Sea snakes from New Caledonia and the Loyalty Islands (Elapidae, Laticaudinae and Hydrophiinae)

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ABSTRACT
The collections of the Muséum national d'Histoire naturelle, Paris, include 198 sea snakes from New Caledonia and the Loyalty Islands, representing twelve species. *Hydrophis macdowelli* and *H. spiralis* are reported for the first time, *Hydrophis major* and *H. ornatus* confirmed for the area, while the previous record of *H. gracilis* is attributed to *H. coggeri*. Only *H. caerulescens*, reported from this area, was not present in our material. A key is provided for all sea snakes known from New Caledonia and the Loyalty Islands.

KEY WORDS
New Caledonia,
Loyalty Islands,
sea snakes,
Elapidae,
Laticaudinae,
Hydrophiinae,
MNHN collections.

RÉSUMÉ
Les collections du Muséum national d'Histoire naturelle, Paris, renferment 198 spécimens de serpents marins de Nouvelle-Calédonie et des îles Loyauté. Ce matériel comprend douze espèces. *Hydrophis macdowelli* et *H. spiralis* sont mentionnés pour la première fois, *H. major* et *H. ornatus* sont confirmés pour la région, tandis que la mention d'*H. gracilis* est attribuée à *H. coggeri*. Seul *Hydrophis caerulescens*, signalé de la région, n'est pas présent dans le matériel examiné. Une clé d'identification des serpents marins de Nouvelle-Calédonie et des îles Loyauté est fournie.

MOTS CLÉS
Nouvelle-Calédonie,
îles Loyauté,
serpents marins,
Elapidae,
Laticaudinae,
Hydrophiinae,
collections MNHN.

INTRODUCTION

A comprehensive collection of sea snakes from New Caledonia and the Loyalty Islands, collected and donated (1990) by Philippe Bourret and Pierre Laboute, gives a most welcome opportunity to review the whole sea snakes collection from this area in the MNHN. The most recent review of the sea snakes from New Caledonia is the one by Bauer & Vindum (1990), who confirmed the occurrence of the following eight species: *Acalyptophis peroni*, *Aipysurus duboisi*, *A. laevis*, *Emydocephalus annulatus*, *Hydrophis coggeri*, *Laticauda colubrina*, *L. laticaudata* and *Pelamis platurus*. Further, Bauer & Vindum (1990) mentioned three species - *Hydrophis gracilis*, *H. major* (formerly *Disteira major*, see Rasmussen 1995) and *H. ornatus* - as being reported in the literature, but not verified by themselves.

The present study adds two species to Bauer & Vindum's list (1990) (*Hydrophis macdowelli* and *H. spiralis*), confirms two others (*H. major* and *H. ornatus*) and attributes the initial report of *H. gracilis* by Gail & Rageau (1958) to *H. coggeri*, thus giving a total of thirteen species (twelve confirmed, one unconfirmed) from New Caledonia and the Loyalty Islands.

MATERIAL AND METHODS

A total of 198 sea snake specimens from New Caledonia and the Loyalty Islands - all located in the Muséum national d'Histoire naturelle, Paris (MNHN) - was examined during this study (Appendix). Using the key given below, it is important to remember that the number of scale rows around the neck is the minimum count and the count around the body the maximum count. To be sure to find the minimum count around the neck, it is necessary to count the scale rows three or four times, starting one-and-a-half head length behind the head. When counting the scale rows around the body, the maximum is normally just behind the mid-body, but again to be sure of finding the maximum, it is a good idea to make three or four counts between the mid-body and the vent. The general distribution of each species from New Caledonia and the Loyalty Islands, taken from Rasmussen (submitted), is mentioned in the key. The names of the recognised taxa follow Golay *et al.* (1993), except for *Disteira* which is currently considered a subjective synonym of *Hydrophis*, in accordance with Rasmussen (1995).

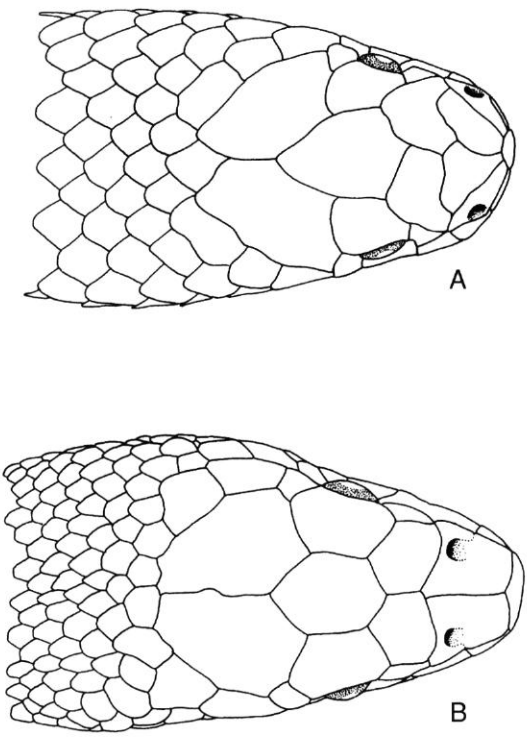

FIG. 1. — Dorsal view of the head of *Laticauda laticaudata* (**A**) and *Hydrophis ornatus* (**B**), respectively showing the presence and the absence of internasals.

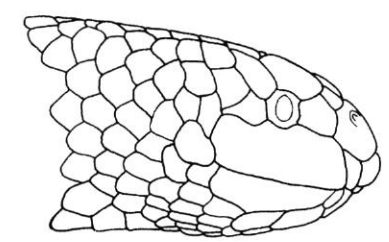

FIG. 2. — Lateral view of the head of *Emydocephalus annulatus*, showing the three supralabials, the second very elongated.

KEY TO THE SEA SNAKES OF NEW CALEDONIA AND THE LOYALTY ISLANDS

1. a. Nasals separated by the internasals (Fig. 1A) 2
   b. Nasals not separated by the internasals (Fig. 1B) 3

2. a. 19 scale rows around body; upper lip dark ..... *Laticauda laticaudata*
   General distribution: East India, Indo-Malayan Archipelago, South China Sea, Philippines, Indonesia and Australian region.
   b. 21-25 scale rows around body; upper lip yellow ..... *Laticauda colubrina*
   General distribution: East India, Indo-Malayan Archipelago, South China Sea, Philippines, Indonesia and Australian region.

3. a. Three supralabials, second very elongated (Fig. 2) ..... *Emydocephalus annulatus*
   General distribution: North Australia, from Timor Sea in west to Loyalty Islands in east.
   b. More than four supralabials 4

4. a. Ventrals large, each at least three times as broad as adjacent body scales 5
   b. Ventrals small or absent, each not more than twice as broad as adjacent body scales 6

5. a. 19 scale rows around body ..... *Aipysurus duboisi*
   General distribution: from western Australia to New Caledonia in east and New Guinea in north.
   b. 21-23, rarely 25, scale rows around body ..... *Aipysurus laevis*
   General distribution: from western Australia to Loyalty Islands in east and New Guinea in north.

6. a. Spines present on rear edge of some of the head shields ..... *Acalyptophis peroni*
   General distribution: Gulf of Thailand, Vietnam and the Australian region.
   b. Spines absent from head shields 7

7. a. Head elongated, with snout bill-like and flattened, gape opening very wide, colour pattern normally black dorsally and yellow ventrally (Fig. 3) ..... *Pelamis platurus*
   General distribution: Indian Ocean and Pacific.
   b. Head not elongated, body normally with bands 8

8. a. At least 30 scale rows around neck 9
   b. Less than 30 scale rows around neck 12

9. a. At least 9 maxillary teeth behind poisonfang 10

   b. Less than 9 maxillary teeth behind poisonfang 11

10. a. At least 14 maxillary teeth behind poisonfang ..... *Hydrophis caerulescens*
    General distribution: Indian Ocean, Indo-Malayan Archipelago, South China Sea, Indonesia, Arafura Sea and Gulf of Carpentaria.
    b. Less than 14 maxillary teeth behind poisonfang ..... *Hydrophis ornatus*
    General distribution: Indian Ocean, Indo-Malayan Archipelago, South China Sea, Philippines, Indonesia, northern Australia and southern New Guinea.

11. a. Less than 280 ventrals ..... *Hydrophis major*
General distribution: western Australia to New Caledonia in east.
b. At least 280 ventrals 12

12. a. Flanks of body with two or three series of markings, head very small and body compressed posteriorly ..... *Hydrophis macdowelli*
General distribution: northern Australia and New Caledonia.
b. Flanks of the body without two or three series of markings 13

13. a. Interspaces between dark bands 2-4 times broader than bands behind ..... *Hydrophis spiralis*
General distribution: Indian Ocean, Indo-Malayan Archipelago, South China Sea and Indonesia.
b. Interspaces between dark bands same as or smaller than bands behind ..... *Hydrophis coggeri*
General distribution: North coast of Australia, New Caledonia, Vanuatu and Fiji.

DISCUSSION

Bavay (1869) recorded a specimen of *Hydrophis protervus* Jan, 1859 from Lifou. Later Boulenger (1896) synonymised *H. protervus* with *Disteira major* and included the specimen from Lifou. This action was followed by Roux (1913), whereas Smith (1926) synonymised *H. protervus* with *H. caerulescens*, without mentioning the specimen from Lifou. Following Roux (1913), Gail & Rageau (1958) probably considered the specimen from Lifou as *H. caerulescens*. In addition, they mentioned three other specimens from New Caledonia and île des Pins, which they also identified as *H. caerulescens*. Saint Girons (1964) examined a female sea snake from New Caledonia and identified it as *H. caerulescens* as well.

Gail & Rageau (1958) recorded *Microcephalophis gracilis* (actually *Hydrophis gracilis*) for the first time from New Caledonia.

In 1985 Minton & Dunson cited Gail & Rageau (1958) as reporting Forné's (1888) record of *H. ornatus ocellatus* from New Caledonia. It was neither possible for us to see Forné's (1888) paper, and we only find *Hydrophis* sp. in Gail & Rageau's (1958) report of Forné (1888), thus indicating that Minton & Dunson (1985) were misquoted. Moreover, Boulenger (1896) mentioned a *Hydrophis* sp., synonymised under *Disteira major*, as the only specimen mentioned by Forné (1888). Forné's (1888) specimen was not mentioned neither by Wall (1909) nor by Smith (1926).

The sea snake material from MNHN adds two new records from the waters of New Caledonia:

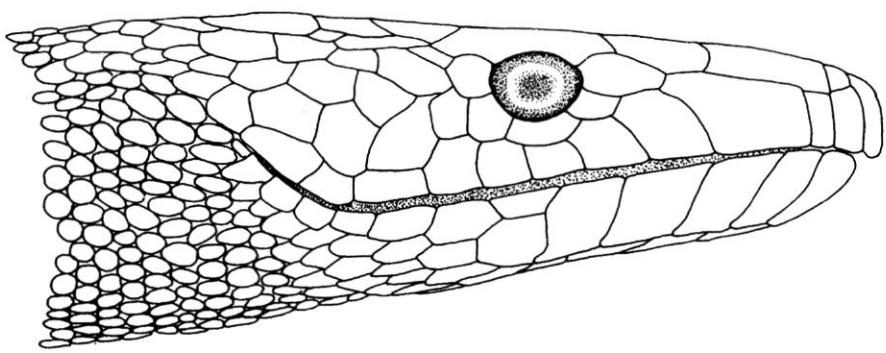

FIG. 3. — Lateral view of the head of *Pelamis platurus*, showing the flattened snout and the very wide gape.

H. macdowelli and *H. spiralis*. It is not surprising to find *H. macdowelli* in New Caledonian waters as this species has been found in northern Australia, tropical Queensland and on Chesterfield Reefs (Cogger 1975: *Hydrophis* sp.; Dunson 1975: *Hydrophis* sp., fig. 4, left hand; Minton & Dunson 1985: *Hydrophis* sp. 2). However, it is surprising to find *H. spiralis*, which has only been caught in Asian waters (Smith 1943; Golay *et al.* 1993) (see below, under discussion of *H. ornatus*).

We have examined one specimen determined by Gail & Rageau (1958) as "*M. gracilis*" [*Microcephalophis gracilis*] (MNHN 1994.6991), and two specimens determined as *H. caerulescens* (MNHN 1994.3130 and 1994.3132). All three specimens correspond to *H. coggeri*, hence we delete *H. gracilis* from the list of New Caledonian sea snakes. We can confirm the occurrence of *H. major* from New Caledonia, as we have four specimens from that area, and at least one of them was collected in the nineteenth century (MNHN 5945, see Appendix), perhaps corresponding to Forné's (1888) *Hydrophis* sp. We can also confirm the occurrence of *H. ornatus* from New Caledonia, despite the fact that earlier records of this species in the literature may be erroneous. Comparing *H. ornatus* from New Caledonia with specimens from the coast of Australia, the New Caledonia specimens look like typical *H. ornatus ornatus* from Asia, as they do not have the deep body with many ocelli on the flank like the Australian *H. o. ocellatus* specimens. Likewise, the number of scale rows around the body is similar to the one of *H. o. ornatus*, whereas *H. o. ocellatus* has a higher number of scale rows around the body. Taking into account *H. spiralis*, *L. laticaudata* and *L. colubrina*, together with *H. o. ornatus*, it seems that there is a biogeographical interaction between the Asian and New Caledonian sea snake faunas, excluding the waters between New Guinea and Australia. However, a thorough phylogenetic analysis of the sea snakes is necessary before any consideration about the historical pattern.

After this study, only one species (*H. caerulescens*) mentioned in the literature remains unconfirmed from New Caledonia and the Loyalty Islands.

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APPENDIX

List of the specimens examined from the Paris Natural History Museum collections. Species are arranged alphabetically within their subfamily. Within each species, specimens are arranged chronologically by their MNHN collection number. Also given are the collection localities, collectors and date of collection, and the donator.

LATICAUDINAE

Laticauda colubrina (Schneider, 1799)
31 specimens:
MNHN **3966**, New Caledonia, leg. Arnoux;
MNHN **3967**, New Caledonia, leg. Penard;
MNHN **5881**, New Caledonia, leg. Bertholoz, 1881;
MNHN **6072**, New Caledonia, leg. Castelnau, 1877;
MNHN **7701**, New Caledonia, leg. Arnoux;
MNHN **9053**, New Caledonia, Saint Vincent Bay, 50 km NW of Nouméa, leg. Bossot;
MNHN **1886.385-388**, Loyalty Islands, leg. Cailliot, 1886;
MNHN **1894.247**, Loyalty Islands, Maré, leg. François, 1894;
MNHN **1935.332-333**, Loyalty Islands, Lifou, leg. Mme Pruvot;
MNHN **1963.779-780**, New Caledonia, Marmite Islet, SW of Nouméa, leg. R. Hoffstetter;
MNHN **1978.494**, New Caledonia, Great Reef, leg. Dr. Merlet, April 1963;
MNHN **1986.134**, New Caledonia, Nouméa, leg. Latoxan, 1982;
MNHN **1989.3808**, New Caledonia, leg. Arnoux (formerly part of MNHN 3966);
MNHN **1990.4545**, New Caledonia, leg. P. Bourret No. 27;
MNHN **1990.4546**, New Caledonia, leg. P. Bourret No. 57;
MNHN **1990.5080**, New Caledonia, leg. P. Bourret No. 58;
MNHN **1990.5081**, Loyalty Islands, Ouvéa, Wawyahob, leg. Waigna Sella, 12h05, 26.I.1974, don. P. Bourret;
MNHN **1990.5082**, New Caledonia, Voh, southwest coast of New Caledonia, leg. Gail & Rageau No. 13, May 1956, don. P. Bourret;
MNHN **1990.5083** (juvenile), New Caledonia, leg. P. Bourret No. 92;
MNHN **1990.5084**, New Caledonia, leg. P. Bourret No. 52;
MNHN **1990.5085**, New Caledonia, leg. P. Bourret No. 91;
MNHN **1990.5086**, New Caledonia, Nouméa, îlot Maître, leg. Gail & Rageau, "J. Feinicha No. 4", 23.IV.1956, don. P. Bourret;
MNHN **1990.5087**, New Caledonia, Nouméa, Anse Vata, leg. Gail & Rageau, 23.II.1959, don. P. Bourret;
MNHN **1990.5088**, New Caledonia, leg. P. Bourret No. 60;
MNHN **1990.5093**, New Caledonia, leg. P. Bourret No. 82;
MNHN **1990.5094**, New Caledonia, leg. P. Bourret.

Laticauda laticaudata (Linné, 1758)
21 specimens:
MNHN **1993.648-649** (formerly A648-A649), New Caledonia, near Nouméa;
MNHN **696**, New Caledonia, leg. Musée des Colonies, 1963;
MNHN **4203**, New Caledonia, leg. Braguy, 1874;
MNHN **4307**, New Caledonia, leg. Vignes, 1875;
MNHN **6071**, New Caledonia, leg. Réveillière, 1880;
MNHN **8343**, New Caledonia, August 1948;
MNHN **1887.276-277**, New Caledonia, leg. Marie, 1887;
MNHN **1979.3839**, New Caledonia, Saint Vincent Bay, leg. Y. Plessis, August 1961;
MNHN **1986.133**, New Caledonia, Nouméa, leg. Latoxan, 1982;
MNHN **1986.585**, New Caledonia, leg. École Normale Supérieure;
MNHN **1990.4502**, New Caledonia, Signal Islet, leg. P. Laboute, 1987, don. P. Bourret;
MNHN **1990.4503**, New Caledonia, récif Croissant, leg. P. Laboute snake No. 12, 7.VIII.1990, don. P. Bourret;
MNHN **1990.4547**, New Caledonia, leg. P. Bourret No. 64;
MNHN **1990.5089**, New Caledonia, Rual, Tiaré Reef, leg. P. Bourret, 18.XII.1974;
MNHN **1990.5090**, New Caledonia, leg. P. Bourret No. 58;
MNHN **1990.5091**, New Caledonia, leg. P. Bourret;
MNHN **1990.5092**, New Caledonia, Nouméa, Anse Vata,

leg. P. Bourret, January 1978;
MNHN **1990.5173**, New Caledonia, Nouméa, Anse Vata, leg. Gail & Rageau No. 3, 22.IX.1955, don. P. Bourret;
MNHN **1994.735** (formerly part of MNHN 696), New Caledonia, leg. Musée des Colonies, 1963.

HYDROPHIINAE

Acalyptophis peroni (A. M. C. Duméril, 1853)
10 specimens:
MNHN **1990.4510-4512**, New Caledonia, north lagoon, leg. P. Laboute snake No. 7, 8.III.1990, dissected gravid female with two embryos nearly mature, don. P. Bourret;
MNHN **1990.4516**, New Caledonia, north lagoon, leg. P. Laboute snake No. 7, May 1990, don. P. Bourret;
MNHN **1990.4517**, New Caledonia, north lagoon, leg. P. Laboute snake No. 7, May 1990, don. P. Bourret;
MNHN **1990.4518**, New Caledonia, north lagoon, leg. P. Laboute snake No. 7, May 1990, don. P. Bourret;
MNHN **1990.4544**, New Caledonia, leg. P. Bourret No. 40;
MNHN **1990.5133**, New Caledonia, Gnierma, leg. P. Bourret, 30.III.1976;
MNHN **1990.5134**, New Caledonia, leg. P. Bourret No. 62;
MNHN **1990.5135**, New Caledonia, leg. P. Bourret No. 59.

Aipysurus duboisi Bavay, 1869
16 specimens:
MNHN **1978.495**, New Caledonia, Signal Islet, leg. Magnier, 3.I.1963;
MNHN **1990.4519**, New Caledonia, north lagoon, leg. P. Laboute snake No. 15, May 1990, don. P. Bourret;
MNHN **1990.4520**, New Caledonia, north lagoon, May 1990, leg. P. Laboute snake No. 15, don. P. Bourret;
MNHN **1990.4521**, New Caledonia, north lagoon, leg. P. Laboute snake No. 15, May 1990, dissected gravid female with a foetus, don. P. Bourret;
MNHN **1990.4522**, New Caledonia, north lagoon, leg. P. Laboute snake No. 15, May 1990, don. P. Bourret;
MNHN **1990.4523**, New Caledonia, north lagoon, leg. P. Laboute snake No. 15, May 1990, don. P. Bourret;
MNHN **1990.4541**, New Caledonia, leg. P. Bourret No. 79;
MNHN **1990.4542**, New Caledonia, leg. P. Bourret No. 73;
MNHN **1990.4543**, New Caledonia, leg. P. Bourret No. 76;
MNHN **1990.5127**, New Caledonia, leg. P. Bourret No. 54;
MNHN **1990.5128**, New Caledonia, leg. P. Bourret No. 81;
MNHN **1990.5129**, New Caledonia, leg. P. Bourret No. 53;
MNHN **1990.5130**, New Caledonia, Unilö, leg. P. Bourret;
MNHN **1990.5131**, New Caledonia, leg. P. Bourret No. 18 or 81?;
MNHN **1990.5132**, New Caledonia, leg. P. Bourret No. 55;
MNHN **1990.5136**, New Caledonia, leg. Gail & Rageau, don. P. Bourret.

Aipysurus laevis Lacépède, 1804
24 specimens:
MNHN **639**, New Caledonia, Corvette *Le Rhin*, leg. Arnoux, 1844, type of *Aipysurus fuliginosus* Duméril, Bibron *et* Duméril, 1854;
MNHN **5065**, New Caledonia, Bay of Nouméa, leg. Cahagne, 1876;
MNHN **1990.4506**, New Caledonia, north lagoon, leg. P. Laboute snake No. 6, May 1990, don. P. Bourret;
MNHN **1990.4507**, New Caledonia, north lagoon, leg. P. Laboute snake No. 6, May 1990, don. P. Bourret;
MNHN **1990.4508**, New Caledonia, north lagoon, leg. P. Laboute snake No. 6, May 1990, don. P. Bourret;
MNHN **1990.4509**, New Caledonia, north lagoon, leg. P. Laboute snake No. 6, May 1990, don. P. Bourret;
MNHN **1990.4513-4515**, New Caledonia, southwestern lagoon, Ilot Tangue, leg. P. Laboute, 13.IV.1990, gravid dissected female with two nearly mature embryos;
MNHN **1990.4526**, New Caledonia, leg. P. Bourret No. 11;
MNHN **1990.4527**, New Caledonia, leg. P. Bourret No. 5;
MNHN **1990.4528**, New Caledonia, leg. P. Bourret No. 49;
MNHN **1990.4529**, New Caledonia, leg. P. Bourret No. 50;
MNHN **1990.4530**, New Caledonia, leg. P. Bourret No. 26;
MNHN **1990.4531**, New Caledonia, leg. P. Bourret;
MNHN **1990.4532**, New Caledonia, leg. P. Bourret No. 23;
MNHN **1990.4533**, New Caledonia, leg. P. Bourret No. 57;
MNHN **1990.5095**, New Caledonia, leg. P. Bourret No. 60;
MNHN **1990.5096**, Loyalty Islands, Ouvéa, Saint Joseph, leg. Waigna Sella, 3.X.1974, 00 h 00, don. P. Bourret;
MNHN **1990.5097**, New Caledonia, leg. P. Bourret No. 48;
MNHN **1990.5098**, New Caledonia, juvenile, leg. P. Bourret No. 49;
MNHN **1990.5099**, New Caledonia, leg. P. Bourret No. 10;
MNHN **1990.5100**, New Caledonia, leg. J. Feinicha No. 7, coll. Gail & Rageau, don. P. Bourret;
MNHN **1990.5101**, New Caledonia, leg. P. Bourret No. 71.

Emydocephalus annulatus Krefft, 1869
22 specimens:
MNHN **1935.331**, Loyalty Islands, Lifou, leg. Mme Pruvot;
MNHN **1990.4504**, New Caledonia, récif Croissant, leg. P. Laboute snake No. 47, August 1990;
MNHN **1990.4534**, New Caledonia, leg. P. Bourret No. 24;
MNHN **1990.4535**, New Caledonia, leg. P. Bourret No. 16;
MNHN **1990.4536**, New Caledonia, leg. P. Bourret No. 6;
MNHN **1990.4537**, New Caledonia, leg. P. Bourret No. 14;
MNHN **1990.4538**, New Caledonia, leg. P. Bourret;
MNHN **1990.4539**, New Caledonia, leg. P. Bourret No. 50;
MNHN **1990.4540**, New Caledonia, leg. P. Bourret No. 53;
MNHN **1990.5114**, New Caledonia, leg. P. Bourret No. 51;
MNHN **1990.5115**, New Caledonia, leg. P. Bourret No. 56;
MNHN **1990.5116**, New Caledonia, leg. P. Bourret No. 55;
MNHN **1990.5117**, New Caledonia, leg. P. Bourret No. 25;
MNHN **1990.5118**, New Caledonia, leg. P. Bourret No. 51;
MNHN **1990.5119**, New Caledonia, leg. P. Bourret No. 6 or 9?;
MNHN **1990.5120**, New Caledonia, Plum, leg. Y. Magnier, 13.X.1974, don. P. Bourret;
MNHN **1990.5121**, New Caledonia, leg. P. Bourret No. 7;
MNHN **1990.5122**, New Caledonia, leg. P. Bourret No. 8;
MNHN **1990.5123**, New Caledonia, leg. P. Bourret No. 48;
MNHN **1990.5124**, New Caledonia, leg. P. Bourret No. 85;
MNHN **1990.5125**, New Caledonia, leg. P. Bourret No. 52;
MNHN **1990.5126**, New Caledonia, leg. P. Bourret No. 54.

Hydrophis coggeri (Kharin, 1984)
11 specimens:
MNHN **1990.4505**, New Caledonia, north lagoon, leg. P. Laboute snake No. 3, May 1990;
MNHN **1990.4552**, New Caledonia, leg. P. Bourret No. 56;
MNHN **1990.4554**, New Caledonia, leg. P. Bourret No. 22;

MNHN **1990.4555**, New Caledonia, leg. P. Bourret;
MNHN **1994.3127**, New Caledonia, leg. P. Bourret;
MNHN **1994.3128**, New Caledonia, Passe Dumbea, leg. P. Bourret, February 1975, 14 h 00;
MNHN **1994.3129**, New Caledonia, Beach of Tié, Poindimié, leg. Sébastien Poagou (Tié), "old fisherman which has never seen this species before", 16.I.1974, don. P. Bourret;
MNHN **1994.3130**, coasts of New Caledonia, leg. Gail & Rageau snake No. 6, determined by these authors as *Hydrophis caerulescens*;
MNHN **1994.3131**, New Caledonia, leg. P. Bourret No. 65;
MNHN **1994.3132**, coasts of New Caledonia, leg. J. Feinicha, coll. Gail & Rageau No. 10 "*Hydrophis* (*Distira*) *caerulescens* Shaw";
MNHN **1994.6991**, coasts of New Caledonia, leg. Gail & Rageau, determined as "*Microcephalophis* ('*Distira* part.') *gracilis* (Shaw/Lesson, 1834)" by Gail & Rageau.

Hydrophis macdowelli (Kharin, 1984)
5 specimens:
MNHN **1990.4524**, northern New Caledonia, leg. P. Laboute snake No. 9, 8.III.1990;
MNHN **1990.4553**, New Caledonia, leg. P. Bourret;
MNHN **1990.4556**, New Caledonia, leg. P. Bourret No. 19;
MNHN **1994.3126**, New Caledonia, leg. P. Bourret No. 59;
MNHN **1994.6990**, New Caledonia, leg. P. Bourret No. 41.

Hydrophis major (Shaw, 1802)
4 specimens:
MNHN **4204**, New Caledonia, leg. Braguy;
MNHN **5945**, New Caledonia, leg. Reveillière, 1880;
MNHN **1990.4557**, New Caledonia, leg. P. Bourret No. 61 or 19 ?;
MNHN **1990.4558**, New Caledonia, leg. P. Bourret.

Hydrophis ornatus (Gray, 1842)
28 specimens:
MNHN **1990.4525**, New Caledonia, "L'Arégnère", leg. P. Laboute, July 1990;
MNHN **1990.4559**, New Caledonia, leg. P. Bourret No. 39;
MNHN **1990.4560**, New Caledonia, leg. P. Bourret;
MNHN **1990.4561**, New Caledonia, leg. P. Bourret No. 35;
MNHN **1994.3110**, New Caledonia, leg. P. Bourret No. 30;
MNHN **1994.3111**, New Caledonia, leg. P. Bourret No. 19 or 61?;
MNHN **1994.3112**, New Caledonia, leg. P. Bourret No. 13;
MNHN **1994.3113**, New Caledonia, leg. P. Bourret No. 28;
MNHN **1994.3114**, New Caledonia, leg. P. Bourret No. 43;
MNHN **1994.3115**, New Caledonia, leg. P. Bourret No. 86;
MNHN **1994.3116**, New Caledonia, leg. P. Bourret No. 88;
MNHN **1994.3117**, New Caledonia, leg. P. Bourret No. 29;
MNHN **1994.3118**, New Caledonia, leg. P. Bourret;
MNHN **1994.3119**, New Caledonia, leg. P. Bourret No. 69;
MNHN **1994.3120**, New Caledonia, leg. P. Bourret No. 84;
MNHN **1994.3121**, New Caledonia, leg. P. Bourret No. 33;
MNHN **1994.3122**, New Caledonia, leg. P. Bourret No. 32;
MNHN **1994.3123**, New Caledonia, leg. P. Bourret No. 87;
MNHN **1994.3124**, New Caledonia, leg. P. Bourret No. 83;
MNHN **1994.3125**, New Caledonia, leg. P. Bourret No. 78;
MNHN **1994.6989**, New Caledonia, Plum Bay, leg. P. Bourret, 15.IV.1974, 12 h 00;
MNHN **1994.6992**, New Caledonia, leg. P. Bourret No. 75;
MNHN **1994.6993**, New Caledonia, leg. P. Bourret No. 72;
MNHN **1994.6994**, New Caledonia, leg. P. Bourret No. 37;
MNHN **1994.6995**, New Caledonia, leg. P. Bourret No. 38;
MNHN **1994.6996**, New Caledonia, leg. P. Bourret No. 89;
MNHN **1994.6997**, New Caledonia, leg. P. Bourret No. 17;
MNHN **1994.6998**, New Caledonia, leg. P. Bourret No. 31.

Hydrophis spiralis (Shaw, 1802)
1 specimen:
MNHN **1994.3133**, New Caledonia, leg. P. Bourret No. 42.

Pelamis platurus (Linné, 1766)
25 specimens:
MNHN **3973**, New Caledonia;
MNHN **8345**, New Caledonia, Nouméa;
MNHN **1886.389**, Loyalty Islands, leg. Cailliot, 1886;
MNHN **1935.334-337**, Loyalty Islands, Lifou, leg. Mme Pruvot;
MNHN **1978.493**, New Caledonia, Grand Récif, leg. Dr Merlet, April 1963, don. Knoepffler;
MNHN **1988.92**, New Caledonia, Nouméa, leg. Latoxan;
MNHN **1990.4548**, New Caledonia, leg. P. Bourret No. 44;
MNHN **1990.4549**, New Caledonia, leg. P. Bourret No. 46;
MNHN **1990.4550**, New Caledonia, leg. P. Bourret No. 47;
MNHN **1990.4551**, New Caledonia, leg. P. Bourret No. 68;
MNHN **1990.5102**, New Caledonia, leg. P. Bourret No. 45;
MNHN **1990.5103**, New Caledonia, leg. P. Bourret No. 67;
MNHN **1990.5104**, New Caledonia, juvenile, leg. P. Bourret;
MNHN **1990.5105**, New Caledonia, leg. P. Bourret;
MNHN **1990.5106**, New Caledonia, Nouméa, Anse Vata, leg. Gail & Rageau No. 1, 10.IV.1956, don. P. Bourret;
MNHN **1990.5107**, New Caledonia, leg. P. Bourret;
MNHN **1990.5108**, New Caledonia, leg. P. Bourret No. 66;
MNHN **1990.5109**, New Caledonia, leg. P. Bourret No. 77;
MNHN **1990.5110**, New Caledonia, leg. P. Bourret No. 63;
MNHN **1990.5111**, New Caledonia, Porc Epic Islet, leg. P. Bourret, November 1979;
MNHN **1990.5112**, New Caledonia, leg. P. Bourret No. 62;
MNHN **1990.5113**, New Caledonia, leg. P. Bourret.