

## CORRESPONDENCE.

## NOTES ON THE GEOLOGY OF NEW GUINEA.

SIR,—From the interest which has of late been taken by the public in matters relating to New Guinea, the following geological notes may be of interest.

I have been favoured by my friend, Mr. C. S. Wilkinson, Govt. Geologist, N. S. Wales, with a newspaper slip containing an abstract of a paper by himself, read before the Linnæan Society, Sydney, 28th February, 1876, *Notes on a Collection of Geological Specimens collected by W. Macleay, Esq., from the Coasts of New Guinea, Cape York, and Neighbouring Islands*, from which I take the following. The specimens upon which Mr. Wilkinson lays the greatest stress are Oolitic Tertiary Limestone from Bramble Bay, yellow calcareous Tertiary clay from Katan River, and yellow and blue ditto from Yale Island and Hall's Sound. These clays, from the evidence afforded by the contained fossils, Mr. Wilkinson considers to be Lower Miocene, and, he says, are exactly similar in lithological character to the Lower Miocene beds near Geelong and Cape Otway, Victoria. The clay from Hall's Sound contained at least two Victorian species, *Voluta macroptera*, M'Coy, and *V. anto-cingulata*, M'Coy, with species of *Ostrea*, *Cythereæ*, *Crassatella*?, *Pecten*, *Turritella*, *Natica*, *Triton*?, *Dolium*?, *Astarte*, *Corbula*, *Læda*, *Venus*, *Cypræa*, and two Echinoderms. The calcareous clay from Katan River, west side of the Gulf of Papua, contained only a few broken shells; but both it, and the Oolitic Limestone of Bramble Bay, Mr. Wilkinson believes to be of the same Miocene formation. This is very interesting from the fact, that hitherto no Miocene Tertiary beds have been met with in the East of Australia farther north than the boundary between Victoria and N. S. Wales—although they are highly developed in the former and S. Australia, extending westwards towards W. Australia. According to Macleay and Signor D'Alberti, Yale Island is formed of a calcareous sedimentary rock, dipping inland and composed of Corals, Shells, and Echini. In the valleys trap is found, and the higher portions of the hills, which attain a height of 700 to 800 feet, are composed of Coralline Limestone. Mr. Wilkinson considers that the occurrence of these beds, which he believes to be Miocene, in New Guinea, suggests the former land-connexion of the latter with Australia, the shallowness of the intervening Torres Straits lending additional weight to this view. Tertiary rocks described by Mr. Macleay as existing at Cape York, especially a ferruginous sandstone overlying the porphyritic granite of that locality, may be perhaps correlated with these New Guinea beds.

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## APPARENT AND TRUE DIP.

SIR,—In reference to the subject of Apparent and True Dip, attention might be redirected to Mr. Dalton's "Geological Problems," published in the GEOLOGICAL MAGAZINE, Vol. X. p. 332.

H. B. W.