

## Echinodermata of New Caledonia

Nadia AMEZIANE

Département Milieux et Peuplements Aquatiques, Muséum national d'Histoire naturelle

CP51, 57, rue Cuvier, F 75005, Paris

ameziane@mnhn.fr

Prior to the research efforts conducted by the IRD (Institut de Recherche pour le Développement) and the MNHN (Muséum national d'Histoire naturelle de Paris) during the project MUSORSTOM, very few studies had examined the Echinodermata of New Caledonia (Cherbonnier 1980; Conand, 1979; Intes & Menou, 1979). However, the 1980's saw an increase in the research effort on littoral echinoderms of New Caledonia (Cherbonnier & Féral, 1984a et b; Guille & Vadon, 1985; Jangoux, 1984), cumulating in the Guide to the Echinoderms (Guille *et al.*, 1986), which is to date the most complete guide to this fauna in the region. With the increase in fieldwork, researchers in systematics became interested in the deep water echinoderms of New Caledonia (Bourseau *et al.*, 1991; Gebruk, 1997; Mah, 1999; O'Hara & Stöhr, 2006; Smirnov, 1997, 1999; Vadon, 1991).

The littoral New Caledonian fauna is highly diverse and comprises of: 257 species, in 135 genera, from 61 families, divided into 18 orders that are spread across 5 classes. 11% of the species are from the Crinoidea, 22% the Asteroidea, 26% the Ophiuroidea, 18% the Echinoidea and 23% in the Holothuroidea. This is in comparison to 378 species observed in a study from China and 300 from the Philippines. Of the species observed in New Caledonian waters, 41% have a large distribution area and are found in the Pacific Ocean covering a region from Japan to Hawaii as well as in the Indian Ocean. 54% of them are found in the Western Indo-Pacific province and 5% of them have been observed in Australia, notably on the Great Barrier Reef. Only 4% of the echinoderm species observed are endemic to New Caledonia. Finally, the remaining 1% are cosmopolitan and are observed all over, including the Mediterranean and the Caribbean. This diversity probably represents only a small percentage of the species living in this region as several littoral echinoderms widely distributed in the west Indo-Pacific, from the Australian coast to the Indian Ocean, are not yet recorded from New Caledonia.

Indeed, fieldwork has produced samples that are rich, abundant and well conserved, but sadly, still very little studied. The focus to date has essentially been on the littoral and deep water Ophiuroidea, the littoral Holothuroidea and the stalked Crinoidea. Moreover, with each new investigation new species are described as highlighted in several recent publications (Goppard, 2006 ; Messing, 2003; O'Hara & Stöhr, 2006). The number of echinoderms found in New Caledonia should increase once all of the material collected will have been studied. The present underestimated diversity is the result of the low number of specialists working in the field combined with the relative inaccessibility of the study sites. The Echinodermata are inaccessible for the following reasons:

Cryptic species;

Species living off substrates that are difficult to access (eg. stalked Crinoidea from the Holopodia and Eudesicrinidia are small and colonise the escarpments of submarine mountains);

Cavity dwelling species;

Nocturnal species (essentially littoral species);

Species with a small size;

The low rates of endemnicity of the littoral fauna are more related to the lack of focussed study on the already collected samples rather than the lack of species. Only the common species have been inventoried while the rest is still remains to be analysed. The deep water fauna of New Caledonia possesses a high degree of endemnicity. The fauna also presents several paedomorphic forms, such as the ophiurians *Ophiphycis guillei* and *Ophiopyrgus trispinosus*. This deep water fauna is composed of

many archaic taxons such as *Gymnocrinus richeri* (a stalked crinoid) that was discovered for the first time in New Caledonia in 1987. This gender belongs to the family Hemicrinidae, thought to have been extinct since the Cretacean. Similarly, *Prosiocrinus ruberrimus* is the only representative of the Jurassic family the Millericrinidae and *Proeudesicrinus lifouensis*, an endemic genre and species, is the only representative of the liasic family of the Eudesicrinidae.

## REFERENCES

- BOURSEAU J.P., AMEZIANE-COMINARDI N., AVOCAT R. & ROUX M. 1991. Echinodermata : Les Crinoïdes pédonculés de Nouvelle-Calédonie. In : A. Crosnier (ed.), Résultats des Campagnes Musorstom, volume 8. *Mémoires du Muséum national d'Histoire naturelle*, (A), **151**: 229-333.
- CHERBONNIER G. 1980. Holothuries de Nouvelle-Calédonie. *Bulletin Muséum national d'Histoire naturelle*, Paris (4 sér.), **2 A(3)** : 615-667.
- CHERBONNIER G. & FÉRAL J.P. 1984a. Les Holothuries de Nouvelle-Calédonie, deuxième contribution (Première partie: Synallactidae et Holothuridae). *Bulletin Muséum national d'Histoire naturelle*, Paris (4 sér.), section A, **6(3)** : 659-700.
- CHERBONNIER G. & FÉRAL J.P. 1984b. Les Holothuries de Nouvelle-Calédonie, deuxième contribution (Deuxième partie: Stichopodidae, Cucumariidae, Phyllophoridae et Synaptidae). *Bulletin Muséum national d'Histoire naturelle*, Paris (4 sér.), section A, **6(4)** : 827-851.
- CONAND C. 1979. Bêche de mer in New Caledonia: weight loss and shrinkage in three species of holothurians. *Fisheries Newsletters of South Pacific Commission*, **19** : 14-18.
- GEBRUK A.V. 1997. New species of the deep-sea holothurian family Elpidiidae Théel, 1879. *Zoosystema* **19(2-3)** : 211-217.
- GOPPARD S.E. 2006. A new species of *Coelopleurus* (Echinodermata: Echinoidea: Arbaciidae) from New Caledonia. *Zootaxa* **1281** : 1-19.
- GUILLE A., LABOUTE P. & MENOUE J.L. 1986. Echinodermes de Nouvelle-Calédonie. Guide des étoiles de mer, oursins et autres échinodermes du lagon de Nouvelle-Calédonie. Edition de l'ORSTOM, collection *Faune Tropicale*, n°**XXV** : 238 p.
- GUILLE A. & VADON C. 1985. Les ophiures littorales de Nouvelle-Calédonie. *Bulletin Muséum national d'Histoire naturelle*, Paris (4 sér.), **7A(1)** : 61-72.
- INTES A.G. & MENOUE J.L. 1979. Quelques holothuries (Echinodermes) des environs de Nouméa et leur répartition. *Rapport Scientifique et Technique*, ORSTOM, Nouméa, **3** : 1-23.
- JANGOUX M. 1984. Les astérides littoraux de Nouvelle-Calédonie. *Bulletin Muséum national d'Histoire naturelle*, Paris (4 sér.), **6A(2)** : 279-293.
- MAH C. 1999. Taxonomy of the South Pacific brisingidan *Brisingaster robillardi* (Asteroidea) with new ontogenetic and phylogenetic information. *Zoosystema* **21(3)** : 535-546.
- MESSING C.G. 2003. Three new species of Comasteridae (Echinodermata, Crinoidea) from the tropical western Pacific. *Zoosystema* **25(1)** : 149-162.
- O'HARA T.D. & STÖHR S. 2006. Deep water Ophiuroidea (Echinodermata) of New Caledonia : Ophiacanthidae and Hemicuryalidae. In Richer de Forges B. & Justine J.-L. (eds), Tropical Deep-Sea Benthos, volume 24, *Mémoires du Muséum national d'Histoire naturelle* **193** : 33-141.
- SMIRNOV A. 1999. Some remarks on the subgenus *Oligotrochus* M. Sars, 1866 *sensu* Hedging, 1935 (genus *Myriotrochus*, Myriotrochidae, Holothurioidea) with description of two new species. *Zoosystema* **21(1)** : 13-27.
- SMIRNOV A. 1997. New apodid holothurians (Holothurioidea, Apodida) from the New Caledonian continental slope collected during "BIOGEOCAL" expedition 1987. *Zoosystema* **19(1)** : 15-26.
- VADON C. 1991. Echinodermata : Ophiuridae profonds de Nouvelle-Calédonie. Formes paedomorphes. In : A. Crosnier (ed.), Résultats des Campagnes Musorstom, volume 8. *Mémoires du Muséum national d'Histoire naturelle*, (A), **151**: 335-356.

## Species List of New Caledonia (Deep species are marked\*)

### ASTERIDES

#### BRISINGIDA

##### BRISINGASTERIDAE

\**Brisingaster robillardi* Loriol, 1883

\**Novodinia* sp. Mah, in prep.

#### FORCIPULATIDA

##### ASTERIIDAE

*Coronaster pauciporis* Jangoux, 1984 NC

##### ZOROASTERIDAE

\**Zoroaster* sp. Mah, in prep.

#### NOTOMYOTIDA

##### BENTHOPECTINIDAE

\**benthopecinids juvenils* Mah, in prep.

#### PAXILLOSIDA

##### ASTROPECTINIDAE

*Astropecten polyacanthus* Müller & Troschel, 1842

##### GONIASTERIDAE

*Iconaster uchelbeluensis* Mah, 2005

*Tosia queenslandensis* Livingstone, 1932

##### LUIDIIDAE

*Luidia maculata* Müller & Troschel, 1842

*Luidia savignyi* (Audouin, 1826)

#### SPINULOSIDA

##### ECHINASTERIDAE

*Echinaster callosus* von Marenzeller, 1895

*Echinaster luzonicus* (Gray, 1840)

*Echinaster varicolor* H.L. Clark, 1938

##### VALVASTERIDAE

*Valvaster striatus* (Lamarck, 1816)

#### VALVATIDA

##### ACANTHASTERIDAE

*Acanthaster planci* (Linné, 1758)

##### ARCHASTERIDAE

*Archaster typicus* Müller & Troschel, 1840

##### ASTERINIDAE

*Asterina burtoni* Gray, 1840

*Disasterina abnormalis* Perrier, 1875

*Nepanthia briareus* (Bell, 1894)

*Patriella exigua* (Lamarck, 1816)

##### ASTERODISCIDIDAE

*Asterodiscides helenotus* (Fisher, 1913)

*Asterodiscides soelae* Rowe, 1985

##### ASTEROPSEIDAE

*Asteropsis carinifera* (Lamarck, 1816)

##### CHAETASTERIDAE

*Chaetaster moorei* Bell, 1894

##### MITHRODIIDAE

*Mithrodia clavigera* (Lamarck, 1816)

*Thromidia catalai* Pope & Rowe, 1977

##### OPHIDIASTERIDAE

*Celerina heffernani* (Livingstone, 1931)

*Cistina columbiae* Gray, 1840

*Fronia indica* (Perrier, 1869)

*Fromia milleporella* (Lamarck, 1816)  
*Fromia monilis* Perrier, 1875  
*Fromia pacifica* H.L. Clark, 1921  
*Gomophia egyptiaca* Gray, 1840  
*Gomophia watsoni* (Livingstone, 1936)  
*Heteronardoa carinata* (Koehler, 1910)  
*Leiaster coriaceus* Peters, 1852  
*Leiaster leachi* (Gray, 1840)  
*Leiaster speciosus* von Martens, 1866  
*Linckia guildingi* Gray, 1840  
*Linckia laevigata* (Linné, 1758)  
*Linckia multifora* (Lamarck, 1816)  
*Nardoa frianti* Koehler, 1910  
*Nardoa gomophiia* (Perrier, 1875)  
*Nardoa novaecaledoniae* (Perrier, 1875)  
*Nardoa tuberculata* Gray, 1844  
*Neoferdina cuningi* (Gray, 1840)  
*Neoferdina offreti* (Koehler, 1910)  
*Ophidiaster cribrarius* Lütken, 1871  
*Ophidiaster granifer* Lütken, 1871  
*Ophidiaster helicostichus* Sladen  
*Ophidiaster hemprichi* Müller & Troschel, 1842  
*Tamaria fusca* (Gray, 1840)  
\**Tamaria* sp. Mah, in prep.

#### **OREASTERIDAE**

*Choriaster granulatus* Lütken, 1869  
*Culcia novaeguineae* Müller & Troschel, 1842  
*Halityle regularis* Fisher, 1913  
*Pentaceraster alveolatus* (Perrier, 1875)  
*Pentaceraster regulus* (Müller & Troschel, 1842)  
*Poraster superbus* (Moebius, 1859)  
*Protoreaster nodosus* (Linné, 1758)

#### **VELATIDA**

##### **PTERASTERIDAE**

*Euretaster attenuatus* Jangoux, 1984 NC  
*Euretaster insignis* (Sladen, 1882)

##### **SOLASTERIDAE**

*Seriaster regularis* Jangoux, 1984

#### **ECHINIDES**

##### **CIDAROIDA**

##### **CIDARIDAE**

*Chondrocidaris brevispina* (H.L. Clark, 1925)  
*Chondrocidaris gigantea* A. Agassiz, 1863  
*Eucidaris metularia* (Lamarck, 1816)  
*Phyllacanthus imperialis* (Lamarck, 1816)  
*Prionocidaris australis* (Ramsay, 1885)  
*Prionocidaris baculosa* (Lamarck, 1816)  
*Prionocidaris bispinosa* (Lamarck, 1816)

##### **ECHINOIDA**

##### **ECHINOMETRIDAE**

*Echinometra mathaei* (de Blainville, 1825)  
*Echinostrephus aciculatus* A. Agassiz, 1863  
*Heterocentrotus mammillatus* (Linné, 1758)  
*Heterocentrotus trigonarius* (Lamarck, 1816)

**PARASALENIIDAE**

*Parasalenia gratiosa* A. Agassiz, 1863

*Parasalenia pöhlilii* Pfeffer, 1887

**TOXOPNEUSTIDAE**

*Gymnechinus epistichus* H.L. Clark, 1912

*Pseudoboletia indiana* (Michelin, 1862)

*Toxopneustes pileolus* (Lamarck, 1816)

*Tripneustes gratilla* (Linné, 1758)

**DIADEMATOIDA****DIADEMATIDAE**

*Astropyga radiata* (Leske, 1778)

*Diadema savignyi* (Michelin, 1845)

*Diadema setosum* (Leske, 1778)

*Echinothrix calamaris* (Pallas, 1774)

*Echinothrix diadema* (Linné, 1758)

**ECHINOTHURIOIDA****ECHINOTHURIIDAE**

*Asthenosoma varium* Grube, 1868

**PHYMOSOMATOIDA****STOMOPNEUSTIDAE**

*Stomopneustes variolaris* (Lamarck, 1816)

**ARBACIIDAE**

*Coelopleurus n.sp.* (Coppard, in press) NC

**TEMNOPLEUROIDA****TEMNOPLEURIDAE**

*Mespilia globulus* (Linné, 1758)

*Salmacis belli* Döderlein, 1902

*Temnopleurus toreumaticus* (Leske, 1778)

**SPATANGOIDA****BRISSIDAE**

*Brissopsis luzonica* (Gray, 1851)

*Brissus latecarinatus* (Leske, 1778)

*Eupatagus rubellus* Mortensen, 1948

*Metalia angustus* de Ridder, 1984

*Metalia spatagus* (Linné, 1758)

*Metalia sternalis* (Lamarck, 1816)

**SCHIZASTERIDAE**

*Schizaster lacunosus* (Linné, 1758)

**SPATANGIDAE**

*Maretia planulata* (Lamarck, 1816)

**LOVENIIDAE**

*Lovenia elongata* (Gray, 1845)

**CLYPEASTEROIDA****CLYPEASTERIDAE**

*Clypeaster humilis* (Leske, 1778)

*Clypeaster latissimus* (Lamarck, 1816)

*Clypeaster oshimensis* Ikeda, 1935

*Clypeaster reticulatus* (Linné, 1758)

**LAGANIDAE**

*Laganum depressum tonganense* L. Agassiz, 1841

*Peronella lesueuri* (L. Agassiz, 1841)

**SCUTELLIDAE**

*Echinodiscus auritus* Leske, 1778

*Echinodiscus bisperforatus truncatus* (L. Agassiz, 1841)

*Echinodiscus tenuissimus* (L. Agassiz, 1847)

## HOLOTHURIDES

### APODIDA

#### CHIRIDOTIDAE

*Polycheira rufescens* (Brandt, 1835)

\**Trochodota neocaledonica* Smirnov, 1997 NC

#### SYNAPTIDAE

*Euapta godeffroyi* (Semper, 1868)

\**Labidoplax georgii* Smirnov, 1997 NC

*Opheodesoma australiensis* Heding, 1931

*Opheodesoma spectabilis* Fisher, 1907

*Polyplectana kefersteini* (Selenka, 1867)

\**Rynkatorpa coriolis* Smirnov, 1997 NC

*Synapta maculata* (Chamisso & Eysenhardt, 1821)

*Synapta ooplax* Wien, 1881

*Synapta reticula* Semper, 1868

*Synaptula media* Cherbonnier & Féral, 1984

### ASPIDOCHIROTIDA

#### HOLOTHURIIDAE

*Actinopyga albonigra* Cherbonnier & Féral, 1984

*Actinopyga crassa* Panning, 1944

*Actinopyga echinites* (Jaeger, 1833)

*Actinopyga flammea* Cherbonnier, 1979

*Actinopyga fusca* Cherbonnier, 1980 NC

*Actinopyga lecanora* (Jaeger, 1833)

*Actinopyga mauritiana* (Quoy & Gaimard, 1833)

*Actinopyga miliaris* (Quoy & Gaimard, 1833)

*Actinopyga palauensis* Panning, 1944

*Actinopyga spinea* Cherbonnier, 1980

*Bohadschia argus* Jaeger, 1833

*Bohadschia graeffei* (Semper, 1868)

*Bohadschia maculisparsa* Cherbonnier & Féral, 1984 NC

*Bohadschia marmorata* (Jaeger, 1833)

*Bohadschia similis* (Semper, 1868)

*Bohadschia tenuissima* (Semper, 1868)

*Bohadschia vitiensis* (Semper, 1867)

*Holothuria altaturricula* Cherbonnier & Féral, 1984 NC

*Holothuria artensis* Cherbonnier & Feral, 1984

*Holothuria atra* Jaeger, 1833

*Holothuria cinerascens* Brandt, 1835

*Holothuria coluber* Semper, 1868

*Holothuria conusalba* Cherbonnier & Féral, 1984

*Holothuria coronopertusa* Cherbonnier, 1980

*Holothuria decorata* Marenzeller, 1881

*Holothuria difficilis* Semper, 1868

*Holothuria dura* Cherbonnier & Feral, 1981

*Holothuria edulis* Lesson, 1830

*Holothuria flavomaculata* Semper, 1868

*Holothuria fuscocinerea* Jaeger, 1833

*Holothuria fuscogilva* Cherbonnier, 1980

*Holothuria fuscopunctata* Jaeger, 1833

*Holothuria hilla* Lesson, 1830

*Holothuria inpatiens* (Forskäl, 1775)

*Holothuria leucospilota* (Brandt, 1835)

*Holothuria maculosa* Pearson, 1913

*Holothuria monacaria* Lesson, 1830

*Holothuria nobilis* (Selenka, 1967)  
*Holothuria ocellata* (Jaeger, 1833)  
*Holothuria pardalis* Selenka, 1867  
*Holothuria pervicax* Selenka, 1867  
*Holothuria rigida* (Selenka, 1867)  
*Holothuria scabra* Jaeger, 1833  
*Holothuria turriscelsa* Cherbonnier, 1980  
*Holothuria verrucosa* Selenka, 1867

#### **STICHOPODIDAE**

*Stichopus chloronotus* Brandt, 1835  
*Stichopus horrens* Selenka, 1867  
*Stichopus noctivagus* Cherbonnier, 1980  
*Stichopus pseudhorrens* Cherbonnier, 1967  
*Stichopus variegatus* Semper, 1868  
*Thelenota ananas* (Jaeger, 1833)  
*Thelenota anax* H.L. Clark, 1921  
*Thelenota rubricolineata* Massin & Lane, 1991

#### **DENDROCHIROTIDA**

##### **CUCUMARIIDAE**

*Pentacta pentagona* Quoy & Gaimard, 1833  
*Plesiocolochirus australis* (Ludwig, 1875)

##### **PHYLLOPHORIDAE**

*Cladolabes aciculus* (Semper, 1868)  
*Neothyonidium magnum* (Ludwig, 1882)  
*Ohshinella castanea* Cherbonnier, 1980

##### **ELPIDIIDAE**

\**Peniagone thieli* Gebruk, 1997 NC

##### **MYRIOTROCHIDAE**

\**Myriotrochus neocaledonicus* Smirnov, 1999 NC  
\**Prototrochus belyaevi* Smirnov, 1997 NC

#### **CRINOIDES**

##### **COMATULIDA**

##### **ANTEDONIDAE**

*Antedon parviflora* (A.H. Clark, 1912)

##### **CALOMETRIDAE**

*Reometra mariae* (A.H. Clark, 1912)

##### **COLOBOMETRIDAE**

*Cenometra bella* (Hartlaub, 1890)  
*Colobometra perspinosa* (Carpenter, 1881)  
*Colobometra perspinosa* vepretum Clark, 1909  
*Oligometra serripinna* (Carpenter, 1881)  
*Pontiometra andersoni* (Carpenter, 1888)

##### **COMASTERIDAE**

*Capillaster multiradiatus* (Linné, 1758)  
*Comactinia titan* Messing, 2003 NC  
*Comantheria briareus* (Bell, 1882)  
*Comanthina schlegeli* (Carpenter, 1888)  
*Comanthus bennetti* (Müller, 1841)  
*Comanthus parvicirrus* (Müller, 1841)  
*Comaster distinctus* (Carpenter, 1888)  
*Comaster multibrachiatus* (Carpenter, 1888)  
*Comaster multifidus* (Müller, 1841)  
*Comatella maculata* (Carpenter, 1888)  
*Comatella nigra* (Carpenter, 1888)  
*Comatula pectinata* (Linné, 1758)

**HIMEROMETRIDAE**

*Himerometra robustipinna* (Carpenter, 1881)

**MARIAMETRIDAE**

*Dichrometra flagellata* (J. Müller, 1841)

*Lanprometra palmata* (J. Müller, 1841)

*Oxymetra erinacea* (Hartlaub, 1890)

*Stephanometra echinus* (A.H. Clark, 1908)

*Stephanometra oxyacantha* (Hartlaub, 1890)

*Stephanometra spicata* (P.H. Carpenter, 1881)

**TROPIOMETRIDAE**

*Tropiometra afra* (Hartlaub, 1870)

**ZYGOMETRIDAE**

*Catoptometra magnifica* (A.H. Clark, 1908)

**ISOCRINIDA****PENTACRINIDAE**

\**Metacrinus levii* Améziane-Cominardi, 1990 NC

\**Metacrinus nursorstomae* Roux, 1981

\**Saracrinus nobilis* (Carpenter, 1884)

\**Endoxocrinus (Diplocrinus) alternicirrus* (Carpenter, 1884)

\**Endoxocrinus (D.) sibogae* (Döderlein, 1907)

**MILLERICRINIDA****MILLERICRINIDAE**

\**Proisocrinus ruberrimus* A.H. Clark, 1910

**BOURGUETICRINIDAE**

\**Porphyrocrinus* sp. NC

**BATHYCRINIDAE**

\**Bathycrinus* sp. NC

\**Caledonicrinus vaubani* Avocat & Roux, 1990 NC

\**Naumachocrinus hawaiiensis* A.H. Clark, 1912

**CYRTOCRINIDA****HEMICRINIDAE**

\**Gymnocrinus richeri* Bourseau *et al.*, 1987

**HYOCRINIDAE**

\**Hyocrinus cyanae* Bourseau *et al.*, 1991 NC

\**Thalassocrinus aff. pontifer* A.H. Clark, 1911

**HOLOPODIDAE**

\**Holopus alidis* Bourseau *et al.*, 1991 NC

**EUDESICRINIDAE**

\**Proeudesicrinus lifouensis* Améziane & Bourseau, 1991 NC

**INCERTAE SEDIS**

\**Guillecrinus neocaledonicus* Bourseau *et al.*, 1991 NC

**OPHIURIDES****EURYALIDA****ASTEROSCHEMATIDAE**

*Astrobrachion constrictum* (Farquhar, 1900)

**EURYALIDAE**

*Asteromorpha tenax* Baker.

*Euryale aspera* Lamarck, 1816

**GORGONOCEPHALIDAE**

*Astroboa granulatus* (H.L. Clark, 1938)

*Astroboa nuda* (Lyman, 1874)

*Astrocladus exiguus* (Lamarck, 1816)

*Astrocladus tonganus* Döderlein, 1911

*Astroglynnma sculptum* (Döderlein, 1896)



## OPHIURIDA

### AMPHIURIDAE

- Amphiura luetkeni* Duncan, 1879
- Ophiocentrus asper* (Koehler, 1905)
- Ophiocentrus dilatatus* (Koehler, 1905)
- Ophiodaphne formata* (Koehler, 1905)

### HEMIEURYALIDAE

- \**Ophiomoeris nodosa* (Koehler, 1905)
- Ophiomoeris obstrica* (Lyman, 1878)

### OPHIACANTHIDAE

- \**Anphilinna transacta* (Koehler, 1930)
- \**Ophiacantha levispina* Lyman, 1878
- \**Ophiacantha longidens* Lyman, 1878
- \**Ophiacantha pentagona* (Koehler, 1897)
- \**Ophiacantha plicata* (Lyman, 1878)
- \**Ophiacantha renekoehleri* (Koehler, 1904)
- Ophiacantha cornuta* Lyman, 1878
- Ophiacantha serrata* Lyman, 1878
- Ophiacantha vepratica* Lyman, 1878
- Ophiacantha funebris* (Koehler, 1930)
- Ophiacantha placida* (Koehler, 1904)
- \**Ophiacantha rosea* Lyman, 1878
- \**Ophiacantha yaldwyni* Fell, 1958
- \**Ophiacantha richeri* O'Hara & Stöhr, 2006 NC
- \**Ophiacantha fuscina* O'Hara & Stöhr, 2006 NC
- \**Ophiocamax vitrea* Lyman, 1878
- \**Ophiologimus quadrispinus* H.L. Clark, 1925
- Ophiomitra leucorhabdota* (H.L. Clark, 1911)
- \**Ophiomitrella granulosa* (Lyman, 1878)
- Ophiomitrella conferta* (Koehler, 1922)
- Ophiomitrella polyacantha* (H.L. Clark, 1911)
- Ophiomitrella stellifera* Matsumoto, 1917
- Ophiomitrella tenuis* (Koehler, 1904)
- \**Ophiomitrella mensa* O'Hara & Stöhr, 2006 NC
- \**Ophiomitrella parviglobosa* O'Hara & Stöhr, 2006 NC
- \**Ophioplinthaca* n.sp. O'Hara & Stöhr, 2006 NC
- \**Ophioplinthaca bythiaspis* (H.L. Clark, 1911)
- \**Ophiurothamnus clausa* (Lyman, 1878)
- \**Ophiotreta stimulea* (Lyman, 1878)
- Ophiotreta eximia* (Koehler, 1904)
- Ophiotreta larissae* (Baker, 1979)
- Ophiotreta matura* (Koehler, 1904)
- Ophiotreta valenciennesi* (Lyman, 1879)
- Ophiolinna antarctica* (Lyman, 1879)
- Ophiolinna perfida* (Koehler, 1904)
- Ophiolinna placentigera* (Lyman, 1880)
- Ophiologimus quadrispinus* H.L. Clark, 1925
- Ophiomedeia liodisca* (H.L. Clark, 1911)
- Ophiopristis dissidens* (Koehler, 1905)
- Ophiopristis luctosa* (Koehler, 1904)
- Ophioplinthaca amezianeae* O'Hara & Stöhr, 2006
- Ophioplinthaca bythiaspis* (H.L. Clark, 1911)
- Ophioplinthaca citata* Koehler, 1904
- Ophioplinthaca globata* Koehler, 1922
- Ophioplinthaca hastata* Koehler, 1922
- Ophioplinthaca plicata* (Lyman 1878)

*Ophioplinthaca rudis* (Koehler, 1897)  
*Ophiothamnus biocal* O'Hara & Stöhr, 2006 NC  
*Ophiurothamnus clausa* (Lyman, 1878)  
*Ophiurothamnus eleaumei* O'Hara & Stöhr, 2006 NC  
*Ophiocopa spatula* Lyman, 1883  
*Ophiocamax nominata* (Koehler, 1930)  
*Ophiocamax vitrea* Lyman, 1878  
*Ophiohamus nanus* O'Hara & Stöhr, 2006 NC  
*Ophiomyces delata* Koehler, 1904

#### **OPHIACTIDAE**

*Ophiosphaera insignis* Brock, 1888

#### **OPHIOCOMIDAE**

*Ophiarthrum elegans* Peters, 1851  
*Ophiocoma dentata* Müller & Troschel, 1842  
*Ophiocoma erinaceus* Müller & Troschel, 1842  
*Ophiocoma pusilla* (Brock, 1888)  
*Ophiocoma scolopendrina* (Lamarck, 1816)  
*Ophiomastix annulosa* (Lamarck, 1816)  
*Ophiomastix asperula* Lütken, 1869  
*Ophiomastix caryophyllata* Lütken, 1869  
*Ophiomastix mixta* Lütken, 1869  
*Ophiomastix palaoensis* Murakami, 1943  
*Ophiomastix variabilis* Koehler, 1095  
*Ophiopsila multipapillata* Guille, 1978  
*Ophiopsila timida* Koehler, 1930

#### **OPHIODERMATIDAE**

*Cryptopelta longibrachialis* Koehler, 1930  
*Ophiarachna delicata* (H.L. Clark, 1932)  
*Ophiarachna incrassata* (Lamarck, 1816)  
*Ophiarachnella gorgonia* (Müller & Troschel, 1842)  
*Ophiarachnella infernalis* (Müller & Troschel, 1842)  
*Ophiarachnella macracantha* H.L. Clark, 1909  
*Ophiarachnella septemspinosa* (Müller & Troschel, 1842)  
*Ophiarachnella snelli* (A.H. Clark, 1964)  
*Ophioclastus hataii* Murakami, 1943  
\**Ophioconis cupida* Koehler, 1905  
*Ophiostegastus novaecaledoniae* Guille & Vadon, 1985 NC

#### **OPHIOMYXIDAE**

*Ophiomyxa australis* Lütken, 1869  
\**Ophiomyxa brevirima* H.L. Clark, 1915

#### **OPHIONEREIDAE**

\**Ophiochiton lentus* Lyman, 1874  
*Ophionereis dubia* (Müller & Troschel, 1842)  
*Ophionereis fusca* Brock, 1888  
\**Ophionereis lamellosa* Matsumoto, 1915  
*Ophionereis porrecta* Lyman, 1860

#### **OPHIOTRICHIDAE**

*Gymnolophus obscura* (Ljungman, 1867)  
*Macrophiothrix belli* (Döderlein, 1896)  
*Macrophiothrix longipeda* (Lamarck, 1816)  
*Macrophiothrix propinqua* (Lyman, 1861)  
*Macrophiothrix rugosa* H.L. Clark, 1938  
\**Ophiogynna pellicula* (Duncan, 1887)  
*Ophiolophus novarae* Marktanner, 1887  
*Ophiomaza cacaotica* Lyman, 1871  
*Ophiopteron elegans* Ludwig, 1888

*Ophiothela danae* Verrill, 1869  
*Ophiothrix ciliaris* (Lamarck, 1816)  
*Ophiothrix hybrida* H.L. Clark, 1915  
*Ophiothrix picteti* de Loriol, 1893  
*Ophiothrix proteus* Koehler, 1905  
*Ophiothrix purpurea* von Martens, 1867  
*Ophiothrix savigny* (Müller & Troschel, 1842)  
*Ophiothrix trilineata* Lütken, 1869  
*Ophiothrix vigelandi* A.M. Clark, 1968

#### **OPHIURIDAE**

\**Anthophiura granulata* (Clarck, 1939)  
\**Anthophiura ingolfi* Fasmer, 1930  
\**Aspidophiura cherbonnieri* Vadon, 1991  
\**Astrophium levii* Vadon, 1991  
\**Amphiophiura bakeri* McKnight, 2003  
\**Amphiophiura bullata* Litvinova, 1971  
\**Amphiophiura liberata* (Koehler, 1904)  
\**Amphiophiura pertusa* (Koehler, 1930)  
\**Amphiophiura sordida* (Koehler, 1930)  
\**Amphiophiura taraniua* McKnight, 1968  
\**Amphiophiura trifolium* Hertz, 1927  
\**Dictenophiura ctenophora* (H.L. Clark, 1909)  
\**Dictenophiura squamosa* Baker, 1979  
*Ophiopsis cincta* Müller & Troschel, 1842  
*Ophiopsis superba* H.L. Clark, 1915  
\**Ophiomusium laqueatum* Lyman, 1882  
\**Ophiomusium simplex* Lyman, 1878  
\**Ophiophyllium novaecaledonia* Vadon, 1991  
\**Ophiopycis guillei* Vadon, 1991 NC  
\**Ophiopycis aff. guillei* Vadon, 1991 NC  
\**Ophiopyrgus biocalae* Vadon, 1991 NC  
\**Ophiopyrgus trispinosus* Koehler, 1904  
\**Ophiotypa simplex* Koehler, 1897  
\**Ophiozonella media* (Koehler, 1904)  
\**Ophiura aequalis* (Lyman, 1878)  
\**Ophiura fluctuans* Koehler, 1922  
\**Ophiura irrorata* (Lyman, 1878)  
\**Ophiura micracantha* H.L. Clark, 1911  
\**Perlophiura profundissima* Belayev & Litvinova, 1972





*Fromia indica*

© IRD/Jean-Louis Menou



*Gomophia watsoni*

© IRD/Jean-Louis Menou



*Leiaster leachi*

© IRD/Jean-Louis Menou



*Thromidia catalai*

© IRD/Jean-Louis Menou



*Macrophiothrix* sp.

© IRD/Pierre Laboute



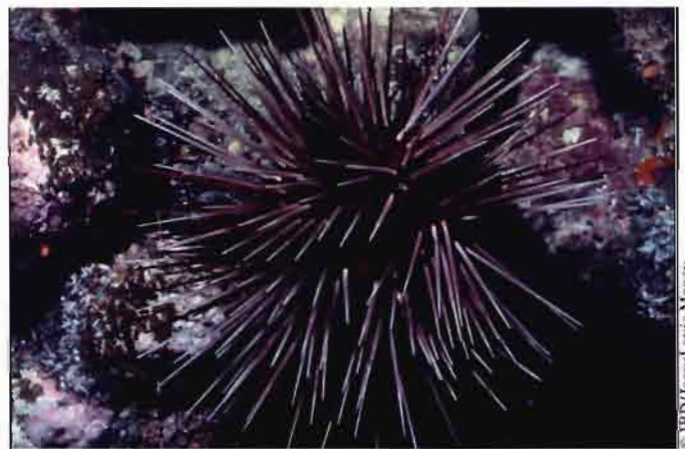
*Ophiarthrum* sp.

© IRD/Pierre Laboute



*Ophiarachnella snelli*

© IRD/Jean-Louis Menou



*Echinothrix diadema*

© IRD/Jean-Louis Menou





© IRD/Jean-Louis Menou

*Echinothrix calamaris*



© IRD/Jean-Louis Menou

*Echinometra mathaei*



© IRD/Jean-Louis Menou

*Prionocidaris bispinosa*



© IRD/Jean-Louis Menou

*Salmacis sp.*



© IRD/Jean-Louis Menou

*Tripneustes gratilla*



© IRD/Jean-Louis Menou

*Stichopus horrens*



© IRD/Jean-Louis Menou

*Thelenota anax*



© IRD/Jean-Louis Menou

*Thelenota rubrolineata*



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

---