

No. 5

British Museum East Africa Expedition
Tendaguru via Lindi
31st. July, 1930.

The Director
British Museum (Natural History)

Sir,

The excavation for the bones of the dinosaur at 4.23 has been continued during the present month to the exclusion of anything else.

To begin with I might make a few remarks on some features of the skeleton.

The vertebral column is very complicated, and has been dealt with as follows. Cervical vertebrae Nos. 4 to 9 have been plastered whole. The largest of them, No. 4, required sixteen men to transport it. Nos. 1 to 3 are larger still, and have to be cut which is now in process of being done, before the parts can be plastered. No. 3 at a somewhat lower level was not in too good condition. No. 2 had been broken in two by natural causes, and a gap of over a foot separated the parts, the anterior part being firmly fixed to No. 3.

The Dorsal vertebrae, I may mention, are numbered in the reverse direction to the cervical vertebrae, both series taking their origin from a neutral shoulder vertebra, which made the only convenient fixed point in the spinal column.

Most of these vertebrae have been separated into three or four pieces, most of which have been plastered. Those nearer the sacrum, being nearer the surface, were in less good condition than the others. Nos. 7 and 8, though of an inconvenient size, are plastered together, so as to give a good example of the method of interlocking of the neural spines.

Many interesting points arise from a study of such a perfect line of vertebrae, most of which I need not mention here. One, however, is that the anterior dorsal vertebrae have a big "wing", those immediately behind being bifurcate. I cannot, however, identify them with the vertebrae of either species of *Dicraeosaurus* as described in such of the German reports as are here.

The first four dorsals as well as the first two cervicals, including the shoulder vertebra, are all so closely fitted into one another, both at the centra as well as at the spines, (or to be more precise, the large superstructures), as to be inseparable. There can have been practically no play at all in the various parts. It is virtually one rigid mass of girders extending some fifteen feet. Further the neural spines, as the neck is approached, have a forward rake to allow for the steep slope of the fore part of the back.

I have made sketches of the more complicated vertebrae from more than one point of view to help their reconstruction.

The end of another tooth, a comparatively small one, has been found, and as regards the missing lower limbs so far only the head of a radius has come to light.

I was long puzzled by the failure to find the majority of the ribs. They lay in what I might call a gutter down alongside the spinal column, six feet below it. Most of them are complete, and lie in such a position as if the whole flank of the reptile had become detached. This refers, of course, to the right flank, the left side ribs from being uppermost being more scattered.

I estimate I finish dealing with the remainder of the bones in sight in the next fortnight, and have fixed on the 16th. of August to leave here and hasten to Manda to catch the steamer over the Lake on the 13th September. The search for the missing parts and clearing up of the site will have to be left till next season.

Mr. Parrington left for Lindi on the 19th. July to arrange the making of big cases for the plastered vertebrae. On two successive he brought ~~XX~~ a ton-lorry to Matapwa about 52 miles from Lindi on the Kilwa road, to which place I sent the bones by carriers. The Government cleared the road through from Matapwa to Tondaguru this year. This was helpful but I did not feel like undertaking the risk of the bones going by lorry this section. Mr. Parrington that even on the main road the lorries with half loads had great difficulty at some of the hills, and a capsizing was imminent at times. Still the loads did get through in safety, and the transport by carriers over the Noto plateau by the ordinary track would have been by no means easy.

Mr. Parrington is arranging the despatch of some stores in advance to Songea by motor, and then goes on ahead of me to arrange the carriers to Manda. We shall require 80 in all, and will probably go in three parties. If he has time he will look at the Karoo deposit not far from Manda.

I wrote to the Chief Secretary of Nyasaland on my arrival at Lindi, but have had no reply. My letter was, however, received, as the Director of the Lake steamers gave me some information I had asked for. I have made a deposit with the Treasury, and written to other Officers regarding certain other matters.

I received a telegram from the Geological Department last week informing me of the discovery of a reptilian bone-bed in Karoo formation 46 miles north of Songea. I regret, however, it will not be possible to go there this year.

Boxes Nos. 85 to 180 have been handed over to the shippers together with a box of botanical specimens and one of zoological specimens.

I am waiting here instead of at Sanga for carriers to Manda in order to make a botanical collection, the flora being distinct from that of Tendaguru.

I am,

Yours faithfully,