

[PROC. ROY. SOC. VICTORIA, 46 (N.S.), PT. I., 1933.]

ART. VII.—*New and Rare Tertiary Mollusca from Deep Borings in Gippsland, Victoria.*By FREDERICK CHAPMAN, A.L.S., F.G.S.
(Palaeontologist to the Commonwealth Government),

and IRENE CRESPIN, B.A.

(Assistant Palaeontologist).

(With Plate V.)

[Read 13th July, 1933; issued separately 22nd December, 1933.]

In the course of investigations by this department into the faunas of various borings put down in East Gippsland in the search for oil, many rare and undescribed molluscan forms have been met with. The paper deals with fossils from the Kalimnan Series of the bores in East Gippsland, and includes eight new species and one new variety, and two species (*Cuna particula* and *Etrema alliterata*), which up to the present had been found only living.

The forms described are:—

PELECYPODA:

- Cuna particula* Hedley.
Venericardia depressulata, sp. nov.
Venericardia gippslandica, sp. nov.
Venericardia spinulosa (Tate) var. *dennanti*, nov.

GASTEROPODA:

- Cerithiopsis woolnoughi*, sp. nov.
Trophon (*Enatimene*) *metungensis*, sp. nov.
Typhis (*Cyphonochelus*) *rugicostatus*, sp. nov.
Personella clarki, sp. nov.
Marginella kalimnac, sp. nov.
Daphnella granulosa, sp. nov.
Etrema alliterata (Hedley).

Class PELECYPODA.

Fam. CRASSATELLITIDAE.

Genus **Cuna** Hedley.

CUNA PARTICULA Hedley.

(Pl. V., Figs. 1, 2.)

Cuna particula, Hedley 1902, p. 316, fig. 56.

Observations.—The fossil specimens agree in all details of shape and sculpture with the living form. *C. particula* is recorded as abundant in 63-75 fathoms off Port Kembla, and in 41-50 fathoms off Cape Three Points, New South Wales.

Dimensions.—Length of shell, 2.23 mm.

Occurrence.—Plesiotype, No. 1 Bore, Parish of Bumberrah (Metung), Gippsland, Victoria, at 180-200 feet. (Commonwealth Coll. No. 50.)

Age.—Lower Pliocene. (Kalimnan.)

Fam. CARDITIDAE.

Genus **Venericardia** Lamarek.

VENERICARDIA DEPRESSULATA, sp. nov.

(Pl. V., Fig. 3.)

Description of Holotype (Left valve).—Shell subquadrate; narrower anteriorly, broadly curved at the posterior border; ventral edge convex, slightly truncate towards anterior, and gently incurved towards the umbo. Umbo moderately sharp, not prominent; costae 23 narrow, with slightly wider interspaces. Surface of costae ornamented with numerous lamellar processes, somewhat spinose on posterior border. Fine concentric growth-lines passing on from costae to interspaces. Ligamental area somewhat narrow and delicate. Inner margin of valve crenulated.

Dimensions of Holotype.—Length, 11 mm.; height, 9 mm.; thickness, 2.75 mm.

Observations.—The general form of this species resembles *Venericardia latissima* (Tate), but is not so quadrate, and generally more depressed. In *V. latissima* the ribs number 30 as against 23 in *V. depressulata*; both are ornamented with lamellar scales.

Occurrence.—Holotype, Steam Drill, Parish of Coongulmerang, East Gippsland, Victoria, at 300-334 feet (Commonwealth Coll. No. 51); also Rose Hill, East Gippsland (Dennant Collection, National Museum, Melbourne).

Age.—Lower Pliocene. (Kalimnan.)

VENERICARDIA GIPPSLANDICA, sp. nov.

(Pl. V., Fig. 4.)

Description of Holotype.—Shell, left valve of moderate size and roundly ovate. Umbo sub-central, more or less projecting. Ventral margin well rounded. Twenty rounded, radiating ribs, with slightly wider interspaces. Ribs are beaded in the earlier half of the shell, becoming platy in later stages. Interspaces occupied with closely set undulate lamellae, which to some extent pass over on to the ribs. Internal margin of valve distinctly crenulate.

Dimensions of Holotype.—Length of valve, 16 mm.; greatest height, 15.5 mm.; greatest thickness of valve, 5 mm.

Observations.—In the Tate Collection, Adelaide University Museum, there is a tablet upon which five specimens of a small *Venericardia* are mounted, together with three others of the same genus but of a different species. These smaller forms at the base of the tablet are comparable with the above new species from Gippsland. The label written by Tate on this tablet is "*Cardita spinulosa* var.?, Meringa Creek, Gippsland." These specimens from the Tate Collection are smaller than our type, but the number and character of the costae and the shell in outline are similar. The largest of these specimens has a length of 10.5 mm., and height of 8 mm. *V. gippslandica* is much more abundant in the Kalimnan of Gippsland than *V. spinulosa*. In comparing *V. gippslandica* with *V. spinulosa*, the former is more suborbicular in outline and the ribs are beaded to platy, but never spinulose as in *V. spinulosa*. With regard to the umbones there is a marked difference in the two forms, that of *V. spinulosa* being very strong and incurved at the apex, whilst in *V. gippslandica* it is not so prominent, and is subcentral and without the conspicuous curvation of *V. spinulosa*. *V. trigonalis* (Tate), from Gippsland Lakes and younger beds of Muddy Creek (Dennant Coll.), is similar to *V. gippslandica* in the beaded character of the ribs, but differs in the few costae and in the distinctly trigonal outline of the shell. A comparison with the Lower Miocene form *V. maudensis* (Pritchard) shows the ribs of this species to be more uniformly beaded and with the umbo directed more strongly forward. The number of the ribs is the same.

Occurrence.—Holotype, Prince's Highway, E. of Bunga, Lakes Entrance, East Gippsland, Victoria (Commonwealth Coll. No. 52); also in No. 1 Bore, Parish of Bumberrah from 90-190 feet; No. 3 Bore, P. of Darriman, from 66-76 feet; No. 1 Government Bore at 90 feet and Kalinna Oil Co. No. 1 Bore, Rigby Island from 50-70 feet, both in the P. of Colquhoun; also Tram Track, Mississippi Creek, Lakes Entrance; Prince's Highway, E. of Bunga (Commonwealth Coll.); Gippsland Lakes and Rose Hill (Dennant Coll. National Museum, Melbourne).

Age.—Lower Pliocene. (Kalimnan.)

VENERICARDIA SPINULOSA (Tate) var. DENNANTI nov.

(Pl. V., Figs. 5, 6.)

Description of Holotype of var.—This variant of *Venericardia spinulosa* may be generally distinguished by the gradual loss of the spinulose character on the costae in the ephelic stage, and the tendency of this character to become platy and finally pass into undulatory growth lines as it nears the ventral border. The outline, compared with the typical *V. spinulosa*, is much more elongate, and in the gerontic stage becomes heavier.

Dimensions of Holotype of var.—Length of shell, 32 mm.; greatest height, 28 mm.; thickness of valve, 10 mm.

Observations.—In the notes on *Venericardia gippslandica*, sp. nov., it was stated that in the Tate Collection, Adelaide University, there is a tablet labelled "*Cardita spinulosa* var.?, Meringa Creek, Gippsland," which contains three large specimens of *Venericardia* as well as five small ones. The uppermost of the larger forms seems to be comparable with our present *Venericardia spinulosa* var. *dennanti*.

Occurrence.—Holotype of var., Old Bunga-road, East of No. 1 Bore, Lakes Entrance, East Gippsland, Victoria (Commonwealth Coll. No. 53); paratype, Meringa Creek, Gippsland (Tate Coll., Adelaide University); also Kalimna Oil Co. No. 1 Bore, Rigby Island, Lakes Entrance at 70 feet (Commonwealth Coll.); Rose Hill, and Gippsland Lakes (Dennant Coll. National Museum, Melbourne).

Age.—Lower Pliocene. (Kalimnan.)

Class GASTEROPODA.

Fam. CERITHIIDAE.

Genus **Cerithiopsis** Forbes and Hanley.

CERITHIOPSIS WOOLNOUGHI, sp. nov.

(Pl. V., Figs. 7, 8.)

Description of Holotype.—Shell, long, turreted. Nine whorls, surmounted by protoconch of two smooth turns and forming a small mamilla. A varix present near mouth of last whorl. The first four of the posterior whorls, which are more or less angulate, are ornamented with two distinct lirae, which increase rapidly, there being as many as seven on body whorl. These lirae are crossed by equally distinct vertical riblets giving a clathrate appearance in early part of shell, becoming nodulose in latter part. The later whorls become increasingly inflated. Suture line deeply impressed, base of body whorl relieved by fine spiral threads. Aperture subquadrate, slightly canaliculate anteriorly.

Dimensions of Holotype.—Length of shell, 5.3 mm.; width of body whorl, 1.88 mm.

Description of Paratype.—The shell is identical with the holotype, except in point of size, it being figured to show the back of specimen.

Dimensions of Paratype.—Length of shell, 4.75 mm.

Observations.—Although *Cerithiopsis woolnoughi* is a common form in the Gippsland borings, it is represented only in the Dennant Collection, National Museum, Melbourne, from

Rose Hill, and is labelled “?Cerithium n. sp.” So far as we have observed, there is no living species exactly comparable with it. We have named the species in honour of Dr. W. G. Woolnough, Geological Adviser to the Commonwealth.

Occurrence.—Holotype and Paratype, Fernbank Water Bore, East Gippsland, Victoria, at 270 feet (Commonwealth Coll. Nos. 54 and 55); also in the East Gippsland Bores, No. 1 Bore, Parish of Moormung, at 389, 438, and 450 feet; No. 1 Bore, P. of Coongulmerang, at 240, 260, 270, and 280 feet; No. 1 Bore, P. of Bengworden, at 480 and 540 feet; in No. 7 Bore, P. of Glencoe at 160-170 feet (Commonwealth Coll.); and at Rose Hill, Gippsland (Dennant Coll. National Museum, Melbourne.)

Age.—Lower Pliocene. (Kalinman.)

Fam. CYMATIIDAE.

Genus **Personella** Conrad.

PERSONELLA CLARKI, sp. nov.

(Pl. V., Fig. 11.)

Description of Holotype.—Shell small, with spire and body whorl of nearly equal length; consisting of eight and a half whorls, two and a half being represented by the protoconch; apex acute. Whorls inflated, subangulate or shouldered. In the whorls preceding the body whorl, the shoulders are ornamented with two prominent spirals, with the exception of the first whorl in the neanic stage, which has only one spiral. Five lirae on body whorl with generally two or three spiral striations between each. The costate ornament consists of some more or less feeble riblets, and these are crossed by the spirals; between the riblets the surface is crossed by the thread-like vertical striae. Varices two to each whorl. Surface of protoconch is smooth and more or less inflated. Aperture roundly ovate, the lip margined by a varix; inner lip callused, narrow, and with a sharp margin. Inner surface of outer lip slightly toothed, canal short and somewhat open; slightly twisted and reverted.

Description of Paratype.—This specimen, from the Kalinna Oil Company's Bore at Rigby Island, is damaged in the body whorl, but otherwise bears all the characters of the type, with the exception that the protoconch of the paratype is not quite so high as that of the holotype, and has two instead of two and a half turns.

Dimensions of Holotype.—Length of shell, 21 mm.; greatest width of body whorl, 11 mm.; height of protoconch, 0.8 mm.; length of aperture and canal, 10 mm.

Dimensions of Paratype.—Length of shell, 14 mm.; height of protoconch, 0.59 mm.

Observations.—The nearest related fossil species is *Personella oligostirum* (Tate), which occurs in the Oligocene of the Lower Aldinga Beds. *P. oligostirum* is a narrow shell, and the riblets are more or less nodulose, especially on the body whorl. In the stoutness and width of shell *P. clarki* approaches the living *P. verrucosa* (Reeve), but with the difference that the latter has more nodulose riblets. The above trivial name was suggested by Mr. J. Dennant in manuscript for this species in honour of his fellow-worker, Mr. Donald Clark.

Occurrence.—Holotype, Gippsland Lakes, Victoria (Dennant Coll. National Museum, Melbourne, No. 13758); paratype, Kalimna Oil Co. No. 1 Bore, Rigby Island, Lakes Entrance, Victoria, at 30–50 feet (Commonwealth Coll., No. 56).

Age.—Lower Pliocene. (Kalimnan.)

Fam. MURICIDAE.

Genus **Trophon**.

Subgenus **Enatimene** Iredale.

TROPHON (ENATIMENE) METUNGENSIS, sp. nov.

(Pl. V., Fig. 9.)

Description of Holotype.—Shell small, fusiform, somewhat elongated. Protoconch shows two smooth and rather inflated whorls, followed by three rounded, slightly shouldered whorls of the spire; the more inflated body whorl has a moderately long canal. Sutures distinct. Seven rounded costae on each whorl; whole of shell surface relieved with fine vertical striae. Lirae crossing the costae in form of strong spiral threads; four on penultimate and nine on body whorl, where, towards the canal, they break up into granules. Mouth ovate, outer lip expanded, constricted anteriorly; inner lip with thin flange. Inner surface of mouth aperture with an enamel surface.

Dimensions of Holotype.—Length of shell, 14 mm.; greatest width of body whorl, 6.5 mm.; length of mouth, 4.2 mm.; length of canal, 4.5 mm.

Description of Paratype.—The specimen labelled "*Murex* sp." in the Dennant Collection agrees in all characters with the holotype.

Observations.—This subgenus (*Enatimene*) of *Trophon* is represented in the living fauna by *Enatimene simplex* (Hedley). This name has lately been proposed by Iredale (1929, p. 185),

who describes the genotype *Trophon simplex* as follows:—"Small apex, medium spire, delicate shape, long recurved canal, and free mouth, making it a striking form, the sculpture being an obsolete clathration."

Occurrence.—Holotype, No. 1 Bore, Parish of Bumberrah, East Gippsland, Victoria, from 90 to 100 feet (Commonwealth Coll. No. 57); paratype, Gippsland Lakes (Dennant Coll. National Museum, Melbourne, No. 13759); also Fernbank Water Bore, E. Gippsland, Victoria, at 337–395 feet (Commonwealth Coll.).

Age.—Lower Pliocene. (Kalimman.)

Genus **Typhis** Montfort.

Subgenus **Cyphonochelus** Jousseau.

TYPHIS (CYPHONOCHELUS) RUGICOSTATUS, sp. nov.

(Pl. V., Fig. 10.)

Description of Holotype.—Shell fusiform, six moderately inflated whorls, surmounted by a protoconch of one and a half smooth turns, the tip being bulbous. Whorls immediately below protoconch are slightly shouldered, sutures well marked. Body whorl moderately convex, having four rounded and costate varices; behind each varix is a conspicuous tubular spine, turned slightly backward and upward. The turns above the body whorl bear the same tubular spinose processes, but diminish in strength towards apex. Aperture ovate, with a sharp salient inner margin carrying a strong fold, tending to become tubular. Fine growth striae between costae.

Dimensions of Holotype.—Length of shell, 15.75 mm.; width of body whorl, 8.5 mm.; length of aperture, 4 mm.; width of aperture, 3 mm.

Observations.—This form, *Typhis* (*Cyphonochelus*) *rugicostatus*, appears to be very closely related to the living species *T. syringianus* Hedley recorded from Victoria, Tasmania, and South Australia. The fossil species differs chiefly in the form of the protoconch, which is much smaller than that in the living species. It is also more acuminate and salient. Tate's species *T. cvaricosus*, from the Lower Miocene of Muddy Creek, shows some ancestral relationship but has a longer shell, slenderer tubular spines and less conspicuous costae, whilst the character of the protoconch points to an affinity with the living species. Numerous specimens of *T. (C.) rugicostatus* from the Gippsland Lakes are in the Dennant Collection, and are labelled "*Typhis* sp. nov."

Occurrence.—Holotype, No. 1 Bore, Parish of Bumberrah, East Gippsland, Victoria, from 90-100 feet (Commonwealth Coll. No. 58); Gippsland Lakes (Dennant Coll. National Museum, Melbourne).

Age.—Lower Pliocene. (Kalimnan.)

Fam. MARGINELLIDAE.

Genus **Marginella** Lamarck.

MARGINELLA KALIMNAE, sp. nov.

(Pl. V., Fig. 12.)

Description of Holotype.—Shell volutiform, large for the genus, elongately ovate; spire long, whorls five. Body whorl one and a half times length of spire, moderately inflated; inner lip with four plaits, outer lip finely denticulated internally, externally with a thickened margin. Surface of shell polished.

Dimensions of Holotype.—Length, 13 mm.; greatest width of body whorl, 6.25 mm.

Observations.—This species bears the characters of *M. muscarioides*, but is generally much larger, and differs in the thickened margin of the outer lip not being produced into a flange-like extension as in the latter species.

Occurrence.—Holotype, No. 1 Bore, Parish of Bumberrah (Metung), East Gippsland, Victoria, at 80-90 feet (Commonwealth Coll. No. 59); also Prince's Highway, East of Bunga; Meringa Creek and Kalinna Oil Co. No. 1 Bore, Rigby Island, Lakes Entrance at 30-50 feet (Commonwealth Coll.); Jemmy's Point, Gippsland Lakes (Dennant Coll. National Museum, Melbourne).

Age.—Lower Pliocene. (Kalimnan.)

Fam. TURRIDAE.

Genus **Daphnella** Hinds.

DAPHNELLA GRANULOSA, sp. nov.

(Pl. V., Fig. 13.)

Description of Holotype.—Shell small, ovate, with six graduated whorls, including the protoconch, contracted at the suture, subangular at the shoulder, rounded at the periphery and hollowed at the base. Surface reticulated by elevated granulated spirals and radials. The radials number 28 on last whorl and on the antepenultimate about 18. On the last whorl there are about ten spirals, not counting the thin interstitial threads; on the penultimate there are four, and on earlier

whorls three. The protoconch consists of two rounded whorls, apparently smooth, but showing very fine reticulation under high magnification. Sinus band bears a series of granules. Aperture simple, outer lip thin, sinus wide and shallow, canal short, with blunt margin; inner lip narrow and smooth.

Description of Paratype.—This shell is similar in all respects to the holotype.

Dimensions of Holotype.—Length of shell, 6.4 mm.; height of protoconch, 0.23 mm.; width of shell, 2.5 mm.; length of aperture, 3.2 mm.

Dimensions of Paratype.—Length of shell, 4.3 mm.; height of protoconch, 0.23 mm.; width of shell, 2 mm.; length of aperture, 2.1 mm.

Observations.—Comparing the recent species *Daphnella granata* Hedley (Hedley 1922, p. 328, pl. 53, fig. 162), from Queensland, it is seen that *D. granulosa* has fewer ribs and coarser and more bead-like granules together with a slightly higher protoconch; whilst *D. aulacoessa* Watson (Watson, 1886, p. 367, pl. 23, fig. 9), from Queensland, has a much slenderer shell, with a fine granulate ornament.

Occurrence.—Holotype, Gippsland Lakes, Victoria (Dennant Coll. National Museum, Melbourne, No. 13760); paratype, Kalimna Oil Co. No. 1 Bore, Rigby Island, Lakes Entrance, Victoria, at 50 feet (Commonwealth Coll. No. 60); also Rose Hill, East Gippsland, Victoria (Dennant Coll.), and No. 1 Bore, P. of Bumberrah, East Gippsland, Victoria, at 90–100 feet (Commonwealth Coll.)

Age.—Lower Pliocene. (Kalimnan.)

Genus **Etrema** (Hedley).

ETREMA ALLITERATA (Hedley).

(Pl. V., Fig. 14.)

Glyphostoma alliteratum, Hedley, 1915, p. 728, pl. 82, figs. 56, 57.

Etrema alliteratum (Hedley), 1922, p. 274.

Observations.—The recent species to which we refer our fossil has been fully described by Hedley (1915), and the localities are Wreck Bay, Sydney Harbour, and Dudley, N.S.W. It is of interest to find this species occurring for the first time as a fossil in the Kalimnan beds of the Stradbroke Bore. The fossil appears to be identical with the recent specimens in all particulars, with perhaps the slight difference of a more inflated protoconch.

Dimensions.—Length of shell, 5.1 mm. This shows the fossil to be slightly smaller than the living specimens, which measured in length 6.3 mm. and 7.5 mm. respectively.

Occurrence.—No. 16 Bore, Parish of Stradbroke, Gippsland, Victoria, at 200 feet (Commonwealth Coll. No. 61).

Age.—Lower Pliocene. (Kalimnan.)

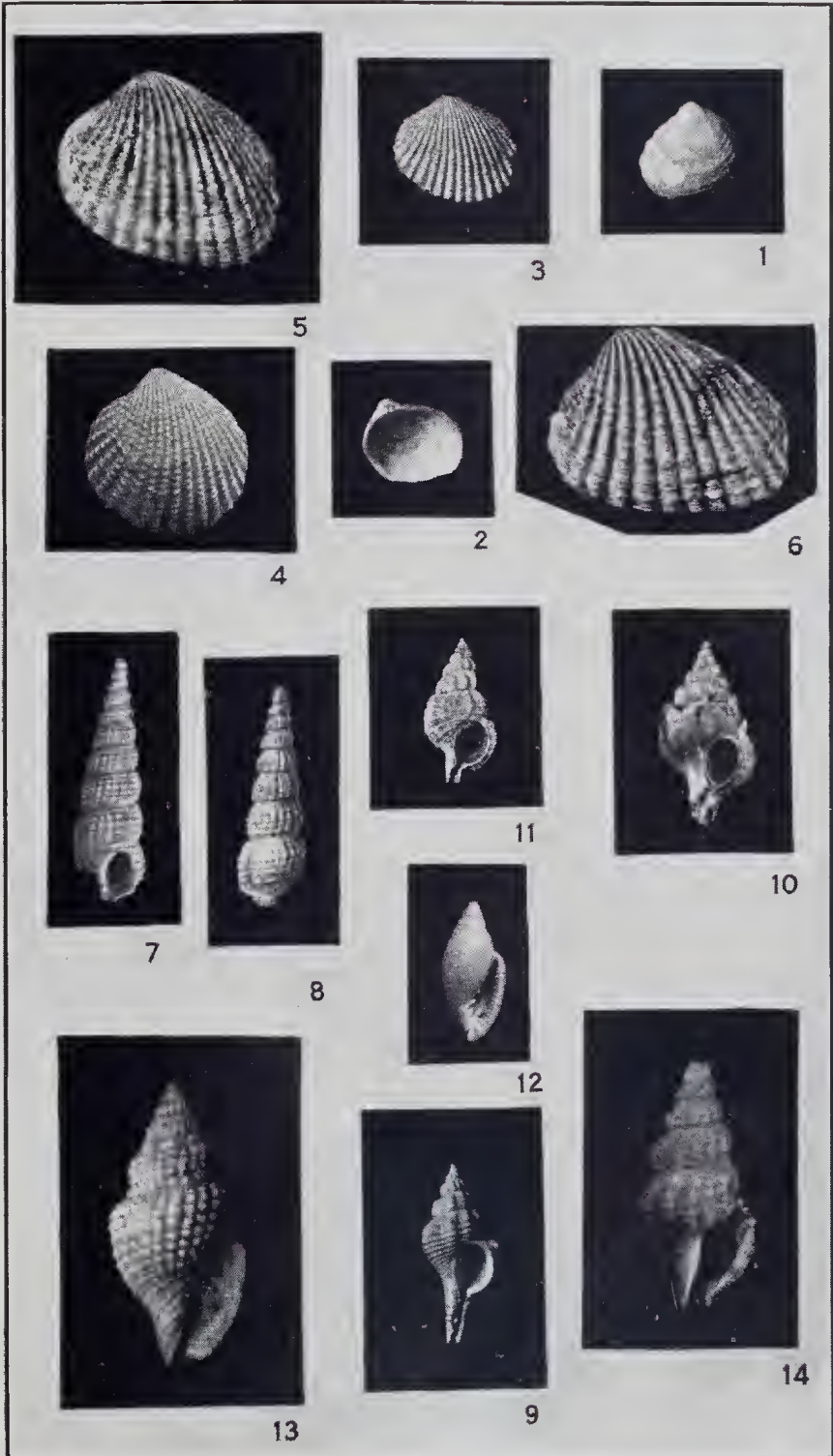
Bibliography.

- HEDLEY, C., 1902. Mollusca. Pt. 1. Brachiopoda and Pelecypoda. Scientific Results Trawling Expedition H.M.C.S. *Thetis*, off the Coast of New South Wales. *Mem. iv.*, *Aust. Mus. Sydney*. Pt. v., 1902, pp. 287-324, text-figs. 39-60.
- , 1915. Studies on Australian Mollusca. Pt. vii., pls. lxxvii.-lxxxv.
- , 1922. A Revision of the Australian Turridae. *Rec. Aust. Mus.*, xiii., pp. 214-359, pls. xlii.-lvi.
- IREDALE, T., 1929. Mollusca from the Continental Shelf of Eastern Australia, No. 2. *Rec. Aust. Mus.*, xvii., No. 4, pp. 157-189, pls. xxxviii.-xli.
- PRITCHARD, G. B., 1895. Contributions to the Palaeontology of the Older Tertiary of Victoria. Lamellibranchs, Pt. 1. *Proc. Roy. Soc. Vic.* (n.s.), vii., pp. 225-231, pl. xii.
- TATE, R., 1878. The Fossil Marginellidae of Australasia. *Trans. Phil. Soc. Adelaide*, 1877-8, pp. 90-98.
- , 1886. The Lamellibranchs of the Older Tertiaries of Australia, Pt. 1. *Trans. Roy. Soc. S. Aust.*, viii., pp. 96-158, pl. ii.-xii.
- , 1888. The Gasteropods of the Older Tertiary of Australia, Pt. 1. *Ibid.*, x., pp. 91-176, pls. i.-xiii.
- WATSON, R. B., 1886. Report on the Scaphopoda and Gasteropoda collected by H.M.S. *Challenger* during the years 1873-6. *Rep. Challenger Zool.*, vol. xv., pt. xlii., p. 367.

Explanation of Plate V.

- Fig. 1.—*Cuna particula* Hedley. Right valve, exterior. No. 1 Bore, P. of Bumberrah, Gippsland, Victoria, 180-200 feet. Kalimnan. Plesiotype. \times circ. 6.
- Fig. 2.—*C. particula* Hedley. Right valve, interior. \times circ. 6.
- Fig. 3.—*Venericardia depressulata*, sp. nov. Left valve. Steam Drill, P. of Coongulmerang, Gippsland, Victoria. Kalimnan. Holotype. \times circ. $1\frac{1}{2}$.
- Fig. 4.—*V. gippslandica*, sp. nov. Left valve. Prince's Highway, E. of Bunga, Lakes Entrance, Gippsland, Victoria. Kalimnan. Holotype. \times circ. $1\frac{1}{2}$.
- Fig. 5.—*V. spinulosa* (Tate) var. *dennanti* nov. Left valve. Old Bunga Road E. of No. 1 Bore, Lakes Entrance, Gippsland, Victoria. Kalimnan. Holotype. Nat. size.
- Fig. 6.—*V. spinulosa* (Tate) var. *dennanti* nov. Left valve. Meringa Creek, Gippsland Lakes, Victoria. (Tate Coll. Adelaide University.) Kalimnan. Paratype. Nat. size.

- Fig. 7.—*Cerithiopsis woolnoughi*, sp. nov. Apertural view. Fernbank Water Bore, East Gippsland, Victoria, at 270 feet. Kalimnan. Holotype. \times circ. 6.
- Fig. 8.—*C. woolnoughi*, sp. nov. Aboral view. Fernbank Water Bore, East Gippsland, Victoria, at 270 feet. Kalimnan. Paratype. \times circ. 6.
- Fig. 9.—*Trophon (Enatimene) metungensis*, sp. nov. No. 1 Bore, P. of Bumberrah, Gippsland, Victoria, 90-100 feet. Kalimnan. Holotype. \times circ. 2.
- Fig. 10.—*Typhis (Cyphonochelus) rugicostatus*, sp. nov. No. 1 Bore, P. of Bumberrah, Gippsland, Victoria, 90-100 feet. Kalimnan. Holotype. \times circ. $1\frac{1}{2}$.
- Fig. 11.—*Personella clarki*, sp. nov. Gippsland Lakes, Victoria. Kalimnan. Holotype. Nat. size.
- Fig. 12.—*Marginella kalimnae*, sp. nov. No. 1 Bore, P. of Bumberrah, Gippsland, Victoria, 80-90 feet. Kalimnan. Holotype. \times circ. $1\frac{1}{2}$.
- Fig. 13.—*Daphnella granulosa*, sp. nov. Gippsland Lakes, Victoria. Kalimnan. Holotype. \times circ. $7\frac{1}{2}$.
- Fig. 14.—*Etrema alliterata* (Hedley). No. 16 Bore, P. of Stradbroke, Gippsland, Victoria, at 200 feet. Kalimnan. Plesio-type. \times circ. 7.
-



F. C. photo.]

New Kalimnan Mollusca from E. Gippsland.