

Paguroidea of New Caledonia and environs: Remarks on the preliminary checklist

Patsy A. McLAUGHLIN

Shannon Point Marine Center, Western Washington University
hermit@fidalgo.net

The shallow-water tropical paguroid communities of the Indo-Pacific typically are dominated by representatives of the family Diogenidae. However, while some 1217 dredgings were made in New Caledonian lagoons between 1984 and 1989 (Richer de Forges, 1991), the majority at depths of less than 100 meters, it is clear from the species listing that the hermit crab fauna from those collections have received little attention. The highly speciose genera *Clibanarius*, *Dardanus* and *Diogenes* are conspicuously absent. Further study of the collections of the Muséum national d'Histoire naturelle will undoubtedly result in appreciable increases in the representation of these genera. In contrast, the monographic study of *Ciliopagurus*, *Strigopagurus* and *Trizopagurus* by Forest (1995) and a similar study of species of *Paguristes* sensu lato in progress by Rahayu (in preparation) indicate that these genera are more accurately represented in the present checklist.

With the exception of species of the genus *Calcinus*, in all four families of paguroids, the preponderance of New Caledonian species documented to date has been collected during explorations of the bathyal fauna. Species representations in the families Pylochelidae and Parapaguridae are, for the most part, accurate indications of the biodiversity in the New Caledonia EEZ (Forest, 1987; Lemaitre, 1996, 1999, 2004a, b); however, that is not the case for the Paguridae. The monographic generic reviews of McLaughlin & Forest (1997), McLaughlin (2000, 2004a, b), Asakura (2005), and McLaughlin & Rahayu (2006) account for all but three of the listed species. Considerable additional study is necessary before biodiversity and potential endemism can be discussed.

REFERENCES

- ASAKURA A., 2005. A review of the genus *Micropagurus* (Crustacea Decapoda Anomura Paguridae). *Zootaxa*, **1090**: 1-34.
- FOREST J., 1987. Les Pylochelidae ou "Pagures symétriques" (Crustacea Coenobitoidea). In: Résultats des campagnes MUSORSTOM. *Mémoires du Muséum National d'Histoire Naturelle, Série A, Zoologie*, **137**: 1-254, Figs 1-82.
- FOREST J., 1995. Crustacea Decapoda Anomura: Révision du genre *Trizopagurus* Forest, 1952 (Diogenidae), avec l'établissement de deux genres nouveaux. In: A. Crosnier (ed.), Résultats des Campagnes MUSORSTOM, vol. 13. *Mémoires du Muséum National d'Histoire Naturelle*, **163**: 9-149.
- LEMAITRE R., 1996. Hermit crabs of the family Parapaguridae (Crustacea: Decapoda: Anomura) from Australia: Species of *Strobopagurus* Lemaitre, 1989. *Sympagurus* Smith, 1883 and two new genera. *Records of the Australian Museum*, **48**: 163-221.
- LEMAITRE R., 1999. Crustacea Decapoda: A review of the species of the genus *Parapagurus* Smith, 1879 (Parapaguridae) from the Pacific and Indian Oceans. In: A. Crosnier (ed.), Résultats des Campagnes MUSORSTOM. Volume 20. *Mémoires du Muséum national d'Histoire naturelle*, **180**: 303-378.
- LEMAITRE R., 2004a. A review of *Strobopagurus* Lemaitre, 1989 (Crustacea: Decapoda: Paguroidea: Parapaguridae), with description of a new species. *Scientia Marina*, **68**(3): 355-372.
- LEMAITRE R., 2004b. Crustacea Decapoda: A worldwide review of the hermit crab species of the genus *Sympagurus* Smith, 1883. In: B. Marshall and B. Richer de Forges (eds.), *Tropical Deep-Sea Benthos*, 23. *Mémoires du Muséum national d'Histoire naturelle*, **191**: 85-149.
- McLAUGHLIN P.A., 2000. CRUSTACEA: DECAPODA: Species of *Porcellanopagurus* Filhol and *Solitariopagurus* Türkay (Paguridae), from the New Caledonia area, Vanuatu, and the Marquesas: new records, new species. In: A. Crosnier (ed.), Résultats des Campagnes MUSORSTOM, 21. *Mémoires du Muséum national d'Histoire naturelle*, **184**: 389-414.
- McLAUGHLIN P.A., 2004a. A reappraisal of the hermit crab genera *Catapagurus* A. Milne-Edwards and *Hemipagurus* Smith (Decapoda: Anomura: Paguroidea: Paguridae), with the description of a new species. *Zootaxa*, **433**: 1-16.
- McLAUGHLIN P.A., 2004b. CRUSTACEA DECAPODA: A review of the hermit crab genus *Nematopagurus* A. Milne-Edwards & Bouvier, 1892 and the descriptions of five new species. In: B. Marshall & B. Richer de Forges (eds.), *Tropical Deep-Sea Benthos*, vol. 23. *Mémoires du Muséum national d'Histoire naturelle*, **191**: 151-229.

- McLAUGHLIN P.A., 2006. Two new Paguridae (Crustacea, Decapoda) from New Caledonia and environs. *In*: B. Richer de Forges & J.L. Justine (eds.), Tropical Deep-Sea Benthos, vol. 24. *Mémoires du Muséum national d'Histoire naturelle*, **193**: 335-347.
- McLAUGHLIN P.A. & J. FOREST, 1997. Crustacea Decapoda: *Diacanthurus* gen. nov., a new genus of hermit crabs (Paguridae) with both Recent and fossil representation, and the descriptions of two new species. *In*: A. Crosnier (ed.), Résultats des Campagnes MUSORSTOM, 18. *Mémoires du Muséum national d'Histoire naturelle*, **176**: 236-259.
- McLAUGHLIN P.A. & D.L. RAHAYU, 2006. A new genus with two new species of hermit crabs (Crustacea, Decapoda, Paguroidea, Paguridae) from an unique habitat. *Zootaxa*, **1116**: 55-68.
- RICHER de FORGES B., 1991. Les fonds meubles des lagons de Nouvelle-Calédonie: généralités et échantillonnages par dragages, *in*: B. Richer de Forges (ed.), Le Benthos des fonds meubles des lagons de Nouvelle-Calédonie. 1. *Etudes et Thèses, ORSTOM, Paris* : 7-148.

List of the taxa of Paguroidea from New Caledonia and environs.

(From published reports and works in progress. The localities cited in parentheses following each species are the type localities)

PYLOCHELIDAE Bate, 1888

- Trizoches caledonicus* Forest, 1987 (New Caledonia)
Trizoches pulcher Forest, 1987 (New Caledonia)
Trizoches spinosus bathamae Forest & de Saint Laurent, 1987 (New Zealand)

DIOGENIDAE Ortmann, 1892

- Calcinus anani* Poupin & McLaughlin, 1998 (Tuamotu, French Polynesia)
Calcinus argus Wooster, 1984 (Guam)
Calcinus gaimardii (H. Milne Edwards, 1848) (Indonesia)
Calcinus imperialis Whitelegge, 1901 (Tasman Sea, Australia)
Calcinus inconspicuus Morgan, 1991 (Tasman Sea, Australia)
Calcinus latens Randall, 1840 (Hawaiian Islands)
Calcinus lineapropodus Morgan & Forest, 1991 [Cocos (Keeling) Islands]
Calcinus minutus Buitendijk, 1937 (Indonesia)
Calcinus morgani Rahayu & Forest, 1999 (Indonesia)
Calcinus pulcher Forest, 1958 (Vietnam)
Calcinus spicatus Forest, 1951 (Gambier Islands, French Polynesia)
Ciliopagurus alcocki Forest, 1995 (New Caledonia)
Ciliopagurus kremphi (Forest, 1952) (Vietnam)
Ciliopagurus pacificus Forest, 1995 (Tuamotu Archipelago)
Ciliopagurus strigatus (Herbst, 1804) ("East Indies")
Paguristes aciculus Grant, 1905 (New South Wales, Australia)
Paguristes alcocki McLaughlin & Rahayu, 2005 (Australia)
Paguristes palythophilus Ortmann, 1892 (Japan)
Paguristes puniceus Henderson, 1896 (Bay of Bengal, India)
Paguristes ortmanni Miyake, 1978 (Japan)
Paguristes versus Komai, 2001 (Japan)
Pseudopaguristes laurentae (Morgan & Forest, 1991) (Western Australia)
Pseudopaguristes monoporus (Morgan, 1987) (Northern Territory, Australia)
Stratiotes ngochoae Rahayu, 2005 (Indonesia)
Stratiotes micheleae Rahayu, 2005 (Indonesia)
Strigopagurus boreonotus Forest, 1995 (New Caledonia)

PAGURIDAE Latreille, 1802

- Alainopaguroides megalophthalmus* McLaughlin, 2006 (New Caledonia)
Alainopagurus crosnieri Lemaitre & McLaughlin, 1995 (New Caledonia)
Anapagurus bonnieri Nobili, 1905 (Persian Gulf)
Catapagurus dauida McLaughlin, 2002 (Andaman Sea)
Catapagurus franklinae McLaughlin, 2004 (Queensland, Australia)
Catapagurus imperialis (Asakura, 2001) (Sagami Bay, Japan)
Catapagurus tanimbarensis McLaughlin, 1997 (Tanimbar Islands, Indonesia)

Diacanthurus ephyra McLaughlin & Forest, 1997 (New Caledonia)
Diacanthurus richeri McLaughlin & Forest, 1997 (New Caledonia)
Icelopagurus crosnieri McLaughlin, 1997 (Tanimbar Islands, Indonesia)
Icelopagurus undulatus McLaughlin, 2006 (New Caledonia)
Michelopagurus limatulus (Henderson, 1888) (south of Philippine Islands)
Micropagurus polynesiensis (Nobili, 1906) (French Polynesia)
Micropagurus spinimanus Asakura, 2005 (New Caledonia)
Nematopagurus alcocki McLaughlin, 1997 (Kai Islands, Indonesia)
Nematopagurus australis (Henderson, 1888) (Arafura Sea)
Nematopagurus diadema Lewinsohn, 1969 (Gulf of Aqaba, Red Sea)
Nematopagurus gardineri Alcock, 1905 (Maldive Islands)
Nematopagurus indicus Alcock, 1905 (Travancore coast, Arabian Sea)
Nematopagurus kosiensis McLaughlin, 1998 (east coast of South Africa)
Nematopagurus lepidochirus (Doflein, 1902) (Sagami Bay, Japan)
Nematopagurus lewinsohni Türkay, 1986 (Saudi Arabia)
Nematopagurus meiringae McLaughlin, 1998 (eastern South Africa)
Nematopagurus ricei McLaughlin, 2004 (New Caledonia)
Nematopagurus richeri McLaughlin, 2004 (New Caledonia)
Nematopagurus scutelliformis McLaughlin (Kai Islands, Indonesia)
Nematopagurus spinulosensoris McLaughlin & Brock, 1974 (Hawaii)
Nematopagurus spongioparticeps McLaughlin, 2004 (New Caledonia)
Nematopagurus vallatus (Melin, 1939) [Ogasawara (Bonin) Islands, Japan]
Pagurojacquesia polymorpha (de Saint Laurent & McLaughlin, 1999) (Vanuatu)
Porcellanopagurus chiltoni de Saint Laurent & McLaughlin, 2000 (Kermadec Islands)
Porcellanopagurus filholi de Saint Laurent & McLaughlin, 2000 (New Zealand)
Porcellanopagurus haptodactylus McLaughlin, 2000 (New Caledonia)
Porcellanopagurus tridentatus Whitelegge, 1900 (New South Wales, Australia)
Propagurus haigae (McLaughlin, 1997) (Kai Islands, Indonesia)
Pteropagurus inernis McLaughlin & Rahayu, 2006 (New Caledonia)
Pteropagurus spina McLaughlin & Rahayu, 2006 (New Caledonia)
Solitariopagurus triprobolus Poupin & McLaughlin, 1996 (French Polynesia)
Solitariopagurus trullirostris McLaughlin, 2000 (New Caledonia)
Solitariopagurus tuerkayi McLaughlin, 1997 (Kai Islands, Indonesia)
Tomopaguroides valdiviae (Balss, 1911) (off Somalia)
Xylopagurus caledonicus Forest, 1997 (New Caledonia)

PARAPAGURIDIAE Smith, 1882

Parapagurus latimanus Henderson, 1888 (New Zealand)
Parapagurus richeri Lemaitre, 1999 (New Caledonia)
Parapagurus furici Lemaitre, 1999 (New Caledonia)
Strobopagurus breviacus Lemaitre 2004 (New Caledonia)
Strobopagurus gracilipes (A. Milne-Edwards, 1891) (Azores, eastern Atlantic)
Strobopagurus sibogae (de Saint Laurent, 1972) (Indonesia)
Sympagurus acinops Lemaitre, 1989 (Bahamas, western Atlantic)
Sympagurus affinis (Henderson, 1888) (Meangis Islands, north of New Guinea)
Sympagurus aurantium Lemaitre, 2004 (New Caledonia)
Sympagurus brevipes (de Saint Laurent, 1972) (Indonesia)
Sympagurus dofleini (Balss, 1912) (Sagami Bay, Japan)
Sympagurus burkenroadi Thompson, 1943 (Zanzibar)
Sympagurus planinanus (de Saint Laurent, 1972) (Flores Sea, Indonesia)
Sympagurus poupini Lemaitre, 1994 (Tuamotu Archipelago)
Sympagurus soela Lemaitre, 1996 (Queensland, Australia)
Sympagurus symmetricus Lemaitre, 2004 (New Caledonia)
Sympagurus trispinosus (Balss, 1911) (Zanzibar)
Sympagurus villosus Lemaitre, 1996 (Queensland, Australia)
Tylaspis anomala Henderson, 1888 (South Pacific, "Challenger" station 285)

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
