

## Scleractinia of New Caledonia: check list of reef dwelling species

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The scleractinian corals of New Caledonia and nearby islands and reefs remains poorly known. Up until now, no comprehensive study of the reef corals (scleractinia) fauna has been carried out.

Although New Caledonia was discovered in 1774, the major maritime exploration voyages of the 19th century did not include it in their itineraries. In fact, the first coral collections from the area refer to deep sea (non-zooxanthellate) species obtained by Willey in the Loyalty Islands and were studied by Gardiner (1899). The first specimens collected in New Caledonia proper were gathered by the naturalist François in the vicinity of Noumea and were reef building species. They were to be subsequently studied by Matthai, who published his results in 1923. It is in 1960 that Chevalier undertook (within the frame of the “French expedition to the coral reefs of New Caledonia”, supported by the Singer-Polignac Foundation) to methodically establish a collection of reef corals from New Caledonia, New Hebrides (now Vanuatu), Loyalty islands, and Chesterfield Atoll. As early as 1968, he published a first list of 66 species from Maré (Loyalty Islands). The several thousand specimens collected by Chevalier during his expeditions were to be the basis for a comprehensive morpho-taxonomic study of the scleractinia of French Melanesia. The first two parts were published in 1971 and 1975 respectively, but the enormous task undertaken by Chevalier was to remain unfinished, on account of his premature death. The two important volumes mentioned above provide a detailed account of 93 species of reef-dwelling, zooxanthellate scleractinians from what he had referred to as “French Melanesia” (New Caledonia, New Hebrides, Loyalty Islands, Chesterfield ...) Other work of somewhat lesser importance have also contributed to the present knowledge of reef scleractinia of New Caledonia and dependencies. One must mention in particular Woodhead & Weber (1969) who listed 53 genera and subgenera in the reefs of New Caledonia, Wells (1961, 1968), who described a new genus and two new species from the material sent to him by Catala, and especially Wijsman-Best who published in 1972 a revision of the sub-family Faviinae from New Caledonia. Wijsman-Best’s study is important on several counts, but particularly, because the observed intraspecific variations of the colony growth form and skeletal structures are linked to specific environmental conditions. This approach, which represents an improvement of the concept of “ecomorphose” defined by Laborel (1970) in his study of Brazilian reef scleractinians lead Wijsman-Best to the notion of “ecotype”. The concept was to be further modified and generalized by Veron & Pichon (1976) who coined the word “ecomorph”. More recently, a number of species from the Chesterfield Islands have been cited or described by Veron & Pichon (1982) and Veron & Wallace (1984). As far as the genus *Acropora* is concerned, the specimens collected in New Caledonia by Pichon and by Wallace herself are included in Wallace’s world revision of the genus (Wallace, 1999). Lastly, the study of the collection at IRD Noumea, undertaken by the author, has yielded a significant number of new records.

The check list includes 306 zooxanthellate scleractinian species and 4 non-zooxanthellate species commonly found in reef or lagoon environment (*Heterocyathus aequicostatus*, *Heteropsammia cochlea*, *Dendrophyllia micranthus* and *Tubastrea aurea*). The list of scleractinian reef corals is presented in alphabetical order for the families, genera and species. Subfamilies and subgenera have not been specified. It is based – after relevant update of the synonymy- on species for which voucher specimens have been lodged in appropriate institutions and identified by the above mentioned authors. Some species have been originally described from New Caledonia, and are listed in Table I. (The present status of these species is not discussed here). One should also mention the genus name *Catalaphyllia*, given by Wells to accommodate Saville-Kent’s species *jardinei*, common in some areas of the New Caledonian lagoon such as the Banc Gail, to honour René Catala, co-founder of the Aquarium of Noumea, and one of the pioneers of reef coral studies in New Caledonia.

**Table I** - List of coral reef scleractinian species described from New Caledonia. Names in bold refer to New Caledonian place names or to major contributors to the knowledge of New Caledonian scleractinian fauna.

| Species                           | Author and date       | Type locality                  | Depth (m) | Museum reg. number |
|-----------------------------------|-----------------------|--------------------------------|-----------|--------------------|
| <i>Barabattoia goroensis</i>      | Yabe & Sugiyama, 1941 | Goro                           | (no data) | IGPTU 64331        |
| <i>Bantamia merleti</i>           | Wells, 1961           | Banc Gail                      | 35-40     | USNM 45390         |
| <i>Alveopora catalai</i>          | Wells, 1968           | Banc Gail                      | 35-40     | USNM 53132         |
| <i>Favia irregularis</i>          | Chevalier, 1971       | Baie St Vincent, pinnacle      | 9         | MNHN scl 20292     |
| <i>Favia paucisepta</i>           | Chevalier, 1971       | Canala                         | (no data) | MNHN scl 5923      |
| <i>Favia rugosa</i>               | Chevalier, 1971       | Baie de St Vincent, patch reef | 4         | MNHN scl 20295     |
| <i>Favites gaili</i> *            | Chevalier, 1971       | Banc Gail                      | 35        | MNHN scl 20296     |
| <i>Goniastrea regularis</i>       | Chevalier, 1971       | «Nord de la Nelle-Calédonie»   | (no data) | MNHN scl 20297     |
| <i>Montastrea magnistellata</i> * | Chevalier, 1971       | Pte Sud Ouest Ile Hugon        | Reef flat | MNHN scl 20299     |
| <i>Euphyllia cristata</i>         | Chevalier, 1971       | Récif Ouandemi, lagoon slope   | 15        | MNHN scl 5809      |
| <i>Plerogyra taisnei</i>          | Chevalier, 1971       | Baie de Saint Vincent          | (no data) | MNHN scl 20303     |
| <i>Caulastrea curvata</i>         | Wijsman-Best, 1972    | Baie de Prony                  | 5         | ZMA Coel 5989      |
| <i>Blastomussa wellsii</i>        | Wijsman-Best, 1973    | Grotte Merlet                  | 30-35     | ZMA Coel 6905      |
| <i>Platygyra pini</i>             | Chevalier, 1975       | Baie de Gu. Ile des Pins       | 33        | MNHN scl 20302     |
| <i>Echinopora glabra</i>          | Chevalier, 1975       | Récif Mangalia, lagoon slope   | 10        | MNHN scl 5802      |
| <i>Acanthastrea rotundiflora</i>  | Chevalier, 1975       | Atoll Fabre, inner patch reef  | 4-5       | MNHN scl 20292     |
| <i>Lobophyllia pachysepta</i>     | Chevalier, 1975       | Chesterfield atoll, pinnacle   | 1         | MNHN scl 20298     |
| <i>Parascolymia fungiformis</i>   | Chevalier, 1975       | Récif Bogota, Outer slope      | 15        | MNHN scl 20301     |
| <i>Echinophyllia rugosa</i> *     | Chevalier, 1975       | Récif Ouandemi, Outer slope    | 4-5       | MNHN scl 20294     |
| <i>Cantharellus noumeae</i>       | Hoeksema & Best, 1984 | Nouméa                         | (no data) | RMNH 16241         |
| <i>Acropora chesterfieldensis</i> | Veron & Wallace, 1984 | Long Isl. Chesterfield atoll   | 8         | MTQ G 55081        |

\* : Species for which the holotype could not be located.

#### Abbreviations:

IGPTU: Institute of Geology and Paleontology, Tohoku University, Sendai

MNHN: Museum National d'Histoire Naturelle, Paris

RMNH: Rijksmuseum Van Natuurlijke Historie ( Naturalis) Leiden

USNM: United States National Museum, Washington

ZMA: Zoologische Museum ( Instituut voor Taxonomische Zoölogie), Amsterdam

As it stands now, the list is doubtless incomplete: On the one hand, some of the major collections have only been partially studied and it is expected that the collections in the Museum National d'Histoire Naturelle, Paris, and at IRD will yield additional species records. On the other hand, it is to be remembered that so far the major collecting effort has taken place in the vicinity of Nouméa and the South West lagoon. Many areas have not, as yet, been adequately sampled, and more species will be added to the list after they have been explored. This includes, for instance the reefs off the North East coast of New Caledonia mainland, the récifs d'Entrecasteaux and most offshore reefal structures including Récif Pétrie, Astrolabe Reef, and the Bellona-Chesterfield area.

Given the present status of our knowledge, it can be stated, at least on a provisional basis, that the scleractinian faune of New Caledonia is remarkably diverse, although, and not unexpectedly not as species-rich as the geographic areas situated further North West, such as N.E. Australia, Papua-New Guinea or the Sulawesi-Moluccas area. The relative diversity of the scleractinian fauna, can be explained, on biogeographical grounds, by the fact that New Caledonia is not situated too far from the recognized coral "centre of biodiversity", and also, on ecological grounds by the remarkably diverse morphology of its coral reefs: Indeed they range from different types of atoll formations (Chesterfield, Huon, Surprise...), to barrier reefs, including double barriers, with various exposures to dominant wind and swell conditions, reef banks and drowned offshore reefs to fringing reefs around New Caledonian mainland and coral communities in very sheltered embayments or submerged banks, which are so characteristic of the New Caledonian coral reef scene ( Baie du Prony, Banc Gail, for instance).

## REFERENCES

- CHEVALIER J.P., (1968). Les Récifs actuels de Maré. *Expédition Française sur les récifs coralliens de la Nouvelle-Calédonie*. III, 61-81.
- CHEVALIER J.P., (1971). Les scléractiniaires de la Mélanésie Française (Nouvelle-Calédonie, Iles Chesterfield, Iles Loyauté, Nouvelles Hébrides). *Expédition Française sur les récifs coralliens de la Nouvelle-Calédonie* V 307 p., 38 Pl.
- CHEVALIER J.P., (1975). Les scléractiniaires de la Mélanésie Française (Nouvelle-Calédonie, Iles Chesterfield, Iles Loyauté, Nouvelles Hébrides). *Expédition Française sur les récifs coralliens de la Nouvelle-Calédonie*. VII 407 p. 42 Pl.
- GARDINER, J. S., (1899). On the solitary corals, collected by Dr A. Willey. In *A. Willey's Zoological Results Pt II*, Cambridge. 161-70, pl. 19-20.
- HOEKSEMA B.W., (1989) Systematics and ecology of mushroom corals (Scleractinia : Fungiidae). *Zool. Verh. Leiden* **254**, 1-295.
- HOEKSEMA B.W. & BEST M.B., (1984) *Cantharellus noumeae* (gen. nov., spec. nov.) a new scleractinian coral from New Caledonia. *Zool. Meded. Leiden*, **58**, 323-328.
- LABOREL J., (1970). Madréporaires et Hydrocoralliaires récifaux des côtes brésiliennes. Systématique, écologie, répartition verticale et géographique. Result. Sci. Campagnes Calypso. *Ann. Inst. Océanogr.* (9) **47**, 171-229.
- MATTHAI G., (1923). Madréporaires de Nouvelle-Calédonie. *Bull. Biol. France Belgique* **57**, 70-88.
- VERON J.E.N. & PICHON M., (1976). Scleractinia of Eastern Australia. I Families Thamnasteriidae, Astrocoeniidae, Pocilloporidae. *Aust. Inst. Mar. Sci. Monogr. Ser.* **1**, 1-86.
- VERON J.E.N. & PICHON M., (1982). Scleractinia of Eastern Australia. IV Family Poritidae. *Aust. Inst. Mar. Sci. Monogr. Ser.* **5**, 1-159.
- VERON J.E.N. & WALLACE C.C., (1984.). Scleractinia of eastern Australia. V. Family Acroporidae. *Aust. Inst. Mar. Sci. Monogr. Ser.* **6**. 485 p.
- WALLACE C.C., (1999). *Staghorn corals of the world*. CSIRO publishing, Australia. 422p.
- WELLS J.W., (1961) Notes on Indo-Pacific scleractinian corals III : A new reef coral from New Caledonia. *Pac. Sci.* **15** (2) 189-191.
- WELLS J.W., (1968). Notes on Indo-Pacific scleractinian corals V : A new species of *Alveopora* from New Caledonia. VI : Further notes on *Bantamia merleti* Wells. *Pac. Sci.* **22**(2) 274-276.
- WIJSMAN-BEST M.B., (1972). Systematics and ecology of New Caledonian Faviinae (Coelenterata, Scleractinia). *Bijdragen tot de Dierkunde*, **42** (1) 90p. 14 Pl.
- WIJSMAN-BEST M., (1973). A new species of the Pacific coral genus *Blastomussa* from New Caledonia. *Pac. Sci.* **27**(2), 154-155.
- WOODHEAD P.M.J. & WEBER J.N., (1969). Coral genera of New Caledonia. *Mar. Biol.* **4**, 250-254.
- YABE H. & SUGIYAMA T., (1941). Recent building corals from Japan and the South Sea islands under the Japanese Mandate. *Science Reports Tohoku Imp. Univ. Sendai, Japan 2<sup>nd</sup> series*. Special vol. N°II, 67-91, 47 Pl.

### List of Scleractinia of New Caledonia (coral reef species)

#### ACROPORIDAE Verrill, 1902

- Acropora abrotanoides* (Lamarck, 1816)  
*Acropora aculeus* (Dana, 1846)  
*Acropora acuminata* (Verrill, 1864)  
*Acropora aspera* (Dana, 1846)  
*Acropora austera* (Dana, 1846)  
*Acropora bushyensis* Veron & Wallace, 1984  
*Acropora brueggemanni* (Brook, 1893)  
*Acropora cerealis* (Dana, 1846)  
*Acropora chesterfieldensis* Veron & Wallace, 1984  
*Acropora clathrata* (Brook, 1891)  
*Acropora cuneata* (Dana, 1846)  
*Acropora cytherea* (Dana, 1846)  
*Acropora dendrum* (Bassett-Smith, 1890)  
*Acropora digitifera* (Dana, 1846)  
*Acropora divaricata* (Dana, 1846)  
*Acropora donei* Veron & Wallace, 1984  
*Acropora elseyi* (Brook, 1892)

*Acropora florida* (Dana, 1846)  
*Acropora gemmifera* (Brook, 1892)  
*Acropora grandis* (Brook, 1892)  
*Acropora horrida* (Dana, 1846)  
*Acropora humilis* (Dana, 1846)  
*Acropora hyacinthus* (Dana, 1846)  
*Acropora intermedia* (Brook, 1891)  
*Acropora kirstyae* Veron & Wallace, 1984  
*Acropora latistella* (Brook, 1892)  
*Acropora listeri* (Brook, 1893)  
*Acropora longicyathus* (Milne Edwards & Haime, 1860)  
*Acropora loripes* (Brook, 1892)  
*Acropora lutkeni* Crossland, 1952  
*Acropora microclados* (Ehrenberg, 1834)  
*Acropora microphthalma* (Verrill, 1869)  
*Acropora millepora* (Ehrenberg, 1834)  
*Acropora monticulosa* (Brüggemann, 1879)  
*Acropora muricata* (Linnaeus, 1758)  
*Acropora nasuta* (Dana, 1846)  
*Acropora palifera* (Lamarck, 1816)  
*Acropora paniculata* Verrill, 1902  
*Acropora polystoma* (Brook, 1891)  
*Acropora pulchra* (Brook, 1891)  
*Acropora robusta* (Dana, 1846)  
*Acropora samoensis* (Brook, 1891)  
*Acropora sarmentosa* (Brook, 1892)  
*Acropora secale* (Studer, 1878)  
*Acropora selago* (Studer, 1878)  
*Acropora spicifera* (Dana, 1846)  
*Acropora solitaryensis* Veron & Wallace, 1984  
*Acropora subglabra* (Brook, 1891)  
*Acropora subulata* (Dana, 1846)  
*Acropora tenuis* (Dana, 1846)  
*Acropora tortuosa* (Dana, 1846)  
*Acropora cf valenciennesi* (Milne Edwards & Haime, 1860)  
*Acropora valida* (Dana, 1846)  
*Acropora vauhani* Wells, 1954  
*Acropora verweyi* Veron & Wallace, 1984  
*Acropora yongei* Veron & Wallace, 1984  
*Anacropora forbesi* Ridley, 1884  
*Anacropora puertogalerae* Nemenzo, 1964  
*Astreopora expansa* Brüggemann, 1877  
*Astreopora gracilis* Bernard, 1896  
*Astreopora listeri* Bernard, 1896  
*Astreopora myriophthalma* (Lamarck, 1816)  
*Astreopora ocellata* Bernard, 1896  
*Montipora aequituberculata* Bernard, 1897  
*Montipora australiensis* Bernard, 1897  
*Montipora caliculata* (Dana, 1846)  
*Montipora crassituberculata* Bernard, 1897  
*Montipora danae* (Milne Edwards & Haime, 1851)  
*Montipora digitata* (Dana, 1846)  
*Montipora efflorescens* Bernard, 1897  
*Montipora cf effusa* (Dana, 1846)  
*Montipora floweri* Wells, 1954

*Montipora foliosa* (Pallas, 1766)  
*Montipora foveolata* (Dana, 1846)  
*Montipora grisea* Bernard, 1897  
*Montipora hispida* (Dana, 1846)  
*Montipora hoffmeisteri* Wells, 1954  
*Montipora incrassata* (Dana, 1846)  
*Montipora informis* Bernard, 1897  
*Montipora millepora* Crossland, 1952  
*Montipora mollis* Bernard, 1897  
*Montipora nodosa* (Dana, 1846)  
*Montipora peltiformis* Bernard, 1897  
*Montipora ramosa* Bernard, 1897  
*Montipora spongodes* Bernard, 1897  
*Montipora spumosa* (Lamarck, 1816)  
*Montipora tuberculosa* (Lamarck, 1816)  
*Montipora turgescens* Bernard, 1897  
*Montipora turtlensis* Veron & Wallace, 1984  
*Montipora undata* Bernard, 1897  
*Montipora venosa* (Ehrenberg, 1834)  
*Montipora verrucosa* (Lamarck, 1816)

**AGARICIIDAE Gray, 1847**

*Coeloseris mayeri* Vaughan, 1918  
*Gardineroseris planulata* (Dana, 1846)  
*Leptoseris explanata* Yabe & Sugiyama, 1941  
*Leptoseris foliosa* Dinesen, 1980  
*Leptoseris gardineri* Van der Horst, 1921  
*Leptoseris hawaiiensis* Vaughan, 1907  
*Leptoseris mycetoseroides* Wells, 1954  
*Leptoseris scabra* Vaughan, 1907  
*Leptoseris tenuis* Van der Horst, 1921  
*Leptoseris yabei* (Pillai & Scheer, 1976)  
*Pachyseris rugosa* (Lamarck, 1801)  
*Pachyseris speciosa* (Dana, 1846)  
*Pavona cactus* (Forsk., 1775)  
*Pavona clavus* (Dana, 1846)  
*Pavona decussata* (Dana, 1846)  
*Pavona explanulata* (Lamarck, 1816)  
*Pavona maldivensis* (Gardiner, 1905)  
*Pavona minuta* Wells, 1954  
*Pavona varians* Verrill, 1864  
*Pavona venosa* (Ehrenberg, 1834)

**ASTROCOENIIDAE Koby, 1890**

*Stylocoeniella armata* (Ehrenberg, 1834)  
*Stylocoeniella guentheri* (Bassett-Smith, 1890)

**CARYOPHYLLIIDAE Gray, 1847**

*Heterocyathus aequicostatus* Milne Edwards & Haime, 1848

**DENDROPHYLLIIDAE Gray, 1847**

*Dendrophyllia micranthus* Ehrenberg, 1834  
*Heteropsammia cochlea* (Spengler, 1781)  
*Tubastrea aurea* (Quoy & Gaimard, 1833)  
*Turbinaria bifrons* Brüggemann, 1877  
*Turbinaria conspicua* Bernard, 1896  
*Turbinaria heronensis* Wells, 1958  
*Turbinaria mesenterina* (Lamarck, 1816)  
*Turbinaria peltata* (Esper, 1794)

*Turbinaria patula* (Dana, 1846)  
*Turbinaria radicalis* Bernard, 1896  
*Turbinaria reniformis* Bernard, 1896  
*Turbinaria stellulata* (Lamarck, 1816)

**EUSMILIIDAE Milne Edwards & Haime, 1857**

*Catalaphyllia jardinei* (Saville-Kent, 1873)  
*Euphyllia ancora* Veron & Pichon, 1979  
*Euphyllia cristata* Chevalier, 1971  
*Euphyllia divisa* Veron & Pichon, 1979  
*Euphyllia glabrescens* (Chamisso & Eysenhardt, 1821)  
*Plerogyra simplex* Rehberg, 1892  
*Plerogyra sinuosa* (Dana, 1846)  
*Physogyra lichtensteini* (Milne Edwards & Haime, 1851)

**FAVIIDAE Gregory, 1900**

*Barabattoia amicorum* (Milne Edwards & Haime, 1850)  
*Caulastrea curvata* Wijsman-Best, 1972  
*Caulastrea echinulata* (Milne Edwards & Haime, 1849)  
*Caulastrea furcata* Dana, 1846  
*Caulastrea tumida* Matthai, 1928  
*Cyphastrea chalcidicum* (Forsk., 1775)  
*Cyphastrea japonica* Yabe & Sugiyama, 1932  
*Cyphastrea microphthalma* (Lamarck, 1816)  
*Cyphastrea serailia* (Forsk., 1775)  
*Diploastrea heliopora* (Lamarck, 1816)  
*Echinopora gemmacea* (Lamarck, 1816)  
*Echinopora hirsutissima* Milne Edwards & Haime, 1849  
*Echinopora horrida* Dana, 1846  
*Echinopora lamellosa* (Esper, 1795)  
*Echinopora mammillata* (Nemzeno, 1959)  
*Favia favius* (Forsk., 1775)  
*Favia hululensis* (Gardiner, 1904)  
*Favia irregularis* Chevalier, 1971  
*Favia laxa* (Klunzinger, 1879)  
*Favia lizardensis* Veron, Pichon & Wijsman-Best, 1977  
*Favia maritima* (Nemzeno, 1971)  
*Favia matthai* Vaughan, 1918  
*Favia maxima* Veron, Pichon & Wijsman-Best, 1977  
*Favia pallida* (Dana, 1846)  
*Favia paucisepta* Chevalier, 1971  
*Favia rotundata* (Veron, Pichon & Wijsman-Best, 1977)  
*Favia rotumana* (Gardiner, 1899)  
*Favia speciosa* (Dana, 1846)  
*Favia stelligera* (Dana, 1846)  
*Favites abdita* (Ellis & Solander, 1786)  
*Favites chinensis* (Verrill, 1866)  
*Favites complanata* (Ehrenberg, 1834)  
*Favites flexuosa* (Dana, 1846)  
*Favites halicora* (Ehrenberg, 1834)  
*Favites pentagona* (Esper, 1794)  
*Favites russelli* (Wells, 1954)  
*Goniastrea aspera* (Verrill, 1865)  
*Goniastrea australensis* (Milne Edwards & Haime, 1857)  
*Goniastrea edwardsi* Chevalier, 1971  
*Goniastrea favulus* (Dana, 1846)  
*Goniastrea palauensis* (Yabe, Sugiyama & Eguchi, 1936)

*Goniastrea pectinata* (Ehrenberg, 1834)  
*Goniastrea retiformis* (Lamarck, 1816)  
*Leptastrea inaequalis* Klunzinger, 1879  
*Leptastrea pruinosa* Crossland, 1952  
*Leptastrea purpurea* (Dana, 1846)  
*Leptastrea transversa* Klunzinger, 1879  
*Leptoria phrygia* (Ellis & Solander, 1786)  
*Montastrea annuligera* (Milne Edwards & Haime, 1849)  
*Montastrea curta* (Dana, 1846)  
*Montastrea magnistellata* Chevalier, 1971  
*Montastrea valenciennesi* (Milne Edwards & Haime, 1848)  
*Oulophyllia crispa* (Lamarck, 1816)  
*Oulophyllia aspera* Quelch, 1886  
*Platygyra daedalea* (Ellis & Solander, 1786)  
*Platygyra lamellina* (Ehrenberg, 1834)  
*Platygyra pini* Chevalier, 1971  
*Platygyra sinensis* (Milne Edwards & Haime, 1849)  
*Plesiastrea versipora* (Lamarck, 1816)

**FUNGIIDAE Dana, 1846**

*Cantharellus noumeae* Hoeksema & Best, 1984  
*Ctenactis albitentaculata* Hoeksema, 1989  
*Ctenactis echinata* (Pallas, 1766)  
*Ctenactis crassa* (Dana, 1846)  
*Fungia concinna* Verrill, 1864  
*Fungia costulata* Ortmann, 1889  
*Fungia cyclolites* Lamarck, 1816  
*Fungia distorta* Michelin, 1842  
*Fungia fragilis* (Alcock, 1893)  
*Fungia fungites* (Linnaeus, 1758)  
*Fungia granulosa* Klunzinger, 1879  
*Fungia gravis* Nemenzo, 1955  
*Fungia horrida* Dana, 1846  
*Fungia moluccensis* Van der Horst, 1919  
*Fungia paumotensis* Stutchbury, 1833  
*Fungia repanda* Dana, 1846  
*Fungia scabra* Döderlein, 1901  
*Fungia scruposa* Klunzinger, 1879  
*Fungia scutaria* Lamarck, 1801  
*Fungia sinensis* Milne Edwards & Haime, 1851  
*Fungia somervillei* Gardiner, 1909  
*Fungia spinifer* Claereboudt & Hoeksema, 1987  
*Fungia vughani* Boschma, 1923  
*Halomitra pileus* (Linnaeus, 1758)  
*Heliofungia actiniformis* (Quoy & Gaimard, 1833)  
*Herpolitha limax* (Esper, 1797)  
*Lithophyllum mokai* Hoeksema, 1989  
*Podabacia crustacea* (Pallas, 1766)  
*Polyphyllia novaehiberniae* (Lesson, 1831)  
*Polyphyllia talpina* (Lamarck, 1801)  
*Sandalolitha robusta* (Quelch, 1886)

**MERULINIDAE Verrill, 1866**

*Hydnophora exesa* (Pallas, 1766)  
*Hydnophora microconos* (Lamarck, 1816)  
*Hydnophora rigida* (Dana, 1846)  
*Merulina ampliata* (Ellis & Solander, 1786)

*Merulina scabricula* Dana, 1846  
*Scapophyllia cylindrica* (Milne Edwards & Haime, 1848)

**MUSSIDAE Ortmann, 1890**

*Acanthastrea bowerbanki* Milne Edwards & Haime, 1857  
*Acanthastrea echinata* (Dana, 1846)  
*Acanthastrea hillae* Wells, 1955  
*Acanthastrea rotundiflora* Chevalier, 1975  
*Blastomussa wellsi* Wijsman-Best, 1973  
*Blastomussa merleti* (Wells, 1961)  
*Cynarina lacrymalis* (Milne Edwards & Haime, 1848)  
*Lobophyllia corymbosa* (Forsk., 1775)  
*Lobophyllia costata* (Dana, 1846)  
*Lobophyllia hataii* Yabe, Sugiyama & Eguchi, 1936  
*Lobophyllia hemprichii* (Ehrenberg, 1834)  
*Lobophyllia pachysepta* Chevalier, 1975  
*Scolymia australis* (Milne Edwards & Haime, 1849)  
*Scolymia fungiformis* Chevalier, 1975  
*Scolymia vitiensis* Brüggemann, 1877  
*Symphyllia agaricia* Milne Edwards & Haime, 1849  
*Symphyllia radians* Milne Edwards & Haime, 1849  
*Symphyllia recta* (Dana, 1846)  
*Symphyllia valenciennesi* Milne Edwards & Haime, 1849

**OCULINIDAE Gray, 1847**

*Acrohelium horrescens* (Dana, 1846)  
*Galaxea astreata* (Lamarck, 1816)  
*Galaxea fascicularis* (Linnaeus, 1758)

**PECTINIIDAE Vaughan & Wells, 1943**

*Echinophyllia aspera* (Ellis & Solander, 1786)  
*Echinophyllia echinata* (Saville-Kent, 1871)  
*Echinophyllia orpheensis* Veron & Pichon, 1979  
*Mycedium elephantotus* (Pallas, 1766)  
*Oxypora glabra* Nemenzo, 1959  
*Oxypora lacera* (Verrill, 1864)  
*Pectinia alpicornis* (Saville-Kent, 1871)  
*Pectinia lactuca* (Pallas, 1766)  
*Pectinia paeonia* (Dana, 1846)

**POCILLOPORIDAE Gray, 1842**

*Madracis kirbyi* Veron & Pichon, 1976  
*Palauastrea ramosa* Yabe & Sugiyama, 1941  
*Pocillopora damicornis* (Linnaeus, 1758)  
*Pocillopora eydouxi* Milne Edwards & Haime, 1860  
*Pocillopora meandrina* Dana, 1846  
*Pocillopora verrucosa* (Ellis & Solander, 1786)  
*Pocillopora woodjonesi* Vaughan, 1918  
*Seriatopora caliendrum* Ehrenberg, 1834  
*Seriatopora hystrix* Dana, 1846  
*Stylophora mordax* (Dana, 1846)  
*Stylophora pistillata* (Esper, 1797)

**PORITIDAE Gray, 1842**

*Alveopora allingi* Hoffmeister, 1925  
*Alveopora catalai* Wells, 1968  
*Alveopora fenestrata* (Lamarck, 1816)  
*Alveopora spongiosa* Dana, 1846  
*Alveopora tizardi* Bassett-Smith, 1890  
*Alveopora verrilliana* Dana, 1872



*Goniopora columna* Dana, 1846  
*Goniopora djiboutiensis* Vaughan, 1907  
*Goniopora fruticosa* Saville-Kent, 1891  
*Goniopora lobata* Milne Edwards & Haime, 1851  
*Goniopora minor* Crossland, 1952  
*Goniopora norfolkensis* Veron & Pichon, 1982  
*Goniopora pandoraensis* Veron & Pichon, 1982  
*Goniopora somaliensis* Vaughan, 1907  
*Goniopora stokesi* Milne Edwards & Haime, 1851  
*Goniopora stutchbury* Wells, 1955  
*Goniopora tenuidens* Quelch, 1886  
*Porites australiensis* Vaughan, 1918  
*Porites cylindrica* Dana, 1846  
*Porites lichen* Dana, 1846  
*Porites lobata* Dana, 1846  
*Porites lutea* Milne Edwards & Haime, 1860  
*Porites murrayensis* Vaughan, 1918  
*Porites nigrescens* Dana, 1846  
*Porites rus* (Forsk., 1775)  
*Porites solida* (Forsk., 1775)  
*Porites vaughani* Crossland, 1952

**PSAMMOCORIDAE Chevalier & Beauvais, 1987**

*Psammocora contigua* (Esper, 1797)  
*Psammocora digitata* Milne Edwards & Haime, 1851  
*Psammocora explanulata* Van der Horst, 1922  
*Psammocora haimeana* Milne Edwards & Haime, 1851  
*Psammocora nierstraszi* Van der Horst, 1921

**SIDERASTREIDAE Vaughan & Wells 1943**

*Coscinaraea columna* (Dana, 1846)  
*Coscinaraea exesa* (Dana, 1846)  
*Coscinaraea monile* (Forsk., 1775)  
*Coscinaraea wellsii* Veron & Pichon, 1980

**TRACHYPHYLLIIDAE Verrill, 1901**

*Trachyphyllia geoffroyi* (Audouin, 1826)



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*Favia rotundata*

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II7

Volume spécial

COMPENDIUM  
of marine species from  
New Caledonia



Edited by  
CLAUDE E. PAYRI  
Bertrand RICHER DE FORGES



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