

ripplemarks discussed in his classic paper, published in 1859 in the *Geologist*, was from one to eight inches. Hitherto Dr. Sorby's views could not be reconciled with the results obtained by other workers at much greater depths. We now know that there is no need to attempt to do so, and that Dr. Sorby's observations were accurate for the special case studied. He tells us that before he recorded his conclusions he had made 20,000 observations! The pity is that the results were compressed into ten pages of print.

A. R. HUNT.

THE KRAAI RIVER VERTEBRA REFERRED TO *EUSKELESAUROS*.

SIR,—Dr. A. Smith Woodward (*Geol. Mag.*, June, 1908, p. 251) reprinted a paper on *Scaphonyx Fischeri*, which in 1907 was said to be a short-necked Dinosaur allied to *Euskelesaurus*. In a postscript (p. 255) it is remarked—"From new specimens submitted to me by Dr. I. C. White, I am now of opinion that *Scaphonyx* is an Anomodont." The publication of this evidence will be interesting, for the figured Brazilian bones, although very imperfect, make approximations to Saurischians, and show little in common with known Anomodonts.

Dr. A. Smith Woodward figured a cervical vertebra (Fig. 1, l.c., p. 252), and it is on this evidence that *Scaphonyx* was affiliated to *Euskelesaurus*, and compared with the cervical vertebra collected by myself and presented to the Natural History Museum. I do not see any close affinity between them. I was not quite certain of my own determination, and (*Ann. Mag. Nat. Hist.*, Nov. 1894, p. 340) remarked upon the vertebra as "indicating, if correctly referred, that *Euskelesaurus* was a short-necked type." The determination therefore was questioned by myself when it was first made. This appears to have been overlooked, for Dr. A. S. Woodward says in his postscript—"The preceding paper was written in 1904, when Professor Seeley's determination of the cervical vertebra of *Euskelesaurus* had not been questioned." The paragraph continues—"Since that time Baron F. von Huene . . . 1906 . . . has expressed the opinion that the vertebra in question does not belong to a Dinosaur, but to an Anomodont." I am under the impression that I had mentioned verbally to v. Huene that I had ceased to refer the vertebra to *Euskelesaurus*, but the reference of it to an Anomodont is entirely his own. The interest of the quotation from the postscript is in Dr. A. Smith Woodward's conclusion that *Scaphonyx* is an Anomodont; for it would appear that he adopts v. Huene's conclusion concerning the Kraai River vertebra, from which I dissent.

In 1905 I deposited in the Natural History Museum for development, with a view to eventual presentation after description, a skeleton which I had known for ten years to be referable to the animal type from the Kraai River, which had been doubtfully referred to *Euskelesaurus*. In 1907 these bones were exhibited by me at a conversazione of the Royal Society under Dr. Broom's name, *Erythrosuchus Africanus*. The animal is not an Anomodont. In superintending the removal of the matrix, I took occasion to draw Dr. Smith Woodward's

attention to the identity of one of its cervical vertebræ with the vertebra from the Kraai River, and the label on the exhibited specimen, giving the name, was turned down at my request. My responsibility for reference of the specimen to *Euskelesaurus* ceased. There is no evidence for making the correction other than that in my possession and under description. Hence no publication seemed necessary in anticipation of final account of the animal.

In his postscript Dr. Smith Woodward states that "Dr. R. Broom has described similar vertebræ from the Upper Beaufort Beds of the Karoo Formation under the new generic name of *Erythrosuchus*." This scarcely represents the facts. If my new unpublished skeleton is omitted, there is no evidence to connect the Kraai River vertebra with Dr. Broom's types. Dr. Broom states that in *Erythrosuchus* "there is one well-preserved vertebra, which is either lower cervical or upper dorsal," compared to the dorsal vertebra of a carnivorous Dinosaur, and said to show that the rib was single-headed. On comparison of this vertebra (Ann. S. Afr. Mus., vol. v, pt. 4, figs. 8, 9) with the Kraai River fossil, it is difficult to recognise any near approximation. There is no room for doubt, for the Trustees of the South African Museum have given me, with the assistance of the Geological Department of the British Museum, the opportunity of studying Dr. Broom's *Erythrosuchus* in the description of my own materials.

Finally, the postscript remarks, "According to Dr. Broom's description this reptile is not a Dinosaur, but exhibits many resemblances both to Belodonts and to Anomodonts." Dr. Broom does not use the term Dinosauria, but refers his animal to the Phytosauria, because the ilium is like that of *Belodon*, and the other bones are said to be somewhat like; but he exhibits caution in not speculating on the nature of the skull. In 1892 (Quart. Journ. Geol. Soc., vol. xlviii, p. 189) I published the view that *Belodon* is a primitive Cetiosaurian, to be classed under the Saurischia. Therefore it makes little difference in my estimate of the wider ordinal affinities of the Kraai River fossil whether it is referred to the typical Saurischian *Euskelesaurus* or transferred to the subdivision Phytosauria and named *Erythrosuchus*. It is stated (Phil. Trans. Roy. Soc., 1892, pt. B, p. 346) that "Saurischian Dinosaur reptiles alone among Reptilia approximate towards the Anomodont types in pelvic characters," and I am not aware that these views have been elaborated by any subsequent writer, though I have repeatedly referred to the affinities of the two groups (l.c., p. 366; 1895, pt. B, pp. 41, 112, etc.).

H. G. SEELEY.

CRETACEOUS AND EOCENE DEPOSITS OFF THE SOUTH-WEST OF THE BRITISH ISLES.

SIR,—The publication of the remarkable papers by Mr. L. R. Crawshay and Mr. R. Hansford Worth, on the rocks dredged from the English Channel since 1906 (Journ. Marine Biol. Assoc., vol. viii, No. 2, May, 1908), marks a very distinct step forward in our knowledge of submarine stratigraphy. It seems of interest to state that the Cretaceous specimens therein recorded and illustrated are paralleled by