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CLASS CRUSTACEA.

	Genera.	Species.	Var.
Subclass I. THORACIPODA, H. Woodw. (or MALACOSTRACA).			
Legion 1. PODOPHTHALMIA.			
Order 1. **Decapoda.**			
Suborder (*a*) BRACHYURA	27	41	
„ (*b*) ANOMURA	2	3	
„ (*c*) MACRURA	22	52	
Order 2. **Stomapoda**	2	4	
Legion 2. EDRIOPHTHALMIA.			
Order 3. **Isopoda**	3	3	
„ 4. *TRILOBITA*	51	304	18
„ 5. **Amphipoda**	1	1	
Subclass II. GNATHOPODA, H. Woodw. (or ENTOMOSTRACA).			
Legion 3. MEROSTOMATA.			
Order 6. **Xiphosura**, and CYCLUS (?)	4	16	
„ 7. *EURYPTERIDA*	5	36	4
Legion 4. BRANCHIOPODA.			
Order 8. **Phyllopoda**	12	55	6
„ 9. **Cladocera.**			
Legion 5. LOPHYROPODA.			
Order 10. **Ostracoda**	55	413	41
„ 11. **Copepoda.**			
Legion 6. ANCHORACEPHALA.			
Order 12. **Rhizocephala.**			
„ 13. **Cirripedia.**			
„ (*a*) BALANIDÆ	5	18	
„ (*b*) LEPADIDÆ	4	29	3
Crustacean "Teeth," Eggs, and "Tracks"	4	4	
	197	979	72

II.—1. HISTORY OF AUSTRALIAN TERTIARY GEOLOGY. By the Rev. J. E. TENISON-WOODS, F.G.S., etc.—2. FURTHER NOTES ON THE TERTIARY MARINE BEDS OF TABLE CAPE, TASMANIA. By R. M. JOHNSTON.—3. NOTES ON THE TERTIARY FOSSILS, TASMANIA. By the Rev. J. E. T. WOODS, F.G.S., etc.

(From the Papers and Proceedings of the R. Soc. Tasmania for 1876. 8vo. pp. 45. Hobart Town, 1876.)

IN the first of the above papers the Rev. Mr. Woods, after a brief notice of the chief works bearing on Australian Tertiary Geology, passes to a consideration of some important questions arising therein. For instance, he asks—Do the Tertiary formations of Australia exhibit any sign of a persistence of the types common to the Secondary formation of the continent? This question Mr. Woods tells us may be answered in the negative. "Some of the Brachiopoda have faint Secondary affinities, but the Echinodermata are certainly not Mesozoic in character." The Secondary types in the Australian Tertiary deposits are few and rare; they may be summarized as two species of *Trigonia*, both differing from existing forms, and a *Pleurotomaria*.[1] In other respects the resemblance between the European and Australian Tertiary rocks is considerable, whilst there

[1] There are three *Trigoniæ*, viz. *T. acuticostata*, M'Coy; *T. semiundulata*, M'Coy; and *T. Howitti*, M'Coy. The first of these has recently been found living in Bass's Straits. The *Pleurotomaria* referred to by Mr. Woods is *P. Tertiaria*, M'Coy.—R. E., Jun.

is the same break between the Secondary and Tertiary series. Mr. Woods is of opinion that the weight of evidence is against the theory advanced by some that any part of the continent has remained dry land since the Mesozoic period.

Mr. R. M. Johnston's paper deals with the stratigraphical order of the Table Cape Tertiary series. The surrounding country has been subjected to a large amount of denudation, a capping of basalt and basaltic tuff, 80 feet thick, acting as the protecting medium in the immediate vicinity of the Cape. Beneath this cap is a series of beds of white and grey calcareous sandstone, termed by the author the "*Turritella* Group" from the prevalence of *T. Warburtonii*, Tenison-Woods. The deposit next in order of succession below the "Turritella Group" consists of an "irregular agglomeration of shells, bound up in a matrix of ferruginous-looking mud," and is called the "*Crassatella* bed." The fauna of both groups is a copious one, and they are respectively characterized more by the prevalence of certain forms in each, and the gradual diminution or increase of these, as the case may be, as we pass from one series to the other, than by the restriction of species to each bed. All that can be said is that the Turritella Group and Crassatella bed were accumulated under somewhat different conditions to one another. This marine deposit rests upon a highly indurated conglomerate floor, which probably corresponds to a conglomerate described by Mr. Gould on the Dial Range, as of Silurian age. At the Table Cape this conglomerate appears to rest unconformably on slate rock.

The species obtained by Mr. Johnston from the Tertiary beds of Table Cape, 150 in number, were examined by the Rev. Mr. Woods, and the new species described in the third paper above cited. Eighty of these were found to be new, of which, 10 per cent. are existing forms, and appear to indicate the Table Cape beds as a deposit of the Laminarian zone. The Foraminifera are abundant, and amongst the Corals are the only true reef-builders met with in the Australian Tertiaries. The Brachiopoda are also abundant, and the Echinodermata numerous, presenting some new forms, whilst on the other hand the Polyzoa are scarce, a marked contrast to similar beds in South Australia. Eliminating those fossils peculiar to the Table Cape beds, the majority are identical with those of the S. Australian so-called Miocene, there being a greater resemblance between the two deposits on each side Bass's Straits, than between the existing Molluscan faunas of the two coasts. The new species described by Mr. Woods are divided as follows:—Gasteropoda, 48 or 49; Lamellibranchiata, 9; Polyzoa, 1; Corals, 2; and by Mr. Johnston, Echinodermata, 1.

The Polyzoon described is both a new genus and species—*Buskia*, (*B. typica*, Tenison-Woods). We would merely point out that the term *Buskia* has already been made use of in a generic sense by the late Mr. Alder for a recent Zoophyte, which he named *Buskia nitens*.[1]

R. E., Jun.

[1] Catalogue of the Zoophytes of Northumberland and Durham, Trans. Tyneside Nat. Field Club, vol. iii. p. 156.