp. nov. (GOY in study)

DISTRIBUTION. — Tuamotu (Fangataufa) - Deep (190m).

REFERENCES. — *Stenopus* sp. nov. - POUPIN, 1996b: 4, pl. 1d (Fangataufa, 190m; in study with J. GOY).

INFRA-ORDER CARIDEA

Caridea have been first reported from French Polynesia by the 19th century voyages: the French 'Corvette' *La Coquille* (GUÉRIN-MENEVILLE, 1838), the American *US Exploring Expedition* (DANA, 1852, 1855), the American *North Pacific Expedition* (STIMPSON, 1860), the Austrian frigate *Novara* (HELLER, 1862, 1865), and the British *Challenger* (BATE, 1881, 1888). Through the activities of the J.C. GODEFFROY & SON shipping company, Polynesian shrimps were also deposited at the Museum GODEFFROY (1860-1886, HAMBURG; see historical by FRANSEN *et al.*, 1997), and subsequently purchased by the LEIDEN Museum (HOLTHUIS, 1950: 175) and the STRASBOURG Museum (ORTMANN, 1890, 1891).

Between 1902-1905, G. SEURAT, head of a Zoological laboratory established at Rikitea, Gambier Islands, sent several collections to Paris Museum. These were studied by NOBILI (1906, 1907). A succession of expeditions were then conducted in the Polynesian waters, with reports of more freshwater and lagoon shrimps: the Hanseatischen Südsee-Expedition (SENDLER, 1923); the Pacific Entomological Survey (ADAMSON, 1935); the Yacht *Alva* world cruise (BOONE, 1935); the Mangarevan Expedition of the Bernice P. BISHOP Museum (EDMONSON, 1935, 1944), and the Raroia Atoll Pacific Science Board Expedition (HOLTHUIS, 1953a; MORRISSON, 1954).

The alpheids have mainly been studied by BANNER & BANNER (1967), from a field trip made in 1954 in the Society Islands. Unfortunately all the material was destroyed in the Hawaii laboratory fire of 1961 (BANNER & BANNER, 1962). As a result BANNER & BANNER (1967) work is based on a draft manuscript and field notes, without any drawings. It is amazing to realise that type material of *Alpheus gracilipes* Stimpson, 1860, described from Tahiti, was destroyed in the Great Chicago fire of 1871 (MANNING, 1993a) and that, 90 years later, the neotype of that species, selected by BANNER & BANNER (1967) was again destroyed in the Hawaii laboratory fire.

In 1965, installation of a French nuclear base at Moruroa had generated several ecological surveys with occasional collections of shrimps. For example, *Periclimenaeus tuamotae* Bruce, 1969a was collected in 1965 in Moruroa by B. SALVAT. Later, these collections were pursued during the campaigns of the RV *Marara* (coll. B. RICHER DE FORGES, J.L. CARSIN, and J. POUPIN) mainly with deep pandalid shrimps (CROSNIER, 1986a,b, 1988b; CHAN & CROSNIER, 1991, 1997) but also with littoral component of the fauna, such as *Cinetorhynchus hendersoni* (Kemp, 1925) (OKUNO, 1997). Part of this material (13 species) is hereafter reported for the first time: *Nematocarcinus gracilis* Bate, 1888; *Janicella spinicauda* (A. Milne Edwards, 1883), *Stylocryptus aff. libratus* Filhol, 1885, *Anchistus demani* Kemp, 1922, *Harpiliopsis spinigera* (Ortmann, 1890), *Jocaste japonica* (Ortmann, 1890), *Paranchistus serenei* Bruce, 1983, *Periclimenes elegans* (Paulson, 1875), *Periclimenes grandis* (Stimpson, 1860), *Periclimenes mahei* Bruce, 1969a, *Philarius gerlachei* (Nobili, 1905), *Vir* sp. nov. Bruce (in preparation), and *Thor amboinensis* (De Man, 1888). Through ORSTOM Tahiti center activity (coll. E. JOSSE and P. FROUIN), four other shrimps are also added to the French Polynesian fauna: *Acanthephyra smithi* Kemp, 1939, *Oplophorus gracilirostris* A. Milne Edwards, 1881, *Salmoneus ? serratidigitus* (Coutière, 1896), *Nikoides aff. danae* Paulson, 1875, and *Processa aff. moana* Yaldwyn, 1971.

Since 1971, several ecological studies have been initiated by the French École Pratique des Hautes Études research center, now denominated CRIOBE and located at Moorea, Society Islands. These studies mainly report coral or algae associated shrimps (NAIM, 1980, identifications by HOLTHUIS; ODINETZ, 1983, identifications by BRUCE for the Palaemonidae, and BANNER for the Alpheidae; and KROPP & BIRKELAND, 1981) and freshwater shrimps (MARQUET, 1988, 1991, 1993, identifications by HOLTHUIS). The freshwater species are still currently under study (see KEITH & VIGNEUX, 1997).

FAMILY NEMATOCARCINIDAE

Nematocarcinus gracilis Bate, 1888

DISTRIBUTION. — Tuamotu (Fangataufa, Marutea South) - Deep (840-1000m).

REFERENCES. — *Nematocarcinus gracilis* - NEW MATERIAL - Coll. RV Marara, det. T. KOMAI (Fangataufa, Marutea South; 840-1000m).

Nematocarcinus undulatus Bate, 1888

DISTRIBUTION. — Marquesas (Fatu Hiva); Society (Raiatea) - Deep (570-850m).

REFERENCES. — *Nematocarcinus undulatus* - POUPIN, 1996b: 4, pl. 1e (Fatu Hiva, Raiatea; 570-850m).

FAMILY ATYIDAE

Atyoida pilipes (Newport, 1847)

DISTRIBUTION. — Austral (Rurutu, Tubuai); Gambier (Mangareva); Marquesas (Eiao, Fatu Hiva, Hiva Oa, Nuku Hiva, Ua Huka, Ua Pou); Society (Moorea, Tahiti) - Freshwater.

REFERENCES. — *Atyoida tahitensis* Stimpson, 1860: 28 [97] (Tahiti). — *Atya brevirostris* - SEURAT, 1934: 50 (Tahiti). — RICARD, 1986: 88 (French Polynesia). — *Atyoida serrata* - ADAMSON, 1935: 16 (Eiao, Fatu Hiva, Hiva Oa, Nuku Hiva, Ua Pou). — EDMONSON, 1935: 14 (Mangareva, Rapa, Tahiti; Marquesas) - Both not *Atyoida serrata* (Bate, 1888). — *Ortmannia alluaudi* - ADAMSON, 1935: 16 (Eiao, Fatu Hiva). — *Vanderbiltia rosamondae* Boone, 1935: 160, pl. 41-42 (Tahiti). — HOLTHUIS, 1953b: 113, fig. 1 (Tahiti; redescription of BOONE's material as a juvenile stage of *Atya serrata*; not *A. serrata* Bate, 1888, in CHACE, 1983); 1980: 70 (Syn.). — *Atyoida pilipes* - CHACE, 1983: 10, fig. 3-8 (Marquesas, Tahiti; Syn.). — MARQUET, 1988: 87, fig. 48, tab. 23; 1991: 129, tab. 1 & 2; 1993: tab. 1 & 3 (Hiva Oa, Mangareva, Moorea, Nuku Hiva, Rurutu, Tahiti, Tubuai, Ua Huka, Ua Pou). — MOSSERON, 1994: 4, fig. 3a (Nuku Hiva). — MOSSERON & FOSSIATI, 1994: 16, fig. 8a (Nuku Hiva). — POUPIN, 1994: 5, fig. 1, pl. 1a (Tahiti). — KEITH & VIGNEUX, 1997: 22, tab. 2 (Same Islands than MARQUET) - SYNONYMS - *Atya brevirostris* De Man, 1892; *Ortmannia alluaudi* Bouvier, 1905.

Atyopsis spinipes (Newport, 1847) (doubtful)

DISTRIBUTION. — Gambier (Mangareva) - Freshwater.

REFERENCES. — *Atya spinipes* - NOBILI, 1907: 353 ("Gatavake" = Mangareva). — SEURAT, 1934: 51 ("Gatavake" = Mangareva). — *Atyopsis spinipes* - CHACE, 1983: 35, figs 20-22 (Syn.; cf. remark).

REMARK. — CHACE (1983: 40) writes "Verification is also needed of the Magareva record in NOBILI (1907) and SEURAT (1934) in order to eliminate the possibility of confusion between *Atyopsis spinipes* and *Atyoida pilipes*, which seems to be established on the Gambier Islands". To confirm CHACE's hesitations we remark that recent prospections in the Gambier rivers (electric fishing by MARQUET: 1988, 1991, 1993) have brought only *Atyoida pilipes* and never *Atyopsis spinipes*.

Caridina rapaensis Edmonson, 1935

DISTRIBUTION. — Austral (Rapa, Rurutu) - Freshwater.

REFERENCES. — *Caridina rapaensis* Edmonson, 1935: 12 (Rapa). — ELDREDGE, 1967: 12 (Rapa; catalog). — MARQUET, 1988: 87, fig. 48, tab. 23; 1991: 130, tab. 1 & 2; 1993: tab. 1 & 3 (Rurutu). — KEITH & VIGNEUX, 1997: 24, tab. 2 (MARQUET's data).

Caridina serratirostris De Man, 1892

DISTRIBUTION. — Austral (Tubuai); Society (Moorea) - Freshwater.

REFERENCES. — *Caridina serratirostris* - MARQUET, 1988: 87, fig. 48, tab. 23 ; 1991: 130, tab. 1 & 2 ; 1993: tab. 1 & 3 (Moorea, Tubuai). — KEITH & VIGNEUX, 1997: 23, tab. 2 (Same Islands than MARQUET).

Caridina weberi De Man, 1892

DISTRIBUTION. — Austral (Rurutu, Tubuai); Marquesas (Fatu Hiva, Hiva Oa, Nuku Hiva, Ua Huka, Ua Pou); Society (Moorea, Tahiti) - Freshwater.

REFERENCES. — *Caridina weberi* - ADAMSON, 1935: 16 (Fatu Hiva, Nuku Hiva, Ua Pou). — EDMONSON, 1935: 10 (Tahiti, Marquesas). — MARQUET, 1988: 87, fig. 48, tab. 23; 1991: 129, tab. 1 & 2; 1993: tab. 1 & 3 (Hiva Oa, Moorea, Nuku Hiva, Rurutu, Tahiti, Tubuai, Ua Huka, Ua Pou). — MOSSERON, 1994: 4, fig. 3a (Nuku Hiva). — MOSSERON & FOSSATI, 1994: 16, fig. 8b-c (Nuku Hiva). — KEITH & VIGNEUX, 1997: 22, tab. 2 (Same Islands than MARQUET).

FAMILY OPLOPHORIDAE

Acanthephyra eximia Smith, 1884

DISTRIBUTION. — Austral (Tubuai); Tuamotu (Fangataufa, Hao, Moruroa) - Bathypelagic (720-1050m).

REFERENCES. — *Acanthephyra eximia* - POUPIN et al., 1990: 15 (French Polynesia). — POUPIN, 1996b: 4, pl. 1e (Fangataufa, Hao, Moruroa; 720-1050m) - NEW MATERIAL - Coll. Y. PLESSIS, 14/05/79, det. A. CROSNIER (Paris, MNHN Na7259; Tubuai; 800m).

Acanthephyra smithi Kemp, 1939

DISTRIBUTION. — French Polynesia - Bathypelagic (Up to 3450m).

REFERENCES. — *Acanthephyra smithi* - NEW MATERIAL - Coll. E. JOSSE 1995, fish stomach, det. J. POUPIN, material deposited at ORSTOM/Tahiti (French Polynesia, probably between Society and Marquesas).

Acanthephyra stylorostratis (Bate, 1888)

DISTRIBUTION. — Austral - Bathypelagic (4346m).

REFERENCES. — *Bentheocaris exuens* Bate, 1888: 724, pl. 123-fig. 3 (Southeast off Marotiri, *Challenger*, st. 285, 14/10/1875, 32°36'S, 137°43'W, 4346m). — *Acanthephyra stylorostrata* - CHACE, 1940: 144, fig. 22 (Syn.; see remark).

REMARK. — CHACE writes "It is very probable that BATE's *Bentheocaris exuens* is the same species [than *A. stylorostratis*] but, inasmuch as CALMAN states that the type is in such condition that comparison is almost impossible and as BATE's figure is inadequate its seems best to retain the much more suitable name, *stylorostrata*, for this form."

Heterogenys microphthalmus (Smith, 1885)

DISTRIBUTION. — Austral - Bathypelagic (4346m).

REFERENCES. — *Acanthephyra longidens* Bate, 1888: 735, pl. 124-fig. 4 (Southeast off Marotiri, *Challenger*, st. 285, 14/10/1875, 32°36'S, 137°43'W, 4346m). — *Heterogenys microphthalmus* - CHACE, 1986: 38, fig. 20 (Syn.).

Janicella spinicauda (A. Milne Edwards, 1883)

DISTRIBUTION. — Probably Tuamotu (Moruroa) - Bathypelagic (500m?).

REFERENCES. — *Janicella spinicauda* - NEW MATERIAL - Coll. Y. PLESSIS & B. RICHER DE FORGES, det. A. CROSNIER (Paris, MNHN Na7255, no location but probably Moruroa according to number given by the collector).

Oplophorus gracilirostris A. Milne Edwards, 1881

DISTRIBUTION. — Society (Maiao); Tuamotu (Mataiva) - Bathypelagic (100-370m).

REFERENCES. — *Oplophorus gracilirostris* - NEW MATERIAL - Coll. ORSTOM 1997, fish stomach and pelagic trawl, det. A. CROSNIER (Off Mataiva and Maiao; MNHN Na13429; bathypelagic 100-370m).

Oplophorus spinosus (Brullé, 1839)

DISTRIBUTION. — Tuamotu (Fangataufa) - Bathypelagic (30-100m).

REFERENCES. — *Oplophorus spinosus* - POUPIN, 1996b: 4, pl. 1g (Fangataufa; in plankton net 30-100m).

Oplophorus typus Milne Edwards, 1837

DISTRIBUTION. — Marquesas (Nuku Hiva, Tahuata) - Bathypelagic (541-580m).

REFERENCES. — *Oplophorus typus* - POUPIN et al., 1990: 15 (French Polynesia). — POUPIN, 1996b: 4, pl. 1b (Nuku Hiva, Tahuata; 541-580m).

Systellaspis debilis (A. Milne Edwards, 1881)

DISTRIBUTION. — Tuamotu (Fangataufa) - Bathypelagic (50-100m).

REFERENCES. — *Systellaspis debilis* - POUPIN, 1996b: 6, pl. 2a (Fangataufa; in plankton net 50-100m).

Systellaspis pellucida Filhol, 1885

DISTRIBUTION. — Tuamotu (Hao) - Bathypelagic (1020m).

REFERENCES. — *Systellaspis pellucida* - POUPIN, 1996b: 6, pl. 2b (Hao; 1020m).

FAMILY STYLODACTYLIDAE

Stylodactylus aff. libratus Chace, 1983

DISTRIBUTION. — Tuamotu (Moruroa) - Deep (512m).

REFERENCES. — *Stylodactylus aff. libratus* - NEW MATERIAL - Coll. J. POUPIN, det. R. CLEVA (MNHN Na 13400; Moruroa; 512m).

FAMILY RHYNCHOCINETIDAE

Cinetorhynchus hendersoni (Kemp, 1925)

DISTRIBUTION. — Austral (Rapa).

REFERENCES. — *Cinetorhynchus hendersoni* - OKUNO, 1997: 46, fig. 9, 12d-f, pl. 1f (Comb. nov.; Rapa).

Cinetorhynchus hiatti (Holthuis & Hayashi, 1967)

DISTRIBUTION. — Marquesas (Nuku Hiva); Tuamotu (Raroia).

REFERENCES. — *Rhynchocinctes hiatti* n. sp. - HOLTHUIS, 1953a: 54 (Raroia; *nomina nuda*). — MORRISON, 1954: 18 (Same material). — *Rhynchocinetes hiatti* Holthuis & Hayashi, 1967: 162, fig. 1-2 (Raroia; holotype from Formosa). — FRANSEN et al., 1997: 14 (Paratypes RMNH D8939; Raroia). — *Cinetorhynchus hiatti* - OKUNO, 1997: 40, fig. 5, pl. 1c (Comb. nov.; Nuku Hiva).

Cinetorhynchus reticulatus Okuno, 1997

DISTRIBUTION. — Marquesas (Nuku Hiva).

REFERENCES. — *Cinetorhynchus reticulatus* Okuno, 1997: 49, fig. 10-11, 12a-c, pl. 1g, h (Nuku Hiva).

FAMILY GNATHOPHYLLIDAE

Gnathophyllum americanum Guerin, 1856

DISTRIBUTION. — Gambier (Mangareva); Society (Tahiti); Tuamotu (Raroia) - Free-living or coral associate (Gen. *Pocillopora*).

REFERENCES. — *Gnathophyllum pallidum* Ortmann, 1890: 537 (Tahiti). — *Gnathophyllum tridens* Nobili, 1906: 259; 1907: 365, pl. 1, fig. 4 ("Rikitea" = Mangareva). — *Gnathophyllum americanum* - BOONE, 1935: 197, pl. 54 (Tahiti; Syn.). — HOLTHUIS, 1949: 210 (NOBILI's material; Syn.); 1953a: 60 (Raroia). — ODINETZ, 1983: 207 (Tahiti; in coral *Pocillopora*, non obligate associate).

FAMILY ANCHISTIOLIDIDAE

Anchistiooides compressus Paulson, 1875

DISTRIBUTION. — Gambier (Mangareva) - ? *Sponge associate*.

REFERENCES. — *Amphipalaemon seurati* Nobili, 1906: 259; 1907: 364, pl. 1, fig. 3 ("Tearia" = Mangareva; 22m). — SEURAT, 1934: 51, 60 ("Gatavake" = Mangareva; in Freshwater, see remark). — *Anchistiooides compressus* - BRUCE, 1967: 570 (NOBILI's material).

REMARK. — *Anchistiooides* species are common in a variety of sponge and, on occasion, in tunicate; freshwater record of SEURAT is certainly erroneous (A.J. BRUCE, personal communication).

FAMILY HYMENOCERIDAE

Hymenocera picta Dana, 1852

DISTRIBUTION. — Tuamotu (Raraka) - ? *Echinoderm associate*.

REFERENCES. — *Hymenocera picta* Dana, 1852: 593; 1855, pl. 39, fig. 3a-c (Raraka; "Coral reef" without mention of echinoderm host). — BRUCE, 1982: 209 (Possibly an echinoderm associate). — CHACE & BRUCE, 1993: 137 (Syn.).

FAMILY PALAEMONIDAE

SUB-FAMILY PALAEMONINAE

Brachycarpus biunguiculatus (Lucas 1846)

DISTRIBUTION. — Tuamotu (Raroia).

REFERENCES. — *Brachycarpus biunguiculatus* - HOLTHUIS, 1953a: 55 (Raroia). — MORRISON, 1954: 18 (Raroia).

Macrobrachium aemulum (Nobili, 1906)

DISTRIBUTION. — Austral (Rurutu, Tubuai); Gambier (Mangareva); Society (Moorea, Tahiti) - Freshwater.

REFERENCES. — *Palaemon (Parapalaemon) aemulus* Nobili, 1906: 258; 1907: 362, pl. 1, fig. 5 ("Gatavake" = Mangareva; elevation 180m). — SEURAT, 1934: 51 ("Gatavake" = Mangareva). — *Macrobrachium aemulum* - HOLTHUIS, 1953a: 54 (Tahiti). — MARQUET, 1988: 90, fig. 48, tab. 23; 1991: 135, tab. 1 & 2; 1993: tab. 1 & 3 (Mangareva, Moorea, Rurutu, Tahiti, Tubuai). — KEITH & VIGNEUX, 1997: 22, tab. 2 (Same Islands than MARQUET).

Macrobrachium australe (Guérin-Méneville, 1838)

DISTRIBUTION. — Austral (Rurutu, Tubuai); Gambier (Mangareva); Marquesas (Fatu Hiva, Hiva Oa, Nuku Hiva, Ua Huka, Ua Pou); Society (Moorea, Tahiti) - Freshwater.

REFERENCES. — *Palaemon australis* Guérin-Méneville, 1838: 37 (Tahiti). — *Palaemon dispar* - ADAMSON, 1935: 17 (Fatu Hiva, Hiva Oa, Ua Pou). — *Palaemon (Eupalaemon) dispar* - NOBILI, 1907: 361 (Tahiti). — SEURAT, 1934: 50 (Tahiti). — *Macrobrachium australe* - HOLTHUIS, 1950: 124, fig. 27-30 (Tahiti); 1953a: 55 (Tahiti); 1980: 87 (Syn.). — GRAND, 1986: 84, fig. 2-3 (French Polynesia). — RICARD, 1986: 88 (French Polynesia). — MARQUET, 1988: 87, fig. 48, tab. 23; 1991: 133, tab. 1 & 2; 1993: tab. 1 & 3 (Hiva Oa, Mangareva, Moorea, Nuku Hiva, Rurutu, Tahiti, Tubuai, Ua Huka, Ua Pou). — DANIGO, 1991: 5, fig. 8, pl. 1a (Nuku Hiva). — FOUILLAND, 1993: 10, fig. 6 (Nuku Hiva). — KEITH & VIGNEUX, 1997: 22, tab. 2 (Same Islands than MARQUET) - SYNONYM - *Palaemon dispar* von Martens, 1868.

Macrobrachium lar (Fabricius, 1798)

DISTRIBUTION. — Austral (Rurutu, Tubuai); Gambier (Mangareva); Marquesas (Eiao, Fatu Hiva, Hiva Oa, Nuku Hiva, Tahuata, Ua Huka, Ua Pou); Society (Moorea, Tahiti) - Freshwater.

REFERENCES. — *Palaemon spectabilis* Heller, 1862: 527; 1865: 113, pl. 10, fig. 8 (Tahiti). — *Palaemon vagus* Heller, 1865: 113 (Tahiti). — *Bithynis lar* - BATE, 1888: 789, pl. 124-fig. 1 (Tahiti). — *Palaemon lar* - ADAMSON, 1935: 17 (Eiao, Fatu Hiva, Hiva Oa, Nuku Hiva, Tahuata, Ua Huka, Ua Pou). — *Palaemon (Eupalaemon) lar* - DE MAN, 1904: 291, pl. 18, fig. 1 (Tahiti). — NOBILI, 1907: 361 (Tahiti). — SEURAT, 1934: 50 (Tahiti). — BOONE, 1935: 150, pl. 38 (Tahiti). — *Macrobrachium lar* - HOLTHUIS, 1950: 176, fig. 37; 1980: 96 (Syn.). — GRAND, 1986: 84, fig. 1 (French Polynesia). — RICARD, 1986: 88, photograph (French Polynesia). —

MARQUET, 1988: 87, fig. 48, tab. 23; 1991: 134, tab. 1 & 2; 1993: tab. 1 & 3 (Hiva Oa, Mangareva, Moorea, Nuku Hiva, Rurutu, Tahiti, Tubuai, Ua Huka, Ua Pou). — DANIGO, 1991: 5, fig. 8, pl. 1b (Nuku Hiva). — FOUILLAND, 1993: 10, fig. 6 (Nuku Hiva). — CHACE & BRUCE: 1993: 20 (Key). — KEITH & VIGNEUX, 1997: 22, tab. 2 (Same Islands than MARQUET).

Macrobrachium latimanus (von Martens, 1868)

DISTRIBUTION. — Austral (Rurutu, Tubuai); Gambier (Mangareva); Marquesas (Fatu Hiva, Hiva Oa, Motane, Nuku Hiva, Ua Huka, Ua Pou); Society (Moorea, Tahiti) - Freshwater.

REFERENCES. — *Palaemon latimanus* - ORTMANN, 1890: 737, pl. 47, fig. 11, 11z (Tahiti). — ADAMSON, 1935: 17 (Fatu Hiva, Hiva Oa, "Mohotani" = Motane, Ua Pou). — *Macrobrachium latimanus* - HOLTHUIS, 1980: 97 (Syn). — GRAND, 1986: 84-85, fig. 4 (French Polynesia). — RICARD, 1986: 88 (French Polynesia). — MARQUET, 1988: 90, fig. 48, tab. 23; 1991: 134, tab. 1 & 2; 1993: tab. 1 & 3 (Hiva Oa, Mangareva, Moorea, Nuku Hiva, Rurutu, Tahiti, Tubuai, Ua Huka, Ua Pou). — DANIGO, 1991: 5, fig. 6, 8, pl. 1c (Nuku Hiva). — CHACE & BRUCE: 1993: 20 (Key). — FOUILLAND, 1993: 10, fig. 6 (Nuku Hiva). — KEITH & VIGNEUX, 1997: 22, tab. 2 (Same Islands than MARQUET) - RELEVANT MATERIAL - *Macrobrachium* sp. nov. - MNHN Na 1251, Na 1379, coll. Père Simon DELMAS, 4/7/1926, det. J. SHORT; MNHN Na 14404, coll. M. de TRÉVIÈRE 1937, det. J. SHORT (Moorea) - *Macrobrachium* sp. 1 & 2 - KEITH & VIGNEUX, 1997: 11, 22, tab. 2 (*Macrobrachium* sp. 1, Hiva Oa, Moorea, Nuku Hiva, Tahiti, Ua Huka, Ua Pou; *Macrobrachium* sp. 2, Moorea, Tahiti).

REMARK. — In Paris collections, J. SHORT has recognised a new species, related to *Macrobrachium latimanus*. This species, denominated *Onana* in Polynesian language, is currently under study.

Arbitrarily we place here the *Macrobrachium* sp. 1 and sp. 2, mentioned by KEITH & VIGNEUX (1997). According to these authors (personal communication), HOLTHUIS think that they could belong to two new species. SHORT study should bring some clarification on that point.

Macrobrachium lepidactyloides (De Man, 1892)

DISTRIBUTION. — Marquesas (Hiva Oa, Nuku Hiva, Ua Huka, Ua Pou); Society (Moorea) - Freshwater.

REFERENCES. — *Macrobrachium* sp. - MARQUET, 1988: 90, fig. 48, tab. 23; 1991: 135, tab. 1 & 2; 1993: tab. 1 & 3 (Hiva Oa, Moorea, Nuku Hiva, Ua Huka, Ua Pou). — DANIGO, 1991: 5, fig. 8 (Nuku Hiva). — *Macrobrachium lepidactyloides* - CHACE & BRUCE: 1993: 20 (Key). — SHORT, in preparation (Syn., personal communication).

Macrobrachium rosenbergii (de Man, 1879)

DISTRIBUTION. — Society (Tahiti) - Freshwater, aquaculture.

REFERENCES. — *Macrobrachium rosenbergii* - GRAND, 1986: 85, photograph (French Polynesia). — PARDON, 1992: 116, photograph (Tahiti). — CHACE & BRUCE: 1993: 20, 36, fig. 15 (Syn. & key). — AQUACOP & PATROIS, 1990: 67 (Aquaculture).

Palaemon concinnus Dana, 1852

DISTRIBUTION. — Austral (Rurutu, Tubuai); Society (Moorea, Tahiti); Tuamotu (Makatea) - Brackish water.

REFERENCES. — *Leander concinnus* - SENDLER, 1923: 46 (Makatea). — *Palaemon concinnus* - HOLTHUIS, 1950: 61, fig. 12 (Tahiti); 1953a: 54 (Tahiti); 1980 (Syn.). — MARQUET, 1988: 90, fig. 48, tab. 23; 1991: 136, tab. 1 & 2; 1993: tab. 1 & 3 (Moorea, Rurutu, Tahiti, Tubuai; "estuaries and shallow stagnant waters"). — CHACE & BRUCE: 1993: 40 (Syn. & key). — KEITH & VIGNEUX, 1997: 22, tab. 2 (Same Islands than MARQUET).

Palaemon debilis Dana, 1852

DISTRIBUTION. — Austral (Tubuai); Gambier (Mangareva); Tuamotu (Hao, Rangiroa, Raroia) - Brackish water.

REFERENCES. — *Leander debilis* - NOBILI, 1907: 363 (Hao, "Rikitea" = Mangareva). — *Periclimenes Leander debilis* - SEURAT, 1934: 60 (Hao, "Rikitea" = Mangareva). — *Palaemon debilis* - HOLTHUIS, 1953a: 54 (Raroia). — MORRISON, 1954: 5 (Raroia). — MARQUET, 1988: 90, fig. 48, tab. 23; 1991: 136, tab. 1 & 2; 1993: tab. 1 & 3 (Mangareva, Rangiroa, Tubuai; "estuaries and shallow stagnant waters"). — CHACE & BRUCE: 1993: 40 (Syn. & key). — KEITH & VIGNEUX, 1997: 22, tab. 2 (Same Islands than MARQUET).

SUB-FAMILY PONTONIINAE

Anchiopontonia hurii (Holthuis, 1981)

DISTRIBUTION. — Tuamotu (Raroia) - Bivalve associate (Gen. *Spondylus*).

REFERENCES. — *Pontonia hurii* n. sp. - HOLTHUIS, 1953a: 57 (Raroia; *nominata nuda*). — MORRISON, 1954: 6 (Same material; commensal in the spiny oyster *Spondylus varius*). — *Pontonia hurii* Holthuis, 1981: 796, fig. 4

(Paratype from Raroia). — *Anchiopontonia hurii* - BRUCE, 1992a: 1276, fig. 1-4 (Comb. nov.). — Fransen et al., 1997: 15 (Paratypes RMNH D9248; Raroia).

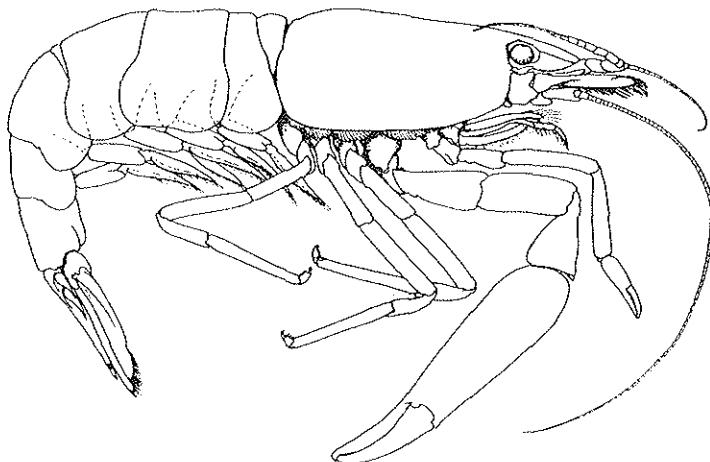


Figure 2 - *Anchiopontonia hurii* (Holthuis, 1981)
(From BRUCE, 1992a)

Anchistus demani Kemp, 1922

DISTRIBUTION. — Tuamotu (Moruroa) - Bivalve associate (Gen. Tridacna).

REFERENCES. — *Anchistus demani* - NEW MATERIAL - Coll. J. POUPIN April-May 1997, det. A.J. BRUCE (Moruroa MNHN Na13416; in bivalve *Tridacna maxima*).

Anchistus miersi (De Man, 1888)

DISTRIBUTION. — Gambier (Mangareva) - Bivalve associate (Gen. Pinctada).

REFERENCES. — *Anchistus miersi* - NOBILI, 1907: 359 ("Mangareva-Tearia" = Mangareva). — SEURAT, 1934: 60 (Gambier; in pearl oyster *Pinctada margaritifera*). — CHACE & BRUCE, 1993: 71, 72 (Syn. & key). — FRANSEN, 1994: 89, pl. 1d (Photograph).

Conchodytes meleagrinae Peters, 1852

DISTRIBUTION. — Gambier (Mangareva); Tuamotu (Amanu, Raroia) - Bivalve associate (Gen. Pinctada).

REFERENCES. — *Conchodytes meleagrinae* - NOBILI, 1907: 359 (Mangareva). — SEURAT, 1934: 60 (Gambier, Tuamotu; in pearl oyster *Pinctada margaritifera*). — HOLTHUIS, 1953a: 59 (Amanu, Raroia). — BRUCE, 1989a: 184 (Key). — CHACE & BRUCE, 1993: 74 (Syn.). — FRANSEN, 1994: 96, fig. 21, pl. 1e (Photograph).

Conchodytes ? tridacnae Peters, 1852

DISTRIBUTION. — Tuamotu (Fangataufa) - Bivalve associate (Gen. Pinctada).

REFERENCES. — *Conchodytes tridacnae* - BRUCE, 1989a: 184 (Key) - NEW MATERIAL - Coll. J. POUPIN April-May 1997, det. A.J. BRUCE, with a ? (Fangataufa MNHN Na13415; in pearl oyster *Pinctada margaritifera*).

Coralliocaris graminea (Dana, 1852)

DISTRIBUTION. — Society (Moorea, Tahiti); Tuamotu (Takapoto) - Coral associate (Gen. Pocillopora).

REFERENCES. — *Coralliocaris graminea* - ODINETZ, 1983: 205 (Moorea, Tahiti, Takapoto; in coral *Pocillopora*). — ODINETZ-COLLART & RICHER DE FORGES, 1985: 201 (Same material). — CHACE & BRUCE, 1993: 77 (Syn. & key). — BRUCE, in preparation (Host genera *Acropora*, rarely *Pocillopora*, *Seriatopora*, *Stylophora*).

Coralliocaris nudirostris (Heller, 1861)

DISTRIBUTION. — Society (Tahiti) - Coral associate (Gen. *Acropora*).

REFERENCES. — *Coralliocaris tahitoei* Boone, 1935: 180, pl. 49 (Tahiti without mention of association). — *Coralliocaris nudirostris* - CHACE & BRUCE, 1993: 47 (Syn.). — BRUCE, in preparation (Host genus *Acropora*).

Coralliocaris superba (Dana, 1852)

DISTRIBUTION. — Society (Raiatea, Tahiti); Tuamotu (Fangataufa, Moruroa) - *Coral associate* (Gen. Acropora).

REFERENCES. — *Coralliocaris superba* - STIMPSON, 1860: 40 [107] (Tahiti; "in coralliis"). — BOONE, 1935: 170, pl. 46 (Raiatea, Tahiti; "in coral"). — CHACE & BRUCE, 1993: 76, 77 (Syn. & key) - NEW MATERIAL - Coll. J. POUPIN April/May 1996 & April-May, 1997, det. A.J. BRUCE (Fangataufa MNHN Na13409, Moruroa; in coral *Acropora*).

Coralliocaris viridis Bruce, 1974

DISTRIBUTION. — Society (Tahiti); Tuamotu (Fangataufa) - *Free-living or coral associate* (Gen. Acropora, Pocillopora).

REFERENCES. — *Coralliocaris viridis* - ODINETZ, 1983: 207 (Tahiti; in coral *Pocillopora*, non obligate associate). — NEW MATERIAL - Coll. J. POUPIN April-May 1997, det. A.J. BRUCE (Fangataufa MNHN Na13412; in coral *Acropora*).

REMARK. — In ODINETZ (1983) this species is reported as "*Gnathocaris* ? *viridis* Bruce", but it is correctly recorded under *Coralliocaris viridis* in Paris MNHN (Na6625).

Exoclimenella denticulata (Nobili, 1906)

DISTRIBUTION. — Gambier (Mangareva); Tuamotu (Raroia) - *Free-living or coral associate* (Gen. Acropora).

REFERENCES. — *Periclimenes petithouarsi* var. *denticulata* Nobili, 1906: 257; 1907: 358 ("Gatavake" = Mangareva). — *Palaemonella denticulata* - HOLTHUIS, 1953a: 55 (Raroia; in coral *Acropora*). — MORRISON, 1954: 5 (Raroia). — *Periclimenes denticulatus* - BRUCE, 1992b: 59, fig. 12-14 (Syn.; "32m, trap, on sand with *Halimeda*"). — *Exoclimenella denticulata* - DURIS & BRUCE, 1995: 637, fig. 9-11 ("Gatavake" = Mangareva, Raroia; new combination and this remark "free-living browser, and only incidentally associated with coral"). — BRUCE, in preparation (Host genus: *Acropora*).

Fennera chacei Holthuis, 1951

DISTRIBUTION. — Society (Moorea); Tuamotu (Takapoto) - *Coral associate* (Gen. Pocillopora).

REFERENCES. — *Fennera chacei* - KROPP & BIRKELAND, 1981: 629, tab. 5 (Moorea, Takapoto; in coral *Pocillopora*). — BRUCE, in preparation (Host genera: *Pocillopora*, *Porites*, *Stylophora*).

Harpiliopsis beauvoisi (Audouin, 1825)

DISTRIBUTION. — Society (Moorea, Tahiti); Tuamotu (Fangataufa, Moruroa, Takapoto) - *Coral associate* (Gen. Pocillopora).

REFERENCES. — *Harpiliopsis beauvoisi* - KROPP & BIRKELAND, 1981: 629, tab. 5 (Moorea, Takapoto; in coral *Pocillopora*). — ODINETZ, 1983: 205 (Moorea, Tahiti, Takapoto; in coral *Pocillopora*). — ODINETZ-COLLART & RICHER DE FORGES, 1985: 201 (Same material). — CHACE & BRUCE, 1993: 82 (Syn. & key). — BRUCE, in preparation (Host genera: *Pocillopora*, *Seriatopora*, *Stylophora*, rarely *Acropora*) - NEW MATERIAL - Coll. J. POUPIN April/May 1996 and April-May 1997 det. A.J. BRUCE (Fangataufa MNHN Na13402-13413, Moruroa MNHN Na13403; in coral *Pocillopora*).

Harpiliopsis depressa (Stimpson, 1860)

DISTRIBUTION. — Marquesas (Fatu Hiva, Hiva Oa); Society (Moorea, Tahiti); Tuamotu (Moruroa, Takapoto) - *Coral associate* (Gen. Pocillopora).

REFERENCES. — *Harpiliopsis depressa* - KROPP & BIRKELAND, 1981: 629, tab. 5 (Moorea, Takapoto; in coral *Pocillopora*). — ODINETZ, 1983: 205 (Moorea, Tahiti, Takapoto; in coral *Pocillopora*). — *Harpiliopsis depressa* - CHACE & BRUCE, 1993: 82 (Syn. & key). — BRUCE, in preparation (Host genera: *Pocillopora*, *Seriatopora*, *Stylophora*, rarely *Acropora*, *Porites*) - NEW MATERIAL - Coll. J. POUPIN, February 1996 & April-May, 1997, det. A.J. BRUCE (Fatu Hiva, Hiva Oa, Moruroa MNHN Na13406; in coral *Pocillopora*).

Harpiliopsis spinigera (Ortmann, 1890)

DISTRIBUTION. — Marquesas (Hiva Oa); Tuamotu (Fangataufa, Moruroa) - *Coral associate* (Gen. Pocillopora).

REFERENCES. — *Harpiliopsis spinigera* - CHACE & BRUCE, 1993: 82 (Syn. & key). — FRANSEN, 1994: 108, fig. 60, 62, pl. 2b (Syn.). — BRUCE, in preparation (Host genera: *Pocillopora*, *Stylophora*) - NEW MATERIAL - Coll. J. POUPIN October 1995, February 1996, and April-May, 1997, det. A.J. BRUCE (Fangataufa MNHN Na13401, Hiva Oa, Moruroa; in coral *Pocillopora*).

Jocaste japonica (Ortmann, 1890)

DISTRIBUTION. — Tuamotu (Fangataufa) - *Coral associate* (Gen. Acropora).

REFERENCES. — *Jocaste japonica* - BRUCE, 1969b: 300, fig. 1 (Host genera: *Acropora*, rarely *Pocillopora*); in preparation (Host genus: *Acropora*). — NEW MATERIAL - Coll. J. POUPIN April-May 1997, det. A.J. BRUCE (Fangataufa MNHN Na13411; in coral *Acropora*).

Jocaste lucina (Nobili, 1901)

DISTRIBUTION. — Society (Tahiti); Tuamotu (Fangataufa, Moruroa) - Coral associate (Gen. *Acropora*).

REFERENCES. — *Coralliocaris lamellirostris* - BOONE, 1935: 174, pl. 47 (Tahiti). — *Jocaste lucina* - CHACE & BRUCE, 1993: 49, 84 (Syn. & key; BOONE's reference with a ?). — BRUCE, in preparation (Host genera: *Acropora*, rarely *Pocillopora*, *Stylophora*) - NEW MATERIAL - Coll. J. POUPIN April-May 1996 & April-May 1997, det. A.J. BRUCE (Fangataufa MNHN Na13410, Moruroa) - SYNONYM - *Coralliocaris lamellirostris* Stimpson, 1860.

Onycocaris quadratophthalma (Balss, 1921)

DISTRIBUTION. — Society (Tahiti) - Free-living or coral associate (Gen. *Pocillopora*).

REFERENCES. — *Onycocaris quadratophthalma* - CASTRO, 1971: 396 (Host *Toxadocia violacea*, Porifera, Demospongia). — ODINETZ 1983: 207 (Tahiti; in coral *Pocillopora*, non obligate associate).

Palaemonella lata Kemp, 1922

DISTRIBUTION. — Society (Tahiti) - Free-living or coral associate (Gen. *Pocillopora*).

REFERENCES. — *Palaemonella lata* - BRUCE, 1970: 274 (Key). — ODINETZ, 1983: 207 (Tahiti; in coral *Pocillopora*, non obligate associate). — NEW MATERIAL - Coll. P. FROUIN 1993/1994, det. A.J. BRUCE (FROUIN st. n°1030, Tahiti).

Palaemonella rotumana (Borradaile, 1898)

DISTRIBUTION. — Society (Moorea) - Free-living, coral, or sea-weed associate.

REFERENCES. — *Palaemonella rotumana* - BRUCE, 1970: 274 (Key); 1976b: table 8 ("Society & Marquesas"; BRUCE personal communication: location must be a table entry error). — NAIM, 1980, annex 1-2 (Moorea; in filamentous sea-weed *Giffordia mitchellae*). — CHACE & BRUCE, 1993: 87, 89 (Syn. & key). — FRANSEN, 1994: 117 (Syn.; "Free-living and occurring among corals").

Palaemonella tenuipes Dana, 1852

DISTRIBUTION. — Society (Moorea, Tahiti); Tuamotu (Takapoto) - Free-living or coral associate (Gen. *Pocillopora*).

REFERENCES. — *Palaemonella tenuipes* - BRUCE, 1970: 274 (Key). — NAIM, 1980, annex 1, tab. 3 (Moorea). — ODINETZ, 1983: 207 (Moorea, Tahiti, Takapoto; in coral *Pocillopora*, non obligate associate). — ODINETZ-COLLART & RICHER DE FORGES, 1985: 201 (Same material). — CHACE & BRUCE, 1993: 87, 89 (Syn. & key).

Paranchistus serenei Bruce, 1983

DISTRIBUTION. — Tuamotu (Fangataufa) - Bivalve associate (Gen. *Pinctada*).

REFERENCES. — *Paranchistus serenei* - NEW MATERIAL - Coll. J. POUPIN, February 1996, det. A.J. BRUCE (Fangataufa, in pearl oyster *Pinctada margaritifera*, 10m; MNHN Na13352) - RELEVANT NEW MATERIAL - ? *Paranchistus* sp. - Coll. J. POUPIN April-May 1997, det. A.J. BRUCE (Fangataufa; in pearl oyster *Pinctada margaritifera*).

Periclimenaeus cf. tridentatus (Miers, 1884)

DISTRIBUTION. — Society (Moorea) - Sea-weed associate (Gen. *Halimeda*).

REFERENCES. — *Periclimenaeus tridentatus* - NAIM, 1980, annex 1-2 (Moorea; in sea-weed *Halimeda opuntia*). — CHACE & BRUCE, 1993: 92, 93 (Syn. & key). — *Periclimenaeus cf. tridentatus* - BRUCE personal communication (cf. remark).

REMARK. — According to BRUCE, personal communication: "I did get hold of the NAIM *Periclimenaeus tridentatus* spms from Leiden and in my opinion they were definitely not that species. They could be new. I made some drawings and then unfortunately lost the best specimen! ... What I would like is some more specimens."

Periclimenaeus tuamotae Bruce, 1969a

DISTRIBUTION. — Tuamotu (Moruroa).

REFERENCES. — *Periclimenaeus tuamotae* Bruce, 1969a: 170 (Moruroa). — CHACE & BRUCE, 1993: 54 (List).

Periclimenella spinifera (de Man, 1902)

DISTRIBUTION. — Society (Moorea, Tahiti); Tuamotu (Takapoto) - Free-living or coral associate (Gen. *Pocillopora*).

REFERENCES. — *Anchistia inaequimana* - HELLER, 1865: 109 (Tahiti). — *Periclimenes (Harpilius) spiniferus* - HOLTHUIS, 1952: 76, fig. 30 (Syn.). — *Periclimenes spiniferus* - ODINETZ, 1983: 207 (Moorea, Tahiti, Takapoto; non obligate coral *Pocillopora* associate). — ODINETZ-COLLART & RICHER DE FORGES, 1985: 201 (Moorea, Tahiti, Takapoto; in coral *Pocillopora*). — *Periclimenella spinifera* - DURIS & BRUCE, 1995: 656, fig. 19-20 (New combination; free-living, and associated with corals of the genera *Acropora*, *Millepora*, *Pavona*, *Pocillopora*, *Porites* and *Seriatopora*, or with a hydroid *Millepora tenera*). — BRUCE, in preparation (Host genera: various) - SYNONYM - ? *Anchistia inaequimana* Heller.

Periclimenes elegans (Paulson, 1875)

DISTRIBUTION. — Society (Tahiti); Tuamotu (Moruroa) - Free-living or coral associate (Gen. *Pocillopora*).

REFERENCES. — *Periclimenes elegans* - BRUCE, 1983: 884, 898 (Free-living shrimp). — NEW MATERIAL - Coll. O. ODINETZ, 1982, det. A.J. BRUCE 10/12/82, (Tahiti MNHN Na6618; in coral *Pocillopora damicornis* and *P. elegans*) - RELEVANT MATERIAL - Coll. J. POUPIN April-May 1997, det. A.J. BRUCE with a ? (Moruroa MNHN Na13408; in *Pocillopora*).

Periclimenes ensifrons (Dana, 1852)

DISTRIBUTION. — Tuamotu (Amanu, Fakahina) - Free-living.

REFERENCES. — *Periclimenes ensifrons* - NOBILI, 1907: 359 (Amanu, Fakahina). — CHACE & BRUCE, 1993: 95, 111 (Syn. & key).

Periclimenes grandis (Stimpson, 1860)

DISTRIBUTION. — Tuamotu (Fangataufa, Moruroa) - Coral associate (Gen. *Pocillopora*).

REFERENCES. — *Periclimenes grandis* - NEW MATERIAL - Coll. J. POUPIN April-May 1997, det. A.J. BRUCE (Fangataufa MNHN Na13414, Moruroa MNHN Na13407; in coral *Pocillopora*). — FRANSEN, 1994: 151 ("Free-living") - RELEVANT MATERIAL - ? *Anchistia danae* Stimpson, 1860: 41 [108] (Tahiti; cf. remark).

REMARK. — Concerning *Anchistia danae* Stimpson, BRUCE, personal communication, has the following remark: "The type material of STIMPSON's species is long gone and I do not think that the question of this species can now ever be resolved. It probably is a *Periclimenes*, at least. It is probably a well known species under some other name, possibly one of the *P. grandis* group (KEMP, 1922: 138). It lacked both second pereiopods and the ambulatory pereiopods, so is not really worth wasting further time on. The sooner it is completely forgotten the better..."

Periclimenes lutescens (Dana, 1852) (doubtful)

DISTRIBUTION. — Marquesas (Nuku Hiva); Society (Tahiti) - Coral associate (Gen. *Acropora*).

REFERENCES. — *Harpilius lutescens* - BOONE, 1935: 167, pl. 45 (Nuku Hiva, Tahiti). — *Periclimenes lutescens* - BRUCE, 1976a: 6 ("The species has been confused with *P. consobrinus* De Man, and some records need to be checked"); 1976b: 98 ("The records from Samoa, Tahiti and the Marquesas islands are in particular need of confirmation"); in preparation (Host genera: *Acropora*, rarely *Pocillopora*, *Seriatopora*). — CHACE & BRUCE, 1993: 94, 117 (Syn. & key).

Periclimenes madreporae Bruce, 1969a

DISTRIBUTION. — Society (Moorea, Tahiti); Tuamotu (Takapoto) - Coral associate (Gen. *Pocillopora*).

REFERENCES. — *Periclimenes madreporae* - ODINETZ, 1983: 205 (Moorea, Tahiti, Takapoto; in coral *Pocillopora*). — BRUCE, in preparation (Host genera: *Acropora*, *Pocillopora*, *Seriatopora*, *Stylophora*, *Turbinaria*).

Periclimenes mahei Bruce, 1969a

DISTRIBUTION. — Tuamotu (Fangataufa) - Coral associate (Gen. *Acropora*).

REFERENCES. — *Periclimenes mahei* - BRUCE, in preparation (Host genera: *Acropora*, *Pocillopora*, *Seriatopora*) - NEW MATERIAL - Coll. J. POUPIN, February 1996, det. A.J. BRUCE (Fangataufa; in coral *Acropora*, 10m).

Periclimenes poupini Bruce, 1989

DISTRIBUTION. — Austral (Maria, Rapa, Rurutu, Tubuai); Gambier; Society (Bora Bora); Tuamotu (Fangataufa, Moruroa) - Ascidian associate; deep (409-600m).

REFERENCES. — *Periclimenes poupini* Bruce, 1989b: 852, fig. 1-5, 6a (Bora Bora, Fangataufa, Gambier, Maria, Moruroa, Rapa, Rurutu, Tubuai; 409-600m). — POUPIN, 1996b: 6, pl. 2c (Same material). — *Periclimenes* sp. nov. - POUPIN et al., 1990: 16 (French Polynesia). — POUPIN & RICHER DE FORGES, 1991: 211 (French Polynesia).

REMARK. — Lives on a the sea-anemone carried on the shell occupied by a parapagurid, *Sympagurus dofleini* (Balss, 1912).

***Periclimenes soror* Nobili, 1904**

DISTRIBUTION. — Society (Tahiti); Tuamotu (Moruroa) - *Echinoderm associate* (*Genus Culcita*).

REFERENCES. — *Periclimenes soror* - BRUCE, 1978: 299, fig. 1-6 (Moruroa, Tahiti); 1982: 200 (Asteroids hosts genera: *Choriaster*, *Culcita*, *Pentaceraster*, *Protoreaster*, *Acanthaster*, *Mithrodia*, *Echinaster*). — CHACE & BRUCE, 1993: 95, 122 (Syn. & key). — FRANSEN, 1994: 129, pl. 3f (Photograph) - NEW MATERIAL - Coll. J. POUPIN, det. A.J. BRUCE (Moruroa; on a sea star, *Culcita* ? *novaeguineae*).

***Philarius gerlachei* (Nobili, 1905)**

DISTRIBUTION. — Tuamotu (Moruroa) - *Coral associate* (*Gen. Acropora*).

REFERENCES. — *Philarius gerlachei* - NEW MATERIAL - Coll. J. POUPIN April/May 1996, det. A.J. BRUCE (Morura; in coral *Acropora* -10m; specimens with A.J. BRUCE).

***Pontonides unciger* Calman, 1939**

DISTRIBUTION. — Marquesas (Tahuata) - *Coral associate* (*Anthipataria*).

REFERENCES. — *Pontonides unciger* - MONOD, 1979: 10, fig. 9-35 (Tahuata; associated with a coral *Anthipataria*). — FRANSEN, 1994: 136, pl. 4d (Photograph; *Anthipataria* associate).

***Stegopontonia commensalis* Nobili, 1906**

DISTRIBUTION. — Tuamotu (Hao, Raroia) - *Echinoderm associate* (*Gen. Echinothrix*).

REFERENCES. — *Stegopontonia commensalis* Nobili, 1906: 258; 1907: 360, pl. 1, fig. 2 (Hao). — SEURAT, 1934: 60 (Commensal of sea urchin *Echinotrix turcarum*). — HOOLTHUIS, 1953a: 58 (Raroia; commensal of *Echinothrix diadema*). — MORRISON, 1954: 6 (Raroia). — BRUCE, 1982: 204 (Echinoid hosts genera: *Diadema* and *Echinothrix*).

***Vir* sp. nov. Bruce (in preparation)**

DISTRIBUTION. — Tuamotu (Moruroa) - *Coral associate* (*Gen. Pocillopora*).

REFERENCES. — *Vir* sp. nov. - BRUCE in preparation (Moruroa, coll. J. POUPIN, February 1996, April/May 1997; in coral *Pocillopora*, 10m).

FAMILY ALPHEIDAE

***Alpheopsis diabolus* Banner, 1956**

DISTRIBUTION. — Society (Bora Bora, Tahiti) - *Free-living or coral associate* (*Gen. Pocillopora*).

REFERENCES. — *Alpheopsis diabolus* - BANNER & BANNER, 1967: 262 ("BD8, BD22" = Bora Bora). — ODINETZ, 1983: 208 (Tahiti; in coral *Pocillopora*, non obligate associate). — CHACE, 1988: 5 (Syn.).

***Alpheopsis equalis* Coutière, 1896**

DISTRIBUTION. — Society (Bora Bora, Tahiti).

REFERENCES. — *Alpheopsis equalis* - BANNER & BANNER, 1967: 262 ("BD3-4, BD6, BD30" = Tahiti, "BD9, BD13-14, BD18" = Bora Bora); 1983: 11 ("collected from reef flat to 150m").

***Alpheus aculeipes* var. *tryphopus* Nobili, 1906**

DISTRIBUTION. — Tuamotu (Marokau).

REFERENCES. — *Alpheus aculeipes* var. *tryphopus* Nobili, 1906: 257; 1907: 355 (Marokau).

***Alpheus amirantei sizou* Banner & Banner, 1967**

DISTRIBUTION. — Society (Bora Bora, Tahiti).

REFERENCES. — *Alpheus amirantei sizou* Banner & Banner, 1967: 265 (Bora Bora, Tahiti; outer reef platform). — MIYA, 1984: 91 (Collected in living or dead coral).

***Alpheus bradyapus* Coutière, 1905a**

DISTRIBUTION. — Society (Bora Bora).

REFERENCES. — *Alpheus bradyapus* - BANNER & BANNER, 1967: 275 ("BD8" = Bora Bora, inner reef).

Alpheus bidens (Olivier, 1811)

DISTRIBUTION. — Tuamotu (Takapoto) - Free-living or coral associate (*Gen. Pocillopora*).

REFERENCES. — *Alpheus bidens* - ODINETZ, 1983: 207 (Takapoto; in coral *Pocillopora*, non obligate associate).

Alpheus brevipes Stimpson, 1860

DISTRIBUTION. — Society (Moorea, Tahiti).

REFERENCES. — *Alpheus brevipes* - BANNER & BANNER, 1967: 274 ("BD2" = Tahiti, from various coral heads, "BD33" = Moorea, probably on the fringing reef).

Alpheus bucephalus Coutière, 1905a

DISTRIBUTION. — Society (Moorea); Tuamotu (Takapoto) - Non obligate coral associate (*Gen. Pocillopora*).

REFERENCES. — *Alpheus bucephalus* - KROPP & BIRKELAND, 1981: 630, tab. 5 (Moorea, Takapoto; in coral *Pocillopora*). — CHACE, 1988: 17 ("Intertidal to 80m").

Alpheus columbianus Stimpson, 1860

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti); Tuamotu (Makatea, Marutea South, ?Takapoto) - Free-living or coral associate (*Gen. Pocillopora*).

REFERENCES. — *Alpheus seurati* Coutière 1905a: 881, pl. 75, fig. 20, 20a-e; 1905b: 22 (Marutea). — SEURAT, 1934: 60 (Marutea South). — *Alpheus columbianus* - NOBILI, 1907: 354 (Marutea South). — SENDLER, 1923: 46 (Makatea). — CHACE, 1988: 19 (Syn.). — MIYA, 1974: 109, pl. 19, fig. a-d (See remark); 1984: 92 (Under coral rock and among branches and in holes in bases of living *Acropora*). — ODINETZ, 1983: 207 (Tahiti, but recorded as "Takapoto" in Paris collections; in coral *Pocillopora*, non obligate associate). — BANNER & BANNER, 1983: 27 (Specimens found in association with a sea star, *Ophiothrix keystonia*) - RELEVANT MATERIAL - *Alpheus columbianus medius* - BANNER & BANNER, 1967: 264 ("BD3, BD30" = Tahiti, "BD8, BD22" = Bora Bora, "BD33" = Moorea). — MIYA, 1974: 112, pl. 16, fig. e-g (See remark). — *Alpheus columbianus inermis* - BANNER & BANNER, 1967: 264 ("BD2-3, BD5-6, BD30" = Tahiti, "BD16" = Bora Bora, "BD33" = Moorea; see remark). — *Alpheus probabilis* - ODINETZ, 1983: 207 (Moorea, Tahiti; in coral *Pocillopora*, non obligate associate; recorded under *A. columbianus probabilis* Banner, 1956, det. BANNER, in MNHN collections).

REMARK. — From material collected in the Marianas, BANNER (1956) has established three *columbianus* subspecies: *Alpheus columbianus probabilis*, *A. c. medius*, and *A. c. inermis*. He supposed that *Alpheus columbianus probabilis* would probably be identical with STIMPSON's typical species but because of the distance from type locality (Bonin Islands) and the Marianas, and the lack of specimens from the Bonins he considered that "it was inadvisable to assume this (*A. c. probabilis*) to be exactly the same form as would be found there". This question remains still open (see MIYA, 1974) and the exact identity of these three subspecies must be clarified. For example, BANNER & BANNER (1967: 265) write: "According to field notes, a pair of cherry-red specimens apparently cohabiting were collected off southern Bora Bora and were bottled together as BD16. By the criteria established to separate the two subspecies, one appears to be *A. c. medius* and one *A. c. inermis*. Obviously this collection throws considerable doubt on the validity of the subspecies, but more specimens should be examined before the subspecies, distinct anatomically, are discarded".

Alpheus crockeri (Armstrong, 1941)

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti).

REFERENCES. — *Alpheus crockeri* - BANNER & BANNER, 1966a: 159 (Syn.); 1967: 264 ("BD3" = Tahiti, from coral heads, "BD8, inner reef, BD12, mud and sandflats most specimens under rocks" = Bora Bora; Moorea). — MIYA, 1974: 124, pl. 21 (Syn.; living in dead coral head and on coralline algae).

Alpheus cythereus Banner & Banner, 1966b

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Alpheus cythereus* Banner & Banner, 1966b: 125, fig. 45 (Tahiti; from head of dead coral); 1967: 282 (Tahiti).

Alpheus diadema Dana, 1852

DISTRIBUTION. — Gambier (Mangareva); Society (Bora Bora, Moorea, Tahiti) - Free-living, coral (*Gen. Pocillopora*, or algae (*Gen. Actinotrichia*, *Halimeda*, *Hydroclathrus*, *Symploca*, *Turbinaria*)) associate.

REFERENCES. — *Alpheus insignis* - NOBILI, 1907: 355 (Mangareva). — *Alpheus diadema* - BANNER, 1956: 357 (Syn.). — BANNER & BANNER, 1967: 267 ("BD3, coral heads, BD37, inner reef" = Tahiti, "BD8, inner reef, BD13, barrier reef, BD21, sandy area from scattered heads of dead corals, BD26, BD28, from dead coral heads, behind growing reef" = Bora Bora). — MIYA, 1974: 152, pl. 29 (Syn.; collected in bases of coral *Pocillopora*, *Heliopora*, and *Porites*, or in coralline algal masses). — NAIM, 1980, annex 1-2 (Moorea; in algae *Hydroclathrus*

clathratus, Halimeda opuntia, Symploca hypnoides, Turbinaria ornata, Actinotrichia rigida). — ODINETZ, 1983: 207 (Moorea, Tahiti; in coral *Pocillopora*, non obligate associate). — ODINETZ-COLLART & RICHER DE FORGES, 1985: 201 (Moorea, Tahiti; in coral *Pocillopora*) - SYNONYM - *Alpheus insignis* Heller, 1861

Alpheus dolorus Banner, 1956

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti).

REFERENCES. — *Alpheus dolorus* - BANNER & BANNER, 1967: 283 ("BD4, reef flat" = Tahiti, "BD14, BD18, BD20, from massive dead heads of *Porites*" = Bora Bora, "BD33" = Moorea). — BANNER & BANNER, 1983: 126 (Sand with shells and corals, hard blocks).

Alpheus edamensis De Man, 1888

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Alpheus acanthomerus* Ortmann, 1890: 474, pl. 36, fig. 12 (Tahiti). — *Alpheus edamensis* - BANNER & BANNER, 1966b: 157, fig. 61 (At low tide under rocks; "Society"). — MIYA, 1984: 92 (Under dead coral rocks in fine coral sands). — CHACE, 1988: 24 (Syn.; intertidal to 50m).

Alpheus edwardsii (Audouin, 1826)

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Alpheus edwardsii* - ORTMANN, 1890: 470 (Tahiti). — CHACE, 1988: 25 (Syn.; intertidal under rocks to 25m) - RELEVANT MATERIAL - *Alpheus cf. edwardsii* - NAIM, 1980, annex 1-2 (Moorea; in algae *Turbinaria ornata*, *Giffordia mitchellae*, *Actinotrichia rigida*).

Alpheus frontalis H. Milne Edwards, 1837

DISTRIBUTION. — Society (Moorea, Tahiti); Tuamotu (Raroia) - Under rocks in algal tube, or coral associate (Gen. *Pocillopora*).

REFERENCES. — *Alpheus frontalis* - HELLER, 1865: 107 (Tahiti). — *Alpheus frontalis* - BANNER, 1959: 141 ("Hamahomo" = Rairoa; in algal tube, under rocks). — MIYA, 1974: 135, pl. 23, fig. d-g ("Could be found living in pairs in tubes which they made from filamentous blue-green or dark brown algae (Gen. *Lyngbya*). These tubes were found branching and penetrating between the fronds of dead corals ..."). — BANNER & BANNER, 1983: 30 (Living in felted tubes of filamentous blue-green algae, genera *Plectonema*, *Lyngbya*, *Microcoleus*). — ODINETZ, 1983: 207 (Moorea - locality not indicated clearly in the work but mentioned in MNHN catalogue; in coral *Pocillopora*, non obligate associate). — CHACE, 1988: 28 (Syn.; "Albatross specimens were found swimming at the surface under an electric light").

Alpheus gracilipes Stimpson, 1860

DISTRIBUTION. — Marquesas; Society (Bora Bora, Moorea, Tahiti) - In algae (Gen. *Halimeda*, *Symploca*) or coral (Gen. *Pocillopora*).

REFERENCES. — *Alpheus gracillipes* Stimpson, 1860: 32 [100] (Tahiti "inter corallia"). — HELLER, 1865: 108 (Tahiti). — ORTMANN, 1890: 488 (Marquesas). — BANNER & BANNER, 1967: 276 ("BD3, coral heads, BD30, BD36, inner reef" = Tahiti, "BD7, shallow fringing reef, BD13, sandy bottom from various living and dead corals, BD14, BD19, from *Pocillopora*, BD21-22, BD25-26, BD28-29" = Bora Bora; Moorea; redescription). — MIYA, 1974: 154, pl. 30 (In dead and overgrown corals of *Pocillopora* spp., *Stylophora mordax* and others). — NAIM, 1980, annex 1-2 (Moorea; in algae *Halimeda opuntia* and *Symploca hypnoides*). — KROPP & BIRKELAND, 1981: 630, tab. 5 (Moorea; in coral *Pocillopora*). — ODINETZ, 1983: 207 (Moorea, Tahiti; in coral *Pocillopora*, non obligate associate).

Alpheus gracilis Heller, 1861

DISTRIBUTION. — Society (Bora Bora, Tahiti).

REFERENCES. — *Alpheus gracilis simplex* - BANNER & BANNER, 1967: 268 ("BD18, from consolidated reef flat made of massive heads of *Porites* sp." = Bora Bora, "BD30, from various heads of coral" = Tahiti). — *Alpheus gracilis* - MIYA, 1984: 94 (With dead corals). — CHACE, 1988: 30 (Syn.).

Alpheus hoplites Nobili, 1906

DISTRIBUTION. — Tuamotu (Marutea South).

REFERENCES. — *Alpheus hoplites* Nobili, 1906: 257; 1907: 357, pl. 1, fig. 7 (Tuamotu).

REMARK. — Since its description, *Alpheus hoplites* seems to have disappeared from the literature. Type specimen is however still in MNHN collections (Na 2508, 1 sp. in bad condition; coll. G. SEURAT Marutea South 1905, det. NOBILI).

Alpheus idiocheles Coutière, 1905a

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti) - *Burrower*.

REFERENCES. — *Alpheus idiocheles* - BANNER & BANNER, 1967: 271 ("BD2, various coral head" = Tahiti, "BD9, outer ridge of coralline alga" = Bora Bora, "BD32, wave-washed ridge of calcareous alga" = Moorea; "specimens of *A. idiocheles* ...were found living in galleries").

Alpheus lobidens De Haan 1850

DISTRIBUTION. — Gambier (Mangareva); Society (Bora Bora, Maupiti, Moorea, Tahiti).

REFERENCES. — *Alpheus lobidens* - NOBILI, 1907: 356 (Mangareva). — BANNER & BANNER, 1983: 36 (Syn.). — *Alpheus crassimanus* - BANNER & BANNER, 1967: 283 ("BD1, under algal mat with small mussels, BD35, under coral heads" = Tahiti, "BD12, mud and sand flat, under rocks, BD24, from coral boulders, BD25, on a sand mud spit" = Bora Bora, "BD23" = Maupiti, "BD33" = Moorea) - SYNONYM - *Alpheus crassimanus* Heller, 1865.

Alpheus lottini Guérin-Méneville, 1829

DISTRIBUTION. — Society (Moorea, Raiatea, Tahiti); Tuamotu (Moruroa, Takapoto) - *Coral associate* (Gen. Pocillopora).

REFERENCES. — *Alpheus laevis* - HELLER, 1865: 107 (Tahiti). — *Alpheus obesomanus* - BOONE, 1935: 135 (Raiatea, Tahiti; in coral) "partim" in BANNER & BANNER, 1964, not *A. obesomanus* Dana, 1852. — *Alpheus lottini* - BANNER & BANNER, 1964: 88 (Syn.); 1967: 267 ("BD2, various coral head" = Tahiti, "BD15, from Pocillopora, BD26, living and dead coral" = Bora Bora; Moorea). — KROPP & BIRKELAND, 1981: 629, tab. 5 (Moorea, Takapoto; in coral Pocillopora). — ODINETZ, 1983: 205 (Moorea, Tahiti, Takapoto; in coral Pocillopora). — KIM & ABELE, 1988: 33, fig. 13 (Syn.; Exclusively in coral Pocilloporidae). — FRANSEN et al., 1997: 154 (Dry collections RMNH D5544; Tahiti) - FIELD OBSERVATION - J. POUPIN, 1997 (Moruroa; in coral Pocillopora) - SYNONYM - *Alpheus laevis* Randall, 1839.

Alpheus malleodigitus (Bate, 1888)

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti) - *Free-living or coral associate* (Gen. Pocillopora).

REFERENCES. — *Alpheus malleodigitus* - BANNER & BANNER, 1966a: 174 (Syn.); 1967: 270 ("BD3, from coral head, BD4, from reef flat, BD6, BD30, various heads of corals" = Tahiti, "BD8, BD13, from various living and dead coral, BD14, BD18, BD20, from massive dead heads of *Porites*, BD28-29, from dead coral heads" = Bora Bora, "BD33-34" = Moorea). — MIYA, 1974: 130, pl. 22 fig. f-g (Syn.; in holes of the basal part of living, overgrown and dead corals). — ODINETZ, 1983: 207 (Tahiti; in coral Pocillopora, non obligate associate).

Alpheus microscaphis (Banner, 1959)

DISTRIBUTION. — Society (Moorea).

REFERENCES. — *Alpheus microscaphis* - BANNER & BANNER, 1967: 273 ("BD32, wave-washed ridge of calcareous alga" = Moorea).

Alpheus mitis Dana, 1852 Incertae sedis

DISTRIBUTION. — Tuamotu (Fakahina, Makatea).

REFERENCES. — *Alpheus mitis* - NOBILI, 1907: 355 (Fakahina). — SENDLER, 1923: 46 (Makatea). — BANNER & BANNER, 1983: 55 (cf. remark).

REMARK. — BANNER & BANNER (1983: 55-57) write "There is a serious question in our minds about the separation of *A. paracritinus* and *A. mitis* Dana...Unfortunately we cannot reexamine the type specimens for that of DANA is missing...Therefore the question of the separation of the two species must at present be left unanswered..."

Alpheus nobili Banner & Banner, 1966a

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Alpheus nobili* - BANNER & BANNER, 1967: 269 ("BD30, from various heads of coral" = Tahiti).

Alpheus oahuensis (Banner, 1953)

DISTRIBUTION. — Tuamotu (Takapoto) - *Free-living or coral associate* (Gen. Pocillopora).

REFERENCES. — *Alpheus oahuensis* - ODINETZ, 1983: 207 (Takapoto; in coral Pocillopora, non obligate associate).

Alpheus obesomanus Dana, 1852

DISTRIBUTION. — Society (Bora Bora, Moorea, Raiatea, Tahiti) - *Free-living or coral associate* (Gen. Pocillopora).

REFERENCES. — *Alpheus obesomanus* - BOONE, 1935: 135, pl. 35, in coral; "partim" in BANNER, & BANNER (1964: 88), (Raiatea, Tahiti). — BANNER & BANNER, 1966a: 174 (Syn.); 1967: 269 ("BD2-3, from coral heads, BD4, from reef flat, BD5, outer ridge encrusted with smooth coralline alga, BD30, various heads of coral, BD37" = Tahiti, "BD8-9, BD13, from various living and dead corals, BD14, BD19, from dead and overgrown heads of *Pocillopora* spp., BD20, from massive dead heads of *Porites*, BD21, from scattered heads of dead coral, BD26, from living and dead coral" = Bora Bora, "BD32" = Moorea). — MIYA, 1974: 127, pl. 22, fig. a-e (Syn.). — ODINETZ, 1983: 207 (Tahiti, not indicated in work but mentioned in MHN collections; in coral *Pocillopora*, non obligate associate).

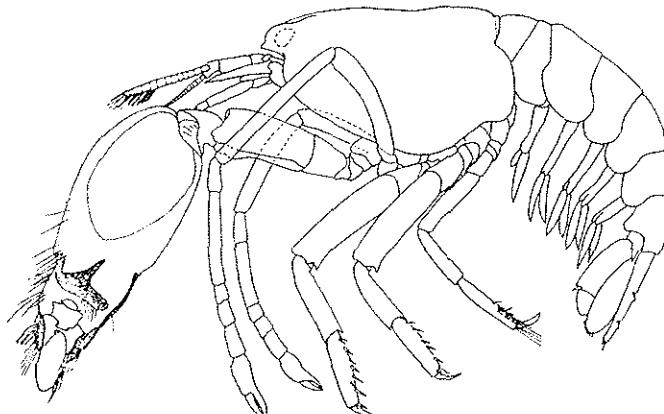


Figure 3 - *Alpheus obesomanus* Dana, 1852
(From MIYA, 1974)

Alpheus ovaliceps Coutière, 1905a

DISTRIBUTION. — Society (Bora Bora, Tahiti).

REFERENCES. — *Alpheus ovaliceps* - BANNER & BANNER, 1967: 275 ("BD3, from coral heads" = Tahiti, "BD8, from inner reef" = Bora Bora). — CHACE, 1988: 44 (Syn.).

Alpheus pachychirus Stimpson, 1860

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti) - Free-living or coral associate (Gen. *Pocillopora*).

REFERENCES. — *Alpheus pachychirus* - DE MAN, 1890: 116, pl. 6, fig. 14 (Tahiti). — ORTMANN, 1890: 489, pl. 26, fig. 17a-k (Tahiti). — BANNER & BANNER, 1967: 275 ("BD7, BD13, from various living and dead corals, BD14, BD15, from *Pocillopora* spp., BD20, from massive dead heads of *Porites*, BD26, from living and dead coral" = Bora Bora; Moorea). — MIYA, 1974: 133, pl. 23, fig. a-c (Syn.). — ODINETZ, 1983: 207 (Moorea, Tahiti, Takapoto; in coral *Pocillopora*, non obligate associate).

Alpheus pacificus Dana, 1852

DISTRIBUTION. — Gambier (Mangareva); Society (Bora Bora, Moorea, Tahiti); Tuamotu (Taiaro).

REFERENCES. — *Alpheus pacificus* - NOBILI, 1907: 356 (Mangareva). — BANNER & BANNER, 1967: 283 ("BD8" = Bora Bora; Moorea). — KIM & ABELE, 1988: 100, fig. 42 (Syn.). — POUPIN, 1994: 6, fig. 2 (Mangareva, Tahiti, Taiaro; at low tide, sandy area, under rocks).

Alpheus paracritinus Miers, 1881

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti); Tuamotu (Takapoto) - Free-living or coral associate (Gen. *Pocillopora*).

REFERENCES. — *Alpheus paracritinus* - BANNER & BANNER, 1967: 278 ("BD4, BD30, various heads of corals, BD36-37" = Tahiti, "BD11, from dead heads of *Porites*, BD13, various living and dead corals, BD21, scattered heads of dead corals, BD25, BD28, dead coral heads" = Bora Bora, "BD34" = Moorea). — MIYA, 1974: 157, pl. 31 (Syn.). — ODINETZ, 1983: 207 (Moorea, Tahiti, Takapoto; in coral *Pocillopora*, non obligate associate). — ODINETZ-COLLART & RICHER DE FORGES, 1985: 201 (Takapoto).

Alpheus paradentipes Coutière, 1905a

DISTRIBUTION. — Society (Tahiti); Tuamotu (Takapoto) - Free-living or coral associate (Gen. *Pocillopora*).

REFERENCES. — *Alpheus paradentipes* - ODINETZ, 1983: 207 (Tahiti, Takapoto; in coral *Pocillopora*, non obligate associate).

Alpheus parvirostris Dana, 1852

DISTRIBUTION. — Gambier (Mangareva); Society (Bora Bora, Moorea, Tahiti); Tuamotu (Marutea South, Takapoto) - Free-living, coral associate (Gen. *Pocillopora*), or bivalve associate (Gen. *Pinctada*).

REFERENCES. — *Alpheus parvirostris* - COUTIÈRE 1905b: 23 (Marutea). — NOBILI, 1907: 356 (Mangareva). — SEURAT, 1934: 60 (In pearl oyster *Pinctada margaritifera*). — BANNER & BANNER, 1967: 284 ("BD4, BD6, BD36-37" = Tahiti, "BD7-8, BD11, BD13-14, BD17, BD19-22, BD25-26, BD28-29" = Bora Bora, "BD33-34" = Moorea). — KROPP & BIRKELAND, 1981: 630, tab. 5 (Moorea, Takapoto). — ODINETZ, 1983: 207 (Moorea, Tahiti, Takapoto; in coral *Pocillopora*, non obligate associate). — CHACE, 1988: 47 (Syn.) - *Alpheus euchiroides* Nobili, 1906: 257; 1907: 356, pl. 1, fig. 6 (Marutea).

Alpheus perplexus Banner, 1956

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Alpheus perplexus* - BANNER & BANNER, 1967: 270 ("BD30, from various heads of coral" = Tahiti).

Alpheus platyunguiculatus (Banner, 1953)

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti) - Free-living or coral associate (G. *Acropora*).

REFERENCES. — *Alpheus platyunguiculatus* - BANNER & BANNER, 1967: 281 ("BD17, from partially living *Acropora* and coralline alga" = Bora Bora, "BD30, from various heads of coral" = Tahiti, "BD33" = Moorea).

Alpheus rostratipes Pocock, 1890

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti).

REFERENCES. — *Alpheus rostratipes* - BANNER & BANNER, 1967: 268 ("BD2, BD30, BD38" = Tahiti, "BD8-9, BD14, BD17-18, BD22" = Bora Bora, "BD32" = Moorea).

Alpheus strenuus Dana, 1852

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti); Tuamotu (Hao, Makatea, Takapoto) - Free-living or coral associate (Gen. *Pocillopora*).

REFERENCES. — *Alpheus strenuus* - ORTMANN, 1890: 475 (Tahiti) — NOBILI, 1907: 356 (Hao). — SENDLER, 1923: 46 (Makatea). — BANNER & BANNER, 1966a: 181 (Syn.); 1967: 284 ("BD12, mud and sand flats, most specimens under rocks" = Bora Bora; Moorea). — ODINETZ, 1983: 207 (Takapoto; in coral *Pocillopora*, non obligate associate). — CHACE, 1988 (Syn.).

Alpheus sublucanus (Forskål, 1775)

DISTRIBUTION. — Gambier (Mangareva); Marquesas (Nuku Hiva); Society (Moorea, Raiatea, Tahiti); Tuamotu (Makatea).

REFERENCES. — *Alpheus ventrosus* - NOBILI, 1907: 355 (Rikitea). — SENDLER, 1923: 46 (Makatea). — BOONE, 1935: 126, pl. 33 ("Anaho bay" = Nuku Hiva, "Point Venus" = Tahiti, "Teviatoa" = Raiatea). — *Alpheus sublucanus* - HOLTHUIS, 1980: 122 (Syn.). — NAIM, 1980, annex 1, tab. 3 (Moorea) - SYNONYM - *Alpheus ventrosus* H. Milne Edwards, 1837.

Alpheus sulcatus Kingsley, 1878

DISTRIBUTION. — Marquesas (Nuku Hiva); Society (Bora Bora, Moorea, Tahiti).

REFERENCES. — *Alpheus macrochirus* - ORTMANN, 1890: 485 (Tahiti). — BANNER & BANNER, 1967: 268 ("BD14, from ridge demarking outer margin of inner reef flat" = Bora Bora; Moorea; Nuku Hiva). — *Alpheus sulcatus* - BANNER & BANNER, 1985: 65 (Syn.) - SYNONYM - *Alpheus macrochirus* Richters, 1880.

Athanas areteformis Coutière, 1903

DISTRIBUTION. — Society.

REFERENCES. — *Athanas areteformis* - BANNER & BANNER, 1960: 138 (Syn.); 1967: 261 (Society). — CHACE, 1988: 61 (Syn.).

Athanas djiboutensis Coutière, 1897

DISTRIBUTION. — Gambier (Mangareva); Marquesas (Nuku Hiva); Society (Moorea, Tahiti); Tuamotu (Hikueru, Takapoto) - Free-living or coral associate (Gen. *Pocillopora*).

REFERENCES. — *Athanas djiboutensis* - NOBILI, 1907: 353 (Hikueru, "Rikitea" = Mangareva). — BOONE, 1935: 119, pl. 31. ("Anaho bay" = Nuku Hiva). — BANNER & BANNER, 1960: 140 (Tahiti); 1967: 261 (Society). — NAIM, 1980, annex 1, tab. 3 (Moorea). — ODINETZ, 1983: 208 (Moorea, Tahiti, Takapoto; in coral *Pocillopora*, non obligate associate). — ODINETZ-COLLART & RICHER DE FORGES, 1985: 201 (Moorea and/or Tahiti, Takapoto). — CHACE, 1988: 62 (Syn.) - RELEVANT MATERIAL - *Athanas cf. djiboutensis* - KROPP & BIRKELAND, 1981: 630, tab. 5 (Moorea).

Athanas dorsalis (Stimpson, 1860)

DISTRIBUTION. — Gambier (Mangareva); Tuamotu (Fakarava, Hao, Marutea South) - *Echinoid* associate (Gen. *Heterocentrotus*).

REFERENCES. — *Arete dorsalis* var. *Pacificus* - COUTIÈRE, 1904: 58 (Marutea South). — *Arete maruteensis* Coutière, 1905a: 864; 1905b: 18, fig. 1-6 (Marutea South; in sea urchin *Heterocentrotus mamillatus*). — NOBILI, 1907: 353 (Mangareva, Hao, Fakarava, Marutea). — SEURAT, 1934: 60 (Marutea South). — *Athanas dorsalis* - BANNER & BANNER, 1960: 151, fig. 5-6; 1967: 261 (Syn. and Tuamotu in distribution). — BRUCE, 1982: 207 (Echinoid hosts genera: *Centrostephanus*, *Echinothrix*, *Stomopneustes*, *Tripneustes*, *Heliocidaris*, *Centrostephanus*); 1990: 578 (Redescription with illustrations). — CHACE, 1988: 62 (Syn.).

Athanas gracilis Boone, 1935

DISTRIBUTION. — Society (Raiatea).

REFERENCES. — *Athanas gracilis* Boone, 1935: 122, pl. 32 (Raiatea). — BANNER & BANNER, 1960: 132 (List).

Athanas indicus (Coutière, 1903)

DISTRIBUTION. — Society (Bora Bora) - *Echinoid* associate (Gen. *Echinometra*).

REFERENCES. — *Athanas indicus* - BANNER & BANNER, 1960: 149 (Bora Bora); 1967: 260-261 (Society; "Athanas indicus was found living in excavations made by the sea urchin *Echinometra*"). — BRUCE, 1982: 207 (Echinoid hosts genera: *Diadema*, *Echinometra*, *Anthocidaris*).

Athanas rhothionastes Banner & Banner, 1960

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Athanas rhothionastes* Banner & Banner, 1960: 142, fig. 3 (Tahiti); 1967: 261 (Society).

Automate gardineri Coutière, 1902

DISTRIBUTION. — Society (Bora Bora, Moorea) - *Coral* associate (Gen. *Acropora*).

REFERENCES. — *Automate gardineri* - BANNER & BANNER, 1966a: 150 (Syn.); 1967: 261 ("BD17, from partially living *Acropora* and coralline alga" = Bora Bora, "BD33" = Moorea).

Metalpheus paragracilis (Coutière, 1897)

DISTRIBUTION. — Society (Bora Bora, Tahiti); Tuamotu (Marutea South) - *Free living or coral* associate (Gen. *Acropora*).

REFERENCES. — *Alpheus paragracilis* - COUTIÈRE 1905a: 883, pl. 76, fig. 22, 22a-g (Tahiti); 1905b: 23 (Marutea South). — SEURAT, 1934: 60 (Marutea South). — BANNER & BANNER, 1967: 268 ("BD6, barrier reef, BD30, from various coral heads, BD35, under coral heads on a gravel and sand expanse" = Tahiti, "BD8, inner reef, BD14, BD17, from partially living *Acropora* and coralline alga, BD18, from consolidated reef flat made mostly of massive heads of *Porites*, BD20, from massive dead heads of *Porites*" = Bora Bora). — *Metalpheus paragracilis* - BRUCE, 1976a: 44 (Syn.).

Salmoneus ? serratidigitus (Coutière, 1896)

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Salmoneus ? serratidigitus* - NEW MATERIAL - Coll. P. FROUIN, det. A.J. BRUCE "to be checked by Y. MIYA" (st. FROUIN 1225, Tahiti; material with BRUCE).

Salmoneus sibogae (de Man, 1910) (presence uncertain)

DISTRIBUTION. — Society (?).

REFERENCES. — *Salmoneus sibogae* - BANNER & BANNER, 1964: 86 (Syn.); 1967: 261 ("Locality notes lost"; could be Society and/or Cook Islands).

Salmoneus tricristatus Banner, 1959

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Salmaneus tricristata* - BANNER & BANNER, 1967: 262 ("BD30, from various heads of coral" = Tahiti). — *Salmaneus tricristatus* - MIYA, 1972: 43, pl. 5 (Syn.).

Synalpheus brachyceros Nobili, 1906

DISTRIBUTION. — Tuamotu (Makatea).

REFERENCES. — *Synalpheus brachyceros* Nobili, 1906: 256; 1907: 354, pl. 1, fig. 8 (Makatea). — de MAN, 1911: 190, 199 (List & key).

REMARK. — Species never retrieved since NOBILI's description.

Synalpheus charon (Heller, 1861)

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti); Tuamotu (Takapoto) - *Free living or coral associate (Gen. Pocillopora)*.

REFERENCES. — *Synalpheus charon* - BANNER & BANNER, 1967: 262 ("BD2, various coral heads" = Tahiti, "BD20, from massive dead heads of *Porites*" = Bora Bora). — MIYA, 1972: 51, pl. 8 (Syn.). — BRUCE, 1976a: 48 (Coral host, genus *Stylophora*). — KROPP & BIRKELAND, 1981: 629, tab. 5 (Moorea, Takapoto; in coral *Pocillopora*). — ODINETZ, 1983: 205 (Moorea, Tahiti, Takapoto; in coral *Pocillopora*). — CHACE, 1988: 77 (Syn.).

Synalpheus heroni Coutière, 1909

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti) - *Free living or coral associate (Gen. Acropora)*.

REFERENCES. — *Synalpheus heroni* - BANNER & BANNER, 1967: 264 ("BD2, various coral heads" = Tahiti, "BD17, from partially living *Acropora* and coralline alga" = Bora Bora, "BD32, from ridge of calcareous alga" = Moorea).

Synalpheus nilandensis Coutière, 1905a

DISTRIBUTION. — Gambier (Mangareva) - *Bivalve associate (Gen. Pinctada)*.

REFERENCES. — *Synalpheus nilandensis* - NOBILI, 1907: 353 (Mangareva). — SEURAT, 1934: 60 (Mangareva; in pearl oyster *Pinctada margaritifera*). — BANNER & BANNER, 1983: 101 (Syn.). — CHACE, 1988: 82 (Syn.).

Synalpheus paraneomeris Coutière, 1905a

DISTRIBUTION. — Society (Bora Bora, Moorea, Tahiti); Tuamotu (Marutea South, Takapoto) - *Free-living or coral associate (Gen. Acropora, Pocillopora)*.

REFERENCES. — *Synalpheus paraneomeris* - COUTIÈRE, 1905b: 22 (Marutea). — SEURAT, 1934: 60 (Marutea South). — BANNER & BANNER, 1967: 262 ("BD2, various coral heads, BD6, barrier reef, BD30, various coral heads" = Tahiti, "BD17, from partially living *Acropora* and coralline alga" = Bora Bora, "BD32, from ridge of calcareous alga, BD33" = Moorea). — MIYA, 1972: 54, pl. 9 (Syn.). — ODINETZ, 1983: 208 (Tahiti; in coral *Pocillopora*, non obligate associate; Takapoto also indicated in Paris collections). — CHACE, 1988: 83 (Syn.).

Synalpheus streptodactylus streptodactylus Coutière, 1905a

DISTRIBUTION. — Society (Moorea, Tahiti); Tuamotu (Takapoto) - *Free-living or coral associate (Gen. Pocillopora)*.

REFERENCES. — *Synalpheus streptodactylus streptodactylus* - BANNER & BANNER, 1966a: 157 (Syn.); 1967: 264 ("BD34, behind the reef" = Moorea). — MIYA, 1972: 69, pl. 14 (Syn.) — *Synalpheus streptodactylus* - ODINETZ, 1983: 208 (Tahiti; in coral *Pocillopora*, non obligate associate; Takapoto also indicated in Paris collections).

FAMILY HIPPOLYTIIDAE

Hippolyte ventricosa H. Milne Edwards, 1837

DISTRIBUTION. — Society (Moorea) - *In algae (Gen. Turbinaria)*.

REFERENCES. — *Hippolyte ventricosa* - HOLTHUIS, 1947: 55, fig. 7-9 (Syn.). — NAIM, 1980, annexe 1-2 (Moorea; in algae *Turbinaria ornata*).

REMARK. — According to C. d'UDEKEM D'ACOZ (personal communication) most of the Indo-Pacific references to *H. ventricosa* need a revision.

Ligur ensiferus (Risso, 1816)

DISTRIBUTION. — Austral (Raevavae, Rapa, Rurutu); Gambier; Tuamotu (Maria) - *Deep (290-380m)*.

REFERENCES. — *Ligur ensiferus* - POUPIN et al., 1990: 15 (French Polynesia). — POUPIN, 1996b: 6, pl. 2d (Gambier, Maria, Raevavae, Rapa, Rurutu; 290-380m).

Lysmata amboinensis (de Man, 1888)

DISTRIBUTION. — Marquesas (Ua Pou) - Littoral to deep (120m).

REFERENCES. — *Lysmata amboinensis* - POUPIN, 1996b: 6, pl. 2e (Ua Pou; 120m).

Merhippolyte kauiaensis Rathbun, 1906

DISTRIBUTION. — Marquesas (Tahuata) - Deep (530m).

REFERENCES. — *Merhippolyte kauiaensis* - POUPIN et al., 1990: 15 ("French Polynesia"; exact location, not indicated in text, is Tahuata, 530m; MNHN Na13299).

Parhippolyte uveae Borradaile, 1900

DISTRIBUTION. — Society (Maupiti, Raiatea) - Deep (110-130m).

REFERENCES. — *Parhippolyte uveae* - POUPIN, 1996b: 6, pl. 2f (Maupiti, Raiatea; 110-130m; usually this species is littoral).

Saron marmoratus (Olivier, 1811)

DISTRIBUTION. — Gambier (Mangareva); Marquesas (Nuku Hiva); Society (Tahiti); Tuamotu (Amanu, ?Moruroa) - Coral associate (Gen. Pocillopora).

REFERENCES. — *Hippolyte gibbosus* - HELLER, 1865: 120 (Tahiti). — *Hippolyte gibberosa* - ORTMANN, 1890: 497 (HELLER's reference). — *Saron gibberosus* - NOBILI, 1907: 358 ("Rikitea" = Mangareva, "Omanu" = Amanu). — SENDLER, 1923: 46 (Tahiti). — *Saron marmoratus* - BOONE, 1935: 187, pl. 51 (Nuku Hiva). — HOLTHUIS, 1947: 6 (Syn.) - RELEVANT MATERIAL - *Saron* sp. aff. *marmoratus* - Coll. J. POUPIN, det. A.J. BRUCE (Moruroa; in coral Pocillopora) - SYNONYM - *Hippolyte gibberosus* H. Milne Edwards, 1837.

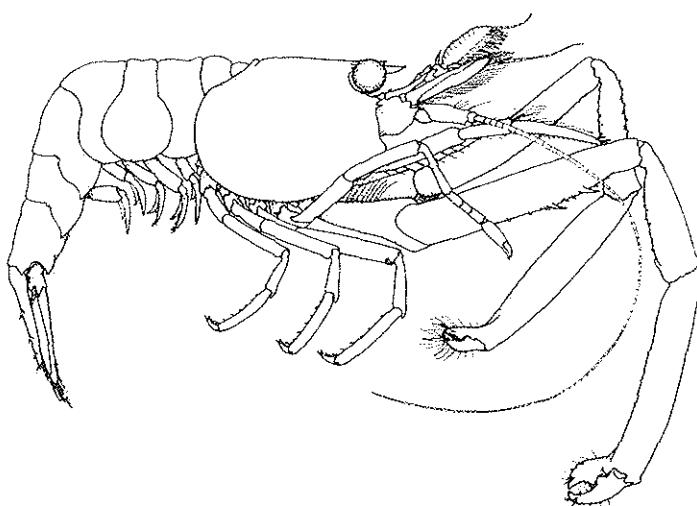


Figure 4 - *Thorina maldivensis* (Borradaile, 1915)
(From BRUCE, 1997)

Saron neglectus De Man 1902

DISTRIBUTION. — Society (Moorea, Tahiti); Tuamotu (Takapoto) - In algae (Gen. Giffordia, Halimeda, Liagora, Turbinaria) or in coral (Gen. Pocillopora).

REFERENCES. — *Saron neglectus* - NAIM, 1980, annex 1-2 (Moorea; in algae *Giffordia mitchellae*, *Halimeda opuntia*, *Liagora hawaiiiana*, *Turbinaria ornata*). — KROPP & BIRKELAND, 1981: 630, tab. 5 (Moorea; in coral Pocillopora, non obligate associate). — ODINETZ, 1983: 207 (Moorea, Tahiti, Takapoto; in coral Pocillopora, non obligate associate) — ODINETZ-COLLART & RICHER DE FORGES, 1985: 201 (Moorea, Tahiti, Takapoto; in coral Pocillopora).

Thor amboinensis (De Man, 1888)

DISTRIBUTION. — Tuamotu (Fangataufa) - *Coral associate (Gen. Acropora)*.

REFERENCES. — *Thor amboinensis* - NEW MATERIAL - Coll. J. POUPIN, February 1996, det. A.J. BRUCE (Fangataufa; in coral *Acropora*, 10m; MNHN Na13303).

Thor paschalis Heller, 1862

DISTRIBUTION. — Society (Moorea) - *In algae (Gen. Codium)*.

REFERENCES. — *Thor paschalis* - HOLTHUIS, 1947: 49 (Syn.). — NAIM, 1980, annex 1-2 (Moorea; in algae *Codium geppii*).

Thorina maldivensis (Borradaile, 1915)

DISTRIBUTION. — Society (Moorea, Tahiti); Tuamotu (Takapoto) - *Free-living or coral associate (Gen. Pocillopora)*.

REFERENCES. — *Thor maldivensis* - ODINETZ, 1983: 207 (Moorea, Tahiti, Takapoto; in coral *Pocillopora*, non obligate associate). — *Thorina maldivensis* - BRUCE, 1997: 14, fig. 1-6 (Tahiti).

FAMILY PROCESSIDAE

Nikoides aff. *danae* Paulson, 1875

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Nikoides* aff. *danae* - NEW MATERIAL - Coll. P. FROUIN, preliminary det. P. NOEL, MNHN Na13053-54 (Tahiti).

Processa aff. *moana* Yaldwyn, 1971

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Processa* aff. *moana* - NEW MATERIAL - Coll. P. FROUIN, preliminary det. P. NOEL, MNHN Na13055 (Tahiti).

FAMILY PANDALIDAE

Chlorocurtis jactans (Nobili, 1904)

DISTRIBUTION. — Society (Moorea, Tahiti) - *Free-living, algae (Gen. Turbinaria) or coral associate (Gen. Pocillopora)*.

REFERENCES. — *Chlorocurtis jactans* - NAIM, 1980, annex 1-2 (Moorea; in algae *Turbinaria ornata*). — ODINETZ, 1983: 207 (Moorea, Tahiti; in coral *Pocillopora*, non obligate associate).

Heterocarpus aff. *ensifer* A. Milne Edwards, 1881

DISTRIBUTION. — Marquesas (Eiao, Fatu Hiva, Hiva Oa, Tahuata, Ua Pou) - Deep (217-730m, mostly 300-400m).

REFERENCES. — *Heterocarpus* aff. *ensifer* - POUPIN et al., 1990: 16, 50, fig. 5-7, 11, pl. 1d (French Polynesia).

— POUPIN, 1996b: 6, pl. 2g (Eiao, Fatu Hiva, Hiva Oa, Tahuata, Ua Pou; 217-730m). — *Heterocarpus ensifer* - POUPIN & RICHER DE FORGES, 1991: 211, fig. 1 (French Polynesia). — Not *Heterocarpus ensifer* - MANAC'H & CARSIN, 1985: 473. — CROSNIER, 1986a: 362. — POUPIN, 1988: 27, fig. 2, 5 - These three references concerned *H. amacula* Crosnier and/or *H. parvispina* de Man.

Heterocarpus amacula Crosnier, 1988b

DISTRIBUTION. — Austral (Rapa, Tubuai); Gambier; Society (Tahiti); Tuamotu (Fangataufa, Moruroa) - Deep (250-800m, mostly 450-650m).

REFERENCES. — *Heterocarpus ensifer* - MANAC'H & CARSIN, 1985: 473 (Moruroa and/or Fangataufa). —

CROSNIER, 1986a: 362 (Moruroa, Tahiti, Tubuai). — POUPIN, 1988: 27, fig. 2, 5 (Moruroa) - All not *H. ensifer* A. Milne Edwards = *H. amacula* sp. nov. in CROSNIER (1988b); some sp. are *H. parvispina* de Man). — *Heterocarpus amacula* Crosnier, 1988b: 72, fig. 4a, pl. 1b, 2h (Tubuai, Moruroa). — POUPIN et al., 1990: 15, 56, fig. 5, 6, 7, 12, pl. 1c (French Polynesia). — POUPIN & RICHER DE FORGES, 1991: 211, fig. 1 (French Polynesia). — POUPIN, 1996b: 6, pl. 2h (Fangataufa, Gambier, Moruroa, Rapa, Tahiti, Tubuai; 250-800m).

Heterocarpus dorsalis Bate, 1888

DISTRIBUTION. — Marquesas (Tahuata); Society (Tahiti); Tuamotu (Makemo) - Deep (680-1025m).

REFERENCES. — *Heterocarpus dorsalis* - CROSNIER, 1986a: 362; 1988b: 62, fig. 2-3 (Tahiti). — POUPIN *et al.*, 1990: 16 (French Polynesia). — POUPIN, 1996b: 8, pl. 3a (Makemo, Tahiti, Tahuata; 680-1025m).

Heterocarpus laevigatus Bate, 1888

DISTRIBUTION. — Austral (Rapa, Tubuai); Gambier; Marquesas; Society (Bellingshausen, Huahine, Tahiti); Tuamotu (Fangataufa, Moruroa) - Deep (410-1050m; mostly 500-800m).

REFERENCES. — *Heterocarpus laevigatus* - CROSNIER, 1986a: 362 (Tahiti, Tubuai); 1988b: 74 (Tubuai). — POUPIN *et al.*, 1990: 16, 37, fig. 5, 6, 7, 9, pl. 1e (French Polynesia). — POUPIN, 1996b: 8, pl. 3b (Bellingshausen = Motu One, Fangataufa, Gambier, Huahine, Marquesas, Moruroa, Rapa, Tubuai; 410-1050m).

Heterocarpus longirostris McGilchrist, 1905

DISTRIBUTION. — Tuamotu (Hao, Moruroa) - Deep (1010-1020m).

REFERENCES. — *Heterocarpus longirostris* - POUPIN, 1996b: 8, pl. 3c (Hao, Moruroa; 1010-1020m).

Heterocarpus parvispina de Man, 1917

DISTRIBUTION. — Austral (Tubuai); Society; Tuamotu (Fangataufa, Moruroa) - Deep (230-730m; mostly 350-500m).

REFERENCES. — *Heterocarpus parvispina* - CROSNIER, 1988b: 70, 72, fig. 5a, pl. 1a, 2g (Moruroa, Tubuai). — POUPIN *et al.*, 1990: 16, 60, fig. 5-7, 13, pl. 1b (French Polynesia). — POUPIN & RICHER DE FORGES, 1991: 211, fig. 1 (French Polynesia). — POUPIN, 1996b: 8, pl. 3d (Fangataufa, Moruroa; Austral, Society; 230-730m). — *Heterocarpus ensifer*. — MANACH & CARSIN, 1985: 473. — CROSNIER, 1986a: 362. — POUPIN, 1988: 27, fig. 2, 5, 6 - All, *pro parte* not *H. ensifer* A. Milne Edwards, 1881 but a mixture of *H. parvispina* and *H. amacula*.

Heterocarpus sibogae de Man, 1917

DISTRIBUTION. — Austral (Tubuai); Society (Tahiti); Tuamotu (Moruroa) - Deep (190-950m).

REFERENCES. — *Heterocarpus sibogae* - CROSNIER, 1986a: 362 (Tahiti); 1988b: 79, fig. 5c, pl. 1c, 3a-b (Tahiti, Tubuai; Tuamotu). — POUPIN, 1988: 27, fig. 2 (Moruroa); 1996b: 8, pl. 3e (Moruroa, Tahiti, Tubuai; 190-950m). — POUPIN *et al.*, 1990: 16, 45, fig. 5-7, 10, pl. 1f (French Polynesia). — POUPIN & RICHER DE FORGES, 1991: 211 (French Polynesia).

Plesionika carsini Crosnier, 1986a

DISTRIBUTION. — Austral (Maria, Raevavae, Tubuai); Gambier; Marquesas (Ua Pou); Tuamotu (Makemo, Maria, Moruroa, Tureia) - Deep (410-600m).

REFERENCES. — *Plesionika carsini* Crosnier, 1986a: 369, fig. 3a-i (Moruroa). — POUPIN *et al.*, 1990: 16, pl. 2b (French Polynesia). — POUPIN & RICHER DE FORGES, 1991: 211 (French Polynesia). — POUPIN, 1996b: 8, pl. 3f (Gambier, Makemo, Maria, Moruroa, Raevavae, Tubuai, Tureia, Ua Pou; 430-600m; in these locations some specimens must belong to *Plesionika picta* Chan & Crosnier). — CHAN & CROSNIER, 1997: 190, fig. 2a, 2b, fig. 21 (Fangataufa, Gambier, Makemo, Maria, Moruroa, Tureia; 410-510m).

Plesionika curvata Chan & Crosnier, 1991

DISTRIBUTION. — Austral (Rapa, Rimatara, Tubuai); Gambier; Tuamotu (Fangataufa) - Deep (150-400m).

REFERENCES. — *Plesionika* sp. nov. 2 - POUPIN *et al.*, 1990: 16, pl. 3f (French Polynesia). — *Plesionika curvata* Chan & Crosnier, 1991: 440, fig. 10b, 11d-f, 33 (Fangataufa, Gambier, Rapa, Tubuai). — POUPIN, 1996b: 8, pl. 3g (Fangataufa, Gambier, Rapa, Rimatara, Tubuai; 150-400m).

Plesionika edwardsii (Brandt, 1851)

DISTRIBUTION. — Austral (Raevavae, Rapa, Tubuai); Gambier; Marquesas; Society (Tahiti); Tuamotu (Fangataufa, Moruroa) - Deep (200-500m; mostly 250-350m).

REFERENCES. — *Plesionika edwardsii* - MANAC'H & CARSIN, 1985: 473 (Fangataufa and/or Moruroa). — CROSNIER, 1986a: 362 (Moruroa, Tahiti, Tubuai). — POUPIN, 1988: 28, fig. 2 (Moruroa); 1996b: 8, pl. 3h (Fangataufa, Gambier, Marquesas, Moruroa, Tahiti, Tubuai; 220-500m). — POUPIN *et al.*, 1990: 16, 68, fig. 5, 6, 7, 15, pl. 1g (French Polynesia). — CHAN & CROSNIER, 1997: 193, fig. 23 (Moruroa, Raevavae, Rapa, Tahiti, Tubuai; 200-450m).

Plesionika erythrocyclus Chan & Crosnier 1997

DISTRIBUTION. — Austral (Rurutu); Tuamotu (Moruroa) - Deep (200-260m).

REFERENCES. — *Plesionika* sp. nov. 1 - POUPIN, 1996b: 10, pl. 4a (Moruroa, Rurutu; 200-260m). — *Plesionika erythrocyclus* Chan & Crosnier, 1997: 214, fig. 16, 34-35 (Moruroa, Rurutu; 200-260m; Syn.)

Plesionika fennieri Crosnier, 1986b

DISTRIBUTION. — Austral (Rapa, Rurutu, Tubuai); Gambier; Marquesas; Society; Tuamotu (Fangataufa, Maria, Moruroa) - Deep (260-820m; mostly 500-700m).

REFERENCES. — *Plesionika chacei* Crosnier, 1986a: 363, fig. 1a-b, 2a-h (Moruroa, Tubuai). — *Plesionika fennieri* Crosnier, 1986b: 691 (new name for *P. chacei*). — POUPIN, 1988: 28, fig. 2, 4-6 (Moruroa); 1996b: 10, pl. 4b (Fangataufa, Moruroa, Rapa, Tubuai; Marquesas & Society; 260-820m). — POUPIN et al., 1990: 16, 29, fig. 5-8, pl. 1a (French Polynesia). — POUPIN & RICHER DE FORGES, 1991: 211 (French Polynesia). — CHAN & CROSNIER, 1997: 196, fig. 4, 26-27 (Gambier, Maria, Rurutu; 470-660m). — *Plesionika* aff. *trispinus* (sic) - POUPIN et al., 1990: 16 ("French Polynesia"; exact location, not indicated, is Maria, 680m) - Not *P. trispinosus* Squires & Barraguan, 1976 = *P. fennieri* juvenile *fide* CHAN & CROSNIER (1997: 196).

Plesionika flavicauda Chan & Crosnier, 1991

DISTRIBUTION. — Austral (Rurutu, Tubuai); Society (Tahiti); Tuamotu (Fangataufa, Moruroa, Takapoto) - Deep (100-260m).

REFERENCES. — *Plesionika* sp. nov. 1 - POUPIN et al., 1990: 16, pl. 3e (French Polynesia). — *Plesionika flavicauda* Chan & Crosnier, 1991: 438, fig. 10a, 11a-c, 29-32 (Fangataufa, Moruroa, Rurutu, Tahiti, Takapoto). — POUPIN, 1996b: 10, pl. 4c (same islands; 100-260m). — ? *Plesionika serratifrons* - CROSNIER, 1986a: 362 (Tahiti, Tubuai) not *P. serratifrons* (Borradaile, 1900); material not retrieved in MNHN but most probably belonging to *P. flavicauda*.

Plesionika macropoda Chace, 1939

DISTRIBUTION. — Austral (Maria); Gambier; Marquesas (Ua Pou); Society (Huahine); Tuamotu (Maria, Moruroa, Tureia) - Deep (300-600m).

REFERENCES. — *Plesionika* aff. *williamsi* - POUPIN et al., 1990: 16 (French Polynesia), in part not *P. williamsi* Forest, 1964. — *Plesionika macropoda* - POUPIN, 1996b: 10, pl. 4d (Gambier, Huahine, Maria, Moruroa, Tureia, Ua Pou; 300-600m). — CHAN & CROSNIER, 1997: 205, fig. 11-13, 30-31 (Gambier, Huahine, Maria [Austral & Tuamotu], Moruroa, Ua Pou; 310-500m; Syn.).

Plesionika martia (A. Milne Edwards, 1883)

DISTRIBUTION. — Marquesas (Nuku Hiva, Ua Pou) - Deep (590-650m).

REFERENCES. — *Plesionika martia* - CHAN & CROSNIER, 1997: 213 (Ua Pou, Nuku Hiva; 590-650m).

Plesionika narval (Fabricius, 1787)

DISTRIBUTION. — Society (Tahiti) - Sublittoral (40-50m).

REFERENCES. — *Plesionika narval* - CHAN & CROSNIER, 1991: 443, fig. 12a-c, 13a, 14a-c, 15a-e, 34-36 (Tahiti; 40-50m).

Plesionika nesisi (Burukovsky, 1986)

DISTRIBUTION. — Marquesas (Hiva Oa); Society (Huahine); Tuamotu (Fangataufa, Makemo, Moruroa) - Deep (550-1080m; mostly 800-1000m).

REFERENCES. — *Plesionika* aff. *laevis* - POUPIN et al., 1990: 16, 72, fig. 16, pl. 2a (French Polynesia). — *Plesionika nesisi* - POUPIN, 1996b: 10, pl. 4e (Fangataufa, Hiva Oa, Huahine, Makemo, Moruroa; 550-1080m). — CHAN & CROSNIER, 1997: 197, fig. 5-10, 28 (Fangataufa, Hiva Oa, Makemo, Moruroa; 600-1050m).

Plesionika payeni Chan & Crosnier, 1997

DISTRIBUTION. — Tuamotu (Moruroa) - Deep (200-250m).

REFERENCES. — *Plesionika* sp. nov. 5 - POUPIN, 1996b: 12, pl. 5g (Moruroa; 250m). — *Plesionika payeni* Chan & Crosnier, 1997: 221: fig. 19, 39 (Moruroa, 200-250m).

Plesionika picta Chan & Crosnier, 1997

DISTRIBUTION. — Austral (Maria, Rurutu); Tuamotu (Fangataufa, Moruroa) - Deep (520-710m).

REFERENCES. — *Plesionika* sp. nov. 2 - POUPIN, 1996b: 10, pl. 4f (Fangataufa, Maria, Moruroa, Rurutu; 650-710m). — *Plesionika picta* Chan & Crosnier, 1997: 223, fig. 20, 40 (Fangataufa, Gambier, Maria, Rurutu, Ua Pou; 520-710m).

Plesionika poupini Chan & Crosnier, 1997

DISTRIBUTION. — Austral (Raevavae, Rimatara, Rurutu); Gambier; Tuamotu (Fangataufa, Makemo, Maria, Moruroa, Tureia) - Deep (260-650m).

REFERENCES. — *Plesionika carsini* - CROSNIER, 1986a: 369. — POUPIN & RICHER DE FORGES, 1991: 211 - Both references, *pro parte*, not *P. carsini* Crosnier 1986 = *P. poupini* Chan & Crosnier, 1997. — *Plesionika* aff. *carsini* - POUPIN et al., 1990: 16, pl. 3h (French Polynesia). — *Plesionika* sp. nov. 3 - POUPIN, 1996b: 10, pl. 4g (Fangataufa, Gambier, Makemo, Maria, Moruroa, Raevavae, Rimatara, Rurutu, Tureia; 280-650m). — *Plesionika poupini* Chan & Crosnier, 1997: 189, fig. 1-2, 22 (Fangataufa, Makemo, Maria, Moruroa, Raevavae, Rimatara, Rurutu; 260-600m).

Plesionika protati Chan & Crosnier, 1997

DISTRIBUTION. — Marquesas (Fatu Hiva, Nuku Hiva, Tahuata) - Deep (190-230m).

REFERENCES. — *Plesionika* sp. nov. 4 - POUPIN, 1996b: 4, pl. 4h (Fatu Hiva, Tahuata; 190-210m). — *Plesionika protati* Chan & Crosnier, 1997: 219, fig. 18, 38 (Fatu Hiva, Nuku Hiva, Tahuata; 190-230m).

Plesionika reflexa Chace, 1985

DISTRIBUTION. — Austral (Rimatara, Tubuai); Gambier; Marquesas (Fatu Hiva); Society; Tuamotu (Moruroa, Tureia) - Deep (360-910m; mostly 550-700m).

REFERENCES. — *Plesionika reflexa* - CROSNIER, 1986a: 362 (Tubuai). — POUPIN, 1996b: 12, pl. 5a (Gambier, Fatu Hiva, Moruroa, Rimatara, Tubuai, Tureia; Society; 360-910m). — CHAN & CROSNIER, 1997: 194, fig. 3, 24 (Fatu Hiva, Maria, Moruroa, Rimatara, Tubuai, Tureia; 430-800m). — *Plesionika ensis* - POUPIN et al., 1990: 16, 64, fig. 5-7, 14, pl. 1h (French Polynesia). — *Plesionika* aff. *ensis*. — POUPIN, 1988: 28, fig. 2 (Moruroa) - Both, not *P. ensis* A. Milne Edwards, 1881 = *P. reflexa* Chace, 1985.

Plesionika rubrior Chan & Crosnier, 1991

DISTRIBUTION. — Austral (Rimatara, Rurutu); Society (Maiao, Tahiti); Tuamotu (Moruroa, Nihuru, Takapoto, Tenarunga) - Deep (120-350m).

REFERENCES. — ? *Plesionika pacifica* - MANACH & CARSIN, 1985: 473 (Moruroa and/or Fangataufa). — CROSNIER, 1986a: 362 - Both, ? not *P. pacifica* Edmonson, 1952 = *P. rubrior* (cf. remark). — *Plesionika* sp. nov. 3 - POUPIN et al., 1990: 16 (French Polynesia). — *Plesionika rubrior* Chan & Crosnier, 1991: 433, fig. 7a-f, 25-28 (Syn.; Maiao, Moruroa, Nihuru, Rimatara, Rurutu, Tahiti, Takapoto, Tenarunga; 120-350m). — POUPIN, 1996b: 12, pl. 5b (Same material).

REMARK. — *Plesionika pacifica* is mentioned from a lost specimen, caught around Moruroa. Although not verifiable, the exact identity of this material would rather be *P. rubrior*.

Plesionika semilaevis Bate, 1888

DISTRIBUTION. — Austral (Tubuai) - Deep (800m).

REFERENCES. — *Plesionika semilaevis* - CHAN & CROSNIER, 1997: 213 (Tubuai; 800m).

Plesionika sindoi (Rathbun, 1906)

DISTRIBUTION. — Austral (Maria, Raevavae, Rurutu); Gambier; Marquesas (Fatu Hiva, Tahuata); Society (Bora Bora); Tuamotu (Fangataufa, Makemo, Moruroa, Tuanake) - Deep (150-800m, mostly 300-600m).

REFERENCES. — *Plesionika* aff. *ocellus* - ? POUPIN et al., 1990: 16 (French Polynesia). — *Plesionika sindoi* - POUPIN, 1996b: 12, pl. 5c (Bora Bora, Fangataufa, Fatu Hiva, Gambier, Makemo, Maria [Austral & Tuamotu], Moruroa, Raevavae, Rurutu, Tahuata; 150-800m). — CHAN & CROSNIER, 1997: 216, fig. 17, 36-37 (Bora Bora, Fangataufa, Fatu Hiva, Gambier, Makemo, Maria [Austral & Tuamotu], Moruroa, Raevavae, Rurutu, Tunake; 380-780m).

Plesionika spinidorsalis (Rathbun, 1906)

DISTRIBUTION. — Austral (Tubuai); Gambier; Society (Bora Bora, Huahine); Tuamotu (Moruroa) - Deep (300-750m).

REFERENCES. — *Plesionika spinidorsalis* - POUPIN et al., 1990: 16 (French Polynesia). — POUPIN, 1996b: 12, pl. 5e (Bora Bora, Gambier, Huahine, Moruroa, Tubuai; 300-750m). — CHAN & CROSNIER, 1997: (Bora Bora, Gambier, Huahine, Moruroa, Tubuai; 540-720m).

Plesionika spinipes Bate, 1888

DISTRIBUTION. — Society (Maiao, Tahiti) - Deep (320-600m).

REFERENCES. — *Plesionika spinipes* - CROSNIER, 1986a: 362 (Tahiti). — CHAN & CROSNIER, 1991: 422, fig. 1b-c, 3e, 21 (Maiao, "Taravao" = Tahiti; 320-600m). — POUPIN, 1996b: 12, pl. 5d (Same material).

Plesionika williamsi Forest, 1964

DISTRIBUTION. — Austral (Rurutu); Gambier; Marquesas (Eiao, Tahuata, Ua Pou); Society (Huahine, Bellingshausen, Tahiti); Tuamotu (Fangataufa, Makemo, Marutea South, Moruroa) - Deep (310-600m).

REFERENCES. — *Plesionika aff. williamsi* - CROSNIER, 1986a: 373, fig. 4a-g (Tahiti). — POUPIN *et al.*, 1990: 16 (French Polynesia), in part, see under *P. macropoda*. — *Plesionika williamsi* - POUPIN, 1996b: 12, pl. 5f (Bellingshausen, Eiao, Fangataufa, Gambier, Makemo, Marutea South, Moruroa, Rurutu, Tahiti, Tahuata, Ua Pou; 310-470m). — CHAN & CROSNIER, 1997: 209, fig. 14-15, 32-33 (Syn.; Bellingshausen, Eiao, Fangataufa, Makemo, Marutea South, Moruroa, Tahiti, Tahuata, Tubuai, Ua Pou; 350-600).

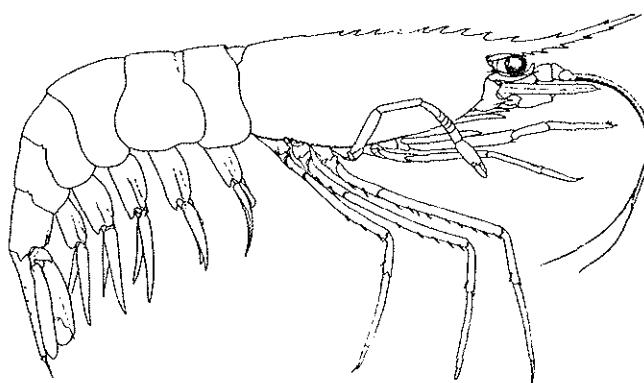


Figure 5 - *Plesionika spinidorsalis* (Rathbun, 1906)
(From CHACE, 1985)

FAMILY CRANGONIDAE

Presence of the deep crangonids in French Polynesia is attested by a single small specimen in bad condition (telson is missing) in the MNHN collections (Coll. RV *Marara*, B. RICHER DE FORGES, May 1979, Tubuai, 300m; material not recorded). It is attributed to *Philoceras* sp. (det. A. CROSNIER). This first report is confirmed by collection of several other deep crangonids around the Marquesas during the recent RV *Alis Marquesas* Expedition, August/September 1997 (J. POUPIN field notes).

FAMILY THALASSOCARIDIDAE

Thalassocaris aff. crinita (Dana, 1852)

DISTRIBUTION. — Society? - Bathypelagic (100m).

REFERENCES. — *Thalassocaris aff. crinita* - NEW MATERIAL - Coll. E. JOSSE, det. J. POUPIN (French Polynesia, ?Society; 100m; material returned to ORSTOM/Tahiti).

INFRA-ORDER THALASSINIDEA

Thalassinidea are often hidden in deep burrows and are very difficult to collect. As a result, our knowledge of this group is superficial and the species listed below certainly represent only a small part of the real French Polynesian fauna. An example of an unknown species is given by a beautiful axiid photographed in Tahitian waters and illustrated in a local newspaper ("Le homard aux pinces d'or", *La Dépêche*, Tahiti, August 31th, 1994, p. 19, photograph D. PARDON).

First reports of Thalassinidea from French Polynesia were made by SENDLER (1923) and EDMONSON (1944). Subsequent collections made by, H.G. MÜLLER, researchers sojourning at the CRIODE center (B. THOMASSIN, J. de VAUGELAS), or present author, are reported by THOMASSIN *et al.* (1982), DE VAUGELAS (1983, 1985), POORE & SUCHANEK (1988), SAKAI (1992), POUPIN (1994), NGOC-HO (1995, 1998), and POORE (1997). In Austral, Gambier, or Marquesas Islands, we still have no record of Thalassinidea.

FAMILY AXIIDAE

Eutrichocheles tuamotu Ngoc-Ho, 1998

DISTRIBUTION. — Tuamotu (Moruroa) - Deep (140m).

REFERENCES. — *Eutrichocheles tuamotu* Ngoc-Ho, 1998: in press (Moruroa; 140m).

REMARK. — According to NGOC-HO (personnal communication) this species would better be placed in the genus *Paraxiopsis* (see KENSLEY, 1996). This point will be discussed in her future publications.

Parascytoleptus tridens (Rathbun, 1906)

DISTRIBUTION. — Society (Bora Bora, Moorea); Tuamotu (Makatea).

REFERENCES. — *Paraxius tridens* - SENDLER, 1923: 44 (Makatea). — *Parascytoleptus tridens* - SAKAI & DE SAINT LAURENT, 1989: 40 (New combination). — SAKAI, 1992: 212 ("Vaitapu" = Bora Bora, "Maharepa & Afareaitu" = Moorea; coral and dead coral, 0.5-2m).

Paraxiopsis brocki (De Man, 1888)

DISTRIBUTION. — Society (Bora Bora); Tuamotu (Fangataufa).

REFERENCES. — *Eutrichocheles brocki* - SAKAI, 1992: 216 ("Vaitape" = Bora Bora; in coral 0.5-1m). — NGOC-HO, 1998: in press (Fangataufa; outer reef). — *Paraxiopsis brocki* - KENSLEY, 1996 (New combination).

FAMILY CALLIANASSIDAE

Cheramus articulatus (Rathbun, 1906) - New combination

DISTRIBUTION. — Tuamotu (Mataiva) - Burrower.

REFERENCES. — *Callichirus articulatus* - VAUGELAS, 1985: 316 (Mataiva).

REMARK. — MANNING & FELDER (1986) do not include RATHBUN's species in their definition of the genus *Callichirus*. In MNHN collections, material from the Tuamotu is represented by one male (c.l. 11.5 mm, MNHN Th1232). Its examination shows that: a) Maxillipedal 3 dactylus is digitiform; b) Pleopods 3-5 have digitiform appendices internae; c) Maxilliped 3 is without exopod. In POORE (1994: 101), this key out to the genus *Cheramus*. We therefore propose here a new combination for this species.

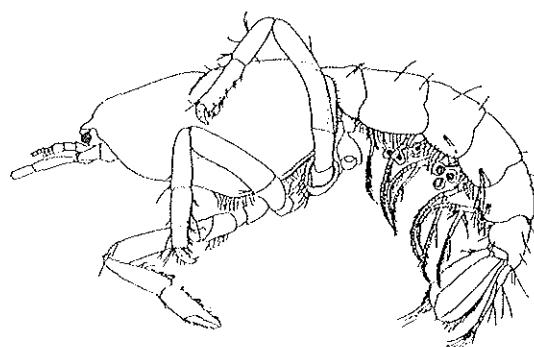


Figure 6 - *Parascytoleptus tridens* (Rathbun, 1906)
(From SAKAI & DE SAINT LAURENT, 1989)

Corallianassa collaroy (Poore & Griffin, 1979)

DISTRIBUTION. — Society (Moorea, Tahiti).

REFERENCES. — *Corallianassa collaroy* - SAKAI, 1992: 212, fig. 1a-d (Moorea, Tahiti).

Glypturus armatus (A. Milne Edwards, 1870)

DISTRIBUTION. — Society (Moorea, Tahiti); Tuamotu (Mataiva, Takapoto, Tikehau) - *Burrower*.

REFERENCES. — *Callichirus armatus* - VAUGELAS, 1983: 23 (Mataiva, Moorea, Tahiti); 1985: 314 (Mataiva). — DELESALLE, 1985: 288, 295, 299 (Mataiva). — HARMELIN-VIVIEN, 1985: 251 (Tikehau). — SALVAT & RICHARD, 1985: 353 (Takapoto). — VAUGELAS *et al.*, 1986: 204, fig. 1-3 (Mataiva, Moorea, Tahiti). — *Callianassa armata* - MANNING, 1987: 390 (Synonymize this species with *Glypturus acanthochirus*). — *Glypturus armatus* - POORE & SUCHANEK, 1988: 197, 201 (Mataiva, VAUGELAS' material, with this remark "We do not agree with MANNING (1987) who believed that *G. armatus* is a junior synonym of *G. acanthochirus*").

Neocallichirus taiaro Ngoc-Ho, 1995

DISTRIBUTION. — Tuamotu (Taiaro) - *Burrower*.

REFERENCES. — *Neocallichirus taiaro* Ngoc-Ho, 1995: 211, fig. 1-2 (Taiaro).

FAMILY CALLIANIDEIDAE

Callianidea typa H. Milne Edwards, 1837

DISTRIBUTION. — Tuamotu (Moruroa, Taiaro) - *Burrower*.

REFERENCES. — *Callianidea typa* - EDMONSON, 1944: 38, fig. 2 (Tahiti). — POUPIN, 1994: 7, fig. 3, pl. 1b (Taiaro). — POORE, 1997: 349, fig. 1-3, 4a-b (Taiaro) - NEW MATERIAL - Coll. & det. J. POUPIN, October 1995 (Moruroa; sandy area, under rocks).

FAMILY THOMASSINIIDAE

Thomassinia moorea Poore, 1997

DISTRIBUTION. — Society (Moorea).

REFERENCES. — *Thomassinia* sp. - THOMASSIN *et al.*, 1982: 394 (Moorea). — *Thomassinia moorea* Poore, 1997: 416, fig. 38 (Moorea).

REMARK. — Two others Thomassiniidae, attributed by POORE (1997: 408) to "? *Mictaxis* sp.", were also collected with this new species. The specimens are in poor condition and POORE writes "While the species is represented by such incomplete specimens, its generic placement is uncertain".

ORDER STOMATOPODA

Collections of Stomatopoda roughly follow those recorded in the Caridea section with the addition of the following Expeditions: the U.S.S. *Wachusett* Expedition, Marquesas 1884, coll. Dr. William H. JONES, U.S. Navy (BIGELOW, 1931), the 1899-1900 *Albatross* Voyage (MANNING, 1978c), the 1901-1902 American *Alvin Seale* cruise (EDMONSON, 1921), and the 1957 SMITHSONIAN BREDIN Expedition (MANNING, 1978c). Material from these cruises is deposited at USNM, Washington, or BPBM, Honolulu.

Surprisingly, two species are deposited at the Indian Museum, Calcutta, *Pseudosquillisma oculata* (Brullé, 1837) and *Gonodactylus platysoma* Wood Mason, 1895 (type species) (KEMP, 1913; GOSH & MANNING, 1988). This material was donated to the Indian Museum by the Otago Museum, before 1895

(MANNING personal communication). OTAGO Museum is the Museum of Otago province, New Zealand, and was founded in 1868 (HOLTHUIS, personal communication).

Individual collectors of Stomatopoda include, J.M. CLEMENTS (1927, Society), priest Siméon DELMAS (1927, Marquesas), G. PINCHOT (1929, Tuamotu), G. RANSON (1952, Society), J. RANDALL (1957, Marquesas), R. WATKINS (1962, Society), and A. MICHEL (1969, Marquesas). People sojourning at Moorea research centers, CRILOBE and/or BERKELEY station, have also collected stomatopods: O. NAIM, M. MONTEFORTE, B. THOMASSIN, M. PEYROT-CLAUSADE and R. CALDWELL (*cf.* MANNING, 1978a). This material is deposited at the BPBM, Honolulu, USNM, Washington, or SME, Endoume.

Deep collections by the RV *Marara* include the big *Indosquilla manihinei* Ingle & Merrett, 1971 (illustrated in POUPIN, 1996b: 42, pl. 20 f-g) and two littoral to sublittoral species, here reported for the first time: *Odontodactylus brevirostris* (Miers, 1884) and *Oratosquilla columnia* (Townsley, 1953). From ORSTOM Tahiti research center (coll. P. FROUIN) and unpublished material in MNHN and USNM (det. R.B. MANNING), three other species are also added to the regional fauna: *Alima alba* (Bigelow, 1893), *Busquilla quadraticauda* (Fukuda, 1911), and *Gonodactylus childi* Manning, 1971.

Material collected by H.G. MÜLLER in 1988 at Bora Bora and Moorea, Society Islands, is properly registered in MNHN (Sto 1658-1674) but was not retrieved. It could be from these field collections that *Gonodactylus playysoma* Wood-Mason, 1895 and *Raoulserenea ornata* (Miers, 1880) are listed from Moorea, to our knowledge for the first time, in MÜLLER (1994)'s world bibliography of Stomatopoda.

FAMILY INDOSQUILLIDAE

Indosquilla manihinei Ingle & Merrett, 1971

DISTRIBUTION. — Tuamotu (Fangataufa) - Deep (550m).

REFERENCES. — *Indosquilla manihinei* - MANNING *et al.*, 1990: 314 (Biogeography). — MÜLLER, 1994: 8 (Syn.). — MANNING, 1995: 18, 28 (List; new family). — POUPIN, 1996: 42, pl. 20 f-g (Fangataufa; 550m).

FAMILY GONODACTYLIDAE

Gonodactylaceus falcatus (Forskål, 1775)

DISTRIBUTION. — Society (Moorea).

REFERENCES. — *Gonodactylus falcatus* - NAIM, 1980: 51, with a ? — *Gonodactylaceus falcatus* - MANNING, 1995: 19, 42-43 (List & key; new combination).

Gonodactylaceus randalli (Manning, 1978)

DISTRIBUTION. — Society (Moorea).

REFERENCES. — *Gonodactylus randalli* Manning, 1978b: 9, fig. 6, 12 (Holotype from Moorea). — MÜLLER, 1994: 41 (Syn.). — *Gonodactylaceus randalli* - MANNING, 1995: 19, 42, 43, 47 (List & key; new combination).

Gonodactylellus espinosus (Borradaile, 1898)

DISTRIBUTION. — Marquesas (Fatu Hiva); Society (Bora Bora, Moorea, Tahiti); Tuamotu (Fakarava, Mataiva).

REFERENCES. — *Gonodactylus espinosus* - MANNING, 1967a: 21, fig. 8 (Bora Bora, Fakarava). — MONTEFORTE, 1984: 173, annex 1, tab. a (Mataiva, Moorea, Tahiti); 1987: 8 (Moorea). — MÜLLER, 1994: 30 (Syn.). — *Gonodactylellus espinosus* - MANNING, 1995: 19, 56, 57 (List & key; new combination) - NEW MATERIAL - February 1996, Coll. J. POUPIN, det. R.B. MANNING (Fatu Hiva MNHN Sto 1960; in base of a coral *Pocillopora*).

***Gonodactylellus inciens* (Lanchester, 1903)**

DISTRIBUTION. — Society (Moorea, Tahiti); Tuamotu (Fakarava).

REFERENCES. — *Gonodactylus inciens* — MANNING, 1967a: 18, fig. 7 (Fakarava). — MÜLLER, 1994: 34 (Syn.). — *Gonodactylellus inciens* — MANNING, 1995: 19, 56, 57, 63, fig. 24, 25b (List & key; new combination) - NEW MATERIAL - MNHN Sto 1165-1166, det. R.B. MANNING (Moorea, Tahiti).

***Gonodactylinus viridis* (Serène, 1954)**

DISTRIBUTION. — Society (Moorea, Tahiti); Tuamotu (Mataiva).

REFERENCES. — *Gonodactylus viridis* — MONTEFORTE, 1984: 173, annex 1, tab. a (Mataiva, Moorea, Tahiti); 1987: 8 (Moorea). — DELESALLE, 1985: 305 (Mataiva). — MÜLLER, 1994: 44 (Syn.). — *Gonodactylinus viridis* — MANNING, 1995: 19, 66, pl. 4, fig. 8c,d, 9c, 10e, 11c, 25a (List; new combination).

***Gonodactylus childi* Manning, 1971**

DISTRIBUTION. — Society (Moorea).

REFERENCES. — *Gonodactylus childi* - NEW MATERIAL - MNHN Sto 1170, det. R.B. MANNING (Moorea).

REMARK. — According to MANNING (in preparation), the original account of *childi* included two species in two different genera. The holotype is a dwarf species, *Gonodactylus childi* sensu stricto, and the paratypes are a new *Gonodactylellus*. French polynesian specimens belong to *G. childi* sensu stricto.

***Gonodactylus chiragra* (Fabricius, 1781)**

DISTRIBUTION. — Gambier (Mangareva); Marquesas (Nuku Hiva); Society (Moorea, Tahiti); Tuamotu (Hao, Kaukura, Fakahina, Makatea).

REFERENCES. — *Gonodactylus chiragra* — HELLER, 1865: 126 (Tahiti). — NOBILI, 1907: 410 ("Ohura-Hao" = Hao, Kaukura, Fakahina, "motu Marakuraku"=?). — SENDLER, 1923: 47 (Makatea). — EDMONSON, 1921: 300 (Marquesas). — BOONE, 1934: 11, pl. 2, fig. a, part (Nuku Hiva, Tahiti; not Bora Bora and Raiatea, see MANNING, 1967c: 103). — SEURAT, 1934: 61 ("Rikitea" = Mangareva, Hao, Fakahina, Kaukura). — MANNING, 1967c: 102 (Marquesas and Society islands; revision of BOONE's material but without precision of islands concerned and: "these specimens were not all examined"); 1995: 20, 69, 71, pl. 5-8, fig. 8e,f, 9a,b, 10a, 11a, 27a, 28-30 (List & key). — NAIM, 1980: 51 (Moorea; in algae *Halimeda opuntia*). — MÜLLER, 1994: 27 (Syn.) - NEW MATERIAL - Coll. C. HILY, det. K. MOOSA (Tahiti MNHN Sto 1959).

REMARK. — Except for BOONE's material, revised by MANNING (1967c), most of the old collections should be checked. "A suite of species, including virtually all members of *Gonodactylus*, has been confused with *G. chiragra* at one time or another" (MANNING, 1995: 74).

***Gonodactylus platysoma* Wood-Mason, 1895**

DISTRIBUTION. — Marquesas; Society (Bora Bora, Moorea, Raiatea); Tuamotu (Raroia).

REFERENCES. — *Gonodactylus platysoma* Wood-Mason, 1895: 11, pl. 3, fig. 3-9 (Society Islands). — *Gonodactylus chiragra* var. *acutus* Lanchester - EDMONSON, 1921: 300 (Marquesas). — *Gonodactylus chiragra* var. *tumidus* - BOONE, 1934: 11, pl. 1, 2b, part (Bora Bora, Raiatea; see MANNING, 1967c). — *Gonodactylus chiragra* var. *platysoma* - KEMP, 1913: 162 (Society Islands; WOOD-MASON's material). — BIGELOW: 1931: 119 (Bora Bora). — HOLTHUIS, 1953a: 62 (Raroia). — MORRISON, 1954: 13 (Raroia). — *Gonodactylus platysoma* - MANNING, 1967c: 103 (Bora Bora, Raiatea; BOONE's material); 1995: 20, 69, 75, pl. 9, 10, fig. 9d, 10b, 11b, 27b, 31 (List & key; "type locality Society Islands, 17°00'S, 150°00'W"). — GHOSH & MANNING, 1988: 654 (Selection of a lectotype from Society Islands in the collections of Zoological Survey of India, Calcutta). — MÜLLER, 1994: 40 (Syn.; with "Moorea" in the Distribution).

FAMILY ODONTODACTYLIDAE

***Odontodactylus brevirostris* (Miers, 1884)**

DISTRIBUTION. — Marquesas (Fatu Hiva) - Sublittoral (49m).

REFERENCES. — *Odontodactylus brevirostris* — MANNING, 1967b: 22, fig. 6-8 (Revision of the genus); 1995: 20, 82 (List & key). — MÜLLER, 1994: 50 (Syn.) - NEW MATERIAL - Coll. RV Marara, det. R.B. MANNING (Fatu Hiva MNHN Sto 1962; 49m).

FAMILY PSEUDOSQUILLIDAE

Pseudosquilla ciliata (Fabricius, 1787)

DISTRIBUTION. — Gambier (Mangareva); Marquesas; Society (Tahiti).

REFERENCES. — *Pseudosquilla ciliata* - NOBILI, 1907: 410 (Mangareva "Rikitea"). — SEURAT, 1934: 61 (Mangareva). — EDMONSON, 1921: 288 (Marquesas). — CHABOIS L. & F., 1954: 92, unnumbered fig. (French Polynesia). — MÜLLER, 1994: 72 (Syn.). — MANNING, 1995: 20, 111, pl. 20, 21, fig. 59a, 60a,b,c, 61-63 (List & syn.) - NEW MATERIAL - Coll. P. FROUIN, det. R.B. MANNING ("Mahaena" = Tahiti MNHN Sto 1958).

Pseudosquillisma oculata (Brullé, 1837)

DISTRIBUTION. — Society.

REFERENCES. — *Pseudosquilla oculata* - KEMP, 1913: 102 (Society Islands). — MÜLLER, 1994: 76 (Syn.). — *Pseudosquillisma oculata* - CAPPOLA & MANNING, 1995: 285 (New combination). — MANNING, 1995: 21 (List) - Not *Pseudosquilla oculata* - HELLER, 1865: 124 (see under *Raoulserenea ornata*).

Raoulserenea hieroglyphica (Manning, 1972)

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Pseudosquilla hieroglyphica* Manning, 1972: 2, fig. 1 (Tahiti). — MÜLLER, 1994: 75 (Syn.). — *Raoulserenea hieroglyphica* - MANNING, 1995: 21, 116 (List & key; new combination).

Raoulserenea ornata (Miers, 1880)

DISTRIBUTION. — Society (Moorea, ?Tahiti) - Littoral to sublittoral (31m).

REFERENCES. — *Pseudosquilla oculata* - ?HELLER, 1865: 124 (Tahiti) ? non *P. oculata* (Brullé, 1837). — *Pseudosquilla ornata* - MIERS, 1880: 33, pl. 3, fig. 5, 6 (Syn.; ?Tahiti see remark). — SEURAT, 1934: 61 (HELLER's material). — MÜLLER, 1994: 77 (Syn.; Moorea in Distribution; up to 31m). — *Raoulserenea ornata* - MANNING, 1995: 21, 118, pl. 22, fig. 59b, 60c,d,f, 64 (List & key; new combination).

REMARK. — MIERS (1880: 34) writes under *Pseudosquilla ornata*: "I believe that the specimens from Tahiti, referred by HELLER (l.c.) to *P. oculata*, belong to this species, as the rostrum is described as 'vorn abgerundet,' and of the terminal post-abdominal segment he observes, 'gewahrt man auf der Oberfläche mehrere Längsleistchen, und zwar eine lange mittlere und zwei seitliche.'"

Raoulserenea n.sp. Manning & Caldwell in preparation

DISTRIBUTION. — Society (Moorea); Tuamotu (Mataiva).

REFERENCES. — *Raoulserenea* n.sp. - MANNING & CALDWELL, in preparation: coll. R. CALDWELL, Moorea; coll. M. MONTEFORTE, 23/05/1982, Mataiva, outer reef, intertidal, dead coral fragments, MNHN Sto 1964.

FAMILY TAKUIDAE

Mesacturus furcicaudatus (Miers, 1880)

DISTRIBUTION. — Tuamotu (Makatea, Mataiva).

REFERENCES. — *Gonodactylus furcicaudatus* - NOBILI, 1907: 410 (Makatea). — SEURAT, 1934: 61 (Makatea). — *Mesacturus furcicaudatus* - MONTEFORTE, 1984: 173, annex 1, tab. a (Mataiva). — MÜLLER, 1994: 50 (Syn.). — MANNING, 1995: 21, 119 (List & new family).

FAMILY CORONIDIDAE

Parvisquilla multituberculata (Borradaile, 1898)

DISTRIBUTION. — Society (Moorea).

REFERENCES. — *Parvisquilla multituberculata* - MANNING, 1978a: 16, fig. 8a-f (Moorea); 1995: 22 (List). — MÜLLER, 1994: 84 (Syn.).

FAMILY LYSIOSQUILLIDAE

Lysiosquillina sulcata (Manning, 1978)

DISTRIBUTION. — Society (Moorea).

REFERENCES. — *Lysiosquilla sulcata* - STEGER & BENIS-STEGER, 1988: 94 (Moorea). — MÜLLER, 1994: 89 (Syn.). — *Lysiosquillina sulcata* - MANNING, 1995: 22, 133, 134 (List & key; new combination).

Lysiosquillina maculata (Fabricius, 1793)

DISTRIBUTION. — Marquesas (Nuku Hiva); Society (Bora Bora, Moorea, Raiatea, Tahiti); Tuamotu (Mataiva, Toau) - Littoral to sublittoral (28m).

REFERENCES. — *Lysiosquilla maculata* - HELLER, 1865: 260, 265 (Tahiti; distribution table only). — BIGELOW, 1894: 508 ("Tawhae" = Taiohae, Nuku Hiva). — EDMONSON, 1921: 292 (Tahiti). — BOONE, 1934: 21-28, pl. 5-6 (Tahiti). — MANNING, 1967c: 103 (Tahiti; BOONE's material). — MANNING, 1978c: 3, fig. 1-3, 9 (Bora Bora, Nuku Hiva, Raiatea, Tahiti, Toau). — MONTEFORTE, 1984: 173, annexe I, tab. a (Mataiva). — DELESALLE, 1985: 288, 293 (Mataiva). — MÜLLER, 1994: 91 (Syn.). — *Lysiosquillina maculata* - MANNING, 1995: 22, 134, fig. 68c, 70a,b, 71a,b, 72a,b, 74-77, 78a, 80a (List & key; new combination) - NEW MATERIAL - Coll. & det. J. POUPIN, May 1997 (Moorea).

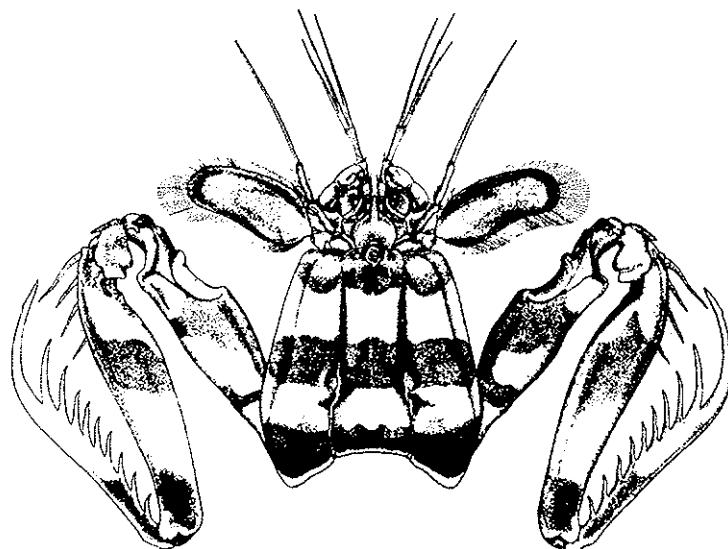


Figure 7 - *Lysiosquillina maculata* (Fabricius, 1793)
(Carapace, anterior appendages, and raptorial claws, from MANNING, 1995)

FAMILY NANNOSQUILLIDAE

Pullosquilla litoralis (Michel & Manning, 1971)

DISTRIBUTION. — Marquesas (Nuku Hiva); Society (Moorea).

REFERENCES. — *Austrosquilla litoralis* Michel & Manning, 1971: 237, fig. 1 (Nuku Hiva). — *Pullosquilla litoralis* - MANNING, 1978a: 19 (Moorea); 1995: 23 (List). — MÜLLER, 1994: 120 (Syn.).

Pullosquilla thomassini Manning, 1978

DISTRIBUTION. — Society (Moorea).

REFERENCES. — *Pullosquilla thomassini* Manning, 1978a: 20, fig. 9a-e (Moorea); 1995: 23 (List). — MÜLLER, 1994: 121 (Syn.).

FAMILY SQUILLIDAE

Alima alba (Bigelow, 1893)

DISTRIBUTION. — Society (Moorea).

REFERENCES. — *Alima alba* - SCHOTTE & MANNING, 1993: 577 (Syn.). — MANNING, 1995: 23 (List) - NEW MATERIAL - MANNING personal communication, in USNM collections, R. CALDWELL leg. 1980 (Moorea; in rubble, 1m).

Busquilla quadraticauda (Fukuda, 1911)

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Busquilla quadraticauda* - MÜLLER, 1994: 135 (Syn.). — MANNING, 1995: 23, 170 (List & key) - NEW MATERIAL - Coll. P. FROUIN, det. R.B. MANNING (Tahiti MNHN Sto 1961; a juvenile).

Miyakea nepa (Latreille, 1828)

DISTRIBUTION. — Society (Tahiti).

REFERENCES. — *Squilla nepa* - HELLER, 1865: 124 (Tahiti). — SEURAT, 1934: 61 (HELLER's reference). — *Oratosquilla nepa* - MÜLLER, 1994: 167 (Syn.). — *Miyakea nepa* - MANNING, 1995: 25, 213, 216, pl. 37, fig. 130a,b, 131d,e, 132-134 (List & key; new combination).

REMARK. — MANNING (Personal communication) has examined HELLER's material from Tahiti in the Vienna Museum. It is labeled as taken by the *Novara* and is correctly identified.

Oratosquilla columnia (Townsley, 1953)

DISTRIBUTION. — Marquesas (Eiao) - Sublittoral (55m).

REFERENCES. — *Oratosquilla columnia* - MÜLLER, 1994: 161 (Syn.). — MANNING, 1995: 25, 220 (List & key) - NEW MATERIAL - Coll. RV Marara, 19/01/91, det. R.B. MANNING (Eiao MNHN Sto 1963; 55m).

FAMILY PROTOSQUILLIDAE

Echinosquilla guerinii (White, 1861)

DISTRIBUTION. — Marquesas (Nuku Hiva).

REFERENCES. — *Gonodactylus guerinii* - GRAVIER, 1928: 337, fig. 1-3 (Nuku Hiva). — BIGELOW, 1931: 139 (Syn.). — *Echinosquilla guerinii* - MÜLLER, 1994: 61 (Syn.). — MANNING, 1995: 21 (List).

A D D I T I O N S

Additions or modifications to POUPIN (1996a) checklist of Astacidea, Palinuridea, Anomura and Brachyura are given here. They mostly come from revised or unstudied RV *Marara* collections. One Polychelidae and two Calappidae are identified from material recently collected in the Marquesas (RV *Alis*, August/September, 1997), and three crabs Cryptochiridae are reported from re-examination of MNHN collections (det. R.K. KROPP).

FAMILY ENOPLOMETOPIDAE

The *Enoplometopus* sp. nov. from the Marquesas (POUPIN *et al.*, 1990: 16, pl. 3c; POUPIN, 1996a: 8; 1996b: 12, pl. 5h) has been recognised in Taiwanese waters and submitted for description by CHAN & YU (1998).

FAMILY POLYCHELIDAE

Stereomastis phosphorus (Alcock, 1894), a common Indo-Pacific species, has been collected during the RV *Alis* Marquesas Expedition (Nuku Hiva, 405m).

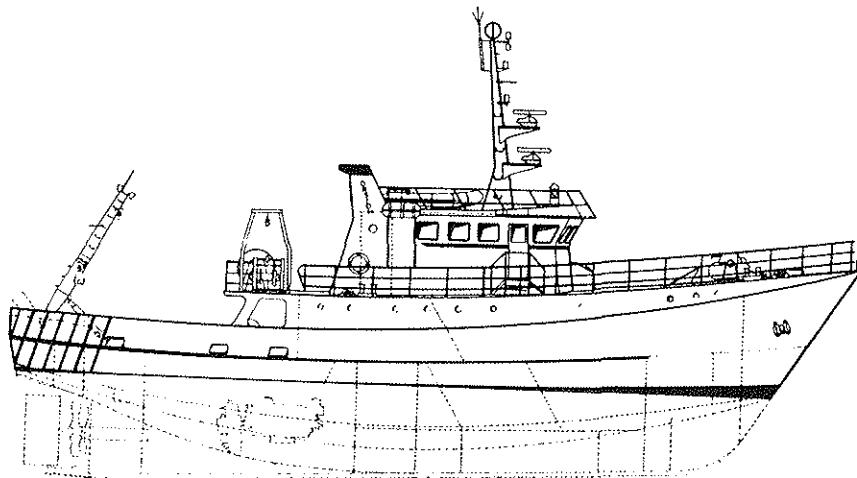


Figure 8 - RV *Alis*, 28.4 m long, lateral view

Crustacea have been recently collected by this vessel around the Marquesas, between 20-1000m (MUSORSTOM 9 Marquesas Expedition, August 18th - September 11th, 1997)

FAMILY PALINURIDEA

Palinuridae could now include, *Panulirus albiflagellum* Chan & Chu, 1996. CHAN & CHU (1996: 381) mentioned that *Panulirus longipes femoristriga* (A. Milne Edwards, 1868), reported in French Polynesia by GEORGE (1972), is "without cross-bands on the antennular flagella" and could be *Panulirus albiflagellum*.

FAMILY DIOGENIDAE

Six new records of *Calcinus* are given by POUPIN (1997): *Calcinus gouti* Poupin, 1997; *C. haigae* Wooster, 1984; *C. imperialis* Whitelegge, 1901; *C. isabellae* Poupin, 1997; *C. orchidae* Poupin, 1997; and *C. vachoni* Forest, 1958. Additionally, three more new *Calcinus* have been submitted for publication (POUPIN & McLAUGHLIN, in press).

A large specimen of *Dardanus sanguinocarpus* Degener, in Edmonson 1925 has been collected at Eiao, during the RV *Alis* Marquesas Expedition. Coloration of this specimen agrees very well with the illustration given in HOOVER (1997; det. P. McLAUGHLIN).

FAMILY PAGURIDAE

From unstudied RV *Marara* material, three species has been identified by P. McLAUGHLIN: *Catapagurus ensifer* Henderson, 1893 (Eiao; 54m), *Nematopagurus cf. spinulosensoris* McLaughlin & Brock, 1974 (illustrated in POUPIN, 1996b: 18, pl. 8f), and *Pylopaguroropsis lewinsohni* McLaughlin & Haig 1988 (Fangataufa, Moruroa; 110-190m). Moreover, *Solitariopagurus* sp. nov. (POUPIN, 1996a: 96) is now described under *Solitariopagurus triprobolus* Poupin & McLaughlin, 1996 (illustrated in POUPIN, 1996b: 18, pl. 8g).

FAMILY PARAPAGURIDAE

From RV *Marara* collections (Moruroa, 200m) *Oncopagurus oimos* sp. nov. is described by LEMAITRE (1998).

FAMILY GALATHEIDAE

Two galatheids, *Munida distiza* Macpherson, 1994 (Moruroa; 290m) and *Munida elegantissima* de Man, 1902 (Eiao, 55m), have been recognised during the last RV *Marara* campaigns (illustrated in POUPIN, 1996b, pl. 10b, c, pl. 10d).

FAMILY ALBUNEIDAE

From RV *Marara* collections *Albunea* sp. cf. *symnysta* (Linné, 1758) (Eiao, Fatu Hiva; 100m) is reported and illustrated in POUPIN (1996b: 26, pl. 12c).

FAMILY CALAPPIDAE

Calappa sp. nov. in POUPIN (1996a: 97; 1996b: 30, pl. 14d) is now described under *Calappa sebastieni* Galil (1997a). Therefore, from RV *Alis* Marquesas collections, two other Calappidae are tentatively attributed here to *Calappa* aff. *gallus* (Herbst, 1803) (Hiva Oa, 98-100m; st. DW1210) and *Mursia* aff. *spinimanus* Rathbun, 1906 (Hatutu, 163-245m; st. DW1287).

FAMILY PARTHENOPIDAE

Attention is drawn to *Parthenope contrarius* (Herbst, 1796) illustrated in POUPIN (1996b: 32, pl. 15d), and again collected during the RV *Alis* Marquesas Expedition. This material seems to be similar to *Lambrus* (*Rhinolambrus*) *longispinis* Miers, reported and illustrated from Hawaii by TINKER (1965: 88, pl. 32). Revision of that material is necessary for a correct determination.

FAMILY GONEPLACIDAE

The *Intesius* sp. nov. illustrated in POUPIN *et al.* (1990: 19 pl. 3a) and POUPIN (1996b: 34, pl. 16e) is proposed for publication by DAVIE (1998).

FAMILY XANTHIIDAE

Alainodaeus nuku Davie, 1997 has been described from RV *Marara* unstudied collections (Eiao, Nuku Hiva, Raevavae; 100-400m).

FAMILY TRAPEZIIDAE

MNHN material, collected by P. LABOUTE in the Tuamotu (Tikehau, 50/60m, in *Stylaster* coral) has been described under *Hexagonalia laboutei* Galil, 1997b. Other trapeziids collected during RV *Marara* campaigns or deposited in MNHN collections have been studied by CASTRO (1997a, b) with the following species added to the fauna: *Tetralia fulva* Serène, 1984; *Tetralia rubridactyla* Garth 1971; *Tetralia vanninii* Galil & Clark, 1988; *Trapezia globosa* Castro 1997b; and *Trapezia lutea* Castro, 1997a. Moreover, CASTRO has removed three trapeziids from the regional fauna: *Tetralia glaberrima* (Herbst, 1790) whose records are attributed either to *T. cinctipes* Paulson, *T. fulva* Serène, or *T. vanninii* Galil & Clark; *Trapezia formosa* Smith, 1869 re-identified to *Trapezia globosa* Castro 1997b; and *Trapezia septata* Dana, 1852, re-identified to *Trapezia areolata* Dana, 1852.

FAMILY CRYPTOCHIRIDAE

MHN material from Marutea South, attributed by NOBILI (1907) to *Cryptochirus coralliodytes* Heller, 1861, has been re-examined by KROPP (Personal communication). It is re-identified to *Lithoscapus paradoxus* A. Milne Edwards (1862) and *Sphenomaiata pyriforma* (Edmonson, 1933). These observations throw a doubt on the effective presence of *Cryptochirus coralliodytes* Heller, 1861 in French Polynesia (cf. records from Marokau by NOBILI, 1907, and Makatea by SENDLER, 1923). From RV *Marara* collections (Fatu Hiva, Marquesas) KROPP has also identified *Utinomiella dimorpha* (Henderson, 1906).

Table 1 - French Polynesian shrimps
number of species by Infra-Order and Family

INFRA-ORDER	FAMILY	SPECIES
Dendrobranchiata		2 5
	Aristaeidae	3
	Benthesicymidae	3
	Penaeidae	12
	Solenoceridae	3
	Sicyoniidae	1
	Luciferidae	2
	Sergestidae	1
Stenopodidea		2
	Stenopodiidae	2
Caridea		1 7 0
	Nematocarcinidae	2
	Atyidae	5
	Oplophoridae	10
	Stylopactylidae	1
	Rhynchocinetidae	3
	Gnathophyllidae	1
	Anchistioiidae	1
	Hymenoceridae	1
	Palaemonidae	46
	Alpheidae	57
	Hippolytidae	10
	Processidae	2
	Pandalidae	29
	Thalassocarididae	1
	Crangonidae	1
Thalassinidea		9
	Axiidae	3
	Callianassidae	4
	Callianideidae	1
	Thomassiniidae	1
Total		2 0 5

D I S C U S S I O N

From this compilation 205 shrimps and 26 Stomatopoda are reported from French Polynesia (Tab. 1 & 2). Within the shrimps Caridea alone are represented by 170 species (83 % of the shrimps) mainly Alpheidae (57 species), Palaemonidae (46 species), and Pandalidae (29 species).

Table 2 - French Polynesian Stomatopoda
number of species by Family

Stomatopoda	2 6
Indosquillidae	1
Gonodactylidae	8
Odontodactylidae	1
Pseudosquillidae	5
Takuidae	1
Coroniidae	1
Lysiosquillidae	2
Nannosquillidae	2
Squillidae	4
Protosquillidae	1

If the previous list of French Polynesian Astacidea, Palinuridea, Anomura, and Brachyura is considered (POUPIN, 1996a; with above additions), the total number of Decapoda and Stomatopoda comes to 757 species. The number of species by Infra-Order is summarized in Table 3 where it clearly appears that Brachyura alone represents almost 50 % of the species.

Table 3 - French Polynesian Decapoda and Stomatopoda
number of species by Infra-Order

INFRA-ORDER	NUMBER OF SPECIES	PERCENTAGE (%)
Dendrobranchiata	25	3,2
Stenopodea	2	0,3
Caridea	170	22,5
Thalassinidea	9	1,2
Astacidea	4	0,5
Palinuridea	19	2,5
Anomura	126	16,6
Brachyura	377	49,8
Stomatopoda	26	3,4
Total	758	100 %

Although drawn from more than a century of research, this report is only a first step in the elaboration of a comprehensive fauna of French Polynesia. Increased effort in collection is needed as well as careful revision of many genera.

Few groups have been relatively well studied. They include: Pandalidae (CROSNIER, 1986a,b, 1988b; CHAN & CROSNIER, 1991, 1997); Palinuridea and Coenobitidae (see POUPIN, 1996a), Diogenidae of the genus *Calcinus* (POUPIN, 1997; POUPIN & MCLAUGHLIN, in press); Parapaguridea (LEMAITRE, 1994, 1998), deep Galatheidae (MACPHERSON & DE SAINT LAURENT, 1991), Homolidae (GUINOT & RICHER DE FORGES, 1995); Geryonidae (MANNING, 1992, 1993b); Etisinae and Chlorodiinae (see POUPIN, 1996a); Trapeziidae (ODINETZ, 1983, 1984; CASTRO, 1997a, b; GALIL, 1997b); and Ocypodidae (*cf.* POUPIN, 1996a, 1997b).

A lot of groups need further researches. Freshwater Decapoda have been intensively collected (MARQUET, 1988, 1991, 1993; KEITH & VIGNEUX, 1997) but revision of the *Macrobrachium* is necessary to establish the status of one to three new species (*cf.* under *Macrobrachium latimanus*).

Alpheidae, representing the bulk of the shrimps, are almost exclusively known from the collections made in 1954 in the Society Islands by A.H BANNER (BANNER & BANNER, 1967). It is regrettable that all this material has been destroyed in the Hawaii laboratory fire of 1961 (see Caridea section), thus excluding any revision of the collection and limiting BANNER & BANNER (1967) to a documented list written from a draft manuscript and field notes, without illustrations or key.

Pontoniinae, although represented by scores of species, are certainly under-estimated. Without particular effort, field collections realised by the present author and determined by A.J. BRUCE have added 10 more species to this list, and several world-wide distributed species, such as *Gnathophylloides mineri* Schmitt, 1933 (Indo-Pacific and Atlantic), are still not recorded in French Polynesia although it is inconceivable that they are not occurring there.

The Infra-Order Thalassinidea has only 9 species. This low figure is undoubtedly the result of the burrowing mode of life of these species, and the resulting difficulty to collect them. Revision of the Indo-Pacific Upogebiidae (SAKAI, 1982) does not mention a single French Polynesian member. Axiidae are represented by only 3 species, whereas SAKAI & DE SAINT LAURENT (1989) report 9 species around Hawaii. Nevertheless, we know that the number of species is usually greater in French Polynesia than in Hawaii (*cf.* POUPIN, 1996a: 78).

A large RV *Marara* collection of Portunidae is still under study by MOOSA & CROSNIER and will include several news records (*Brusinia*, *Portunus*, and *Thalamita* spp.).

To conclude this brief overview of groups that need further research, Stomatopoda appear obviously under-represented. In New Caledonia, investigations in the lagoon conducted by means of a dredge (RICHER DE FORGES, 1991) have boosted the number of Stomatopoda from 10 to 69 (MOOSA, 1991). French Polynesian lagoons are usually inadequate for navigation. However, if dredges were operated by means of small boats, we could expect a significant increase of number of Stomatopoda, as well as for many Decapoda (Majidae, Portunidae, Xanthidae...).

A special mention must be given here to the recent MUSORSTOM 9 Marquesas Expedition, August 18th - Septembre 11th, 1997, RV *Alis*. During that cruise, dredge and beam-trawl were operated between 20-1000m, and a large collection of Crustacea was realised. This material, deposited at the MNHN, is still unstudied. However, from field notes taken by the present author, it appears that this collection will bring a minimum of 60 new records. These include bathypelagic shrimps (Aristeidae, Benthesicymidae, Solenoceridae, Sergestidae), Stenopodidea (at least three species), lobsters (Scyllaridea, Axiidae), Crangonidea, Diogenidae (a

new *Ciliopagurus*), Parapaguridea, Galatheidea (*Munida* spp.), Chirostylidae (first record of an *Uroptychus* sp.), Dromiidae, Dorripidae (first report of the family), Calappidae, Leucosiidae (at least five additional species), Majidae, Portunidae, Xanthidae, and Palicidae (first report of the family). This estimation is reported on figure 9 where evolution of number of species within the years is illustrated. Number of Polynesian Decapoda and Stomatopoda will thus exceed 800 species. Moreover, it appears that researches conducted after 1980 (CRIODE Moorea studies and RV *Marara* campaigns) have generated 322 new records, *i.e.* an increase of 74 % ! If this effort was continued in the future, it is to be expected that regional fauna will reach the level of a thousand species.

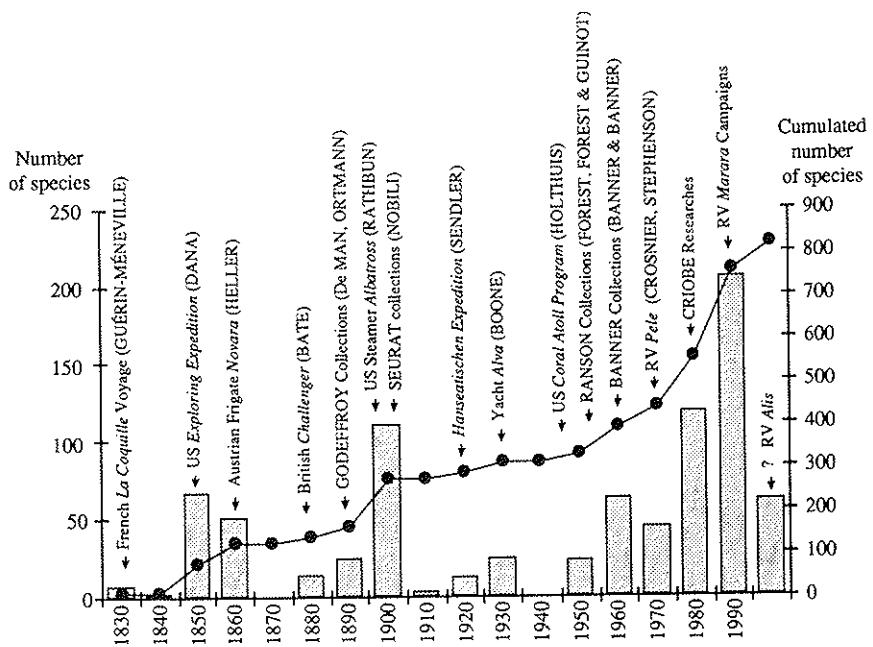


Figure 9 - Historical of collections of the French Polynesian Decapoda and Stomatopoda
Number of species, and cumulated number of species, recorded each 10 years, with indication of main episodes in collections

In the present state of knowledge, biogeographical consideration are rather hazardous for most of the groups. The main trend, as generally admitted, would be towards a decreasing biodiversity from Indonesia and Australia to French Polynesia. For example, BRUCE (1990: 13) mentioned 168 Australian pontoniids for only 36 in French Polynesia. However, this difference is probably amplified by imperfection of our data, and could be reduced when pontoniids are better studied in French Polynesia. In fact, for genera that have been well studied, biodiversity appears only slightly lower, or even greater, than in western Pacific. For example *Plesionika* count 21 species in French Polynesia vs 29 in western Pacific (CHACE, 1985) or 26 around Taiwan (CHAN, personal communication). Hermit crabs of the genus *Calcinus* were cited as an example of low diversity in French Polynesia by POUPIN (1996a), with only 10 species vs 23 in Indonesia. However, after more collections and revision of the genus (see above) the balance is now 18 vs 23 and biodiversity of Polynesian *Calcinus* appears even greater than in Australia (17 species in MORGAN, 1991). The same observation is verified after more collections and re-examination of the genus *Trapezia* by CASTRO (1997a, b) who records 14 Polynesian species vs only 11 in New Caledonia and CASTRO concludes (1997b: 131): "The

decrease in species diversity that is expected as one moves eastward from areas of high diversity in the western Pacific is not observed in trapeziids".

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<i>picta</i>	
<i>Hymenocera</i>	11
<i>Plesionika</i>	27; 28
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<i>platysoma, Gonodactylus</i>	34
<i>platyunguiculus</i>	22
<i>Plesionika</i>	
<i>carsini</i>	27; 29
<i>chacei</i>	28
<i>curvata</i>	27
<i>edwardsii</i>	27
<i>ensis</i>	29
<i>erythrocyclus</i>	27
<i>fennieri</i>	28
<i>flavicauda</i>	28
<i>laevis</i>	28
<i>macropoda</i>	28
<i>martia</i>	28
<i>narval</i>	28
<i>nesisi</i>	28
<i>ocellus</i>	29
<i>pacifica</i>	29
<i>payeni</i>	28
<i>picta</i>	27; 28
<i>poupini</i>	28
<i>protati</i>	29
<i>reflexa</i>	29
<i>rubrior</i>	29
<i>semilaevis</i>	29
<i>serratifrons</i>	28
<i>sindoi</i>	29
<i>spinidorsalis</i>	29
<i>spinipes</i>	29
<i>trispinosus</i>	28
<i>williamsi</i>	29
<i>Plesiopenaeus armatus</i>	3
<i>Pontonia hurii</i>	12
<i>Pontonides unciger</i>	17
<i>Portunus</i>	42
<i>poupini</i>	
<i>Periclimenes</i>	16
<i>Plesionika</i>	28
<i>probabilis, Alpheus</i>	18
<i>Processa moana</i>	26
<i>protati, Plesionika</i>	29
<i>Pseudosquilla</i>	
<i>ciliata</i>	35
<i>hieroglyphica</i>	35
<i>oculata</i>	35
<i>ornata</i>	35
<i>Pseudosquillisma oculata</i>	35
<i>Pullosquilla</i>	
<i>litoralis</i>	36
<i>thomassini</i>	36
<i>Pylopaguropsis lewinsohni</i>	38
<i>pyriforma, Sphenomaia</i>	40
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Q	
<i>quadraticauda, Busquilla</i>	37
<i>quadratophthalma, Onycocaris</i>	15
<i>randalli</i>	
<i>Gonodactylaceus</i>	33
<i>Gonodactylus</i>	33
<i>Raoulserenea</i>	
<i>hieroglyphica</i>	35
<i>n. sp.</i>	35
<i>ornata</i>	35
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<i>rapensis, Caridina</i>	8
<i>reflexa, Plesionika</i>	29
<i>reticulatus, Cinetorhynchus</i>	10
<i>reynaudii, Lucifer</i>	6
<i>Rhinolambrus longispinis</i>	39
<i>rhotitonastes, Athanas</i>	23
<i>rosamondae, Vanderbiltia</i>	8
<i>rosenbergii, Macrobrachium</i>	12
<i>rostratipes, Alpheus</i>	22
<i>rotumana, Palaemonella</i>	15

<i>rubridactyla</i> , <i>Tetralia</i>	39
<i>rubrior</i> , <i>Plesionika</i>	29

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<i>sibogae</i>	23
<i>tricristata</i>	24
<i>tricristatus</i>	23
<i>sanguinocarpus</i> , <i>Dardanus</i>	38
<i>Saron</i>	
<i>gibberosus</i>	25
<i>marmoratus</i>	25
<i>sebastieni</i> , <i>Calappa</i>	39
<i>semilaevis</i> , <i>Plesionika</i>	29
<i>septata</i> , <i>Trapezia</i>	39
<i>serenei</i> , <i>Paranchistus</i>	15
<i>Sergestes</i>	
<i>diapontius</i>	6
<i>fermerinkii</i>	6
<i>Sergia bigemmea</i>	6
<i>serrata</i> , <i>Atyoida</i>	8
<i>serratidigitus</i> , <i>Salmoneus</i>	23
<i>serratifrons</i> , <i>Plesionika</i>	28
<i>serratiostris</i> , <i>Caridina</i>	8
<i>seurati</i>	
<i>Alpheus</i>	18
<i>Amphipalaemon</i>	11
<i>sibogae</i>	
<i>Heterocarpus</i>	27
<i>Salmoneus</i>	23
<i>Sicyonia</i> sp.	5
<i>simplex</i> , <i>Alpheus</i>	19
<i>sindoi</i> , <i>Plesionika</i>	29
<i>sizou</i> , <i>Alpheus</i>	17
<i>smithi</i> , <i>Acanthephyra</i>	9
<i>Solitariopagurus triprobolus</i>	38
<i>soror</i> , <i>Periclimenes</i>	17
<i>spectabilis</i> , <i>Palaemon</i>	11
<i>Sphenomaia pyriforma</i>	40
<i>spinicauda</i> , <i>Janicella</i>	9
<i>spinidorsalis</i> , <i>Plesionika</i>	29
<i>spinifera</i> , <i>Periclimenella</i>	15
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<i>Harpilius</i>	16
<i>Periclimenes</i>	16
<i>spinigera</i> , <i>Harpiliopsis</i>	14
<i>spinimanus</i> , <i>Mursia</i>	39
<i>spinipes</i>	
<i>Atya</i>	8
<i>Atyopsis</i>	8
<i>Plesionika</i>	29
<i>spinosus</i> , <i>Oplophorus</i>	9
<i>spinulosensoris</i> , <i>Nematopagurus</i>	38
<i>Squilla nepa</i>	37
<i>Stegopontonia commensalis</i>	17
<i>Stenopus</i>	
<i>hispidus</i>	6
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<i>Stenopusculus</i> sp.	6
<i>Stereomastis phosphorus</i>	38

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<i>strenuus</i> , <i>Alpheus</i>	22
<i>streptodactylus</i> , <i>Synalpheus</i>	24
<i>stylirostris</i> , <i>Litopenaeus</i>	4
<i>Styloceratulus libratus</i>	10
<i>stylostrata</i> , <i>Acanthephyra</i>	9
<i>stylostratis</i> , <i>Acanthephyra</i>	9
<i>sublucanus</i> , <i>Alpheus</i>	22
<i>sulcata</i>	
<i>Lysiosquilla</i>	36
<i>Lysiosquillina</i>	36
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<i>superba</i> , <i>Coralliocaris</i>	14
<i>symnysta</i> , <i>Albunea</i>	39
<i>Sympagurus dosleini</i>	16
<i>Synalpheus</i>	
<i>brachyceros</i>	24
<i>charon</i>	24
<i>heroni</i>	24
<i>nilandensis</i>	24
<i>paraneomeris</i>	24
<i>streptodactylus</i>	24
<i>Systellaspis</i>	
<i>debilis</i>	10
<i>pellucida</i>	10

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<i>taanangi</i> , <i>Funchalia</i>	4
<i>tahitensis</i>	
<i>Atyoida</i>	8
<i>Penaeus</i>	5
<i>tahitoei</i> , <i>Coralliocaris</i>	13
<i>taiaro</i> , <i>Neocallichirus</i>	32
<i>tarawensis</i> , <i>Metapenaeopsis</i>	5
<i>tenuipes</i> , <i>Palaemonella</i>	15
<i>Tetralia</i>	
<i>cinctipes</i>	39
<i>fulva</i>	39
<i>glaberrima</i>	39
<i>rubridactyla</i>	39
<i>vannini</i>	39
<i>Thalamita</i>	42
<i>Thalassocaris crinita</i>	30
<i>thomassini</i> , <i>Pullosquilla</i>	36
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<i>moorea</i>	32
<i>sp.</i>	32
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<i>amboinensis</i>	26
<i>maldivensis</i>	26
<i>paschalisi</i>	26
<i>Thorina maldivensis</i>	26
<i>Trapezia</i>	
<i>areolata</i>	39
<i>formosa</i>	39
<i>globosa</i>	39
<i>lutea</i>	39
<i>septata</i>	39
<i>tricristata</i> , <i>Salmoneus</i>	24
<i>tricristatus</i> , <i>Salmoneus</i>	23
<i>tridacnae</i> , <i>Conchodytes</i>	13

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<i>Gnathophyllum</i>	10
<i>Parascytopleptus</i>	31
<i>Paraxius</i>	31
<i>tridentatus, Periclimenaeus</i>	15
<i>triplobolus, Solitariopagurus</i>	38
<i>trispinosus, Plesionika</i>	28
<i>tryphopus, Alpheus</i>	17
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<i>Paraxiopsis</i>	31
<i>Eutrichocheles</i>	31
<i>tumidus, Gonodactylus</i>	34
<i>typa, Callianidea</i>	32
<i>typus</i>	
<i>Lucifer</i>	6
<i>Oplophorus</i>	10

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<i>unciger, Pontonides</i>	17
<i>undulatipes, Nematocarcinus</i>	8
<i>Uroptychus</i>	43
<i>Utinomiella dimorpha</i>	40

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<i>vachoni, Calcinus</i>	38
<i>vagus, Palaemon</i>	11
<i>Vanderbiltia rosamondae</i>	8
<i>vannamei, Litopenaeus</i>	4
<i>vannini, Tetralia</i>	39
<i>velutina, Metapenaeopsis</i>	5
<i>ventricosa, Hippolyte</i>	24
<i>ventrosus, Alpheus</i>	22
<i>villosa, Funchalia</i>	4
<i>Vir sp. nov.</i>	17
<i>viridis</i> , <i>Coralliocaris</i>	14

W

<i>weberi, Caridina</i>	9
<i>williamsi, Plesionika</i>	29