

cluded among the cotypes on which Marsh¹ founded the species *Allosaurus medius*, but in 1911 they were removed from the Theropoda by Lull² to the Ornithopoda, and with other bones made the cotypes of the new species *Dryosaurus grandis*. I had never been satisfied in my own mind that these bones pertained to a herbivorous dinosaur but it was only recently that I have had the opportunity of comparing them with Ornithomimid materials. Through the courtesy of Mr. Walter Granger, of the American Museum of Natural History, I was enabled to compare these foot bones with those of the genotype of *Struthomimus altus* (Lambe) and other Ornithomimid foot materials from the Belly River and Edmonton formations, and in every instance have found such close resemblances as to leave no doubt of their Ornithomimid affinities, a view concurred in by Mr. Barnum Brown, of the above institution.

In an extended paper on the carnivorous Dinosauria contained in the collections of the U. S. National Museum, now in press, these bones are discussed in detail and are there tentatively assigned to the genus *Ornithomimus*.

The recognition of this Ornithomimid dinosaur led to an investigation of the other members of the Arundel fauna and the preliminary study appears to show that there are at least three other dinosaurian forms having Upper Cretaceous affinities.

The presence of dinosaurs with Upper Cretaceous affinities, associated with Sauropod dinosaurs (*Pleurocælus*) is a combination previously unknown, but whether it means that the Sauropoda lived on to a much later time than we had previously suspected or whether we have in these dinosaurs of Upper Cretaceous affinities the progenitors of the Judith River (Belly River) forms, I shall reserve judgment until a critical study of the whole fauna, now in preparation, is completed.

¹ *Amer. Jour. of Sci.* (III.), Vol. XXXV., 1888, p. 93.

² *Geol. Survey of Maryland, Lower Cretaceous*, 1911, pp. 204-206, Fig. 7; Pl. 20, Figs. 1-4.

The Arundel formation is regarded by the most competent authorities to be Lower Cretaceous in age, and equally eminent paleontologists have correlated the Arundel fauna with the Morrison fauna of the Rocky Mountain region so that the conflicting evidence of these later discoveries promises to be of both paleontological and geological interest.

CHARLES W. GILMORE

U. S. NATIONAL MUSEUM,
October 4, 1919

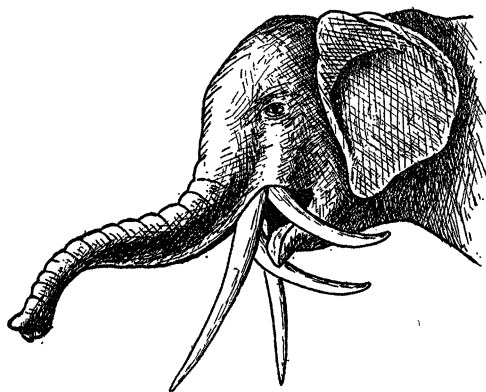
AN ELEPHANT WITH FOUR TUSKS

TO THE EDITOR OF SCIENCE: I have thought that the accompanying note with regard to the "elephant with four tusks," and its illustration would be interesting for SCIENCE to reproduce as an extraordinary record tucked away in a rather remote publication.

Picture and text are taken from "Sudan Notes and Records," Volume 2, number 3, July, 1919, page 231, and the account is there printed in Arabic with the accompanying translation. I am sure this will engage the attention of our many mammalogists and paleontologists.

JOHN M. CLARKE

On the 18th May, 1917, I went out shooting in the district of Sheikh Ako Mangara, in the Markaz of Yambio, in the village of Wakila Marbo, on the borders between Tembura and Yambio districts.



I met a herd of elephant which I followed, searching for a good one to shoot. I kept following them until they stopped near a pool of water, where they began to drink and throw mud on them-

selves. I was in hiding behind a tree about fifteen yards from them looking at them, when I saw an elephant with four tusks as roughly represented in the attached sketch.

The left tusk was the bigger and had the usual direction, but the direction of the small tusk was downwards and came out from under the big one. It was round, and its thickness was about $2\frac{1}{2}$ inches.

The direction of the right tusk was downwards and the small tusk came out from under it in the usual direction, but it was small like the other one.

I did not know that this elephant was so valuable and for this reason I did not try to shoot it, although the Ombashi and the soldier who were with me told me to shoot it, but I refused. This is all the story.

ABD EL-FARAG ALI, M.A.

YAMBIO,

February 17, 1919

QUOTATIONS

THE WORK OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

YOUR leading article of this morning expresses some dissatisfaction which even those who have best cause to be satisfied with the recent meeting will readily share. You sneer at the "vast sum" of £1,300 provided for research at the outcome of the meeting. We all share your obvious wish that it were much larger, and the treasurer especially made that desire clear at one of the evening meetings. Any hint you may give us how it may be increased will be gratefully received. Meanwhile it is possible that its exact significance is not fully understood. It represents, so to speak, the extra charges for heating and lighting when a big factory is run overtime by voluntary workers. The main expenses of the scientific organization of the country, including the salaries of professors and demonstrators, are met in quite other ways. Some members of this large staff find that they have time and energy to work overtime—to conduct some research which has occurred to them as desirable if only a piece of apparatus can be provided or the expenses of a series of computations met. They ask for no addition to their salaries for this work, though such additions could in many cases be reasonably

defended. They come to the British Association only for out-of-pocket expenses. The value of the work thus done is enormous, and if fully remunerated would represent a sum many times greater than that actually devoted to it.

It follows that there is a limit to possible expenditure of this kind. I do not mean to suggest that has been reached, but clearly the unpaid overtime obtained from a given staff has its limits. There comes a point at which more work can be got only by adding to the staff, and at this point the British Association generally hands over the matter to some other body. Thus the beginnings of our Great National Physical Laboratory, now added to the scientific resources of the nation, may be traced in the earnest but unassuming work done by the British Association many years ago when in your own words "some of the best brains in Great Britain met in solemn conclave to allot the vast sum" of about £1,000, only a fraction of which could be devoted to the fundamental work of fixing accurately the electrical and other standards. The war has accustomed us to the huge sums which are apparently available for destruction: it is a commonplace that the beginnings of the most important constructive work are usually small. Is your sneer altogether appropriate?

With your suggestions that the camp followers should be dismissed and the discussions specially directed to the "technical methods on which the progress of science depends" I do not find myself altogether in sympathy. We owe much to the camp followers, even beyond the money they provide for research; and the experts can meet at the Royal Society for technical discussions. But I scarcely know whether you would welcome a reconsideration of the declared objects of the British Association in your columns: at any rate, I hesitate to enter on so large a field without some indication of permission. On the point you consider most vital, that the Association should "insist on the advancement of science simply as knowledge, and not merely as a means to practical utilities," we are all fully agreed, as a glance