

Carideans, stenopodideans and lobsters of the New Caledonian shallow waters

Tin-Yam CHAN and Masako MITSUHASHI
Institute of Marine Biology, National Taiwan Ocean University,
Keelung, TAIWAN, R.O.C.
tychan@mail.ntou.edu.tw

The first report dealt with a collection of carideans and lobsters from the New Caledonia was by Borradaile in 1899, which reported 18 species. Since then, there were scattered reports on the shrimps and lobsters of the New Caledonia. Only after 1990 there have been active works on the New Caledonian shrimps and lobsters. For the shallow marine species, Bruce (1991), Short and Marquet (1998), and Li and Bruce (in press) reported extensively on the palaemonids, Hayashi (1995/6) on *Leptochela* (family Pasiphaeidae), and Okuno (1997) on *Cinetorhynchus* (family Rhychocinetidae) of the New Caledonia. A general account of the lobsters of the New Caledonia was given by Richer de Forges & Laboute (1995/6) while Holthuis (2002) revised those genera previously assigned to *Scyllarus* based on an extensive collection from the New Caledonia.

Now 154 species of carideans, 1 stenopodidean species and 17 species of lobsters are known from the shallow waters (less than 100 m) of New Caledonia, with the family Palaemonidae being the most speciose (100 species). Considering the diversity of palaemonids in New Caledonia is comparable to those from the other parts of the Western Pacific such the Philippines and Japan (Chace & Bruce, 1993; Miyake, 1998) with a high diversity, the number of alpheid species (ie. 10) in New Caledonia should be severely underestimated as the ecology and diversity of alpheids in the shallow waters of the Western Pacific generally resemble those of palaemonids (see Chace & Bruce, 1993; Miyake, 1998). Furthermore, it is highly likely that some more species will be found in the families Hippolytidae, Crangonidae, Palaemonidae, Processidae, Rhychocinetidae and Stenopodidae from the shallow waters of New Caledonia. It may need to point out that some families, such as Enoplometopidae, Ogyrididae as well as some families of the superfamily Bresilioidea are still await to be discovered in the New Caledonian shallow waters.

At present, 23 species of carideans and 2 species of lobsters were originally described from the shallow waters of the New Caledonia (including the Loyalty Island) and are still valid. Nevertheless, only 13 species are still so far known from the Caledonia.

REFERENCES

- BORRADAILE L.A. 1899. On the Stomatopoda and Macrura brought by Dr. Willey from the South Seas. *In*: Willey, *Zoological results based on material from New Britain, New Guinea, Loyalty Islands, and elsewhere, collected during the years 1895, 1896 and 1897*, 4: 395-428.
- BRUCE A. J. 1991. Shallow-water palaemonoid shrimps from New Caledonia (Crustacea: Decapoda). *In*: B. Richer de Forges (ed.) *Le benthos des fonds meubles des lagons de Nouvelle-Calédonie, Etudes et Thèses vol. 1, ORSTOM, Paris*: 221-279.
- CHACE F. A., Jr. and A. J. BRUCE. 1993. The caridean shrimps (Crustacea: Decapoda) of the *Albatross* Philippine expedition, 1907-1910, Part 6: Superfamily Palaemonoidea. *Smithsonian Contributions to Zoology* 543: 1-152.
- HAYASHI K.I. 1995/6. Brief revision of the genus *Leptochela* with description of two new species (Crustacea, Decapoda, Pasiphaeidae). *In*: B. Richer de Forges (ed.) *Les fonds meubles des lagons de Nouvelle-Calédonie. Etudes et Thèses vol. 2, ORSTOM, Paris*: 83-99.
- HAYASHI K.I. 2006. Revision of the *Pasiphaea alcocki* species group (Crustacea, Decapoda, Pasiphaeidae) *In*: Richer de Forges B. & Justine, J.L. (eds) *Tropical Deep Sea Benthos vol. 24. Mémoires du Muséum national d'Histoire naturelle vol.193*: 193-241.
- HOLTHUIS L.B. 2002. The Indo-Pacific scyllarine lobsters (Crustacea, Decapoda, Scyllaridae). *Zoosystema* 14(3): 499-683.
- OKUNO J. 1997. Crustacea Decapoda: Review on the genus *Cinetorhynchus* Holthuis, 1995 from the Indo-West Pacific (Caridea: Rhychocinetidae). *In*: B. Richer de Forges (ed.) *Les fonds meubles des lagons de Nouvelle-Calédonie, Etudes et Thèses vol. 3, ORSTOM, Paris*: 31-58.

- LI X. & A. J. BRUCE (in press). Further Indo-West palaemonid shrimps (Crustacea: Decapoda: Palaemonoidea), principally from the New Caledonian region. *Journal of Natural History*.
- RICHER DE FORGES B. & LABOUE P. 1995/6. Langoustes, langoustines et cigales de mer de Nouvelle-Calédonie. In: B. Richer de Forges (ed.) *Les fonds meubles des lagons de Nouvelle-Calédonie, Etudes et Thèses vol. 2, ORSTOM, Paris*: 45-82.
- SHORT J. W. & G. MARQUET 1998. New records of freshwater Palaemonidae (Crustacea, Decapoda) from New Caledonia. *Zoosystema* **20**(2): 401-410.
- MIYAKE S. 1998. *Japanese Crustacean Decapods and Stomatopods in Color. I. Macrura, Anomura and Stomatopoda*. 3rd edition. Hoikusya, Osaka. 261 pp., 56 pls. (in Japanese).

List of taxa

CARIDEA Dana, 1852

ALPHEIDAE Rafinesque, 1815

- Alpheus gracilipes* Stimpson, 1860
Alpheus lottini Guérin, 1829
Alpheus gracilidigitus Miers, 1884
Alpheus diadema Dana, 1852
Alpheus obesomanus Dana, 1852
Alpheus frontalis H. Milne Edwards, 1837 (Borradaile used Say, 1832)
Potamalpheops pininsulae Bruce & Iliffe, 1992 (? holotype from New Caledonia and still endemic)
Synalpheus demani Borradaile, 1899
Synalpheus streptodactylus Coutière, 1905
Synalpheus stimpsonii (de Man, 1888)

ANCHISTIOIDIDAE Borradaile, 1915

- Anchistioides willeyi* (Borradaile, 1899)

CRANGONIDAE Haworth, 1825

- Aegaeon orientalis* Henderson, 1893
Pontocaris hilarula (de Man, 1918)
Philocheras pilosus (Kemp, 1916)

GNATHOPHYLLIDAE Dana, 1852

- Gnathophyllum americanum* Guérin-Méneville, 1855

HIPPOLYTIDAE Dana, 1852

- Gelastocaris paronae* (Nobili, 1905)
Gelastreutes crosnieri Bruce, 1990*
Hippolysmata grabhami Gordon, 1935 (Atlantic species!!)
Hippolysmata multiscissa Nobili, 1904
Hippolysmata vittata Stimpson, 1860
Hippolyte caradina Holthuis, 1947
Latreutes mucronatus (Stimpson, 1860)
Latreutes pygmoeus Nobili, 1904
Parhippolyte uveae Borradaile, 1899*
Lysmata zacaе Armstrong, 1941
Saron neglectus (de Man, 1902)
Thor paschalis (Heller, 1862)
Thor spinosus Boone, 1935
Tozeuma armatum Paulson, 1875

HYMENOCERIDAE Ortmann, 1890

- Hymenocera picta* Dana, 1852
Phyllognathia ceratophthalma (Balss, 1913)

OPLOPHORIDAE Dana, 1852

- Oplophorus gracilirostris* A. Milne-Edwards, 1881

PALAEEMONIDAE Rafinesque, 1815

- Allopontonia iaini* Bruce, 1972

Anchiopontonia hurii (Holthuis, 1981)
Anchistus australis Bruce, 1977
Anchistus custos (Forsskål, 1745)
Anchistus demani Kemp, 1922
Anchistus gravieri Kemp, 1922
Anchistus miersi (de Man, 1888)
Anchistus pectinis Kemp, 1925
Apopontonia dubia Bruce, 1982
Brachycarpus biunguiculatus (Lucas, 1846)
Brachycarpus crosnieri Bruce, 1998*
Conchodytes meleagrinae Peters, 1852
Conchodytes maculatus Bruce, 1989
Conchodytes tridacnae Peters, 1852
Coralliocaris graminea (Dana, 1852)
Coralliocaris superba (Dana, 1852)
Dactylonia monnioti (Bruce, 1990)*
Dactylonia ascidicola (Borradaile, 1898)
Dasycaris symbiotes Kemp, 1922
Dasycaris zanzibarica Bruce, 1973
Hamodactylus boschnai Holthuis, 1952
Hamodactylus nouneae Bruce, 1970*
Harpiliopsis depressa (Stimpson, 1860)
Harpiliopsis spinigera (Ortmann, 1890)
Isopontonia platycheles Bruce, 1982*
Jocaste japonica (Ortman, 1890)
Jocaste lucina (Nobili, 1901)
Kemponia agag (Kemp, 1922)
Kemponia anynone (de Man, 1902)
Kemponia anacanthus (Bruce, 1988)
Kemponia andamanensis (Kemp, 1922)
Kemponia darwiniensis (Bruce, 1987)
Kemponia elegans (Paulson, 1875)
Kemponia ensifrons (Dana, 1852)
Kemponia grandis (Stimpson, 1860)
Kemponia nilandensis (Borradaile, 1915)
Kemponia seychellensis (Borradaile, 1915)
Kemponia tenuipes (Borradaile, 1898)
Leander plumosus Bruce, 1994
Leander tenuicornis (Say, 1818)
Leandrites cyrtorhynchus Fujino & Miyake, 1969
Macrobrachium equidens (Dana, 1852)
Manipontonia psamathe (de Man, 1902)
Metapontonia fungiacola Bruce, 1967
Odontonia compacta (Bruce, 1996)*
Odontonia katoi (Kubo, 1940)
Odontonia sibogae (Bruce, 1972)
Odontonia simplicipes (Bruce, 1996)
Onycocaris longirostris Bruce, 1980*
Palaemon concinnus Dana, 1852
Palaemon debilis Dana, 1852
Palaemon pacificus (Stimpson, 1860)
Palaemonella dolichodactylus Bruce, 1991*
Palaemonella hachijo Okuno, 1999
Palaemonella pottsi (Borradaile, 1915)
Palaemonella pusilla Bruce, 1975

Palaemonella rotunana (Borradaile, 1898)
Palaemonella spinulata Yokoya, 1936
Palaemonetes atrinubes Bray, 1976
Paraclimenes franklini (Bruce, 1990)
Paranchistus nobilii Holthuis, 1952
Parapontonia nudirostris Bruce, 1968*
Periclimenaeus arabicus (Calman, 1939)
Periclimenaeus bidentatus Bruce, 1970
Periclimenaeus colodactylus Bruce, 1996*
Periclimenaeus jeancharcoti Bruce, 1991*
Periclimenaeus nobilii Bruce, 1974
Periclimenaeus rastrifer Bruce, 1980*
Periclimenaeus stylirostris Bruce, 1969
Periclimenella spinifera (de Man, 1902)
Periclimenes affinis (Zehntner, 1894)
Periclimenes amboinensis (de Man, 1888)
Periclimenes brevicarpalis (Schenkel, 1902)
Periclimenes ceratophthalmus Borradaile, 1915
Periclimenes commensalis Borradaile, 1915
Periclimenes hertwigi Balss, 1913
Periclimenes hirsutus Bruce, 1971
Periclimenes holthuisi Bruce, 1969
Periclimenes imperator Bruce, 1967
Periclimenes incertus Borradaile, 1915
Periclimenes ischiospinosus Bruce, 1991*
Periclimenes kempii Bruce, 1969
Periclimenes lanipes Kemp, 1922
Periclimenes lepidus Bruce, 1978
Periclimenes magnificus Bruce, 1979
Periclimenes novaecaledoniae Bruce, 1968*
Periclimenes obscurus Kemp, 1922
Periclimenes soror Nobili, 1904
Periclimenes tenuirostris Bruce, 1991*
Periclimenes venustus Bruce, 1990
Philarius imperialis (Kubo, 1940)
Philarius lifuensis (Borradaile, 1898)*
Pliopontonia furtiva Bruce, 1973
Pontoniopsis comanthi Borradaile, 1915
Stegopontonia commensalis Nobili, 1906
Thaumastocaris streptopus Kemp, 1922*
Typtonychus crassimanus Bruce, 1996*
Urocaridella antonbrunii (Bruce, 1967)
Urocaridella urocaridella (Holthuis, 1950)
Zenopontonia noverca (Kemp, 1922)*

PANDALIDAE Hayworth, 1825

Chlorocurtis jactans (Nobili, 1904)
Chlorotocella gracilis Balss, 1914
Plesionika narval (Fabricius, 1787)

PASIPHAEIDAE Dana, 1852

Leptochela chacei Hayashi, 1995 (or 1996)
Leptochela crosuieri Hayashi, 1995 (or 1996)*
Leptochela irrobusta Chace, 1976
Leptochela robusta Stimpson, 1860
Leptochela sydniensis Dakin & Colefax, 1940
Pasiphaea major Hayashi, 2006

PROCESSIDAE Ortmann, 1896

- Nikoides danae* Paulson, 1875
Nikoides gurneyi Hayashi, 1975
Nikoides steinii (Edmondson, 1935)
Clytomanningus coutieri (Nobili, 1904)
Hayashidonus japonica (de Haan, 1844)
Processa zostericola Hayashi, 1975

RHYNCHOCINETIDAE Ortmann, 1890

- Cinetorhynchus concolor* (Okuno, 1994)
Cinetorhynchus erythrostickus Okuno, 1997
Cinetorhynchus hendersoni (Kemp, 1925)
Cinetorhynchus hiatti (Holthuis & Hayashi, 1967)
Cinetorhynchus reticulatus Okuno, 1997*
Cinetorhynchus striatus (Nomura & Hayashi, 1992)
Rhynchocinetes brucei Okuno, 1994

STYLODACTYLIDAE Bate, 1888

- Neostylodactylus amarynthus* (de Man, 1902)

STENOPODIDEA Bate, 1888

STENOPODIDAE Claus, 1872

- Stenopus tenuirostris* de Man, 1888

PALINURA Latreille, 1803

PALINURIDAE Latreille, 1803

- Palinurellus wieneckii* (de Man, 1881)
Panulirus penicillatus (Olivier, 1791)
Panulirus versicolor (Latreille, 1804)
Panulirus ornatus (Fabricius, 1798)
Panulirus longipes bispinosus Borradile, 1899*
Panulirus homarus (Linnaeus, 1758)

SCYLLARIDAE Latreille, 1825

- Arctides regalis* Holthuis, 1963
Biarctus vitiensis (Dana, 1852)
Crenarctus bicuspidatus (de Man, 1905)
Eduarctus martensii (Pfeffer, 1881)
Eduarctus reticulatus Holthuis, 2002
Galearctus aurora (Holthuis, 1982)
Gibbularctus gibberosus (de Man, 1905)
Parribacus antarcticus (Lund, 1793)
Parribacus caledonicus Holthuis, 1960*
Petrarctus rugosus (H. Milne Edwards, 1837)
Scyllarides squammosus (H. Milne Edwards, 1837)

DOCUMENTS
SCIENTIFIQUES
et TECHNIQUES

II7

Volume spécial
Deuxième édition

COMPENDIUM
of marine species from
New Caledonia



Edited by
Claude E. PAYRI
Bertrand RICHER DE FORGES



Institut de recherche
pour le développement

CENTRE DE NOUMEA

**DOCUMENTS
SCIENTIFIQUES
et TECHNIQUES**



Institut de recherche
pour le développement

Publication éditée par :
Centre IRD de Nouméa
BP A5, 98848 Nouméa CEDEX
Nouvelle-Calédonie
Téléphone : (687) 26 10 00
Fax : (687) 26 43 26

L'IRD propose des programmes regroupés en 5 départements pluridisciplinaires :

- I DME Département milieux et environnement
- II DRV Département ressources vivantes
- III DSS Département sociétés et santé
- IV DEV Département expertise et valorisation
- V DSF Département du soutien et de la formation des communautés scientifiques du Sud

Modèle de référence bibliographique à cette revue :

Adjeroud M. *et al.*, 2000. Premiers résultats concernant le benthos et les poissons au cours des missions TYPATOLL.
Doc. Sci. Tech. II 3, 125 p.

ISSN 1297-9635. Seconde édition

Numéro II 7 - Octobre 2007

© IRD 2007

Distribué pour le Pacifique par le Centre de Nouméa.



Première de couverture : Récif corallien (Côte Ouest, NC) © IRD.C. Geoffray

Vignettes : voir les planches photographiques

Quatrième de couverture : *Platygyra sinensis* © IRD.C. Geoffray

Matériel de plongée sous-marine © IRD.C. Geoffray	L'Aldric, moyen naviguant de l'IRD © IRD/J.-M. Boré
Récoltes et photographies sous-marines en scaphandre autonome © IRD/J.-L. Menou	Traitement des récoltes en laboratoire © IRD/L. Mattio

CONCEPTION/MAQUETTE/MISE EN PAGE

MAQUETTE DE COUVERTURE

PLANCHES PHOTOGRAPHIQUES

TRAITEMENT DES PHOTOGRAPHIES

JEAN PIERRE MERMOUD/ISABELLE RITZENTHALER

CATHY GEOFFRAY/MINA VILAYLECK

CATHY GEOFFRAY/JEAN-LOUIS MENOÙ/GEORGES BARGIBANT

NOËL GALAUD

La traduction en anglais des textes d'introduction, des Ascidies et des Echinodermes a été assurée par EMMA ROCHELLE-NEWALL.
la préface par MINA VILAYLECK.

Ce document est publié par le Service ISC du Centre IRD de Nouméa et financé par le Ministère de la Recherche et de la Technologie.

ISSN 1297-9635. Seconde édition

Numéro **117** - Octobre 2007

© IRD 2007

**COMPENDIUM OF MARINE SPECIES FROM
NEW CALEDONIA**

SECOND EDITION

Edited by
CLAUDE E. PAYRI, BERTRAND RICHER DE FORGES
