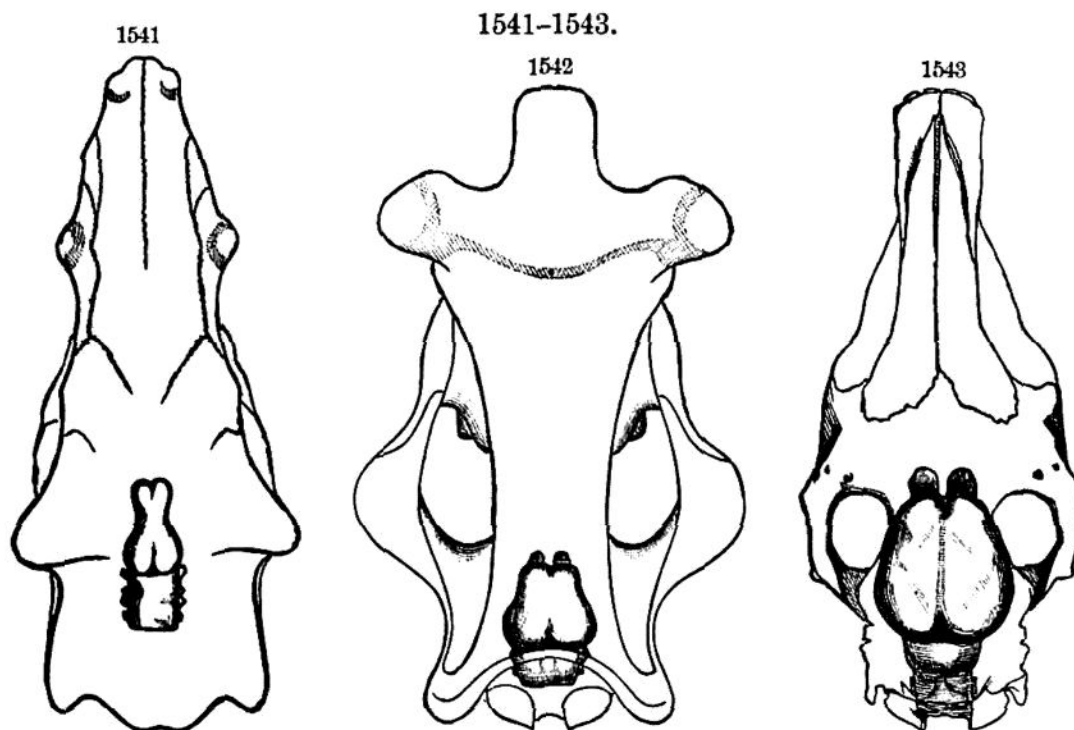


American, is the increasing size of the brain with the progress of the Tertiary. In most of the earliest Eocene species the brain was extremely small, and especially the cerebral or anterior part; that of the *Dinoceras* might have been drawn entire through the cavity of the spinal cord. This point is illustrated in figures 1541-1543 (from Marsh), representing the skulls, reduced to a common length, with the brain cavity: of the Eocene *Dinoceras*



Illustrations of the sizes of brains in successive genera of Ungulates. Fig. 1541, *Dinoceras* (Eocene); 1542, *Brontotherium* (Miocene); 1543, Modern Horse. From Marsh.

(Fig. 1541), the Miocene *Brontotherium* (Fig. 1542), and the modern Horse (Fig. 1543). The Horse has a brain more than eight times the bulk of that of the *Dinoceras*. It is seen in these figures that the posterior part of the brain, as Marsh observes, has undergone little change of size, the enlargement having been eminently in the cerebral portion. The principle has necessarily its exceptions, since size is not the element of most importance in a brain. Marsh has further shown that the principle is exemplified in fossil Birds, and also in the Dinosaurian group of Reptiles.

In addition to relics of Rodents in the form of bones and teeth, there are, in the Niobrara region, what have been supposed to be burrows of some species of Rodent. They were described as probably fossil Sponges by E. H. Barbour (*Univ. Studies*, Nebraska, 1892, where many excellent figures are given, some showing specimens in place). They stand vertically, in large numbers, in the Miocene of the region, some of them 8 or 9 feet in height. Each usually ends below in a long horizontal or oblique chamber. *Dæmonelix* is a Greek form (abbreviated) of the popular name "Devil's corkscrew." The figure includes two views of one of the specimens, the vertical spiral of which is 53 inches high, and the oblique basal portion 76 inches.