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Small Size of the Brain in Tertiary Mammals.

By Prof. O. C. MARSH.

At the last meeting of the Connecticut Academy of Arts and Sciences, June 17th, Prof. Marsh, of Yale College, made a communication on the size of the brain in Tertiary mammals. His researches on this subject have been mainly confined to the larger extinct mammals which he had obtained in the Rocky-Mountain region; and the results are of peculiar interest. The Eocene mammals all appear to have had small brains; and in some of them the brain-cavity was hardly more capacious than in the higher reptiles. The largest Eocene mammals are the *Dinocerata*, which were but little inferior to the elephant in bulk. In *Dinoceras*, Marsh, the type genus, the brain-cavity is not more than one eighth the average size of that in existing rhinoceroses; in the other genera of this order (*Tinoceras*, Marsh, and *Uintatherium*, Leidy) the smallness of the brain was quite as remarkable. The gigantic mammals of the American Miocene are the *Brontotheridæ*, which equalled the *Dinocerata* in size. In *Brontotherium*, Marsh, the only genus of the family in which the skull is known, the brain-cavity is very much larger than in the Eocene *Dinoceras*, being about the size of the brain in the Indian rhinoceros. In the Pliocene strata of the West a species of *Mastodon* is the largest mammal, and although but little superior in absolute size to *Brontotherium*, it had a very much larger brain, but not equal to that of existing Proboscideans. The tapiroid Ungulates of the Eocene had small brain-cavities, much smaller than their allies, the Miocene Rhinocerotidæ. The Pliocene representatives of the latter group had well-developed brains, but proportionally smaller than living species. A similar progression in brain-capacity seems to be well marked in the equine mammals, especially from the Eocene *Orohippus*, through *Miohippus* and *Anchitherium* of the Miocene, *Pliohippus* and *Hipparion* of the Pliocene, to the recent *Equus*. In other groups of mammals likewise, so far as observed, the size of the brain shows a corresponding increase in the successive subdivisions of the Tertiary. These facts have a very important bearing on the evolution of mammals, and open an interesting field for further investigation.

On Euphysetes Pottsi. By Dr. JULIUS HAAST, F.R.S.

This small Catodont whale was stranded amongst the rocks in Governor Bay, near Ohinitahi, and was sent by Mr. T. H. Potts to the Canterbury Museum, New Zealand. It was an adult female, 7 feet 2 inches long, and very like *Euphysetes Grayi*; but that species has 7 cervical, 14 dorsal, 9 lumbar, and 21 caudal vertebræ (of which 13 have chevron bones attached), making 51 altogether. *Euphysetes Pottsi* has only 50 vertebræ; and they are differently arranged. The 7 cervical vertebræ are soldered together; there are only 12 dorsal (instead of 14), 11 lumbar (instead of 9), and 20 caudal with 8 chevron bones attached (instead of 21).