

THE LITTORAL MARINE MOLLUSCS OF NIUE ISLAND

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Abstract. Two hundred and three species of molluscs have been collected at Niue Island by Mr. N. McDowall between the years 1966-1968. These are listed together with six additional species from the Finlay and Sorrensen collections of Niue Island molluscs at the Auckland Institute and Museum. In the species list of Niue Island molluscs, figure references for each species have been cited. From a total of 209 Niue Island molluscs recorded, 83% are widely distributed throughout the Indo-Pacific, 14% are Pacific endemics and 3% are Polynesian endemics; none are endemic to Niue Island.

The molluscan fauna of Niue Island has, until recent times, been imperfectly known, and representative collections in Museums consisted of only small sample lots. The molluscan collections made by Mr. N. McDowall, a resident of Niue Island, during the years 1966-68, greatly supplement our knowledge of Niue Island's molluscs and their relationship to other Pacific faunules. Contrary to expectations, the bulk of Niue Island molluscs show a close relationship to molluscs of the Melanesian region, despite the island's geographical position within the Polynesian zoogeographic province which extends westward to the Tongan trough.

ZOOGEOGRAPHY

Niue Island, a small coral atoll situated at Lat. 19°02' S and Long. 169°50' W, is a New Zealand territory, annexed in 1901 and administered by the Department for Island Territories. Only $13\frac{3}{4}$ x $11\frac{1}{2}$ miles (22.1-34.6 km) in dimension, Niue Island lies approximately 300 miles (483 km) to the east of the Tonga group and 580 miles (933.8 km) west of the Cook Islands. Niue is a coral atoll which has undergone two successive uplifts which were responsible for the formation of the lagoon bed in the centre of the Island, and occasional deep chasms such as may be found at Matapa and Vailoa. Beneath the topsoil of the old lagoon bed is coral sand, which is prolific in Pleistocene fossils, especially *Strombus mutabilis* Swainson.

The island consists of two terraces: the west coast terrace *ca.* 400 yards (365.8 m) in width, accommodates western villages and rises to almost 100 feet (30.5 m). Beyond this terrace is the second cliff, eroded to form a steep hill, and rising to the island's highest point of 220 feet (67.1 m). A shore reef skirts the island which apart from small breaks is almost continuous. At Alofi, the main town on the west coast, the reef extends for almost 2 miles (3.2 km) northward, and attains a width of about 80 yards (73.1 m). Towards the north coast there are small reefs at Vaohina, Namoui and Oneone. A larger reef commences at Hikutavake and extends northward with occasional small breaks. Kavata reef, at the extreme north point of the island, is about 2 miles (3.2 km) long and fairly wide; there is a paucity of molluscs on

this reef. On the eastern coast of the island are small stretches of reef at Tuavao, Vaitafe, Motu, Hiola, Tautu, Vaotoi, Uani and Hakupu. At Tepa Point in the south, a reef extends for 3 miles (4.8 km) to Fakaava. West coast reefs are flat-topped coral terraces which slowly rise towards the reef edge; within the intertidal zone, coral sand is at a minimum. Beyond the reef edge there is a sharp drop to a depth of 40 feet (12.2 m) to a sand and coral-rubble terrace; from this terrace the sea-bottom gradually slopes downward for several hundred yards and is followed by a steep descent to deeper water.

Mean winter water temperatures taken in 1966 were 24.3°C, mean summer water temperatures 25.8°C. A spot check taken by Mr. McDowall in December 1967 gave a water temperature reading of 26.9°C.

The majority of Niue Island molluscs are widely distributed in the Indo-Pacific region, and the number of Pacific and Polynesian endemics is small. Orr-Maes (1967), in her study of the littoral marine molluscs of the isolated Indian Ocean Cocos-Keeling Islands, obtained rather similar distributional figures to those of Niue Island: Cocos-Keeling 82% of Indo-Pacific endemics (Niue I.—83%); Cocos-Keeling Pacific endemics 15% (Niue I.—14%, but no Indian Ocean endemics); Cocos-Keeling Indian Ocean endemics 3% (Niue I.—Polynesian endemics 3%). These figures tend to lend support to the theory of an Indo-Pacific molluscan fauna origin in the central Indo-Pacific arc (Philippines-Indonesian region), and a subsequent migration to the West and East. Towards the fringe areas of the east-west distribution, Indian Ocean and Pacific Ocean endemics have evolved through time and isolation; not only does the number of species decline in these east-west distributional fringe areas, but the percentage of Indian and Pacific Ocean endemics is more or less proportionate. On Cocos-Keeling Islands, the littoral molluscs were predominantly gastropods, while pelecypods, scaphopods and Amphineura were recorded in very small numbers. This is the case on Niue Island, where the paucity of pelecypods and scaphopods is conspicuous. Due to their shorter planktonic life, most pelecypods and scaphopods did not survive the early migrational drift towards the central Pacific.

GASTROPODA

Family TROCHIDAE

Genus *TROCHUS* Linnaeus, 1758

Trochus maculatus Linnaeus, 1758 Kira, 1959, pl. 9; fig. 1a, b

Family TURBINIDAE

Genus *TURBO* Linnaeus, 1758

Turbo(Marmarostoma) argyrostomus Linnaeus, 1753 Kira, 1959, pl. 9; fig. 6

Family NERITIDAE

Genus *NERITA* Linnaeus, 1758

Nerita albicilla Linnaeus, 1758 Kira, 1959, pl. 11; fig. 15
N. plicata Linnaeus, 1758 Kira, 1959, pl. 11; fig. 17
N. polita Linnaeus, 1758 Kira, 1959, pl. 11; fig. 19

Family ARCHITECTONIDAE

Genus *HELIACUS* d'Orbigny, 1842

Heliacus variegatus (Gmelin, 1791) Kira, 1959, pl. 12; fig. 4

Family CERITHIIDAE

Genus CERITHIUM Bruguière, 1792

- Cerithium columna** Sowerby, 1855 Habe, 1961, pl. 13; fig. 13
C.nodulosum Bruguière, 1792 Kira, 1959, pl. 12; fig. 22

Genus RHINOCLAVIS Swainson, 1840

- Rhinoclavis sinensis** (Gmelin, 1791) Kira, 1959, pl. 12; fig. 19

Family EULIMIDAE

Genus BALCIS Leach, 1847

- Balcis** c.f. **B.cumingi** (A. Adams, 1854) Orr-Maes, 1967, pl. 8; fig. K

Family CALYPTRAEIDAE

Genus CHEILEA Modeer, 1793

- Cheilea equestris** (Linnaeus, 1758) Habe & Kosuge, 1967, pl. 15; fig. 2

Family HIPPONICIDAE

Genus HIPPONIX DeFrance in Blainville, 1819

- Hipponix conicus** (Schumacher, 1817) Cernohorsky, 1968b, pl. 41; figs. 1-8

Family STROMBIDAE

Genus STROMBUS Linnaeus, 1758

- Strombus(Tricornis)thersites** Swainson, 1823 Abbott, 1960, pl. 17; fig. 1-2
S.(Euprotomus)vomer vomer (Röding, 1798) Abbott, 1960, pl. 14; fig. 7-8

This species was known to range as far eastward as the Tonga Islands, and the Niue Island record is a new range extension.

- S.(Canarium)maculatus** Sowerby, 1842 Abbott, 1960, pl. 20; fig. 13-14

The Niue Island record of this specimen is a new westward extension of this Micro-Polynesian endemic.

- S.(Canarium)mutabilis** Swainson, 1821 Abbott, 1960, pl. 20; fig. 15-16
S.(Canarium)wilsoni Abbott, 1967 Abbott, 1967, pl. 328; fig. 1-5

This recently described species was known to range as far eastward as the Fiji Islands. This new record extends the species' range considerably further east towards Polynesia.

- S.(Gibberulus)gibberulus gibbosus** (Röding, 1798) Abbott, 1960, pl. 14; fig. 26

Genus LAMBIS Röding, 1798

- Lambis truncata sebae** (Kiener, 1843) Abbott, 1961, pl. 121; fig. 9

Family NATICIDAE

Genus POLINICES Montfort, 1810

- Polinices melanostoma** (Gmelin, 1791) Orr-Maes, 1967, pl. 9; fig. E

Family OVULIDAE

Genus OVULA Bruguière, 1789

- Ovula ovum** (Linnaeus, 1758) Cernohorsky, 1967, pl. 20; fig. 118-9

Genus CALPURNUS Montfort, 1810

- Calpurnus verrucosus** (Linnaeus, 1758) Cernohorsky, 1967, pl. 21; fig. 122
C.(Procalpurnus)lacteus (Lamarck, 1811) Cernohorsky, 1967, pl. 21; fig. 121

Genus PSEUDOCYPRAEA Schilder, 1927

- Pseudocypraea adamsonii** (Sowerby, 1832) Cernohorsky, 1968a, pl. 51; fig. 14

Family TRIVIIDAE

Genus TRIVIROSTRA Jousseaume, 1884

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| Trivirostra hordacea (Kiener, 1843) | Cernohorsky, 1968a, pl. 51; fig. 19 |
| T.oryza (Lamarck, 1811) | Cernohorsky, 1967, pl. 22; fig. 133 |

Genus LACHRYMA Sowerby [1832]

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| Lachryma sulcifera (Sowerby, 1832) | Cernohorsky, 1963a, pl. 52; fig. 21a-22a |
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Family CYPRAEIDAE

Genus MAURITIA Troschel, 1863

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| Mauritia arabica (Linnaeus, 1758) | Cernohorsky, 1967, pl. 9; fig. 40 |
| M.depressa (Gray, 1824) | Cernohorsky, 1967, pl. 9; fig. 41, 41a |
| M.maculifera Schilder, 1932 | Cernohorsky, 1967, pl. 10; fig. 43 |
| M.mauritiana (Linnaeus, 1758) | Cernohorsky, 1967, pl. 10; fig. 45 |
| M.scurra (Gmelin, 1791) | Cernohorsky, 1967, pl. 10; fig. 46 |

Genus TALPARIA Troschel, 1863

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| Talparia talpa (Linnaeus, 1758) | Cernohorsky, 1967, pl. 8; fig. 31 |
| T.isabella (Linnaeus, 1758) | Cernohorsky, 1967, pl. 8; fig. 32 |

Genus CYPRAEA Linnaeus, 1758

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| Cypraea tigris (Linnaeus, 1758) | Cernohorsky, 1967, pl. 8; fig. 30 |
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Genus LYNCINA Troschel, 1863

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| Lyncina carneola (Linnaeus, 1758) | Cernohorsky, 1967, pl. 8; fig. 35 |
| L.schilderorum (Iredale, 1939) | Cernohorsky, 1967, pl. 9; fig. 38 |
| L.lynx (Linnaeus, 1758) | Cernohorsky, 1967, pl. 8; fig. 36 |
| L.ventriculus (Lamarck, 1811) | Cernohorsky, 1967, pl. 8; fig. 37 |

The radula of the species confirms the placement of the species in the genus *Lyncina* (Fig. 1)

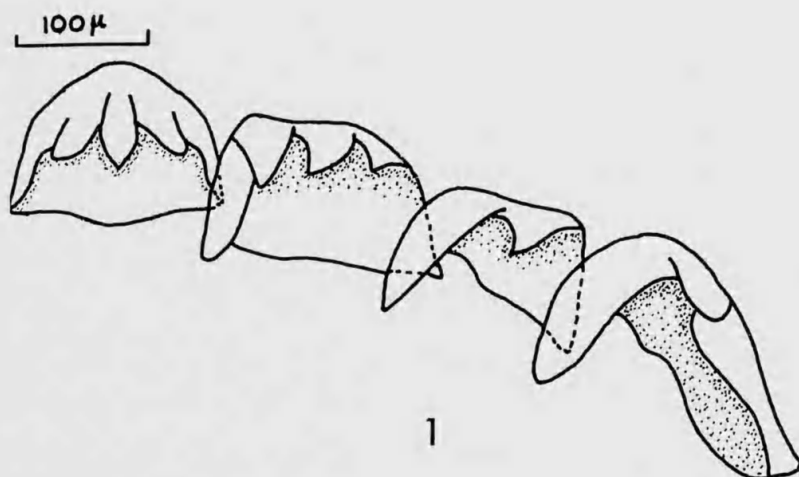


Fig. 1. Half-row of radula of *Lyncina ventriculus* (Lamarck) from Niue Island.

Genus CHELYCYPRAEA Schilder, 1927

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| Chelycypraea testudinaria (Linnaeus, 1758) | Cernohorsky, 1967, pl. 8; fig. 29 |
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Genus PUSTULARIA Swainson, 1840

Pustularia cicercula (Linnaeus, 1758) Cernohorsky, 1967, pl. 10; fig. 47

This is the species known in recent literature as *Pustularia bistrinotata* Schilder & Schilder, 1937.

P.childreni (Gray, 1825) Cernohorsky, 1967, pl. 10; fig. 48

P.globulus (Linnaeus, 1758) Cernohorsky, 1967, pl. 11; fig. 51

P.margarita (Dillwyn, 1817) Cernohorsky, 1967, pl. 11; fig. 52

P.mariae Schilder, 1927 Cernohorsky, 1967, pl. 10; fig. 49

Genus MONETARIA Troschel, 1863

Monetaria annulus (Linnaeus, 1758) Cernohorsky, 1967, pl. 11; fig. 53

M.moneta (Linnaeus, 1758) Cernohorsky, 1967, pl. 11; fig. 54

Genus EROSARIA Troschel, 1863

Erosaria caputserpentis (Linnaeus, 1758) Cernohorsky, 1967, pl. 12; fig. 59

E.dillwyni (Schilder, 1922) Cernohorsky, 1967, pl. 12; fig. 58

E.erosa (Linnaeus, 1758) Cernohorsky, 1967, pl. 12; fig. 61

E.helvola (Linnaeus, 1758) Cernohorsky, 1967, pl. 12; fig. 63

E.poraria (Linnaeus, 1758) Cernohorsky, 1967, pl. 13; fig. 65

Genus STAPHYLAEA Jousseaume, 1884

Staphylaea limacina (Lamarck, 1811) Cernohorsky, 1967, pl. 13; fig. 69

S.nucleus (Linnaeus, 1758) Cernohorsky, 1967, pl. 13; fig. 68

Genus ERRONEA Troschel, 1863

Erronea caurica (Linnaeus, 1758) Cernohorsky, 1967, pl. 14; fig. 73

Genus NOTADUSTA Schilder, 1935

Notadusta punctata (Linnaeus, 1771) Cernohorsky, 1967, pl. 16; fig. 87

Genus PALMADUSTA Iredale, 1930

Palmadusta asellus (Linnaeus, 1758) Cernohorsky, 1967, pl. 16; fig. 88

P.fimbriata (Gmelin, 1791) Cernohorsky, 1967, pl. 17; fig. 94

P.irrorata (Gray, 1828) Cernohorsky, 1967, pl. 13; fig. 67

P.minoridens (Melvill, 1901) Cernohorsky, 1967, pl. 17; fig. 96

P.serrulifera Schilder & Schilder, 1938 Cernohorsky, 1967, pl. 17; fig. 99

Genus BISTOLIDA Cossmann, 1920

Bistolida goodallii (Sowerby, 1832) Cernohorsky, 1967, pl. 18; fig. 102

B.stolida (Linnaeus, 1758) Cernohorsky, 1967, pl. 19; fig. 108

B.ursellus (Gmelin, 1791) Cernohorsky, 1967, pl. 19; fig. 111

Family CASSIDAE

Genus CASSIS Scopoli, 1777

Cassis cornuta (Linnaeus, 1758) Abbott, 1968, pl. 3; fig. 1-4

Genus CASMARIA H. & A. Adams, 1853

Casmaria erinaceus erinaceus (Linnaeus, 1758) Abbott, 1968, pl. 14; fig. 7-12

C.ponderosa ponderosa (Gmelin, 1791) Abbott, 1968, pl. 14; fig. 1-6

Family CYMATIIDAE

Genus CYMATIUM Röding, 1798

Cymatium muricinum (Röding, 1798) Cernohorsky, 1967, pl. 5; fig. 19

C.nicobaricum (Röding, 1798) Cernohorsky, 1967, pl. 3; fig. 11

C.pileare (Linnaeus, 1758) Cernohorsky, 1967, pl. 3; fig. 9, 10

Genus *DISTORSIO* Röding, 1798*Distorsio anus* (Linnaeus, 1758) Cernohorsky, 1967, pl. 6; fig. 23Genus *CHARONIA* Gistel, 1848*Charonia tritonis* (Linnaeus, 1758) Cernohorsky, 1967, pl. 7; fig. 26

Family BURSIDAE

Genus *BURSA* Röding, 1798*Bursa bubo* (Linnaeus, 1758) Cernohorsky, 1967, pl. 1; fig. 1*B.bufonia* (Gmelin, 1791) Cernohorsky, 1967, pl. 2; fig. 5*B.cruentata* (Sowerby, 1835) Cernohorsky, 1967, pl. 2; fig. 7

Two forms of this species occur on Niue Island: the form with distinct black columellar bars, and the one with a plain white columella.

B.granularis (Röding, 1798) Cernohorsky, 1967, pl. 1; fig. 4*B.rosa* Perry, 1811 Cernohorsky, 1967, pl. 1; fig. 3

Family TONNIDAE

Genus *TONNA* Brünnich, 1772*Tonna perdix* (Linnaeus, 1758) Kira, 1959, pl. 22; fig. 6

Family MURICIDAE

Genus *CHICOREUS* Montfort, 1810*Chicoreus brunneus* (Link, 1807) Cernohorsky, 1967, pl. 25; fig. 148Genus *PTERYNOTUS* Swainson, 1833*Pterynotus triqueter* (Born, 1778) Cernohorsky, 1967, pl. 26; fig. 160Genus *THAIS* Röding, 1798*Thais armigera affinis* (Reeve, 1846) Reeve, 1846, pl. 15; fig. 77*T.intermedia* (Kiener, 1836) Cernohorsky, 1967, pl. 28; fig. 173Genus *MANCINELLA* Link, 1807*Mancinella tuberosa* (Röding, 1798) Cernohorsky, 1967, pl. 28; fig. 174Genus *DRUPA* Röding, 1798*Drupa clathrata* (Lamarck, 1816) Habe & Kosuge, 1967, pl. 27; fig. 29*D.morum* Röding, 1798 Cernohorsky, 1967, pl. 23; fig. 176*D.ricinus* (Linnaeus, 1758) Cernohorsky, 1967, pl. 28; fig. 175 & pl. 29; f. 177

Both forms, the pure white and the orange-spotted form, occur on Niue Island.

Genus *DRUPINA* Dall, 1923*Drupina grossularia* (Röding, 1798) Cernohorsky, 1967, pl. 29; fig. 179*D.rubusidaeus* (Röding, 1798) Cernohorsky, 1967, pl. 29; fig. 180Genus *DRUPELLA* Thiele, 1925*Drupella cornus* (Röding, 1798) Habe & Kosuge, 1967, pl. 27; fig. 20Genus *MORULA* Schumacher, 1817*Morula granulata* (Duclos, 1832) Cernohorsky, 1967, pl. 29; fig. 178*M.uva* (Röding, 1798) Habe, 1961, pl. 26; fig. 1*M.marginatra* (Blainville, 1832) Orr-Maes, 1967, pl. 11; fig. KGenus *NASSA* Röding, 1798*Nassa sarta* (Bruguière, 1789) Cernohorsky, 1967, pl. 29; fig. 183

Family MAGILIDAE

Genus RAPA Röding, 1798

Rapa rapa (Linnaeus, 1758) Kira, 1959, pl. 24; fig. 17

Genus CORALLIOPHILA H. & A. Adams, 1853

Coralliophila violacea (Kiener, 1836) Kira, 1959, pl. 25; fig. 2

Family BUCCINIDAE

Genus CADUCIFER Dall, 1904

Caducifer truncatus (Hinds, 1844) Habe, 1961, pl. 31; fig. 4

Genus CANTHARUS Röding, 1798

Cantharus undosus (Linnaeus, 1758) Kira, 1959, pl. 26; fig. 8

Genus ENGINA Gray, 1839

Engina mendicaria (Linnaeus, 1758) Kira, 1959, pl. 26; fig. 1

Family COLUBRARIIDAE

Genus COLUBRARIA Schumacher, 1817

Colubraria tortuosa (Reeve, 1844) Cernohorsky, 1967, pl. 7; fig. 28

Family NASSARIIDAE

Genus NASSARIUS Dumeril, 1806

Nassarius graniferus (Kiener, 1834) Habe, 1961, pl. 32; fig. 12

N.livescens (Philippi, 1849) Kira, 1959, pl. 28; fig. 17

N.papillosus (Linnaeus, 1758) Kira, 1959, pl. 28; fig. 28

Family FASCIOLARIIDAE

Genus LATIRUS Montfort, 1810

Latirus (Pleuroploca) filamentosus (Röding, 1798) Habe & Kosuge, 1966, pl. 25; fig. 10

L. (Mazzalina) smaragdulus (Linnaeus, 1758) Kira, 1959, pl. 30; fig. 19

Genus PERISTERIA Mörch, 1852

Peristernia nassatula (Lamarck, 1822) Kira, 1959, pl. 30; fig. 8

Family VASIDAE

Genus VASUM Röding, 1798

Vasum ceramicum (Linnaeus, 1758) Abbott, 1959, pl. 1; fig. 1

Family OLIVIDAE

Genus OLIVA Bruguière, 1789

Oliva annulata (Gmelin, 1791) Cernohorsky, 1967, pl. 46; fig. 334

O.duclosi Reeve, 1850 Habe & Kosuge, 1966, pl. 27; fig. 4

Family MITRIDAE

Genus MITRA Röding, 1798

Mitra chrysalis Reeve, 1844 Cernohorsky, 1967, pl. 30; fig. 190

M.coffea Schubert & Wagner, 1829 Cernohorsky, 1967, pl. 30; fig. 192

M.coronata Lamarck, 1811 Cernohorsky, 1967, pl. 31; fig. 195

M.ferruginea Lamarck, 1811 Cernohorsky, 1967, pl. 31; fig. 198

M.imperialis Röding, 1798 Cernohorsky, 1967, pl. 31; fig. 201

M.lugubris Swainson, 1821 Cernohorsky, 1967, pl. 31; fig. 202

M.mitra (Linnaeus, 1758) Cernohorsky, 1967, pl. 32; fig. 204

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| M.stictica (Link, 1807) | Cernohorsky, 1967, pl. 33; fig. 218 |
| M.(Strigatella) acuminata Swainson, 1824 | Cernohorsky, 1967, pl. 34; fig. 225 |
| M.(Strigatella) auriculoides Reeve, 1845 | Cernohorsky, 1967, pl. 30; fig. 186 |
| M.(Strigatella) colombelliformis Kiener, 1838 | Cernohorsky, 1967, pl. 31; fig. 193 |
| M.(Strigatella) decurtata Reeve, 1844 | Reeve, 1844, pl. 20; fig. 154 |

For the radula of this species, see Fig. 2.



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Fig. 2. Half-row of radula of *Mitra (Strigatella) decurtata* Reeve from Niue Island.

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| M.(Strigatella) fastigium Reeve, 1845 | Cernohorsky, 1967, pl. 34; fig. 229 |
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This is the earliest name applicable to this species. *Strigatella fuscescens* Pease, 1860, and *Mitra brunnea* Pease, 1868, are synonyms. *Mitra oleacea* Reeve, 1844 (non Cernohorsky, 1965) is a chronologically prior name for the species *M.quoyi* Deshayes & M. Edwards, 1844 (a *nom.pro* *Mitra nigra* Quoy & Gaimard, 1833—non Gmelin, 1791).

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| M.(Strigatella) litterata Lamarck, 1811 | Cernohorsky, 1967, pl. 34; fig. 227 |
| M.(Strigatella) paupercula (Linnaeus, 1758) | Cernohorsky, 1967, pl. 34; fig. 228 |
| M.(Strigatella) pellisserpentis Reeve, 1844 | Cernohorsky, 1967, pl. 34; fig. 230 |
| M.(Strigatella) typha Reeve, 1845 | Reeve, 1845, pl. 33; fig. 267 |

Genus NEOCANCILLA Cernohorsky, 1966

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|---|-------------------------------------|
| Neocancilla clathrus (Gmelin, 1791) — Finlay coll. | Cernohorsky, 1967, pl. 35; fig. 238 |
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Genus IMBRICARIA Schumacher, 1817

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| Imbricaria conovula (Quoy & Gaimard, 1833) | Cernohorsky, 1967, pl. 37; fig. 253 |
| I.punctata (Swainson, 1821) | Cernohorsky, 1967, pl. 37; fig. 256 |

Genus PTERYGIA Röding, 1798

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| Pterygia nucea (Gmelin, 1791) | Cernohorsky, 1967, pl. 38; fig. 262 |
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Genus VEXILLUM Röding, 1798

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| Vexillum(Costellaria)cancellarioides (Anton, 1839) | Cernohorsky, 1967, pl. 44; fig. 323 |
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The species is generally assigned to the genus *Pusia*, the radula, however, is of the same pattern as *Vexillum* Röding.

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| V.(Costellaria)festum (Reeve, 1845) — Finlay coll. | Cernohorsky, 1967, pl. 40; fig. 282 |
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Genus PUSIA Swainson, 1840

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| Pusia consanguinea (Reeve, 1845) | Cernohorsky, 1967, pl. 45; fig. 324 |
| P.diutenera (Hervier, 1897) — Finlay coll. | — |
| P.hervieri (Dautzenberg & Bouge, 1923) | Dautzenberg & Bouge, 1923, pl.2; fig.10,11 |
| P.microzonias (Lamarck, 1811) | Cernohorsky, 1967, pl. 45; fig. 328 |
| P.millecostata (Broderip, 1836) | Cernohorsky, 1967, pl. 44; fig. 321 |

Mitra adamsonii Reeve, 1844, is a synonym of *Pusia millecostata* (Broderip).

P.picea (Pease, 1860)

J. Cate, 1963, pl. 7; fig. 27-29

P.moelleri (Küster, 1840)

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Mitra flammulata Pease, 1868, and *M.baldwinii* Melvill, 1899, are synonyms of *Pusia moelleri* (Küster).

P.rosea (Broderip, 1836)

Reeve, 1844, pl. 36; fig. 300

P.speciosa (Reeve, 1844) — Finlay coll.

Reeve, 1844, pl. 19; fig. 148

P.suavis (Souverbie, 1875)

J. Cate, 1963, pl. 6; fig. 23

This species is occasionally confused with *Mitra exquisita* Garrett, 1873. Garrett's syntypes are extant in the Bernice P. Bishop Museum in Honolulu; they are a *Thala* species and conspecific with *Vexillum(Thala) mirificum* (Reeve, 1845).

P.tuberosa (Reeve, 1845)

Cernohorsky, 1967, pl. 45; fig. 333

P.turben (Reeve, 1845)

J. Cate, 1962, pl. 34; fig. 7-8

P.tusa (Reeve, 1845)

J. Cate, 1963, pl. 6; fig. 15-18

The species illustrated by J. Cate (1963) is *Pusia tusa* (Reeve) and not *P.alveolus* (Reeve).

Family HARPIDAE

Genus HARPA Röding, 1798

Harpa amouretta Röding, 1798

Kira, 1959, pl. 31; fig. 16

Family TURRIDAE

Genus LIENARDIA Jousseaume, 1884

Lienardia rubida (Hinds, 1843)

Powell, 1966, pl. 17; fig. 21

Genus LOVELLONA Iredale, 1917

Lovellona atramentosa (Reeve, 1849)

Powell, 1966, pl. 10; fig. 13

Family CONIDAE

Genus CONUS Linnaeus, 1758

Conus arenatus Hwass in Bruguière, 1792

Cernohorsky, 1964, pl. 14; fig. 27

C.aristophanes Sowerby, 1857

Cernohorsky, 1964, pl. 18; fig. 67

C.auricomus Hwass in Bruguière, 1792

Habe, 1961, pl. 37; fig. 3

C.balteatus Sowerby, 1833

Cernohorsky, 1964, pl. 16; fig. 49

C.catus Hwass in Bruguière, 1792

Cernohorsky, 1964, pl. 15; fig. 42

C.ceylanensis Hwass in Bruguière, 1792

Reeve 1843, pl. 37; fig. 199

C.chaldaeus (Röding, 1798)

Cernohorsky, 1964, pl. 18; fig. 70

C.coronatus Gmelin, 1791

Cernohorsky, 1964, pl. 18; fig. 68

C.cylindraceus Broderip & Sowerby, 1830

Cernohorsky, 1964, pl. 17; fig. 58

C.distans Hwass in Bruguière, 1792

Cernohorsky, 1964, pl. 12; fig. 4

C.ebraeus Linnaeus, 1758

Cernohorsky, 1964, pl. 18; fig. 69

C.eburneus Hwass in Bruguière, 1792

Cernohorsky, 1964, pl. 12; fig. 3

C.flavidus Lamarck, 1810

Cernohorsky, 1964, pl. 16; fig. 48

C.geographus Linnaeus, 1758

Cernohorsky, 1964, pl. 15; fig. 37

C.imperialis Linnaeus, 1758

Cernohorsky, 1964, pl. 12; fig. 11

C.litoglyphus Hwass in Bruguière, 1792

Cernohorsky, 1964, pl. 17; fig. 61

C.litteratus Linnaeus, 1758

Cernohorsky, 1964, pl. 12; fig. 2

C.lividus Hwass in Bruguière, 1792

Cernohorsky, 1964, pl. 16; fig. 50

C.marmoreus Linnaeus, 1758

a. forma **bandanus** Hwass in Bruguière, 1792

Cernohorsky, 1964, pl. 12; fig. 10

b. forma **nigrescens** Sowerby, 1859

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C.miles Linnaeus, 1758

Cernohorsky, 1964, pl. 12; fig. 7

C.miliaris Hwass in Bruguière, 1792

Cernohorsky, 1964, pl. 18; fig. 72

C.mitratus Hwass in Bruguière, 1792

Cernohorsky, 1964, pl. 17; fig. 59

C.moreleti Crosse, 1858

Cernohorsky, 1964, pl. 16; fig. 52

C.nussatella Linnaeus, 1758

Cernohorsky, 1964, pl. 17; fig. 57

C.omaria Hwass in Bruguière, 1792

Cernohorsky, 1964, pl. 13; fig. 19

C.pulicarius Hwass in Bruguière, 1792	Cernohorsky, 1964, pl. 14; fig. 28
C.rattus Hwass in Bruguière, 1792	Cernohorsky, 1964, pl. 18; fig. 74
C.retifer Menke, 1829	Cernohorsky, 1964, pl. 13; fig. 25
S.sanguinolentus Quoy & Gaimard, 1833	Cernohorsky, 1964, pl. 16; fig. 51
C.scabriusculus Dillwyn, 1817	Cernohorsky, 1964, pl. 15; fig. 36
C.tenuistriatus Sowerby, 1858	Cernohorsky, 1967, pl. 59; fig. 438
C.textile Linnaeus, 1758	Cernohorsky, 1964, pl. 13; fig. 23
C.tulipa Linnaeus, 1758	Cernohorsky, 1964, pl. 15; fig. 38
C.varius Linnaeus, 1758	Cernohorsky, 1964, pl. 14; fig. 35
C.vexillum Gmelin, 1791	Cernohorsky, 1964, pl. 12; fig. 5
C.vitulinus Hwass in Bruguière, 1792	Cernohorsky, 1964, pl. 14; fig. 32

Family TEREBRIDAE

Genus TEREBRA Bruguière, 1789

Terebra (Decorihastula) affinis Gray, 1834	Cernohorsky, 1967, pl. 49; fig. 349
T.(Perirhoe) babylonia Lamarck, 1822	Cernohorsky, 1967, pl. 49; fig. 355
T.(Oxymeris) crenulata (Linnaeus, 1758)	Cernohorsky, 1967, pl. 50; fig. 361
T.(Subula) dimidiata (Linnaeus, 1758)	Cernohorsky, 1967, pl. 50; fig. 362
T.(Oxymeris) felina (Dillwyn, 1817)	Cernohorsky, 1967, pl. 50; fig. 364

Family TRIPHORIDAE

Genus TRIPHORA Blainville, 1828

Triphora pallida (Pease, 1870) —

Genus INIFORIS Jousseume, 1884

Iniforis formosula (Hervier, 1897)	Habe & Kosuge, 1966, pl. 41; fig. 49
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Genus CAUTOTRIPHORA Laws, 1940

Cautotriphora pavimenta (Laseron, 1958)	Kosuge, 1966, pl. 1; fig. 4
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Genus VIRIOLA Jousseume, 1884

Viriola incisa (Pease, 1860)	Kosuge, 1961, pl. 22; fig. 9
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Genus MASTONIA Hinds, 1843

Mastonia cingulifera (Pease, 1860)	Habe & Kosuge, 1966, pl. 41; fig. 11
M.undata (Kosuge, 1962)	Kosuge, 1962, pl. 8; fig. 1

The species has not been previously recorded outside its type-locality of Amami Islands, Japan.

M.ustulata (Hervier, 1897)	Habe & Kosuge, 1966, pl. 41; fig. 6
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Family HYDATINIDAE

Genus APLUSTRUM Schumacher, 1817

Aplustrum aplustrum (Linnaeus, 1758)	Kira, 1959, pl. 39; fig. 14
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Genus MICROMELO Pilsbry, 1894

Micromelo guamensis (Quoy & Gaimard, 1825)	Orr-Maes, 1967, pl. 18; fig. A
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Family ATYIDAE

Genus ATYS Montfort, 1810

Atys cylindrica (Helbling, 1779)	Orr-Maes, 1967, pl. 17; fig. K
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Family UMBRACULIDAE

Genus UMBRACULUM Schumacher, 1817

Umbraculum sinicum (Gmelin, 1791)	Orr-Maes, 1967, pl. 14; fig. K
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Family ELLOBIIDAE

Genus MELAMPUS Montfort, 1810

- Melampus castaneus** (Mühlfeld, 1818)—Sorrensen coll. Orr-Maes, 1967, pl. 14; fig. I
M. flavus (Gmelin, 1701)—Sorrensen coll. Orr-Maes, 1967, pl. 14; fig. J

SCAPHOPODA

Family DENTALIIDAE

Dentalium sp.

AMPHINEURA

Family CHITONIDAE

Chiton sp.

PELECYPODA

Family PTERIIDAE

Genus PTERIA Scopoli, 1777

- Pteria penguin** (Röding, 1798) Kira, 1959, pl. 71; fig. 9

Family LUCINIDAE

Genus CODAKIA Scopoli, 1777

- Codakia punctata** (Linnaeus, 1758) Kira, 1959, pl. 53; fig. 8
C. tigrina (Linnaeus, 1758) Kira, 1959, pl. 53; fig. 5

Family CARDIIDAE

Genus FRAGUM Röding, 1798

- Fragum fragum** (Linnaeus, 1758) Kira, 1959, pl. 54; fig. 14

Family TRIDACNIDAE

Genus TRIDACNA Lamarck, 1799

- Tridacna maxima** (Röding, 1798) Habe & Kosuge, 1966, pl. 61; fig. 4

Family TELLINIDAE

Genus SCUTARCOPAGIA Pilsbry, 1918

- Scutarcopagia scobinata** (Linnaeus, 1758) Kira, 1959, pl. 59; fig. 24

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REFERENCES

ABBOTT, R. T.

1959. The family Vasidae in the Indo-Pacific. *Indo-Pacif. Moll.* 1(1): 15-32, pl. 1-10.
 1960. The genus *Strombus* in the Indo-Pacific. *Indo-Pacif. Moll.* 1(2): 33-144, pl. 11-117.
 1961. The genus *Lambis* in the Indo-Pacific. *Indo-Pacif. Moll.* 1(3): 147-173; pl. 118-133.
 1967. *Strombus*(*Canarium*)*wilsoni* new species from the Indo-Pacific. *Indo-Pacif. Moll.* 1(7): 455-456; pl. 328.
 1968. The Helmet shells of the world (Cassidae). Part 1. *Indo-Pacif. Moll.* 2(9): 7-201, pl. 1-187.

CATE, J.

- 1962. Revision of some Hawaiian mitrid species. *The Veliger* 4(3): 140-149, pl. 33-35.
- 1963. Revision of Dall's Hawaiian Mitrids with descriptions of three new species (Mollusca: Gastropoda). *The Veliger* 6(1): 23-43, pl. 5-8.

CERNOHORSKY, W. O.

- 1964. The Conidae of Fiji (Mollusca.Gastropoda). *The Veliger* 7(2): 61-94, pl. 12-18.
- 1967. *Marine shells of the Pacific*. Sydney, Pacific Publications Pty. Ltd.
- 1968a. The Ovulidae, Pediculariidae and Triviidae of Fiji (Mollusca-Gastropoda). *The Veliger* 10(4): 353-374, pl. 50-52.
- 1968b. Observations on *Hipponix conicus* (Schumacher, 1817). *The Veliger* 10(3): 275-280, pl. 41.

DAUTZENBERG, Ph. & L. J. BOUGE

- 1923. Mitridés de la Nouvelle Calédonie et de ses dépendances. *Journ. Conchyl.* 67(3): 179-259, pl. 2.

HABE, T.

- 1961. *Coloured Illustrations of the shells of Japan*. Vol. 2. Osaka, Hoikusha.

HABE, T. & S. KOSUGE

- 1966. *Shells of the world in colour*. Vol. 2. Osaka, Hoikusha.
- 1967. *The Standard Book of Japanese shells in colour*. Vol. 3. Japan.

HERVIER, R. P. J.

- 1897. Descriptions d'espèces nouvelles de Mollusques, provenant de l'Archipel de la Nouvelle-Calédonie. *Journ. Conchyl.* 45: 225-248, pl. 9-10.

KIRA, Tetsuaki

- 1959. *Coloured Illustrations of the shells of Japan*. Osaka, Hoikusha.

KOSUGE, S.

- 1961. On the family Triphoridae (Gastropoda) from Amami Islands (2). *Venus: Jap. Journ. Malac.* 21(4): 413-415, pl. 22.
- 1962. Descriptions of 10 new species and 1 new subspecies of the family Triphoridae (Mollusca) from Shiono-misaki, Kii Peninsula, Central Japan with a list of hitherto known species. *Bull. Nat. Sci. Mus. Tokyo* 6(2): 78-79, pl. 8-10.
- 1966. The family Triphoridae and its systematic position. *Malacologia* 4(2): 279-324, pl. 1.

ORR-MAES, V.

- 1967. The littoral marine mollusca of Cocos-Keeling Islands (Indian Ocean). *Proc. Acad. Nat. Sci. Philadelphia* 119(4): 93-217, pl. 1-26.

POWELL, A. W. B.

- 1966. The Molluscan families Speightiidae and Turridae. *Bull. Auckland Inst. Mus.* 5: 1-184, pl. 1-23.

REEVE, L. A.

- 1843-44. *Conchologia Iconica; monograph of the genus Conus*. L. Reeve, London.
- 1844-45. *Conchologia Iconica; monograph of the genus Mitra*. L. Reeve, London.
- 1846. *Conchologia Iconica; monograph of the genus Purpura*. L. Reeve, London.



Cernohorsky, Walter Oliver. 1970. "THE LITTORAL MARINE MOLLUSCS OF NIUE ISLAND." *Records of the Auckland Institute and Museum* 7, 175–186.

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