

New Zealand
MOLLUSCA

Marine, Land and Freshwater Shells

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Collins

AUCKLAND SYDNEY LONDON

*This book is dedicated to all those people past and present,
whose published work upon the New Zealand molluscan fauna forms
the framework upon which the present volume is built. Their names
appear in the bibliographic section of this book.*

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TURRIDAE-TEREBRIDAE

Pleurotoma (Drillia) ula Watson, 1881, p. 420. *Bela*, Suter, 1913, p. 485. *Asperdaphne*, Powell, 1942, p. 162. Dell, 1956A, p. 136, pl. 20, fig. 207.

Genus XANTHODAPHNE Powell, 1942

Type (OD) *Pleurotoma (Thesbia) membranacea* Watson, 1886

Shell rather large, up to 22 mm. in height, broadly ovate, very thin, having a widely open aperture, and a thin-edged protractively arcuate outer-lip, with a shallow to deep and wide subsutural sinus. New Zealand, Archibenthal, 155 to 1,100 fathoms.

***Xanthodaphne membranacea* (Watson, 1886)**

North Island, off Cape Turnagain, 1,100 fathoms.

Shell broad, short, tumid, with rounded whorls, sculptured with numerous, irregular, fine, axial growth lines, crossed by dense, fine, spiral striae. Sinus sutural deep and wide. Colour white under a thin brownish-yellow periostracum. Height 22.0 mm., width 13.5 mm.

Pleurotoma (Thesbia) membranacea Watson, 1886, p. 333. *Daphnella (T.)*, Suter, 1913, p. 512.

***Xanthodaphne xanthias* (Watson, 1886)**

North Island, off Cape Turnagain, 1,100 fathoms.

Shell narrower than *membranacea*, and with the whorls strongly carinated. Sculpture; smooth above carina, indistinctly spirally striated below carina. Colour white. Dell (1963), who examined the unique type specimen considered it to be in such poor condition that the name "might well be considered a nomen dubium".

Height 19.5 mm., width 10.2 mm.

Pleurotoma (Thesbia) xanthias Watson, 1886, p. 334. *Daphnella (T.)*, Suter, 1913, p. 513. *Xanthodaphne*, Powell, 1942, p. 166. Dell, 1963C, p. 175.

***Xanthodaphne maoria* Dell, 1956**

Fig. 56:6

Chatham Islands. S.E. of Pitt Island, 155 fathoms (type).

Shell very small, only 2.7 mm. in height, with gently convex whorls, and spire a little less than height of aperture. Sculpture of very fine closely spaced flexuous axials, the whole surface crossed by exceedingly fine spirals. Protoconch of two finely reticulated whorls. Sinus sutural, shallow and wide. Colour white.

Height 2.7 mm., width 1.4 mm.

Dell, 1956A, p. 136.

Family CONIDAE

Genus CONUS Linnaeus, 1758

Type (SD, Children, 1823) *Conus marmoreus* Linnaeus, 1758

Shell shaped like an inverted cone. Characteristic of the tropics, and to a lesser extent,

subtropical and warm-temperate regions. The animal is actively carnivorous and has a highly specialised toxic radula, used for narcotizing or even killing its prey, which can include such highly mobile creatures as small fishes. The teeth are harpoon-like with a barbed tip and a hollow shaft connected to a poison gland. Some of the larger Pacific *Conus* have been known to cause death to humans. Caution: always pick up a live *Conus* by the thick end, and keep the aperture away from your hand.

***Conus kermadecensis* Iredale, 1912**

Plate 47:14

North Island. Parengarenga Harbour, Northland, entrance to Te Kao Channel, on a low-tidal sandbank (Mrs M.E. Armiger, Jan., 1972 and Master Andrew Wilson, March, 1972). A new addition to the New Zealand fauna). Sunday Island = Raoul Island, Kermadec Islands (type).

Shell of moderate size, up to 74.5 mm. in height, cone-shaped, broad above and low-spired, solid. Colour orange, often with a pale narrow median band. Usually covered by a thick reddish-brown periostracum.

Height 47.0-74.5 mm., width 26.5-41.0 mm.

Conus kermadecensis Iredale, 1912, p. 227. Oliver, 1915, p. 541. Powell, 1972, p. 249.

The only other authentic records of *Conus* in New Zealand waters are (a), a half grown *C. marmoreus* Linnaeus, 1758, said to have been picked up alive at Farewell Spit, Cook Strait (Mestayer, 1918, p. 102). This is undoubtedly a chance occurrence, due probably to shipping. (b), A small *Conus*, in too imperfect condition for precise identification, but said to resemble the Kermadec *Conus (Kermasprella) raoulensis* Powell, 1958, was dredged in 440 fathoms north of the Three Kings Islands (Crozier, 1966, p. 48).

Family TEREBRIDAE

(Synonym Pervicaciidae Rudman, 1969)

Slender, many-whorled shells, with an anterior notch but not a fully developed anterior canal, carnivorous, and closely related to the cones and turrids. They are sand dwellers and plough along on, or just beneath, the surface, usually leaving a well defined track. The larger members of the typical genus are without dentition but a radula is present in many of the smaller species of *Hastula* and *Duplicaria*, and this consists of serial rows, each with a pair of simple, elongate, curved and sharply pointed, but not barbed, marginal teeth.

Genus TEREBRA Bruguière, 1789

Type (SM) *Buccinum subulatum* Linnaeus, 1767
Sculpture axial, spiral, a combination of both,

or smooth. Usually of large size, and without a radula.

***Terebra circumcincta* Deshayes, 1857**
Plate 47:18

North Island. Bay of Islands, dredged alive in shallow water (Mr. and Mrs. M. Hancock). Type locality 'Red Sea', probably erroneous = ? Queensland.

Shell with almost flat-sided whorls, sculptured with punctate deeply incised spiral grooves. Colour ivory, with a spiral series of rusty-brown dots.

Height 31.75–38.0 mm., width 7.6–8.0 mm. (Bay of Islands). A syntype has a height of 50.1 mm. Deshayes, 1857, p. 77. Powell, 1971B*, p. 225.

Genus DUPLICARIA Dall, 1909

Type (OD) *Buccinum duplicatum* Linnaeus, 1758

Subgenus PERVICACIA Iredale, 1924

Type (OD) *Terebra ustulata* Deshayes, 1857

Shell small, elongated and narrow, with simple sculpture of regular axials, varying to almost smooth. A radula of simple curved, non barbed marginals is present.

***Duplicaria (Pervicacia) tristis* (Deshayes, 1859)**
Plate 47:16, 17

North, South and Stewart Islands, common on fine sand in shallow water, down to 40 fathoms or more. Cape Maria van Diemen (type of *mariae*); Lyall Bay, Wellington (type of *crassicosata*).

Shell small, slender, subulate, with regular arcuate axial ribs. Colour chocolate, with a pale yellow spiral band just above the suture. Dredged shells are often pinkish-buff above but reddish-brown on the base. The form *mariae* is broader

and more strongly sculptured. Rudman (1969) wrote on the anatomy and ecology of *tristis*, and noted that it has neither eyes nor tentacles, that the sexes are separate, and that a poison gland is not present.

Height 13.5–22.0 mm., width 4.5–7.5 mm.

Terebra tristis Deshayes, 1859, p. 306. *T. tristis crassicosata* Suter, 1909, p. 255. *T. tristis*, Suter, 1913, p. 515. *Pervicacia*, Finlay, 1927A, p. 435. *P. mariae* Powell, 1940, p. 246. *P. tristis*, Rudman, 1969, pp. 53–64.

***Duplicaria (Pervicacia) flexicostata* (Suter, 1909)**
Plate 47:15

North Island. Cape Maria van Diemen (type). The Port Waikato record (Suter, 1913, p. 514) is very doubtful.

Shell taller and narrower than *tristis*, has much more rapidly increasing whorls, with the axial sculpture subobsolete, but fine spiral striae still present. Colour varying from uniformly dark shining reddish-brown to almost white, with only the early whorls and lower half of the base reddish-brown. Other variants are dark brown, relieved by a spiral narrow pale zone that may be either sub or supra-sutural.

Height 18.5–22.0 mm., width 5.0–6.0 mm.

Terebra flexicostata Suter, 1909, p. 255; 1913, p. 514.

***Duplicaria (Pervicacia) propelevis* (Ponder, 1968)**

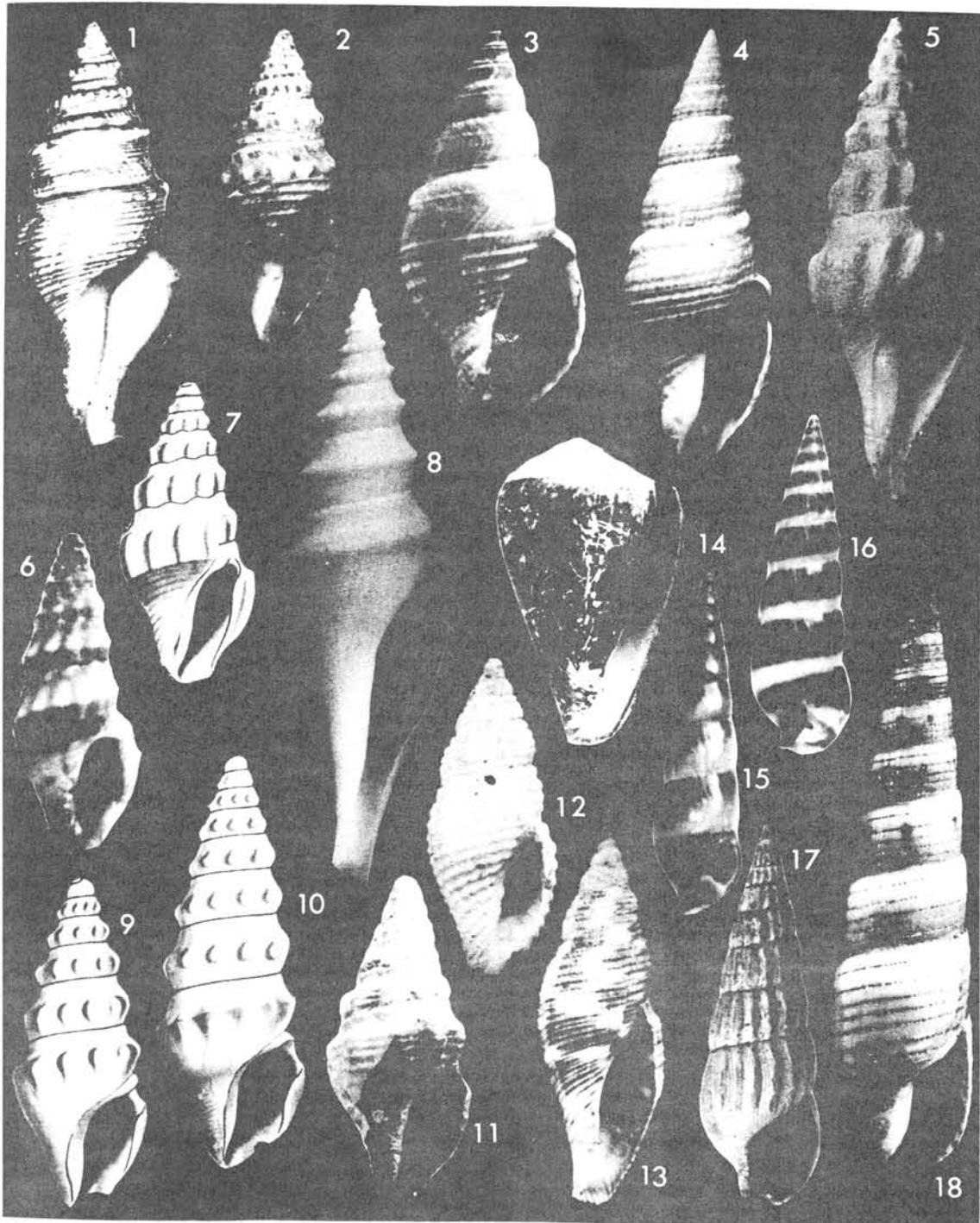
North Island. Waikanae Beach, Wellington west coast (type).

Shell rather small for the genus, 10.95 mm. in height, very tall and slender, axial sculpture subobsolete, the last three whorls quite smooth, and there is no spiral sculpture. Colour pale yellowish-brown.

Height 10.95 mm., width 2.75 mm.

Pervicacia propelevis Ponder, 1968D, p. 46.

Plate 47



1, *Bathytoma (Riuguhdrillia) parengonius* (Dell), Chatham Rise, 260 fathoms, 39 mm. 2, *B. (Micantapex) finlayi* (Powell), trawled Bay of Plenty, 15–22 mm. 3, *Phenatoma zealandica* (E.A. Smith), Mount Maunganui, 23–26 mm. 4, *P. rosea* (Quoy & Gaimard), Pakawau, West Nelson, 29–34 mm. 5, *Comitas onokeana vivens* Dell, Chatham Rise, 220 fathoms, 41–47 mm. 6, *Austrodrillia (Regidrillia) secunda* Powell, trawled off Great Barrier Island, 10.5 mm. 7, *A. (R.) sola* Powell, off Three Kings Islands, 100 fathoms, 10.3 mm. 8, *Leucosyrinx pikei* (Dell), off Poor Knights Islands, 256–267 fathoms, 35 mm. 9, *Splendrillia otagoensis* Powell, off Oamaru, 50 fathoms, 7.6 mm.

10, *S. (Hauturua) vivens* (Powell), off Little Barrier Island, 20 fathoms, 9.9 mm. 11, *Aoteadrillia rawitensis* (Hedley), Doubtless Bay, 11–15 mm. 12, *Mitrithara gemmata* (Suter), off Otago Heads, 60 fathoms, 7–8 mm. 13, *Daphnella cancellata* Hutton, Bay of Islands, 12–20 mm. 14, *Conus kermadecensis* Iredale, Parengarenga Harbour, 47–74 mm. 15, *Duplicaria (Pervicacia) flexicostata* (Suter), Cape Maria van Diemen, 18–22 mm. 16, 17, *D. (P.) tristis* (Deshayes), Wade Heads, Auckland (16); Manukau Harbour (17); 13–22 mm. 18, *Terebra circumcincta* Deshayes, Bay of Islands, dredged in shallow water, 31–38 mm.