

ADDITIONS TO THE TERTIARY MOLLUSCA OF VICTORIA.

By the Rev. E. H. Chapple.

Plate XIX.

The type specimens of the tertiary mollusca described below are in the National Museum. With one exception, all were collected by the present author.

Class **PELECYPODA.**

Family **CRASSATELLITIDAE** Dall.

Genus **SALAPUTIUM** Iredale 1924.

Salaputium corioensis, sp. nov.

Plate XIX, figs. 1, 1a.

Holotype, a right valve from West Beach, Corio Bay, Reg. No. 13685.

Description.—Shell subquadrate, somewhat convex at umbo, depressed towards anterior margin; a faint median ridge extends from umbo to post-ventral margin. Umbo sub-central, directed anteriorly; lunule well defined, long, not striate; dorsal margin fairly straight; anterior margin rounded; posterior obliquely angular; ventral margin strongly arched posteriorly, tapering towards anterior end of shell. Surface ornament consists of concentric ridges, somewhat flattened and reflected, interspaces plain; no radial ornament. Inner margin of valve bevelled; finely crenulated on inner side of bevelled edge.

Dimensions.—Holotype:—Length, 18 mm.; height, 15 mm.; depth of valve, 4 mm.

Observations.—This fossil resembles *Salaputium communis* (Tate) = *Crassatella communis* Tate in shape, but is larger and, unlike *S. communis*, it has the inner margin crenulated. It also bears some resemblance to *S. aldingensis* (Finlay) = *Crassatella corrugata* Tate, but the latter has a plain margin and is striate between the corrugations.

Localities.—West Beach, Corio Bay (Type). North bank of Mitchell River above bridge 10 miles upstream from Bairnsdale.

Geological Horizon.—Barwonian (Oligocene or Miocene).

Class **GASTEROPODA.**

Family **TURRIDAE** Hedley 1922.

Genus **TURRIS** Müller 1766.

Turris janjukiensis, sp. nov.

Plate XIX, figs. 2, 2a.

Holotype, Reg. No. 13686; paratype, Reg. No. 13687; both from Bird Rock Cliffs, Torquay.

Description.—Shell fusiform; protoconch consists of two smooth convex whorls devoid of ornament, tip slightly oblique, immersed. Body whorl ventricose, tapering to acute spire of six convex whorls which bear spiral lirae; lirae on anterior portion of whorls bold, acute, undulating, interspaces being wider than lirae; posterior half of whorls sulcate, finely lirate; penultimate whorl bears five principal lirae on its anterior face; suture well defined, margined anteriorly with two close-set lirae. Body whorl sulcate, finely lirate anterior to suture; four or five bold lirae on periphery; anterior to this they become fainter as they approach canal, interspaces carrying a fine thread. Transverse growth-lines not very conspicuous. Aperture ovate; outer lip thin, fragile, no available example being perfect; sinus broad (deduced from growth-lines); canal long, straight, narrow.

Dimensions.—Holotype.—Length, 31 mm.; breadth, 10 mm.; length of aperture, 6 mm.; of canal, 10 mm.

Locality.—Bird Rock Cliffs, Spring Creek, Torquay.

Geological Horizon.—Janjukian (Miocene).

Genus **GEMMULA** Weinkauff 1876.

Gemmula gellibrandensis, sp. nov.

Plate XIX, figs. 3, 3a.

Holotype, Reg. No. 13688; paratype, Reg. No. 13689; both from near Princetown.

Description.—Shell narrowly fusiform, with long scalar spire. Protoconch consists of two convex whorls; initial portion slightly inflated, oblique; anterior whorl costate. Spiral whorls nine, squarely shouldered, the keel consisting of two raised, close-set coarsely granulose lirae; in front of keel whorls are flattened, the spiral lirae being bold and rounded, four on penultimate whorl with a thread-like lira in interspaces; posterior area slightly sulcate, carries two or three fine lirae; suture is channelled, marginate. Body whorl not inflated; ornament similar to that on spire. Whole shell traversed by numerous close-set oblique growth-lines, most marked in interspaces. Aperture narrowly ovate; outer lip lirate within; sinus wide, deep; columella smooth, nearly straight, its margin very distinct; canal relatively short, a little incomplete, slightly twisted.

Dimensions.—Holotype.—Length, 18 mm. (approx.) ; breadth, 6.5 mm. ; length of aperture, 4.8 mm. ; of canal, 8.0 mm.

Locality.—Land-slide about three-quarters of a mile west of the Gellibrand River and half a mile from the beach, Princetown district. The material has slipped from a bed in the immediate vicinity.

Geological Horizon.—Barwonian (Oligocene or Miocene).

Genus ETREMA Hedley 1918.

Etrema morningtonensis, sp. nov.

Plate XIX, figs. 4, 4a.

Holotype, Reg. No. 13690. Balcombe Bay, Mornington.

Description.—Shell smooth, rather solid, turreted, fusiform. Protoconch of two rounded whorls. Other whorls, five, convex, shouldered at posterior third, abruptly descending to posterior suture ; suture well impressed. Whorls obliquely costate, eighteen narrow costae on penultimate whorl, interspaces wider than costae and faintly lirae. Spiral ornament consists of regularly-spaced, somewhat distant lirae, four on penultimate whorl ; small granules form where lirae traverse costae, lirae on anterior canal being more pronounced. Aperture ovate ; sinus well-defined ; outer lip with distinct varix ; columella with thin callus ; canal short, truncate, a little expanded at front, twisted, recurved.

Dimensions.—Holotype. Length, 10 mm. ; breadth, 3 mm. ; length of aperture and canal, 4.5 mm.

Locality.—Balcombe Bay, Mornington.

Geological Horizon.—Balcombian (Oligocene).

Genus GURALEUS Hedley 1918.

Guraleus cuspidatus, sp. nov.

Plate XIX, figs. 5, 5a.

Holotype, Reg. No. 13691. Balcombe Bay, Mornington.

Description.—A small, graceful, elongately fusiform, turreted shell with acute spire. Protoconch, a smooth, acute, apical series of four convex whorls ending in a sharp point. Spire whorls four, graded, shouldered at posterior third, abruptly descending to well marked posterior suture ; whorls medially convex. Posterior spire whorls ornamented with distant, acute, oblique riblets, which are not continuous from whorl to whorl, and fade away on anterior portion of penultimate whorl. Spiral ornament consists of close-set fine lirae, interspaces striate. Body whorl elongated, somewhat inflated, with a few rudimentary riblets on shoulder and a well-defined varix a little removed from margin of outer lip. Spiral lirae similar to those on spire, save that those on spire are oblique and coarser. Area posterior to shoulder of whorls is plain. Aperture elongate-oval ; outer lip smooth, bevelled, and with a small sub-sutural sinus ; columella medially concave ; canal open at front, recurved.



New Tertiary Mollusca

Dimensions.—Holotype. Length, 15 mm.; breadth, 5 mm.; length of aperture and canal, 7 mm.

Observations.—This species resembles somewhat the living *Guraleus cuspis* (Sowerby) as figured by W. L. May (Illustrated Index of Tasmanian Shells, 1923).

Localities.—Balcombe Bay, Mornington. Spoil heap of brown coal mine, Altona, near Williamstown.

Geological Horizon.—Balcombian (Oligocene).

Family **TROCHIDAE** Adams 1858.

Genus **CALLIOSTOMA** Swainson 1840.

Calliostoma balcombensis, sp. nov.

Plate XIX, figs. 6, 6a.

Holotype. Reg. No. 13694. Balcombe Bay, Mornington.

Description.—Shell trochiform, of five convex whorls, exclusive of apex. Protoconch, small, of one-and-a-half turns, tip enrolled at right angles to axis of shell. Whorls spirally lirate throughout, five on penultimate whorl, lirae granulose, with an intermediate fine thread. Suture well impressed. Body whorl ventricose; base convex, lirate but less granulose than on whorls, about eight lirae on base. Aperture subquadrate, pearly within; outer lip thin, crenulate; columella excavated, slightly reflexed.

Dimensions.—Holotype. Length, 9 mm.; breadth, 7 mm.

Observations.—This species is fairly common at Balcombe Bay.

Locality.—Balcombe Bay, Mornington.

Geological Horizon.—Balcombian (Oligocene).

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Plate XIX.

- Figs. 1a, b. *Salaputium corioensis*, sp. nov.; holotype. $\times 1.5$.
 Figs. 2a, b. *Turris janjukiensis*, sp. nov.; holotype. $\times 1.5$.
 Figs. 3a, b. *Gemmula gellibrandensis*, sp. nov.; holotype. $\times 1.5$.
 Figs. 4a, b. *Etrema morningtonensis*, sp. nov.; holotype. $\times 3$.
 Figs. 5a, b. *Guraleus cuspidatus*, sp. nov.; holotype. $\times 3$.
 Figs. 6a, b. *Calliostoma balcombensis*, sp. nov.; holotype. $\times 3$.