

ON A FOSSIL ELEPHANT FROM TEXAS (*E. Texianus*).

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The existence of a fossil species of true elephant distinct from *Elephas primigenius* in America has been only of late years brought under the notice of palæontologists. I have slightly alluded to the subject in the 'Geologist,' Vol. IV. p. 470. For many years remains of true Elephant have been found with those of *Mastodon* at various spots within the New World.

Cuvier ('Ossements Fossiles,' ed. 1834, vol. ii. p. 145) mentions only one species of American elephant, the remains of which had been discovered in Kentucky, Carolina, Ohio, Mexico, Louisiana, Virginia, and Maryland.

De Blainville ('Ostéographie,' *Eléphants*, p. 157: Atlas, pl. x.) alludes to a tooth of fossil elephant from Texas, which is apparently referable to *Elephas primigenius*. He also mentions other remains from Mexico, Mississippi, Carolina, Kentucky, Ohio, Maryland, Virginia, and Behring's Straits.

Leidy ('Nebraska Fauna,' 1852, p. 9) recognizes specific distinction between the European and American species of elephant, and terms the latter *E. Americanus*.

Humboldt ('Cosmos,' vol. i. p. 280) alludes to certain elephantine remains from the Mexican plateau, but gives no description which might identify the species.

Dr. Carpenter (Silliman's Journal, 2nd series, vol. i. p. 244) describes a collection of elephant and mastodon remains, collected by Mr. William Huff, from the banks of the Brazos river, near San Felipe de Austin (Texas), some of which are at present in the British Museum. Through the kindness of Mr. G. R. Waterhouse, I have been enabled to identify them as those originally alluded to by Dr. Carpenter.

The most complete, elaborate, and philosophical conspectus of the affinities of the Order Proboscidea has been that from the pen of Dr. Falconer (Quarterly Journal Geographical Society, 1857, p. 319, and 1858, p. 81), in which he distinctly recognizes an American species of elephant (*Euelephas Columbi*), which he says has hitherto been undescribed. He places this apart from *Euelephas primigenius*, in the same group as *E. Indicus* and *Armeniacus*, of which group he discriminates the character as having "*Colliculi approximati, machæridibus valde undulatis*." The detailed exposition of his memoir has not been published up to February, 1862, although it was read on June 3, 1857.

Mr. William Bollaert, F.R.G.S., who has contributed original memoirs on the geography of Texas to the Geographical Society (Journal, 1851, vol. xx. p. 115), mentions the fact that he was the discoverer of a tooth of "*Mastodon*" from San Felipe de Austin, Texas. This tooth was carefully preserved by him, and was submitted to me

in February, 1858. At that time I had not read Dr. Falconer's paper, yet from the remarkable appearance of the tooth, the conclusion that it was a distinct species of elephant, closely allied to the Indian type, forced itself on me. This opinion was confirmed by Professor Owen, and after the name of *Elephas Texianus* had been given to the species, the specimen was deposited in the British Museum, and now forms one of the most conspicuous objects in the gallery devoted to Proboscidea. Professor Owen, in September, 1858, thought fit to adopt the name of *E. Texianus* for the species, in his eloquent address to the British Association (and also in the second edition of 'Palæontology,' p. 395). From a comparison of this tooth with that already possessed by the Museum from the same locality, described by Dr. Carpenter, I think decidedly that the remains in the Museum are identical with *E. primigenius*, while the tooth discovered by Mr. Bollaert appears to belong to the distinct species of *E. Texianus* vel *Columbi*. This is the only specimen which I have seen of this type, as Dr. Falconer has not stated where the specimens are on which he described his species. He appends as a doubtful synonym, "*E. Jacksoni*?, Silliman's Journal, 1838, vol. xxxiv. page 363;" but after examination of the very bad drawings contained in that page, I cannot make any distinction between them and *E. primigenius*. The tooth of *E. Texianus* (m. 6, lower jaw) has enamel-folds much wider and much more waved and undulated than that of the *E. Jacksoni*. The canals of cement are consequently of much greater width, and the whole aspect of the tooth is much more like *E. Indicus*.

As the British Association, in their Rules for Zoological Nomenclature, have authoritatively sanctioned the principle that names not clearly defined, and likely to propagate important errors, may be changed, and as the name of *E. Columbi* lays itself open to the grave charge that it is not clear whether it is named in honour of Columbus, or because it is found in Colombia (Venezuela y Nueva Granada), I trust that this name will not be accepted. That of *E. Texianus*, founded upon a yet unimpeached geographical distinction, if it has not the advantage of published priority, yet gives a more lucid idea of the nature of the species which it indicates.

The figure by Mr. Mackie gives a better idea of its appearance than any mere verbal description. I however define it as *Elephas Texianus, dentium molarium* (m. 6), *colliculi undulati, magis remoti quam in E. Indico*. Its association with *E. Indicus* and *Armeniacus*, by Dr. Falconer, seems warranted by its legitimate affinities.

The greater width between the enamel-folds may indicate a more sapid and juicy diet than that of the larch-eating elephants of Eschscholtz Bay. The nutritious prairie-grass of Texas did not require such formidable apparatus for its comminution as was possessed by the Siberian mammoths. The indication of this species, therefore, illustrates the remarkable special adaptation of animals to external and climatal conditions, and may not be altogether irrelevant to the questions discussed by the physio-philosophers of the present day, with regard to the origin of species.