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Fact and Fiction in Hippopotamology

(Sampling the history of scientific error)

The fragmentary nature of most of the fossils as well as the frequent lack of sufficient material for comparison must put a paleontologist on his guard against drawing too far-reaching conclusions. Two high spots in the history of paleontology are the cases of Prof. J. J. SCHEUCHZER, who in 1726 mistook the skull and vertebral column of a large salamander from the Miocene of Oeningen for the " betrübten Beingerüst eines alten Sünders " (sad bony remains of an old human sinner) and figured the specimen as " Homo diluvii testis " (the man who witnessed the Deluge), and that of the so-called lie-stones of Würzburg : " fossils " described by Prof. J. B. A. BERINGER in his *Lithographia wirceburgensis* (1726) which eventually proved to have been fabricated and planted by his own students. As a matter of fact these instances are of historical interest only.

Naturally the number of cases in which non-human remains have been ascribed to Man or his supposed ancestors is legion ; the medieval European scholars held the belief that the large bones unearthed were proof of the existence of human giants, and even the last few decades saw professional people, both in the Old and the New World, take certain fossils for Man or ancestral forms of Man which did not belong to the Primates, and sometimes not even to the mammals at all.

In the present paper I would like to present the data found by me while doing bibliographical research on recent and fossil hippopotami (1). These animals are completely free from emotionality for Man, but because of the special difficulties involved in the study of this geographically and geologically

(1) HOOIJER, D. A., *Natuurhist. Maandblad*, vol. 35, 1946, nos. 11-12; *ibid.*, vol. 36, 1947, nos. 3-4.

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took the specimen as an upper incisor and coined for it the name *Castoroides georgiensis*. "What were the zoological relations of the creature which once sported this incisor and which dwarfed even the Capybara of the present day and *Castoroides ohioensis* of the past?" *(loc. cit.)*. The tooth, as correctly seen by COPE (12), is a lower canine of *Hippopotamus amphibius* LINNAEUS.

Order Carnivora.—ZUMOFFEN (13) has figured teeth from a breccia near Ras-el-Kelb in Syria as belonging to a carnivore. According to BOULE (14), however, these teeth are premolars of *Hippopotamus*.

Order Perissodactyla.—An incomplete fossil metacarpal from the Pliocene of Wadi Natrun in Egypt was identified by STROMER (15) as rhinoceros, nearest to *Rhinoceros sondaicus* DESMAREST. However (16), afterwards this bone turned out to belong to *Hippopotamus protamphibius andrewsi* ARAMBOURG [*Hippopotamus hipponensis* ANDREWS, 1902, nec Gaudry, 1876, see ARAMBOURG (17)], the only hippopotamus known to occur in the Astian Wadi Natrun fauna.

Order Artiodactyla.—A humerus from the Pleistocene Oldoway fauna of East Africa originally identified as *Helladotherium* belongs to *Hippopotamus amphibius* LINNAEUS (18). The recent species is known since the Villafranchian from Africa and Europe, under various names (see 19), and the fossil remains often are larger than the recent.

HIPPOPOTAMI SPURII

Order Proboscidea.—A molar from the Brunswick canal, Georgia, recorded by HARLAN (20) and COUPER (21) as *Hippopo-*

(12) COPE, E. D., *Amer. Naturalist*, vol. 24, 1890, p. 772.
(13) ZUMOFFEN, *La Phénicie avant les Phéniciens*, Beyrouth, 1900, pl. 14, figs. 7, 8.
(14) BOULE, M., *Les grottes de Grimaldi (Baoussé-Roussé)*, vol. 1, fasc. 3, 1910, p. 195.
(15) STROMER, E., *Zeitschr. deut. geol. Ges.*, vol. 54, Briefl. Mitt., 1902, p. 111.
(16) STROMER, E., *Abh. Senckenb. naturf. Ges.*, vol. 29, 1905, p. 112.
(17) ARAMBOURG, C., *Mission scient. de l'Omo 1932-1933*, vol. 1, fasc. 3, 1948, p. 328.
(18) DIETRICH, W. O., *Wiss. Erg. Oldoway Exp.*, new series, vol. 3, 1928, p. 36.
(19) HOOIJER, D. A., *Zool. Verh. Museum Leiden*, no. 8, 1950, p. 28/29.
(20) HARLAN, R., *Amer. Journ. Sci.*, vol. 43, 1842, p. 143.
(21) COUPER, J. H., *Proc. Acad. Nat. Sci. Philad.*, vol. 1, 1842, p. 216.