

DESCRIPTIONS OF SOME NEW LAND MOLLUSCA FROM NEW  
ZEALAND AND MACQUARIE ISLAND.

By HENRY SUTER, Christchurch, New Zealand.

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PLATE IV.

1. *LAGOCHILUS CHILTONI*, n.sp. Pl. IV, Fig. 1.

Shell very small, turbate, subperforate, rufous, slightly glossy, thin, semi-transparent, with rather close longitudinal membranous white costellæ, which easily rub off; they are nearly equidistant, five to six per millimetre. Spire conical, apex rather pointed; periphery rounded; whorls 5, convex, the first three increasing slowly, the others more rapidly, faintly microscopically spirally striated, the body-whorl about two-thirds of the total height; suture impressed. Aperture subcircular, slightly oblique; peristome simple, straight; notch at the suture very slightly indicated; columella lip somewhat callous, expanded, completely covering the small umbilicus; margins convergent, not united by a callus. Base rounded. Operculum not seen. Alt. 3, diam. 2.25 mm.

*Type* in my collection.

*Hab.*—Fern Flat, Buller River, South Island. A single specimen found under a log by Dr. Ch. Chilton, whose name I have much pleasure in connecting with this species.

*L. Chiltoni* is near to *L. Hedleyi*, Sut., but the latter is more depressed, the membranous plaits are not equidistant on the body-whorl, the margins of the aperture approximate more, and the narrow umbilicus is open.

2. *LAGOCHILUS* (?) *STUDERI*, n.sp. Pl. IV, Fig. 2.

Shell very small, globosely conoidal, perforate, whitish-horny, faintly glossy, fragile, transparent, smooth, showing under the lens regular and close lines of growth. Spire conoidal, rather short; whorls 3½, rather rapidly increasing, convex, slightly flattened below the suture; periphery rounded; suture deep. Protoconch smooth, rather obtuse. Aperture ovate, longitudinal; peristome simple, acute, outer lip regularly arched, basal lip strongly convex, columella lip almost straight, vertical; margins converging, not connected by any callosity. There is no indication of a notch at the suture. Umbilicus pervious, very narrow. Base convex. Operculum thin, horny, transparent, with few whorls round a subcentral nucleus. Alt. 3, diam. 2.25 mm.; height of aperture 1.5 mm.

*Type* in my collection.

*Hab.*—Whangarei, North Island (Mr. Grosch).

Named in honour of Prof. Dr. Th. Studer, Berne, Switzerland.

The only specimen I possess is immature, so that the generic position is somewhat doubtful.

3. *ATHORACOPHORUS* (*PSEUDANEITEA*) *SIMROTHI*, n.sp. Pl. IV,  
Figs. 3, 4.

Animal (in spirit) elongate, about five times longer than broad, fulvous; head broadly rounded, tail tapering; back rounded, presenting a botryoidal appearance owing to the numerous strongly developed papillæ; it is separated from the foot by a broad lateral groove, keeled towards the sole, which is lighter-coloured; dorso-medial groove, bifurcating towards the head, distinct, extending to the tail. There are about twenty lateral grooves on each side, and a lateral area contains two to three rather large papillæ. These papillæ are oval,  $1 \times 1.5$  mm., on the central part of the body, and about .75 to 1 mm. high; the interstices between are granulate. The mantle-area, which I cannot make out distinctly in the specimen before me, seems to be triangular, the pulmonary orifice being situated at its anterior angle. The lateral grooves, the keel, and the sole are crossed by numerous transverse furrows. Length 30, breadth 2, height 5 mm. (alcoholic specimen).

*Type* in my collection.

*Hab.*—Collingwood, South Island (Mr. J. Dall).

Named in honour of Dr. H. Simroth, of Leipzig.

This slug is so distinct and peculiar in its appearance that I will not defer its preliminary description any longer. I have only one specimen, and that in a rather bad state of preservation, since the animal was probably placed alive in strong alcohol. The diagnosis and the sketches I give must be considered as merely provisional. I hope to get some living specimens later on, when the description will be completed, better figures given, and the anatomy investigated. I do not doubt that this species must be assigned to the subgenus *Pseudaneitea*, since it possesses the main characters of *Athoracophorus papillatus*, Hutton.

The New Zealand species of *Athoracophorus* now known to science are:—

*A. bitentaculatus*, Q. and G.

*A. maculatus*, Collinge.

*A. (Konophora) marmoreus*, Hutt.

*A. (Pseudaneitea) papillatus*, Hutt.

*A. (Pseudaneitea) papillatus* v. *nigricans* (v. Mts. MS.), Simroth.

*A. (Pseudaneitea) papillatus* v. *fasciatus* (v. Mts. MS.), Simroth.

*A. (Pseudaneitea) Simrothi*, Sut.

4. *ENDODONTA* (*CHAROPA*) *ROSEYEARI*, n.sp. Pl. IV, Figs. 5-7.

Shell small, subdiscoidal, umbilicated, horny, with radiate rufous streaks which are irregularly disposed on the upper surface, form zigzag lines on the periphery, and are obscurely tessellated on the base; dull, thin, semi-transparent. Spire flatly depressed; periphery

rounded; whorls 5, slowly and regularly increasing, rounded, the last not descending in front; suture impressed; whorls radiately costate, the costæ sharp and elevated, directed forwards, arcuate on the upper surface, sinuate on the periphery and base, about ten per millimetre, interstices minutely decussate. Protoconch having fine, narrow costæ, obtuse. Aperture lunate, oblique; peristome regularly arched, straight, acute, the outer lip tapering, columella lip short, arcuate, not reflexed; margins convergent; umbilicus broad, nearly one-fourth of the greatest diameter, showing all the whorls; base rounded. Diam. max. 4, min. 3.5; alt. 2 mm.

*Type* in my collection.

*Hab.*—Tarukenga near Rotorua, North Island (Capt. T. Broun).

Named in honour of Mr. B. Rosevear, Fulham, London.

This species is nearest to *E. Sterkiana*, Sut., but may at once be distinguished from it by the costæ being wider apart.

5. *ENDODONTA (CHAROPA) TITIRANGIENSIS*, n.sp. Pl. IV, Figs. 8-10.

Shell small, discoidal, umbilicated, thin, horny, without colour markings, semi-transparent, dull; longitudinally costate, the costæ not much raised, slightly directed backwards, sinuated at the periphery; interstices with fine lines of growth, 9-10 costellæ per millimetre. Whorls 5, the first three gradually increasing, the last attaining relatively a considerable development, taking up about one-third of the maximum diameter; suture well impressed. Protoconch smooth, spire flat, periphery rounded. Aperture rotundly lunate, oblique; peristome straight, acute, columella lip slightly callous and reflexed; margins converging. Umbilicus about one-third of the greatest diameter, showing all the whorls. Base rounded. Diam. maj. 3.75, min. 3.25; alt. 1.75 mm.

*Type* in my collection.

*Hab.*—Nikau-bush, Titirangi, near Auckland (H. S.).

This shell is closely allied to *E. anguiculus*, Reeve, var. *montivaga*, Sut., but differs from it in the greater diameter of the four first whorls, the broader last whorl, etc.

6. *LAOMA ELEGANS*, n.sp. Pl. IV, Figs. 11, 12.

Shell minute, conoidal, perforate, horny, without colour markings, somewhat glossy, thin, transparent, surface radiately costate, the very distinct costellæ straight, directed backwards, 15 per millimetre. Spire dome-shaped; periphery slightly keeled; whorls 5, flatly rounded, gradually and slowly increasing; suture impressed. Protoconch smooth, rather large. Aperture transverse, semicircular, with six long slender lamellæ, two on the penultimate whorl and four on the base, the latter lying far back, and only showing through the transparent shell on the exterior as white lines. Peristome straight, acute, basal lip broadly rounded, columella lip slightly callous, reflexed; margins only very slightly approximate. Umbilicus narrow, but pervious, not covered by the columellar reflection. Base smooth up to the periphery; whitish, flatly rounded. Diam. 2, alt. 1.5 mm.

*Type* in my collection.

*Hab.*—Whangarei, North Island (Mr. Grosch).

*L. elegans* is very distinct from all the species of the genus hitherto described; the aspect of the base and character of the lamellæ call to mind some of the species of *Sagda*.

7. *LAOMA* (*PHRIXGNATHUS*) *LUCIDA*, n.sp. Pl. IV, Figs. 13–15.

Shell very small, depressly-turbinate, subperforate, yellowish-horny, shining, pellucid, thin, somewhat smooth, with fine lines of growth (more distinct at the suture), microscopically finely decussate. Spire conoidal; periphery rounded; whorls 5, gradually increasing, rounded; suture rather deep. Protoconch smooth. Aperture lunate, transverse; peristome straight, acute, somewhat callous, columella lip subvertical, slightly reflexed. Umbilicus very narrow, partly covered by the columella lip. Base rounded. Diam. maj. 3, min. 2·75; alt. 2 mm.

*Type* in my collection.

*Hab.*—Near Auckland, exact locality not stated (Mr. Wright).

This species comes nearest to *L. transitans*, Suter, which, however, is higher, banded with chestnut, and has the periphery keeled.

The jaw and radula are typical, the former being strongly papillate. The formula of the radula is 20–1–20.

— var. *ELEVATA*, n.var.—This variety is higher; the number of whorls is the same, but they are narrower, especially the fourth and fifth. The protoconch is also smooth, and the shell microscopically finely decussate. The colour is darker, the periphery keeled, and the mouth destitute of callosity. Diam. maj. 3, min. 2·75; alt. 2·5 mm.

*Type* in my collection.

*Hab.*—Whangarei, North Island (Mr. Grosch).

8. *LAOMA* (*PHRIXGNATHUS*) *SPIRALIS*, n.sp. Pl. IV, Figs. 16–18.

Shell very small, depressly-turbinate, perforate, pale-horny with somewhat irregular radiate rufous streaks, dull, thin, semi-transparent, with close-set longitudinal membranous costellæ, produced into ragged processes at the periphery; there are five to six costellæ per millimetre; the interstices decussate. Spire conoidal, apex pointed, periphery sharply keeled; whorls 5, gradually increasing, flatly rounded; suture impressed, somewhat constricted, between the fourth and fifth whorls. The protoconch is smooth, but the rest of the shell is distinctly spirally striated, most conspicuously so on the base. Aperture transverse, squarish; peristome straight, acute, outer lip sharply keeled, basal lip regularly broadly arched, columella lip subvertical, slightly arched, and reflexed. Umbilicus narrow, pervious, deep. Base rounded. Diam. maj. 3·25, min. 2·75; alt. 2 mm.

*Type* in my collection.

*Hab.*—Pelorus Sound, Marlborough, South Island (Mr. J. McMahon).

*L. spiralis* stands nearest to *L. phrynia*, Hutton, but differs from it in having a more acute spire and a sharper keel on the periphery, in its less rounded whorls with their very distinct spiral striation, in possessing ragged processes to the costellæ, and a much narrower umbilicus as well as a constricted portion of the suture.

*Note.*—*LAOMA* (*PHRIXGNATHUS*) *ACANTHINULOPSIS*, Sut., which I described in *Trans. New Zeal. Inst.*, vol. xxiii (1891), is a synonym of *Laoma* (*Phrixgnathus*) *phrynia*, Hutton. Since my description was published, well-preserved specimens of *L. phrynia* have come into my possession, and, after careful comparison, I have come to the conclusion that my species is nothing more than a local variety.

9. *LAOMA* (*PHRIXGNATHUS*) *MOELLENDORFFI*, n.sp. Pl. IV, Figs. 19–21.

Shell very small, depressly-turbinate, pale-horny with irregular radiate streaks of chestnut; faintly glossy, very thin, semi-transparent, smooth, microscopically decussate. Spire broadly conoidal, arched; periphery slightly keeled; whorls 4, gradually increasing in size, convex, the last not descending in front. Protoconch smooth, blunt. Aperture transverse, lunate; peristome straight, acute, outer lip somewhat keeled, basal lip broadly arched, columella lip subvertical, slightly reflexed, and callous. Umbilicus narrow, deep, one-sixth of the major diameter. Base rounded. Diam. 2.5, alt. 1.5 mm.

*Type* in my collection.

*Hab.*—Mt. Wellington lava-fields, Auckland (H. S.).

This is another species closely allied to *L. phrynia*, but it is smaller, more depressed, is not ribbed, is microscopically decussate, and has a slightly narrower umbilicus. Named in honour of Dr. O. F. von Möllendorff, Manila.

10. *LAOMA* (*PHRIXGNATHUS*) *HAMILTONI*, n.sp. Pl. IV, Figs. 22–24.

Shell minute, subdiscoidal, umbilicated, yellowish-horny, glossy, pellucid, smooth, with distinct lines of growth, impressed at the suture, not decussate. Spire flat, but little elevated; periphery rounded; whorls  $3\frac{1}{2}$ , slowly and regularly increasing, convex, the last not descending. Protoconch microscopically spirally striate. Aperture diagonal, rotundly lunate; peristome straight, acute, outer and basal lip regularly rounded, columella almost straight, oblique, much reflexed. Umbilicus about one-eighth of the diameter, deep. Base rounded. Diam. maj. 2.5, min. 2; alt. 1.25 mm.

*Type* in my collection.

*Hab.*—Macquarie Island, where it was found by Mr. A. Hamilton, of Dunedin, in whose honour the species is named.

The specimens were kindly given to me by Prof. J. T. Parker, of Dunedin.

This species has its nearest allies, such as *Laoma occultus*, Cox, etc., in Tasmania; and it is no doubt also very near to *L. Campbellica*, Filhol, but I have not yet seen that species.

11. *LAOMA* (*PHRIXGNATHUS*) *SUBLUCIDA*, n.sp.

Shell small, depressly-turbinate, subperforate, whitish-horny, glossy, semi-transparent, smooth, with faint, radiate, rufous streaks extending to the umbilicus, not decussate. Whorls 5, gradually increasing, flatly rounded; suture impressed; periphery rounded. Protoconch smooth. Aperture transverse, lunate; peristome straight, acute, slightly callous; outer and basal lip regularly arched, columella lip

very short, oblique, callous, reflexed, and partly covering the very narrow and pervious umbilicus. Base flatly rounded. Diam. maj. 3, min. 2.75; alt. 2 mm.

*Type* in my collection.

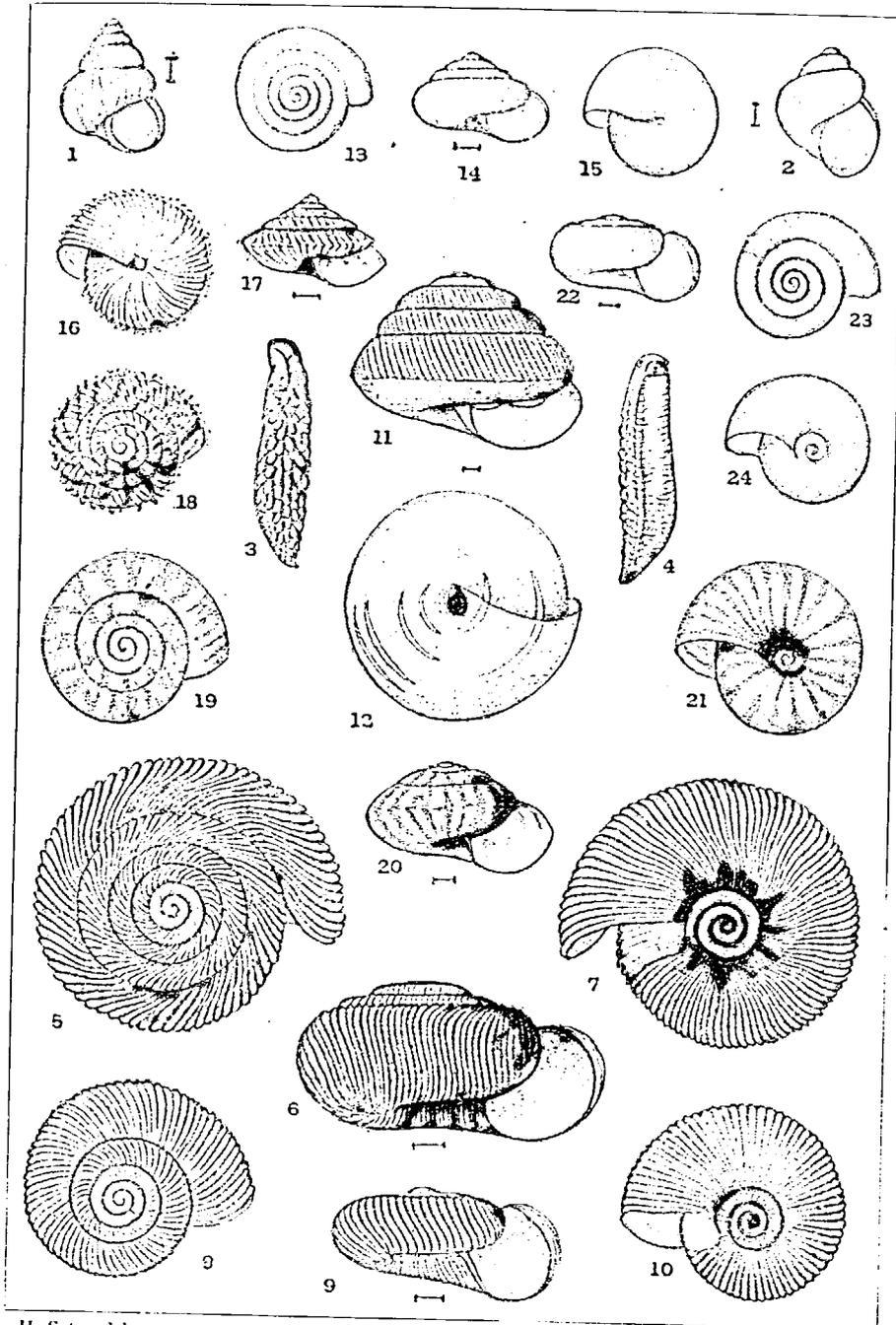
*Hab.*—Waitakeri, Auckland (Mr. T. F. Cheeseman).

This species is intermediate between *L. transitans* and *L. lucida*. It is distinguished from the latter by the colour-markings, the absence of microscopical spiral striation, and the more opaque texture. *L. transitans* differs from it in the higher spire, the distinct growth-lines, and the acute keel at the periphery.

No figure is given, as the outline of the shell is very similar to that of *L. lucida*.

#### EXPLANATION OF PLATE.

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| FIG. 1.   | <i>Lagochilus</i> Chiltoni, n.sp. (× 6.)           |
| „ 2.      | „ (?) Studeri, n.sp. (× 6.)                        |
| „ 3, 4.   | <i>Athoracophorus</i> Simrothi, n.sp. (nat. size.) |
| „ 5-7.    | <i>Endodonta</i> Roseveari, n.sp. (× 10.)          |
| „ 8-10.   | „ Titirangiensis, n.sp. (× 8.)                     |
| „ 11, 12. | <i>Laoma elegans</i> , n.sp. (× 15.)               |
| „ 13-15.  | „ <i>lucida</i> , n.sp. (× 6.)                     |
| „ 16-18.  | „ <i>spiralis</i> , n.sp. (× 6.)                   |
| „ 19-21.  | „ <i>Moellendorffi</i> , n.sp. (× 10.)             |
| „ 22-24.  | „ <i>Hamiltoni</i> , n.sp. (× 8.)                  |



H. Suter, del.

NEW LAND-SHELLS FROM NEW ZEALAND.

