

*Description.*—Rhombic, in radiating groups, which separate in thin flexible laminæ. Hardness 2 to 2·5; colour, whitish green to dark green, weathering to a bronze hue and pearly lustre. B.B. infusible, but becomes white; odour, bitter argillaceous when breathed upon. Allied to picrosmine and antigorite. It is from the Dun Mountain, where it occurs with the serpentine rocks. It was collected by the late Mr. E. H. Davis.

ART. XLIX.—*Descriptions of some new Tertiary Shells from Wanganui.*

By Professor F. W. HUTTON.

[Read before the Philosophical Institute of Canterbury, 7th September, 1882.]

A SHORT time ago a collection of over a hundred species of Mollusca from the Wanganui bed was submitted to me for determination by Mr. S. H. Drew, of Wanganui, and in it I found the following forms which appear to be undescribed:—

*Trophon expansus*, sp. nov.

Shell ovate; spire moderate, acute: whorls five or six, spirally grooved, the grooves narrower than the ribs, about 26 grooves on the body-whorl, crossed by undulating laminæ of growth worn smooth. Aperture ovate, wide, slightly angled behind; outer lip expanded; columella rounded, with a small posterior canal: anterior canal very short and recurved.

Length, ·77 inch; breadth, ·4 inch. Length of spire, ·8; of aperture, ·85; of canal, ·12 inch.

This is one of the purpuroid Trophons, but with a rounded columella; it is so like the figure of *Purpura patens*, H. and J., that I should have considered it the same, but that the authors state that *P. patens* has the columella very flat.

*Cominella drewi*, sp. nov.

Shell ovate, spire short: whorls six, spirally liræte, about 22 liræ on the body-whorl; the spire-whorls finely longitudinally plicate. Aperture ovate, the posterior canal well marked: columella obliquely truncated; anterior canal well defined.

Length, ·78 inch; breadth, ·45 inch.

This species is distinguished from all our other species of *Cominella*, except *C. ordinalis*, Hutton, by being spirally liræte, and from this species it is separated by its well-marked anterior canals, which makes it intermediate between *Cominella* and *Euthria*.

*Odostomia sherriffi*, sp. nov.

Shell subulate, tapering: whorls fifteen, smooth, flattened and polished, the suture deep. Aperture ovate; peritreme not continuous; columella with one strong plait.

Length, .55 inch; breadth, .17 inch.

Named after Mr. G. Sherriff, of Wanganui.

*Trochita inflata*, sp. nov.

Shell subglobose; whorls two and a half rounded; the last inflated, with four or five distant, narrow, spiral ribs crossed obliquely by lines of growth: apex lateral. Aperture ovate, the lamina concave.

Height .4 inch. Length of aperture .88; breadth .72.

This species has externally the appearance of a *Natica*, but the surface is not polished.

*Anthora conica*, sp. nov.

Shell conical, high; whorls seven, slightly convex, with fine spiral moniliform ribs, about eight on the penultimate whorl; suture deep; base of the last whorl spirally striated with moniliform striæ, the angle rounded. Axial cavity deep, smooth, conical; columella with a slight posterior fold.

Height .84 inch; breadth .84 inch.

This species has the smooth axial cavity of *A. tiarata*, but it is larger, higher, the granulations finer, and the basal angle much more rounded.

NOTE.—In addition to these new species there was in the collection a specimen of what I take to be *Siphonaria fuscozonata*, Angas (P.Z.S., 1865, p. 56), which appears to be the same as *Fusus minutisquamosus*, Reeve.

ART. L.—Note on the Silt Deposit at Lyttelton. By Prof. F. W. HUTTON.

[Read before the Philosophical Institute of Canterbury, 6th April, 1882.]

IN cutting back the hill on the west side of Lyttelton Harbour to make room for the dock, an excellent section has been exposed of the silt deposit and the rocks underlying it. An uneven surface of volcanic rocks is covered by the silt, which is distinctly stratified, and dips at an angle of 8 degrees to the north-east, that is towards the harbour. In 1878 the cutting behind the

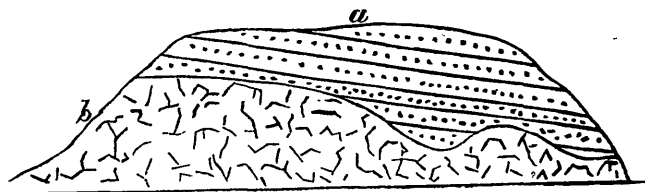


Fig. 1. a, silt deposit; b, volcanic rocks.