

A Guide to 1,000 Foraminifera from Southwestern Pacific: New Caledonia

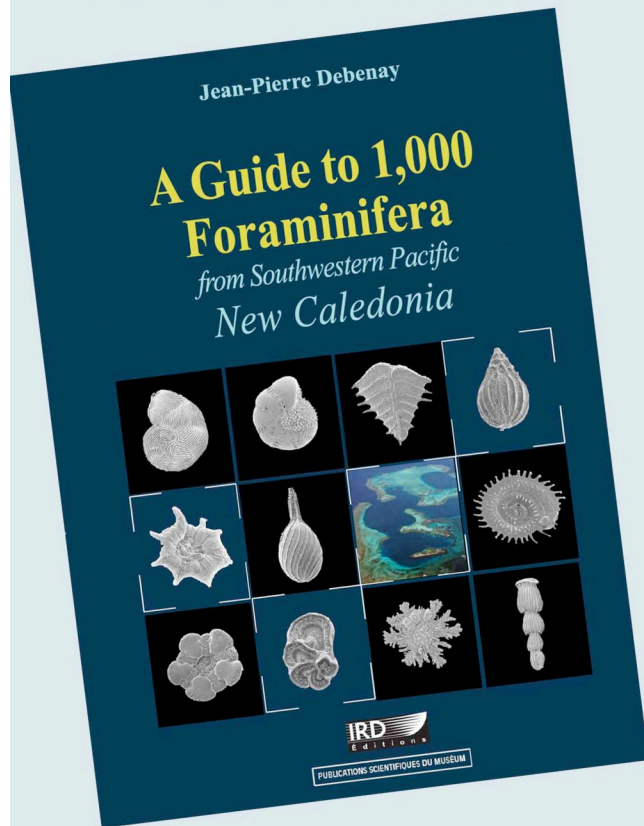
The main part of this book describes and illustrates 1,043 species of foraminifera collected in about 1,000 samples from New Caledonia. For each species SEM micrographs are associated with a description and notes on its distribution.

Introductory parts describe the regional setting and the characteristics of New Caledonia, provide an introduction to foraminifera, and give a synthesis of the main results published on Recent foraminifera from New Caledonia.

The mode of presentation of foraminiferal species aims to facilitate their identification, even by non-specialists. In this objective, species are not presented in accordance with the usual classification of foraminifera, which would be obscure to non-specialists, but they are grouped on the basis of (1) the nature of the test and (2) the

dominant morphological feature as it appears at first sight. In each group, species are arranged in alphabetical order. The systematics has been separated from the description in order to lighten the presentation for non-specialists.

It is hoped that this work will be helpful to professional micropaleontologists, researchers, students, as well as sand collectors who find a lot of foraminifera in their samples. It aims also to offer environmental managers and all person interested in lagoonal environment and protection the access to this invaluable tool for environment monitoring that are benthic foraminifera.



La partie principale de cet ouvrage décrit et illustre 1 043 espèces de foraminifères, récoltées dans environ 1 000 échantillons de Nouvelle-Calédonie. Pour chaque espèce, les images au MEB sont associées à une description et une note sur le site de récolte. Les parties introductives décrivent l'environnement régional et les caractéristiques de la Nouvelle-Calédonie, proposent une initiation aux foraminifères, et donnent une synthèse des principaux résultats publiés sur les foraminifères récents de Nouvelle-Calédonie. Le mode de présentation des espèces cherche à faciliter l'identification, même par des non-spécialistes. Dans ce but, les espèces ne sont pas présentées selon la classification habituelle qui serait absconse pour les non-spécialistes, mais sont groupées sur la base 1) de la nature du test et 2) du caractère morphologique dominant. Dans chaque groupe, les espèces sont classées en ordre alphabétique. La systématique a été séparée de la description pour alléger la présentation pour les non-spécialistes.



Nous espérons que ce travail sera utile aux micropaléontologistes professionnels, aux chercheurs, aux étudiants, ainsi qu'aux collectionneurs de sables qui trouvent de nombreux foraminifères dans leurs échantillons. Il vise aussi à offrir, aux responsables de l'environnement et à toute personne concernée par l'environnement lagunaire et sa protection, l'accès à cet outil inestimable pour la surveillance de l'environnement que sont les foraminifères.

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1 When the nature of the test has been recognized, a preliminary determination of the species can be made using the photographic summary that is organized in sections based on the nature of the test and on the dominant morphological feature.

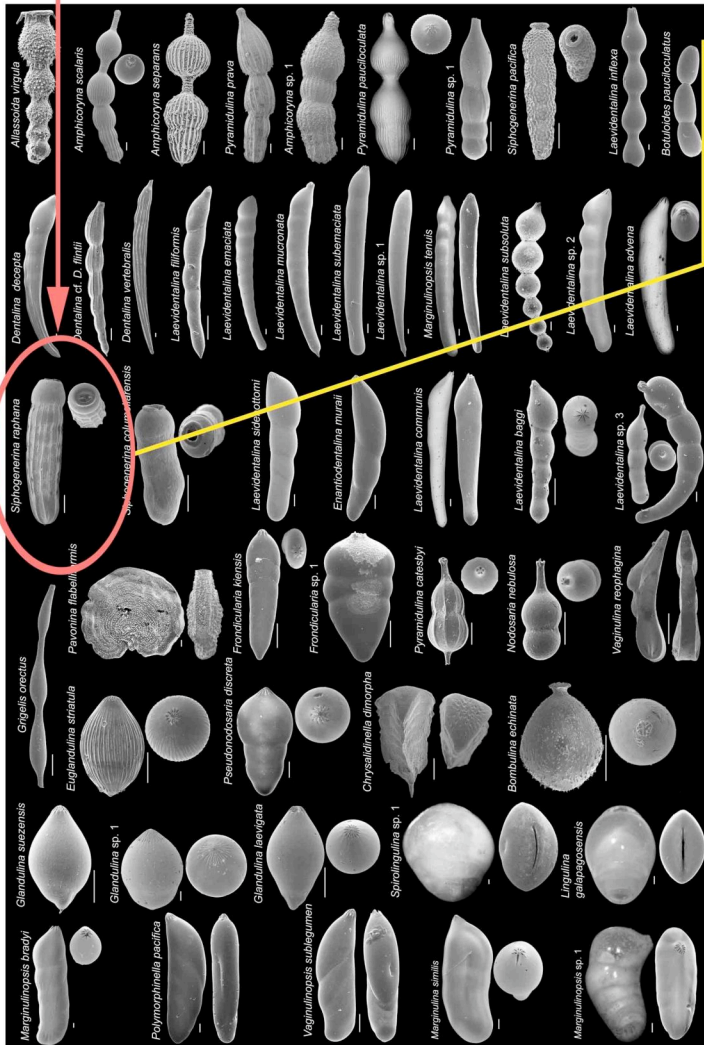


Plate 11

Hyaline uniserial species. Scale bar = 0.1 mm.

2 The validity of this identification will be confirmed or not by consulting the description that can be reached through the alphabetical index of taxa at genus and species level.

As often as possible, the description is directly based on the original type description, or on a publication that has referred to the original description and figures

Siphogenerina
Siphogenerina columellarensis
 Test elongate, cylindrical; initial end, rounded or subacute, oral extremity convex and broad; early chambers biserially arranged, then uniserial for most of the test; sutures distinct, thick and slightly depressed; wall smooth, with short and faint costae across the sutures; aperture terminal, large, circular and surrounded by a lip.
 Coastal bay, 5-10 m, Bay of Prony, 20 m.
 Systematics p. 302.

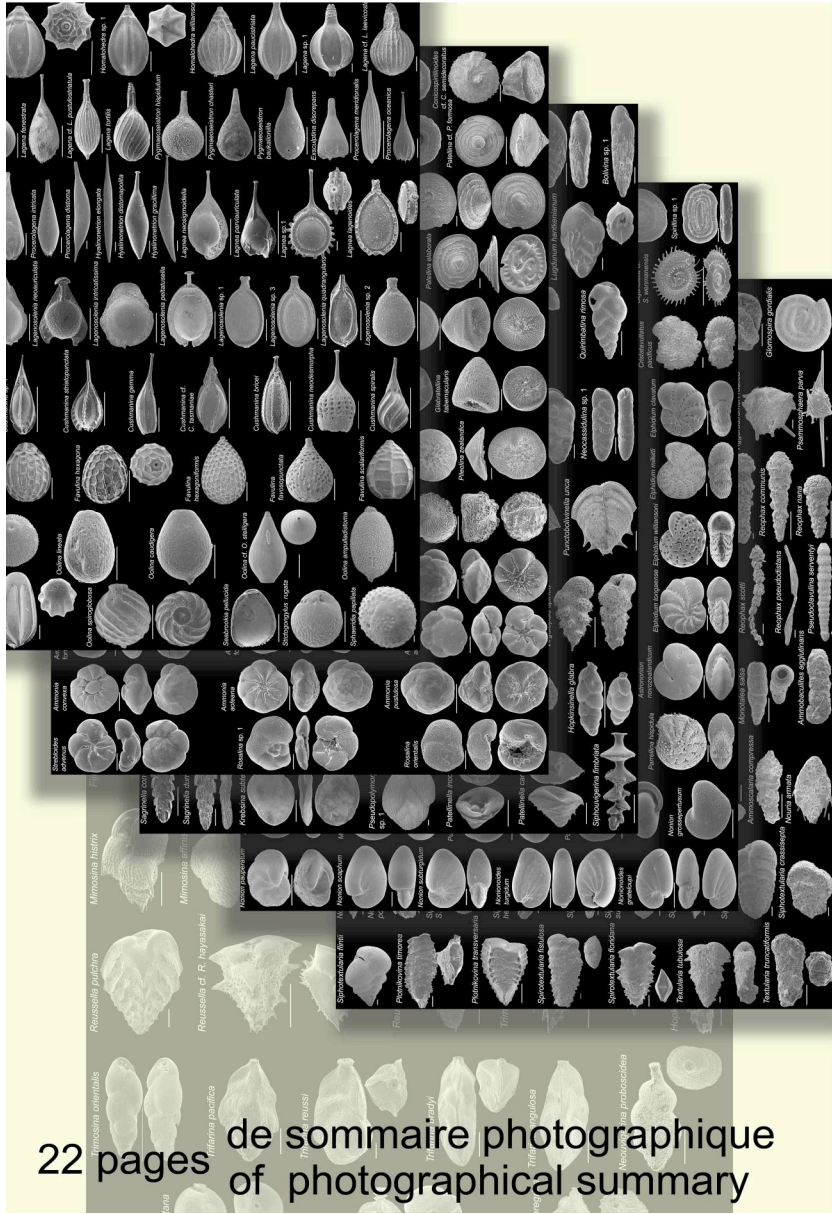
Siphogenerina raphana
 Test elongate, cylindrical, tapering slightly toward the initial end, initial end rounded, oral end convex and broad; early chambers biserially arranged, later uniserial and rectilinear for most of the test; sutures distinct slightly depressed; wall ornamented by several prominent longitudinal costae regularly spaced and running the full length of the test; aperture circular, surrounded by a prominent lip.
 Bay of Prony, 20 m.
 Systematics p. 302.

<i>stultis Marginalina</i>	167, 288	<i>sphaerica Armoretta</i>	77, 252
<i>simplex Cribrostrata</i>	325	<i>sphaerica Adranamina</i>	252
<i>simplex Elphidium</i>	325	<i>sphaerica Succammina</i>	252
<i>simplex Fijetia</i>	180, 304	<i>Sphaeridia papillata</i>	161, 308
<i>simplex Nodophragmatidium</i>	267	<i>Sphaeridia rugata</i>	326
<i>simplex Porosonouton</i>	230, 325	<i>Sphaerogypsinia globata</i>	249, 317
<i>simplex Reussella</i>	305	<i>Sphaerogypsinia globulus</i>	317
<i>simplex Trimosina</i>	304	<i>Sphaeroidina bulboides</i>	249, 311
<i>simplexissima Paratrochammina</i>	87, 258	<i>Sphaeroidina cortica</i>	307
<i>Stuotoculina lunata</i>	131, 277	<i>sphaeroidiniforme Haplophragmium</i>	76, 257
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<i>Siphonaptera anguina</i>	270	<i>Spiculifera Hyperammina</i>	84, 253
<i>Siphonaptera enoplostoma</i>	273	<i>Spiculifera Reophax</i>	255
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		<i>Spincterules compressus</i>	232, 287

3 Through the alphabetical index, specialists may also find the list of synonyms that is provided with up to four references for each species (except a few species that needed a little more), including reference to the original type description, and publications that have illustrated the species. The list of synonyms may also be found with the page number indicated after the description of each species

1884 *Sagrina columellaris* Brady - Brady, p. 581, pl. 75, figs 15-17.
 1960 *Rectobolinita columellaris* (Brady) - Barker, p. 156, pl. 75, figs 15-17.
 1994 *Siphogenerina columellaris* (Brady) - Jones, p. 87, pl. 75, figs 15-17.
 +*Siphogenerina pacifica*, Cushman, 1926 - p. 169
 1926a *Siphogenerina dimorpha* (Parker & Jones) var. *pacifica* - Cushman, p. 13, pl. 2, fig. 4
 1960 *Rectobolinita dimorpha* (Parker & Jones) var. *pacifica* (Cushman) - Barker, p. 158, pl. 75, fig. 15-17.
 1994 *Siphogenerina pacifica* (Cushman) - Loeblich & Tappan, p. 123, pl. 241, figs 1-9.
Siphogenerina raphana (Parker & Jones, 1865) - p. 169
 1865 *Utriginina (Sagrina) raphanus* - Parker & Jones, p. 364, pl. 18, figs 16-17.
 1884 *Sagrina raphanus* (Parker & Jones) - Brady, p. 585, pl. 75, figs 21-22.
 1926b *Rectobolinita raphana* (Parker & Jones) - Hatta & Ujike, p. 174, pl. 26, figs 11-12.
 1999 *Siphogenerina raphana* (Parker & Jones) - Hayward *et al.*, p. 130, pl. 9, fig. 4.

**Siphogenerina tropicalis* Cushman
 Family Buliminidae T.R. Jones, 1875
Bulimina d'Orbigny, 1826
 +*Bulimina biserialis* Millett, 1900 - p. 179



22 pages de sommaire photographique
of photographical summary



With about 10,000 species living in salted and brackish waters, foraminifera constitute the most diverse group of shelled microorganisms in modern oceans, and substantially contribute to biodiversity. Abundant and sensitive to environmental conditions, they constitute one of the most valuable tools for environmental assessment and monitoring programs. Preservation of their mineralized test in the sediment allows the reconstruction of past conditions, including Global Change.

This guide first presents the regional setting and environmental conditions prevailing around New Caledonia. The following sections give an introduction to foraminifera, designed to be accessible to non-specialists, and summarize the main researches that have been carried out on foraminifera from New Caledonia. The main part of the guide describes and illustrates more than 1,000 species of foraminifera collected in a great variety of environments around New Caledonia. For each species, SEM micrographs are associated with a description and notes on its distribution. In order to facilitate identification, even by non-specialists, species are recorded in alphabetical order within groups made on the basis of (1) the nature of the test and (2) the dominant morphological feature. A photographic summary is provided for preliminary identification.

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