

A NEW TREE-SNAIL FROM NORTH QUEENSLAND

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(1 Text figure)

The tree-snails of the subfamily Papuininae (family Papuinidae of Iredale 1938) are among the most conspicuous members of the land molluscan fauna of New Guinea, the islands of the Bismarck Archipelago and the Solomon Group. It is an interesting fact that comparatively few species of this group have reached Australia, despite the intermittent land connection between New Guinea and the Australian mainland which existed during Tertiary time. Iredale's Basic List of the Land Mollusca of Australia includes eleven species referred to the Papuininae, and another has been added since (*Meliobba shafferyi* Iredale 1940).

Among these is *Rhynchotrochus poiretianus* (Reeve) 1852, which is the type species of the subgenus *Noctepuna* Iredale 1933. There seems to be no good reason for continuing the association of *poiretiana* with the predominantly New Guinea genus *Rhynchotrochus*, so that *Noctepuna* is here used as a full genus. Clench (1943) recorded this species under the name *Papuina gartneriana* Pfeiffer 1851, regarding *poiretiana* as a synonym. However, the two are almost certainly distinct species, for the original description of *gartneriana* by Reeve (whose descriptions of both species antedates Pfeiffer's) mentions plicate striations and a purple-violet blotch on the umbilicus and columella margin of the lip, neither of which are found in *poiretiana*. The correct locality for *gartneriana* appears to be the Aru Islands as Tapparone Canefri (1883) suggested, for specimens in the Australian Museum from that locality agree exactly with Reeve's description.

Reeve gave the locality of both *gartneriana* and *poiretiana* as Port Essington, but Cox (1868, p. 67) showed that *poiretiana* was in fact collected at Night Island, off the north Queensland coast by Macgillivray during the voyage of the "Rattlesnake." The discovery of the species is recorded by Macgillivray 1852, p. 116.

When erecting *Noctepuna* for *poiretiana* Reeve, Iredale also included *Papuina muensis* (sic) = *P. muensis* Hedley 1912. However, in his Basic List, Iredale (1938) listed the latter species under *Posorites* Iredale 1933, the type species of which is another Australian tree-snail, *Helix fucata* Pfeiffer. The latter generic placement of *muensis* is undoubtedly an error, for both *poiretiana* and *muensis* are subspecies of a polytypic species which occurs on the mainland on Cape York Peninsula. Specimens of the mainland race were recently forwarded to the Australian Museum by Mr. J. L. Wassell, of Silver Plains Station, near Coen, North Queensland, and as this is not yet named, it is described as new below.

Noctepuna poiretiana clenchi ssp. nov.

Shell trochiform, of $6\frac{1}{2}$ whorls regularly increasing, the whorls slightly convex, the suture shallow. Body whorl rounded below, descending a little at the mouth, not constricted behind the aperture. Mouth oblique, oval, the peristome slightly expanded above, but not reflected; becoming reflected

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towards the outer edge of the lip and increasingly so below; towards the columellar, the lip expanded and reflected, almost covering the narrow umbilicus. A thin callus joining the margins of the aperture across the body whorl.

Protoconch of 14 whorls, not sculptured, but with an eggshell-like appearance under the microscope. Remainder of shell sculptured with fine radial growth lines.

Colour white, the body whorl marked with a dark brown band about 1 mm. in width, usually bordered below by a fine reddish-brown line; the band just below the level of the suture, not showing above the body whorl. Columella marked with a small brown spot.

Animal dark grey, the tentacles reddish-brown.

Type locality: Dinner Creek, at the foot of a spur of the McIlwrath Range, on the Coen to Port Stewart Road, North Queensland.

Types: The holotype is in the Australian Museum, Registered Number C.62421, and is figured on plate 10, figures 1-3. Paratypes are in the Australian Museum C.62422, and additional paratypes are in the Museum of Comparative Zoology, Cambridge, Mass.

Records: Clench (1943) recorded specimens of "*Papuina gartneriana* Pfeiffer" from Lankelly Creek, McIlwrath Range, which are probably this subspecies. Some specimens in the Australian Museum from Coen River are larger, but otherwise agree with *N. p. clenchi*. Mr. Wassell informs me that he has also taken the species at Merluna Station, about 100 miles north-west of Coen, and also from Port Stewart, Princess Charlotte Bay.

Habitat: The specimens were taken from branches of trees in thin marginal scrub along the banks of Dinner Creek, on the 16th July, 1958.

Dimensions (in mm.)

	Length	Maximum Diameter	Minimum Diameter
<i>N. p. poiretiana</i>			
Mean of 20 Topotypes	24.25	19.7	17.5
<i>N. p. clenchi</i>			
Holotype	19.0	16.5	14.0
Mean of 20 Paratypes	18.5	17.0	14.25
<i>N. p. muensis</i>			
Holotype	15.0	14.0	12.5
Mean of 4 Paratypes	13.0	12.25	12.0

Distinguishing Characters and Relationships: The new subspecies stands intermediate between the other two subspecies, *poiretiana* and *muensis*. *N. poiretiana poiretiana* Reeve is larger, and lacks the broad dark band of *clenchi*, in place of which it has a fine reddish-brown line only. The shell is normally cream coloured, not flat white as in *clenchi*. On the other hand, *N. p. muensis* Hedley is much smaller than either *poiretiana* or *clenchi* and is proportionately broader. *N. p. muensis* agrees with *clenchi* in possessing the dark, broad band, but differs in the general colour of the shell, which is light brown or buff.

N. p. clenchi appears to be rather widely distributed in the lower part of the Cape York Peninsula, and probably occurs throughout the Peninsula, as it has probably given rise to the *muensis* subspecies, which is known only from Mua or Banks Island in Torres Strait. It has probably also been the ancestral source of *N. p. poiretiana*, which is known only from Night Island.

The new subspecies is named in honour of Dr. William J. Clench, Curator of Molluscs at the Museum of Comparative Zoology, who with Dr. R. D. Turner is revising the Pupininae. Specimens of *N. p. clenchi* have been sent to the Museum of Comparative Zoology for anatomical study.

REFERENCES.

- CLENCH, W. J., 1943—*Nautilus*, 57: pp. 64-66.
 COX, J. C., 1868—*Monograph of Australian Land Shells*. (William Maddock, Sydney.)
 HEDLEY, C., 1912—*Rec. Australian Mus.*, 8: pp. 154, pl. 54, figs. 44, 45.
 IREDALE, T., 1933—*Rec. Australian Mus.*, 19: pp. 41-42.
 ———— 1938—*Australian Zoologist*, 9: pp. 91-93.
 ———— 1940—*Australian Naturalist*, 10: pp. 239-240.
 MACGILLIVRAY, J., 1852—*Narrative of the Voyage of H.M.S. Rattlesnake*, Vol. 1.
 REEVE, L., 1852—*Conchologica Iconica*, 7: Helix, pl. 79, sp. and figs. 418-419.
 TAPPARONE CANEFRI, C., 1883—*Ann. Mus. Civ. Stor. Nat. Genova*, 19: pp. 129-131.



Text fig.

- Top left—ventral view of Holotype.
 Top right—umbilical view of Holotype.
 Bottom centre—left dorso-lateral view of shell and animal of Holotype.