

## Shallow water Stomatopoda of New Caledonia (0–100 m)

Shane T. AHYONG

Marine Biodiversity and Biosecurity, NIWA, Private Bag 14901, Klibirnie, Wellington

NEW ZEALAND

s.ahyong@niwa.co.nz

The most recent summary of the Stomatopoda of New Caledonia and adjacent localities recorded 69 species in 31 genera and 10 families of which 60 occurred at depths of 100 m or less. Richer de Forges & Moosa (1992) analysed the distribution patterns of the stomatopods from the lagoons of New Caledonia and Chesterfield Atoll based on the results of Moosa (1991). The present revised list of New Caledonian Stomatopoda is derived from recent revisionary studies (Ahyong, 2001) and reexamination of the stomatopod collections in the Muséum national d'Histoire naturelle, Paris (Ahyong, unpublished). Sixty-two species of stomatopod distributed in 35 genera and 9 families occur in the 0–100 m depth range in the New Caledonian EEZ.

The New Caledonian stomatopod fauna can be broadly divided into coral reef and lagoon components. The coral reef component largely corresponds to the cavity dwelling gonodactylids of the families Gonodactylidae, Odontodactylidae, Protosquillidae, Pseudosquillidae and Takuidae. The gonodactylids are the most speciose and abundant stomatopods on hard substrates and all, except for the pseudosquillids, are 'smashers'. The lagoonal component corresponds to the soft-bottom burrowing families, all of which are 'spearers', namely Eurysquillidae, Lysiosquillidae, Nannosquillidae and Squillidae. The division between reef and lagoon components, however, is not a strict one. Many gonodactylids also occur in the lagoon amongst rubble and coral outcrops, and many burrowers, mainly lysiosquillids and nannosquillids also live in the reef flat sediments. The minute squillid, *Parvisquilla multituberculata*, lives only in deep coral cavities, and odontodactylids occupy both coral reef crevices and burrows constructed on the lagoon floor.

Fifty New Caledonian species range widely in the Indo-West Pacific, extending beyond Oceania. Seven stomatopod species are shared only with Australia. At present, only two shallow water species have not been recorded beyond New Caledonia: *Pontiosquilla caledonica* and *Neoanchisquilla semblatae*. Whether these prove to be endemic awaits further study of regional faunas. Additional described and undescribed genera and species that are apparently endemic to New Caledonia are known, but these live at depths exceeding 100 m (Ahyong, unpublished). Thus, taking present data at face value, the shallow water stomatopods of New Caledonia appear to form part of a more widespread western Pacific fauna, with low levels of endemism. Of course, sampling that specifically targets stomatopods remains to be conducted in the region, particularly in deep coral crevices and deep burrows in soft substrates. Study of these habitats will almost certainly reveal a rich undescribed fauna that will probably also include numerous endemic species.

The new records of *Gonodactylus micronesicus*, *G. spinosus*, *Gonodactylaceus ternatensis* and *Odontodactylus hansenii* from New Caledonia represent incremental range extensions of species previously recorded from Australia or other western Pacific localities. The record of *Gonodactyloideus tricarinatus*, however, previously known only from French Polynesia, represents a significant range extension (Ahyong, 2002).

## REFERENCES

- AHYONG S.T. 2001. Revision of the Australian Stomatopod Crustacea. *Records of the Australian Museum, Supplement* 26: 1–326.
- AHYONG S.T. 2002. Stomatopoda (Crustacea) from the Marquesas Islands: results of MUSORSTOM 9. *Zoosystema* 24(2): 347–372.
- MOOSA M.K. 1991. The Stomatopoda of New Caledonia and Chesterfield Islands (in) RICHER DE FORGES (ed.) *Le benthos des fonds meubles des lagons de Nouvelle-Calédonie* 1: 149–219. Editions de l'ORSTOM, Paris.
- RICHER DE FORGES B. & M.K. MOOSA. 1992. Distribution of stomatopods (Crustacea) in the lagoons of New Caledonia and Chesterfield Atoll. *Raffles Bulletin of Zoology* 40(2): 149–162.

## ***Checklist of the shallow water Stomatopoda of New Caledonia (0–100 m)***

New records are marked \*, widespread Indo-West Pacific species are marked +, species shared only with Australia %, and species presently known only from New Caledonia @.

### **STOMATOPODA Latreille, 1817**

#### **EURYSQUILLIDAE Manning, 1977**

*Coronidopsis bicuspis* Hansen, 1926 +

*Manningia australiensis* Manning, 1970 +

#### **GONODACTYLIDAE Giesbrecht, 1910**

*Gonodactylaceus falcatus* (Forskäl, 1775) +

*Gonodactylaceus randalli* (Manning, 1978) +

*Gonodactylaceus ternatensis* (Manning, 1978) +

*Gonodactylellus affinis* (de Man, 1902) +\*

*Gonodactylellus erdmanni* Ah Yong, 2001 +

*Gonodactylellus espinosus* (Borradaile, 1898) +\*

*Gonodactylellus micronesicus* (Manning, 1971) +\*

*Gonodactylellus rubriguttatus* Erdmann & Manning, 1978 +

*Gonodactylellus viridis* (Serène, 1954) +

*Gonodactylus chiragra* (Fabricius, 1781) +

*Gonodactylus platysoma* Wood-Mason, 1895 +

*Gonodactylus smithii* Pocock, 1893 +

*Gonodactyloideus tricarinatus* Ah Yong, 2002 +\*

#### **LYSIOSQUILLIDAE Giesbrecht, 1910**

*Lysiosquilla maculata* (Fabricius, 1793) +

#### **NANNOSQUILLIDAE Manning, 1980**

*Acanthosquilla derijardi* Manning, 1969 +

*Acanthosquilla multifasciata* (Wood-Mason, 1895) +

*Pullosquilla pardus* Moosa, 1991 %

#### **ODONTODACTYLIDAE Bigelow, 1893**

*Odontodactylus cultrifer* (White, 1850) +

*Odontodactylus hansenii* (Pocock, 1893) +\*

*Odontodactylus latirostris* Borradaile, 1907 +

*Odontodactylus scyllarus* (Linné, 1758) +

#### **PROTOSQUILLIDAE Brooks, 1886**

*Chorisquilla hystrix* (Nobili, 1899) +

*Chorisquilla pococki* Manning, 1975 +

*Chorisquilla tuberculata* (Borradaile, 1907) +

*Chorisquilla tweediei* (Serène, 1950) %

*Echinosquilla guerinii* (White, 1861) +

*Haptosquilla glyptocercus* (Wood-Mason, 1875) +

*Haptosquilla trispinosa* (Dana, 1852) %

#### **PSEUDOSQUILLIDAE Manning, 1977**

*Pseudosquilla ciliata* (Fabricius, 1787) +

*Pseudosquillana richeri* (Moosa, 1991) +

*Raoulserenea hieroglyphica* (Manning, 1972) +

*Raoulserenea komaii* (Moosa, 1991) +

#### **SQUILLIDAE Latreille, 1803**

*Alimopsoides tuberculatus* Moosa, 1991 %

*Anchisquilla chani* Ah Yong, 2001 %

*Areosquilla indica* (Hansen, 1926) +

*Areosquilla interstincta* Manning, 1976 +

*Areosquilla* sp.nov. \*

*Busquilla quadraticauda* (Fukuda, 1911) +

*Carinosquilla australiensis* Ah Yong, 2001 %

*Carinosquilla redacta* Ahyong, 2001 %  
*Clorida denticauda* (Chhappgar & Sane, 1967) +  
*Clorida gaillardi* Moosa, 1985 +  
*Cloridina chlorida* Brooks, 1886 +  
*Cloridina ichneumon* (Fabricius, 1798) +  
*Cloridina inflata* (Moosa, 1991) %  
*Cloridina moluccensis* Moosa, 1973 +  
*Cloridina malaccensis* (Manning, 1968) +  
*Cloridina verrucosa* (Hansen, 1926) +  
*Fallosquilla fallax* (Bouvier, 1914) +  
*Harpiosquilla japonica* Manning, 1969 +  
*Leptosquilla schmeltzii* (A. Milne-Edwards, 1873) +  
*Levisquilla jurichi* (Makarov, 1979) +  
*Miyakea nepa* (Latreille, 1828) +  
*Neoanchisquilla semblatae* Moosa, 1991 @  
*Oratosquilla fabricii* (Holthuis, 1941) +  
*Oratosquillina gravieri* (Manning, 1978) +  
*Paralimopsis carinata* Moosa, 1991 +  
*Pontiosquilla caledonica* Moosa, 1991 @  
*Quollastria subtilis* Manning, 1978 +  
**TAKUIDAE Manning, 1995**  
*Taku spinosocarinatus* (Fukuda, 1909) +

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 NOUMÉA

**DOCUMENTS  
SCIENTIFIQUES  
et TECHNIQUES**

---



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

---