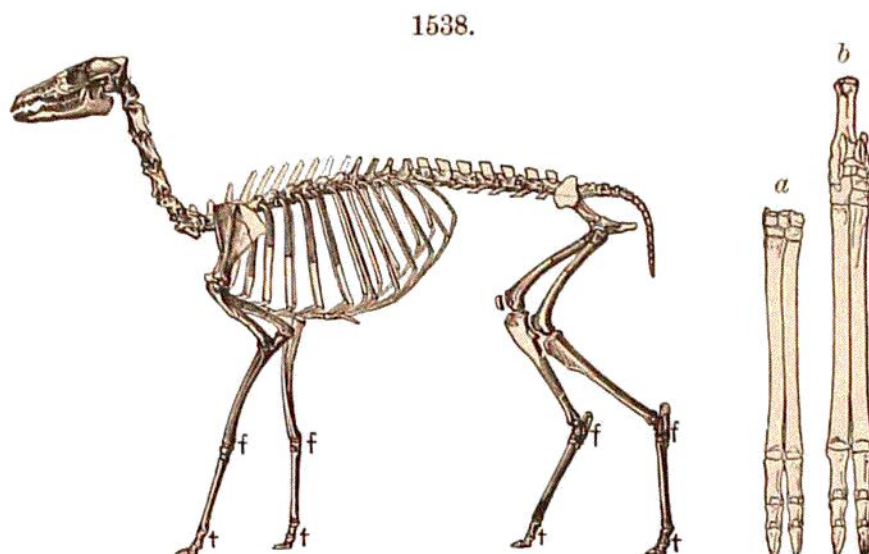


of the leg from *f* to *t*. Moreover, the upper ends of the tibia and fibula are soldered into one bone. In many species of Artiodactyls the soldering is so complete that no suture is left to indicate it. This addition to the length of the legs, by putting the foot vertical on its toes and elongating the foot



ARTIODACTYL UNGULATE.—Fig. 1538, *Poebrotherium labiatum*, restoration ($\times \frac{1}{2}$); *a*, *b*, same, feet, less reduced. Scott.

(especially the metatarsal and metacarpal bones), was of great advantage to the running animal; for it served, as also in the Horse, to give a proportional increase of speed, other things equal.

The Fauna comprised also several *Insectivores*; also Beavers, among Rodents, as the *Palæocastor Nebrascensis* Leidy, besides other species.

The *Protoceras* beds of Wortman, making the upper part of the White River group, are characterized by various Artiodactyls related to the Camel, Deer, and Hog, and the remarkable *Protoceras* of Marsh, which has long canines and horn-cores, the fore feet 4-toed, while the hind feet are 2-toed; also others related to the Tapir and Rhinoceros, and various Carnivores and other species.

The John Day beds of Oregon are characterized by the genera *Miohippus*, *Diceratherium*, *Thinohyus*, *Poebrotherium*, *Eporeodon*, *Elotherium*, various Rodents and Carnivores of the genera *Cynodon*, *Temnocyon*, *Dinictis*, and others.

In the Deep River beds of the Upper Miocene occur the first known of Mastodons (*M. proavus* of Cope), Rhinoceroses of the genus *Aphelops*, several genera of the Horse type, *Miohippus*, *Desmatippus*, *Anchitherium*, *Protohippus*.

The Loup Fork beds are characterized by species of *Procamelus*, and the related *Protolabis*, *Protohippus*, *Aphelops*, *Mastodon* (*M. mirificus* of Leidy), and by Deer of the genera *Blastomeryx* and *Cosoryx*, together with Carnivores of the genera *Canis* and *Machærodus*.