

swarming with life, myriads of fossil shells may be collected from the cliffs, whilst still further on, at Hordwell, we have beds showing that the land arose again, affording suitable conditions for the growth of luxuriant palms, and was the haunt of the alligator, turtle, and other reptiles, which are now confined to tropical countries.¹

CORRESPONDENCE.

THE OTOTARA SERIES, NEW ZEALAND.

SIR,—In the last received GEOLOGICAL MAGAZINE for August Capt. Hutton takes exception to my note appended to Mr. H. Woodward's paper on the "Fossil Crab of New Zealand."

One of his criticisms I admit to be correct. No distinct Saurian bones have been found on the West Coast. The error arose from an oversight in correcting the press, as the remark under letter *k* was (Saurian *beds*, Ammonites, etc.), by which I meant to indicate the horizon in the East Coast section of the same formation, as proved by associated fossils.

His other criticism relates to the presence of Secondary fossils in the Ototara group; but he evidently confounds this with his Oamaru formation, under which are included strata of both later and earlier date, while *localities* are excluded where Secondary fossils are found. Thus he places the Greensands of the Green Island Brown Coal in his Oamaru formation, although they contain *Belemnites*, *Ancylloceras Rostellaria*, and other Cretaceous forms. His Oamaru Cape beds I consider to be Miocene, while the Upper Marls at Amuri Bluff, which Capt. Hutton places in his Pareora or Miocene formation, are the calcareous Greensands that form the upper part of the Chalk formation, with *Inoceramus* and *Pleuronectes Zittelli*, the latter found ranging through the whole series; while from about the middle of the section the humerus of *Palæudyptes antarcticus* has lately been found by Mr. McKay, making the third locality for this fossil bird in New Zealand. Other cases of stratigraphical confusion might be stated, showing that we have not yet acquired sufficient data for classifying our later formations by per-centages of fossils to the exclusion of stratigraphical evidence.

GEOLOGICAL SURVEY OFFICE,
WELLINGTON, 10th Nov., 1876.

JAMES HECTOR.

MR. MILNE ON FLOATING ICE.

SIR,—I am sorry that Mr. Milne should think that I made an "unfair comparison" in testing the behaviour of the floating cone he had figured, by means of a tetrahedron. "Comparisons are" always "odious." What then must they be when they are "unfair"? And I am the last who would wish intentionally to make unfair ones. The truth is that I had not a cone, and so I took the solid nearest in its proportions to Mr. Milne's figure, and I submit that the tetrahedron was quite as like an iceberg as the cone!

¹ See also Report of Mr. Gardner's Lecture in the January Number of the *GEOL. MAG.* (p. 23), "On the Tropical Forests of Hampshire.