

not only *Phenacodus* and allies (=Condylarthra), but also Hyracoidea, Lemuroidea, Simmopithecoidea, and Anthropoidea, although the last-named diverge a little in the characters of the carpus. Moreover, some of the Taxeopoda of the Puerco epoch show that the Unguiculate forms can readily have descended from them, for as the carpus and tarsus of this order are thoroughly Unguiculate, it only requires intermediate forms of ungues to connect them, and these have been found. These facts and conclusions are set forth in the "American Naturalist" for 1885, in a paper on the "Evolution of the Vertebrata Progressive and Retrogressive."

It thus appears that Lemurine forms were the ancestors of all Placental Mammalia, as was already anticipated by Haeckel in his far-seeing "Schöpfungsgeschichte."
E. D. COPE.

NOTE ON *ERISICHTHE*.

SIR,—A careful perusal of Mr. Davies' note on this subject in your number for March reveals the fact that he agrees with me in the association of the fin-spines in question with *Erisichthe*, and not with *Ptychodus*. He corrects me as to the authorship of the term *Xiphias Dixoni*, and agrees with me again that the weapon of that species also belongs to the fish I have called *Erisichthe*. But he wishes me to use the name *Protosphyrena*, Leidy, in the place of the one I have proposed. In this point I hope Mr. Davies will yet again agree with me.

Two species are catalogued¹ by Leidy under the name of *Protosphyrena*, *P. ferox* and *P. striata*. If now his *P. ferox* be a species of the genus I have named *Erisichthe*, Leidy's name should, in accordance with all usage, be retained for the *P. striata*, provided the two belong to different genera. When in London, in 1878, either Mr. Davies or Mr. E. T. Newton showed me a jaw containing teeth of the *P. striata*, which was plainly not an *Erisichthe*. For this statement I depend on memory alone. If I be correct, it is for this genus that the name *Protosphyrena* should be retained, if it be used at all.

In its present status, however, the name in question is *nomen nudum*, and under the rules not more entitled to recognition than new names in museum or sale catalogues. The rules of the American and British Associations are explicit on this point, and properly so.
E. D. COPE.

NOTOCHELYS COSTATA, OWEN.

SIR,—In his description of this interesting fossil,² Sir Richard Owen stated that the "nature and age of the deposit from which it came was unknown to him." I am informed by Prof. Archibald Liversidge, by whom *Notochelys* was sent to Prof. Owen, that it was found associated with certain other fossils described³ by myself from

¹ The name is not referred to in the text of his paper by Leidy, but only appears in a catalogue at the end of it.

² Quart. Journ. Geol. Soc. 1882, vol. xxxviii. p. 178.

³ Journ. R. Soc. New South Wales for 1883 [1884], vol. xvii. p. 87.

the Cretaceous beds of Landsborough Creek, a tributary of the Thomson River, such as *Ancyloceras Flindarsi*, M'Coy, *Aucella Hughdensis*, Eth., sp., a probable *Hamites* and large *Inocerami*. These would appear to indicate beds about the horizon of the Marathon or Hughenden series of the late Mr. R. Daintree.¹

R. ETHERIDGE, JUN.

THE LANDSLIP IN THE WARREN NEAR FOLKESTONE.

SIR,—It is only right that a record should be kept of the very extensive landslip which occurred in the undercliff of the Warren near Folkestone on the 19th January last, not only because few know anything of the circumstance, but that it might be useful in case of future investigations.

The area affected by this slip is very considerable, extending from the Warren House, near the Martello Tower, eastwards to a spot locally called the Jetty, a distance of nearly a mile in length and by about a quarter or rather less in breadth. This undercliff is entirely composed of rubble and *débris* from the Chalk cliffs above, which have been falling and slipping over for centuries. This slip appears to have taken a horizontal line from the seaward side of the railway cutting, in fact, in some parts it started from the outside of the actual railway bank. Had it broken away a few yards further inland, and there is no reason why it should not have done so, the passengers by the South-Eastern would then realize the danger to which the line is exposed. This large area gave way and went down bodily for a depth of from 12 to 20 feet, varying in places; this had the effect of forcing up the beds upon the shore several feet in height for about a mile of the coast. Towards the east end of the slip, the Chalk-marl is raised nearly 20 feet. It is a remarkable coincidence that since this happened, there have not been any heavy seas upon this coast, consequently no further damage has been done; but when heavy seas do come in, which they inevitably must, they will wash away thousands of tons of the rotten rubble cliffs which, upon the shore-line, are composed for the most part of *débris* from the cuttings and tunnels, which when cleared away will give further impetus for another and perhaps a more disastrous landslip to take place.

The whole floor of the shore is much raised, with here and there a depression which is probably the level of the old shore. In one place the Upper Gault is raised into a hillock several feet high.

The coming spring will afford an excellent opportunity for those interested in Cretaceous geology to examine the Chalk-marl as it is now placed. I may add, the whole of this area is constantly moving, and another slip may occur at any moment.

F. G. HILTON PRICE.

13th April, 1886.

¹ Quart. Journ. Geol. Soc. 1872, vol. xxviii. p. 279.