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Two New Species of Punctid Land Snail from the South Island, New Zealand

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Abstract

Charopa (*Ptychodon*) *paytoni* n.sp. (Punctidae; Charopinae) is described from the Waiatoto Valley, South Westland, and *Laoma* (*Phrixgnathus*) *academia* n.sp. (Punctidae; Punctinae) is described from a Quaternary deposit in Christchurch city.

INTRODUCTION

IN an earlier paper (Climo, 1969) I revised the classification of a group of charopinid land snails (Charopinae Hutton, 1884), placing them in the redefined subgenus *Ptychodon* Ancey, 1888. Since then, I have received a new species of *Ptychodon* living outside the geographical range of the most closely related species. Also recently examined was a punctinid land snail from a Quaternary deposit at the Ilam University site, Christchurch city. This species, which appears to be extinct, and the new *Ptychodon* are described below.

SYSTEMATICS

Family PUNCTIDAE Morse, 1864

Subfamily CHAROPINAE Hutton, 1884

Genus *Charopa* Albers, 1860

Subgenus *Ptychodon* Ancey, 1888

TYPE SPECIES: *Strobila leiodus* Hutton, 1883.

Charopa (Ptychodon) paytoni n.sp. Fig. 1, A–C

Shell very small (diameter 2.7mm), depressed-turbiniform, sparsely radially ribbed, umbilicate. Sculpture consisting of sparse, sturdy, sinuous radial riblets (18 on body whorl of holotype); interstices with crowded secondary radials, microscopically reticulated by obsolete spiral lirae. Colour light brown, blotched and streaked by areas of darker brown; shell eroded in places, these appearing greyish-white. Spire a little higher than height of aperture. Whorls 4½, slowly expanding; all post-nuclear whorls descending, the descent increasing towards aperture; whorls flattened on upper surface; periphery angled; base convex. Aperture subrhomboidal, descending. Columella evenly arcuate, at first vertical. Umbilicus open, showing all whorls, approximately one-quarter shell diameter. Protoconch of 1½ bulbous, strongly spirally striate whorls.

Animal unknown.

TYPE MATERIAL: Holotype (M23253) in Dominion Museum, Wellington.

TYPE LOCALITY: Near Donald Hut, Waiatoto River, South Westland (Coll. I. Payton, 21/XII/67).

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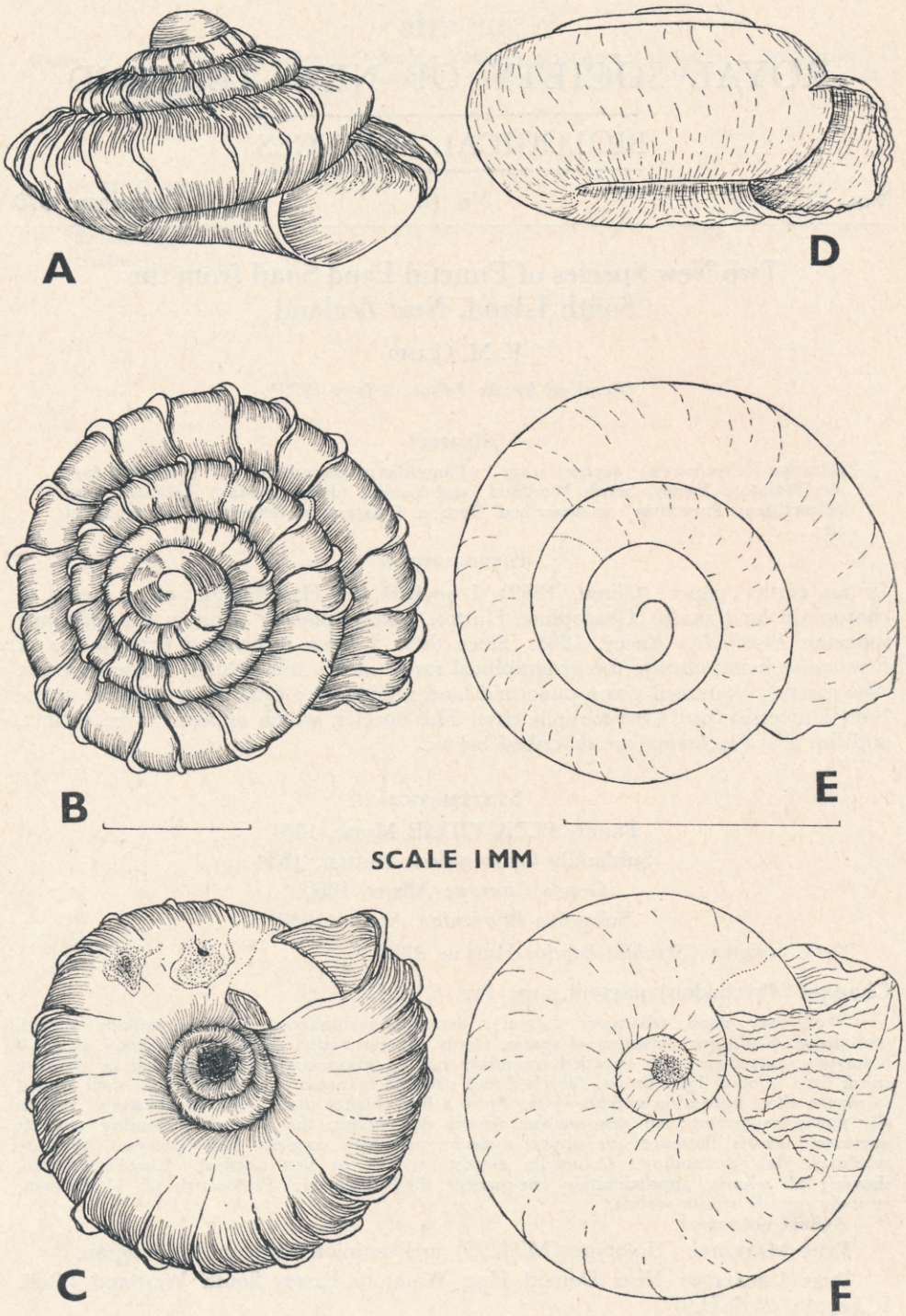

Fig. 1, A–C.—Holotype *Charopa* (*Ptychodon*) *paytoni* n.sp.; D–F.—Holotype *Laoma* (*Phrixgnathus*) *academia* n.sp.

REMARKS: The species is named after its discoverer. *C. paytoni* n.sp. is very closely related to *C. varicosa* (Pfeiffer, 1853) (see Climo, 1969: 202–204 for variation in the latter species), but differs in having a taller spire, a more bulbous protoconch and the complete absence of lamellae in the aperture. *C. varicosa* is apparently not found south of Banks Peninsula in the South Island; there is, therefore, a large geographical gap between this species and the closely allied *paytoni.* I am of the opinion that distributional and morphological data provide enough evidence for the recognition of a new species, in the absence of more specimens or anatomical information. If a form of *varicosa,* it is indeed extreme, and so is probably best treated as a separate species at this stage.

Subfamily PUNCTINAE Morse, 1864

Genus *Laoma* Gray, 1850

Subgenus *Phrixgnathus* Hutton, 1883

TYPE SPECIES: *Helix fatua* Hutton, 1880 (= *Phrixgnathus celia* Hutton, 1883); not *fatua* of Pfeiffer, 1857.

Laoma (Phrixgnathus) academia n.sp. Fig. 1, D–F

Shell minute (diameter 1.5mm), thin, glossy, subdiscoidal, umbilicate. Sculpture virtually absent, consisting of weak arcuate growth lines only; shell surface highly glossy. Spire weakly raised, about three-quarters height of aperture. Whorls $3\frac{1}{4}$, regularly expanding; periphery and base convex; protoconch of $1\frac{3}{4}$ smooth, shiny whorls. Aperture subcircular, partially collapsed in unique specimen. Umbilicus open, between one-fifth and one-quarter shell diameter.

Animal unknown.

TYPE MATERIAL: Holotype (M23252) in Dominion Museum, Wellington.

TYPE LOCALITY: Quaternary deposit, 6 feet below a layer of Waimakariri River silt alluvium, University of Canterbury, Ilam site, Christchurch city (collected by Botany Department, University of Canterbury, 1969).

REMARKS: The species is represented by a subadult specimen; a shell with such slowly expanding whorls is likely to have more than $3\frac{1}{4}$ volutions in the adult state. It is superficially similar to the introduced zonitid snail *Hyalina crystallina* (Mueller, 1774), but has a wider umbilicus and is considerably smaller. The most closely related New Zealand species is *Laoma* (*Phrixgnathus*) *rakiura* (Dell, 1954). *L. rakiura* differs from *L. academia* n.sp. in having a taller spire, more deeply incised sutures, a much coarser pattern of growth lines and a spirally striate protoconch.

There is a possibility that *academia* is a zonitid land snail, but as there is only one endemic zonitid snail recorded from New Zealand, and that in the north of the North Island, it seems more likely that the new species is a punctid. *L. academia* has not been collected alive in Canterbury, and is known only from the type specimen. Dr C. Burrows (Department of Botany, Canterbury University) has informed me that pollen analysis and macrofossil remains indicate that the type locality was once a lowland podocarp association, which, it is assumed, was destroyed by burial in silt when the Waimakariri River changed its course some 400–500 years ago.

ACKNOWLEDGMENTS

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Literature Cited

Climo, F. M., 1969. Classification of New Zealand Arionacea (Mollusca : Pulmonata) II. A Revision of *Charopa* subgenus *Ptychodon* Ancey, 1888. *Rec. Dom. Mus. Wellington,* 6(14): 202–4.

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