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## ON SOME NEW MARINE SHELLS.

By Rev. J. E. TENISON-WOODS, F.G.S., Hon. Mem. Roy. Soc.  
N. S. Wales, Tasmania, Victoria, Corr. Mem. Linn. Soc.,  
N. S. W., &c.

The following shells were dredged off Port Jackson Heads at a depth of 45 fathoms, and were handed to me for description by Mr John Brazier, C.M.Z.S.

## TEREBRA LAURETANÆ, N. S.

*T. parva*, pyramidata, turrita, opaca, haud nitente, albida, maculis latis, quadratis, fulvis tessellata (in ult. anfr. maculis 2 lin. distinct. zonata); anf. (nucl. excluso) 8, planatis, lineis incrementi undulatis rugoso-striatis, superne valde spiraliter canaliculatis supra canalem obsolete granulatis; nucleo ( $1\frac{1}{2}$  anfr.) naticiformis nitente, basi maculata, convexa, striata labro acuto, columella nitente, exacte definita, canali recurvo, brevi, sutura acute impressa. Long. 20, lat.  $6\frac{1}{2}$  mil.

This *Terebra* resembles a good many of our Australian and Tasmanian forms in the distinct groove in the upper 3rd part of the whorls. It is most like *T. Brazieri*, Angas, but that shell is always longer, and has acute shining ribs. Until we are better acquainted with the younger forms of this and similar shells its specific value must remain doubtful.

## TURRITELLA INCISA, N. S.

*T. parva*, pyramidata, turrita, spira acuta, subpellucida, pallide fulva; anf. 13, utrimque late marginatis margine elevata, striata, albo fulvoque eleganter tessellata, intra margines bi-liratis; 5 anf. apicalibus translucidis et rotundatis; basi concava, lirata; apertura quadrata, labro acuto, sinu angusto, profunde insignito. Long. 11, lat. 3 mil.

This remarkable little *Turritella* is distinguished by the narrow and very deep sinus in the outer lip. It has a raised tessellated margin above and below on each whorl, and the intervening space has two distinct liræ. The colour is pellucid, golden reddish, and the tessellations are red and white. We have one or

two Australian *Turritellas* with a sinus in the outer lip (*T. sinuata*, &c.), but the sinus is broad and shallow, while in this case it is a narrow deep cut of equal width extending some 4 or 6 millim. into the shell.

## CINGULINA TORCULARIS.

This singular species is distinguished by its very prominent spiral keel on the centre of each whorl, which makes the shell appear like a small screw. The nucleus is smooth, white, and shining, not reversed but subvertical; the base has three rounded keels, and the aperture is somewhat produced. It is larger than *CINGULINA AUSTRALIS* nobis, has only one keel, while that shell has two.

*T. parva*, subdiaphana, sordide alba, subnitente, pyramidata; anf. (nucleo excluso) 4, in medio valde unicarinatis, carina acuta elevata, sutura profunde impressa, nucleo laevi, nitente, subverticaliter sito; basi conspicue tricarinata, periphæria ultimi anfr. acuta, apertura circulari integra, extus conspicue quadricostata, labio tenui, leviter reflexo, labro antice producto. Long.  $3\frac{1}{2}$ , lat.  $1\frac{1}{2}$  mil.

## NATICA SUBCOSTATA.

*T. parva*, oblique elliptica, nitente, polita, alba anguste umbilicata, anf. 3, rapide decrescentibus, ultimo laevi, striis tantum incrementi sparsim munito; penultimo costis parvis regularibus radiatim ornato; apertura semilunari, magna, labro acuto, labio recto; umbilico callo parvo, spiraliter costiformi insignito. Major diam. 5, min.  $3\frac{1}{2}$  mil.

A small, smooth-shining *Natica* of oblique elliptical form, mainly distinguished by small, fine radiating ribs on the penultimate whorl.

The next shell which I have to describe is of so rare and remarkable a genus that a few words concerning its generic history may not be unnecessary. The genus *RAULINIA* to which it belongs was erected by Mons. C. Mayer (*Jour. de Conch.* 1864, p. 180) for small turbinated, oblong, oval, thin shells, with spiral grooves. Whorls rapidly increasing, convex; the last very large. Aperture large, slightly oblique, oval oblong, entire,

angular posteriorly, anteriorly sub-effuse. Columella broad, curved, flattened, and with one conspicuous tooth. The author says: "The shell for which I have erected this genus, although extremely rare, has been long known to naturalists. It is the *Raulinia alligata*, described by Deshayes, in his 'Desc. des. coq. foss. d. environs d. Paris' as a *Tornatella*, and finally placed by the same author in the genus *Odontostomia*. Having been so fortunate as to meet at Jeurres a fine specimen of this singular shell, I have been able to study it closely, and found myself under the agreeable necessity of erecting a new genus for it. For it seems to me that it cannot be placed with *Odontostomia*, because of its dimensions and unusual form, from its thin shell and transverse grooves, but above all from its flat non-twisted columella, carrying on the inside an independent tuberculous tooth, which is so very unlike the plait of the *Odontostomia*. By these characters it is associated with *Littorina*, and should be placed in the same family. There is in the Paris basin another shell with much the same character—that is *Littorina monodonta*. It differs from the type in its more elongated form, fainter grooves, and in the position of the tooth. But I believe it should be regarded as a *Raulinia*."

It is very remarkable that a living analogue of this curious shell should be found in Australia. It is rare; but no doubt now that its peculiarities are published many more will be discovered. It has all the characters of the Paris fossils, and is another instance of how extinct forms of the Eocene (*Calcaire grossier*), and secondary formations have existing representatives in the Australian seas.

#### RAULINIA BADIA.

*T. parva*, subpellucida turbinata, spira parum, elata, pallide badia saturata, nitente; anfr. 4, rapide decrescentibus, spiraliter regulariter carinata et liris obliquis crebre cancellata; liris supra carinas transeuntibus; carinis rotundatis, anfr. 13, apice lævi, nitente, albo, diaphano; apertura integra, circulari, antice canaliculato; labro tenui, acuto, postice globose arcuato et producto; labio recto, acuto, dente conspicuo munito, umbilico angusto, profundo

*marginè rotundato spiraliter circumscripto*. Long. 4, lat.  $2\frac{1}{2}$  mil. *Hab.* Cape Solander, Botany Bay. J. Brazier.

Shell small subpellucid, spire slightly exsert, saturated brown, shining, whorls 4, rapidly decreasing, spirally regularly keeled and thickly cancellate, with oblique liræ which pass over the rounded keels; whorls 13, apex smooth, shining, white, diaphanous aperture entire, circular, anteriorly unicarinate, outer lip thin, acute, posteriorly globosely arched and produced; inner lip straight, acute, furnished with a conspicuous tooth; umbilicus narrow, deep, spirally circumscribed with a rounded margin.

#### DRILLIA TRICARINATA.

*T. parva*, elongato-fusiforimi, angusta, turrita, spira quam apertura longiori, opaca, alba pallidissime fulva. zonata; anfr. 6 (nucleo tumide obtuso,  $1\frac{1}{2}$  anfr. incluso) convexis, in spira tenuiter tricarinatis, interstitiis, latis, regulariter concavis, ultimo anfr. tricarinato et lirato, sutura una carinarum insignita; apertura ovata, postice late profundoque sinuata, labro incrassato, labio encausto, exacte definito, canali lato, recto, sat brevi, basi concava, spiraliter multilirata. Long. 6, lat. 2 mil.

A small banded shell without plaits, which is unusual in the genus, but it has three delicate keels, one of which is on the suture, and the spaces between are shallow concave grooves. The sinus is entirely posterior, is wide and deep, and the outer lip is thickened

#### RISSOINA CRETACEA, n.s.

*T. parva*, turrita, pyramidalis alba polita sed periostraca cretacea quasi obtecta; anfr. 7, convexis, crebre plicatis; plicis validis, acutis a sutura ad suturam pertinentibus; suturis bene impressis; apice lævi tumido  $1\frac{1}{2}$  anfr., apertura angusta, labio crasso; basi lævi. Long. 6, lat.  $1\frac{1}{2}$  mil.

I don't know any distinguishing character for this *Rissoina*, except its chalky periostraca. It is much smaller than *R. nivea*, but larger than *R. gertrudis, nobis*; is neither pellucid nor margined at the suture. *Hab.* Off Port Jackson, 45 fathoms. J. Brazier.

## RISSOINA CYLINDRACEA.

*T. minuta*, cylindracea, alba subpellucida, laevi, polita; anfr.  $5\frac{1}{2}$  elongatis; apice obtuso, sutura marginata; apertura pyriformi, eversa, labro incrassato, labio inconspicuo. Long. 5, lat.  $1\frac{1}{2}$  mil.

A small cylindrical form, differing from *R. gertrudis*, in being entirely smooth, and highly polished without any signs of plaits. The suture is margined, but the lip is inconspicuous with the lower part of the aperture everted. Off Port Jackson, 45 fathoms. J. Brazier.

## EXHIBITS.

Dr. Hector exhibited a series of 60 plates of the Fossil Flora of New Zealand, photo-lithographed from drawings made by him. He also gave a general account of the Stratified Rocks of New Zealand as distinguished and related by the organic remains preserved in them.

MONDAY, 26TH NOVEMBER, 1877.

W. J. STEPHENS, Esq., M.A., President, in the Chair.

## MEMBERS ELECTED.

His Grace the Archbishop of Sydney.

The Rev Dr. Forrest.

James Hector, M.D., F.R.S., &c., of Wellington, New Zealand.

The SECRETARY reported that the Council had elected F. M. Bailey, Esq., of Brisbane, to be a Corresponding Member.

## DONATIONS.

Compte Rendu de la Soc. Entomologique de Belgique, Serie II., Nos. 41 and 42, by the Society.

H. Alleyne Nicholson's Ancient Life History of the Earth, and

F. P. Pascoe's Zoological Classification, by Hon. W. Macleay.  
Survey of Buller Coal Fields, New Zealand, by Dr. Hector.

## PAPERS READ.

On some Tertiary Fossils, from New Guinea.

By the Rev. J. E. TENISON-WOODS, F.G.S., F.L.S., &c.

At a previous meeting this year (Aug. 27), I drew the attention of the Society to some Echini, which had been obtained by Mr. Macleay in New Guinea. They were fossils, and the beds with their position and character were then described. I promised at the same time to refer to the Mollusca on a future occasion. Since then the whole collection has been carefully gone over by Mr. Masters, who has broken up all the larger portions and cleared away the matrix from the casts. The result has not revealed any new fossils, and no new casts of any definite character have been found. The consequence is that the material at my disposal is exceedingly small. There are casts in abundance, but for the most part of bivalves, and these, only internal casts are preserved from which even the genus can very seldom be ascertained. I proceed therefore to deal with what can be clearly described. The only shell is a Pecten, which appears to me to be a new species. It is a remarkable fact, as I before observed, that Pectens seem to have some singular power of resisting the dissolving action of water in limestone deposits. Pectens and Brachiopoda are the only mollusca preserved in the Mount Gambier limestones, though there are casts of others. Even the finest ornaments of the shell, and the most delicate tracery, is quite fresh and well preserved, while the large shells of other genera are entirely dissolved away. It would be really worth while to investigate the microscopic structure of these shells with a view to explain the cause of their permanent character. The following is the diagnosis of the new species.

## PECTEN NOVÆGUINÆ.

P. shell regularly orbicular, equivalve regularly convex, but not globose, rather thick, equilateral and symmetrically rounded at the margin; ears quite square, one being a little obliquely indented at the edge, but otherwise almost equal and rather large; furnished with 12 to 14 large rounded radiate ribs, each