

Oligocene
4,700,000 years ago

Pleistocene
(Ice age)

2,000,000 years ago

Late Miocene

14,000,000 years ago

Early Miocene

23,000,000 years ago

Oligocene

37,000,000 years ago



Castor canadensis
Modern beaver



Castoroides kanisassensis
Late Pliocene gart beaver



Procastoroides neweri
Pliocene gart beaver



Eucastor
An early member of the round incisor gart beaver lineage



Dipoides stirtoni
Early gart beaver

Pliocene
4,700,000 years ago

The oldest known beaver is *Agnocastor*, a small form with round incisors. It lived in aquatic environments much like modern beavers. *Agnocastor* probably gave rise to later round incisor beavers in North America including the gart beavers of the Pliocene and Pleistocene.

The greatest diversity of beavers is in the subfamily Palaeocastorinae. These beavers had fat incisors and short tails, and lived in semi-arid environments. One form, *Palaeocastor*, dug immense spiraled burrows and lived in dense colonies much like modern prairie dogs. Other forms, like *Euhapsia*, survived in the earth after floods in a way similar to modern pocket gophers. Features on the skull of *Euhapsia effocata* indicate that it had lost external ear pinnae, had small eyes, and had a horny pad on its nose for shoveling dirt-adaptations for living underground.

All of these early beaver lineages are now extinct. Modern beavers arrived in North America from Asia about 6 million years ago.

Palaeocastor lewisii
Vast towns of several hundred burrows made by this form can still be seen in the early Miocene of Nebraska.

Palaeocastor (Capatanka) magnus
This larger species constructed a smaller town of very large burrows.

Euhapsia effocata

Fossocastor greeni
Gopher-like beaver.

Pseudopalaeocastor barbouri
This form made small towns of small spiral burrows.

Palaeocastor pennsylvanicus
It is not known if the Oregon fat-incisor beavers dug spiral burrows as did their relatives in Nebraska.

Palaeocastor simplicioides
An early fat incisor beaver.

Palaeocastor (Capatanka) canispeoi

Euhapsia platyceps
Gopher-like fat incisor beaver.

Fossocastor brachyceph
Gopher-like beaver.

Capacikala gradatus
A small beaver from Oregon.

Capacikala sp.

"Palaeocastor" complexus
A pocket gopher-like beaver with an elongated muzzle.

Palaeocastor cf. nebrascensis

of Evolution