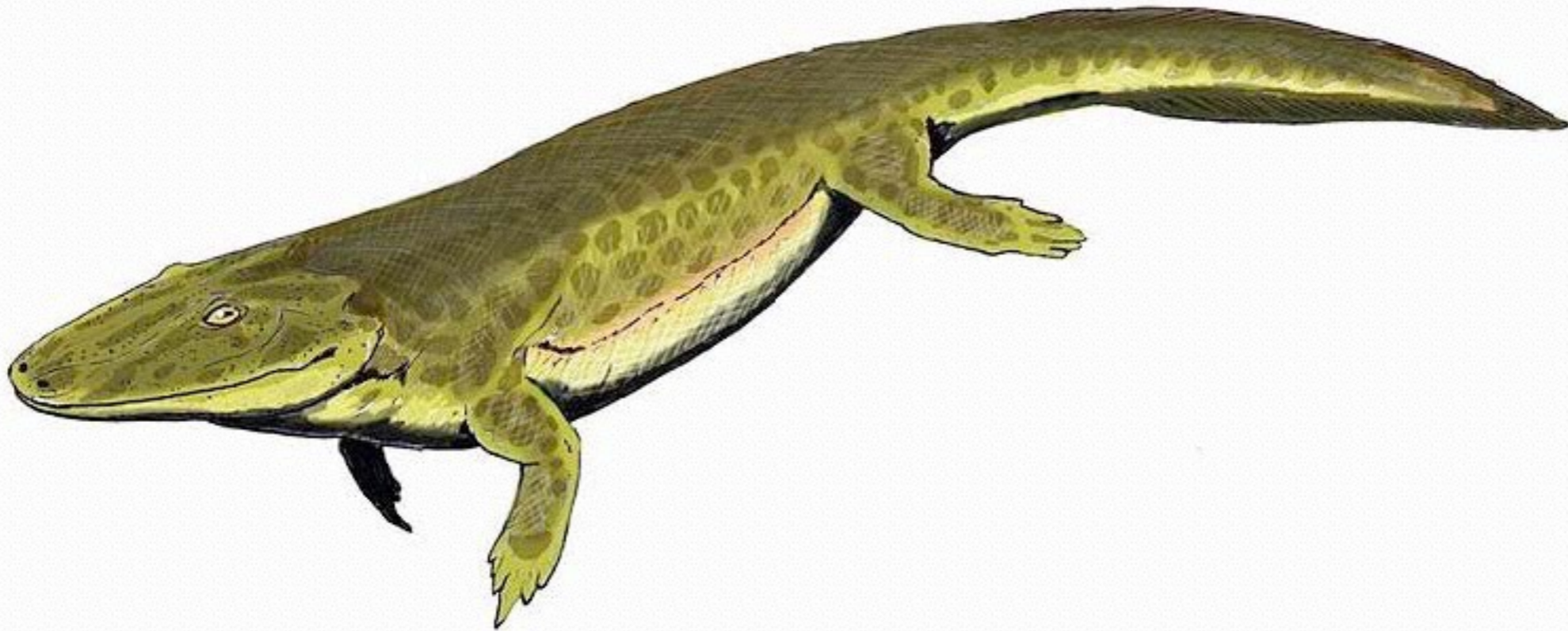


Eon	Era	Period		Epoch	
Phanerozoic	Cenozoic	Quaternary		Holocene	Today (0 ya.)
				Pleistocene	11,700 ya.
		Tertiary	Neogene	Pliocene	2.6 Ma.
				Miocene	5.3 Ma.
				Oligocene	23 Ma.
			Paleogene	Eocene	34 Ma.
				Paleocene	56 Ma.
					66 Ma.

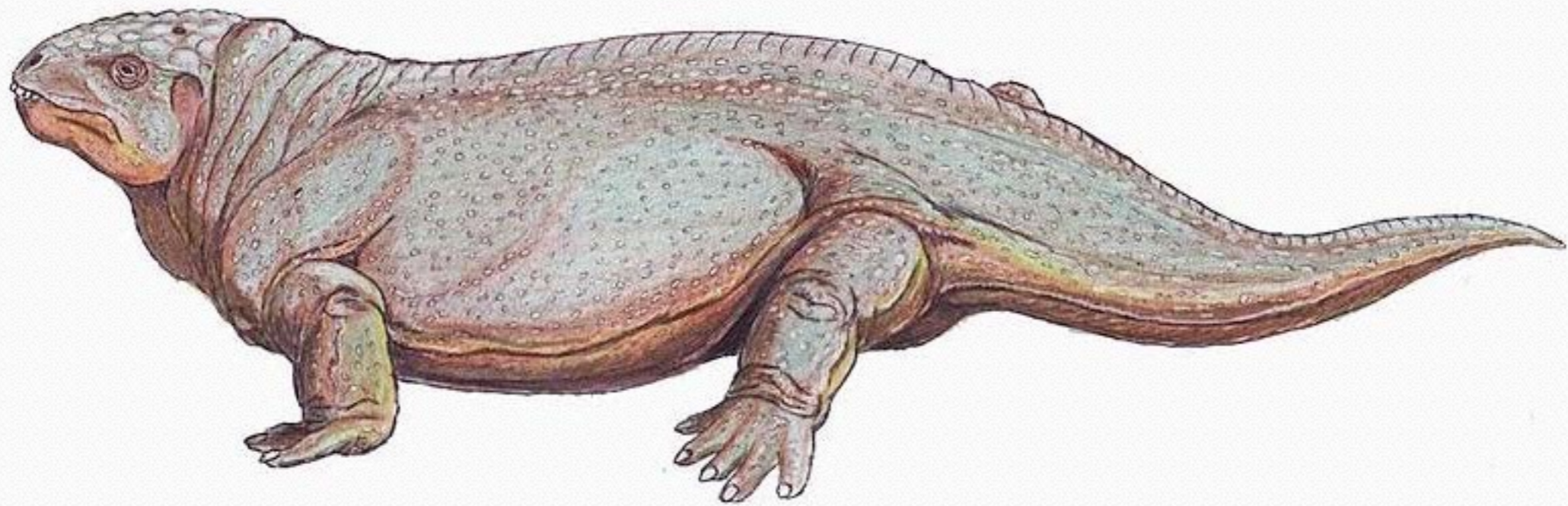
Eusthenopteron - Devonian Lobe-finned fish



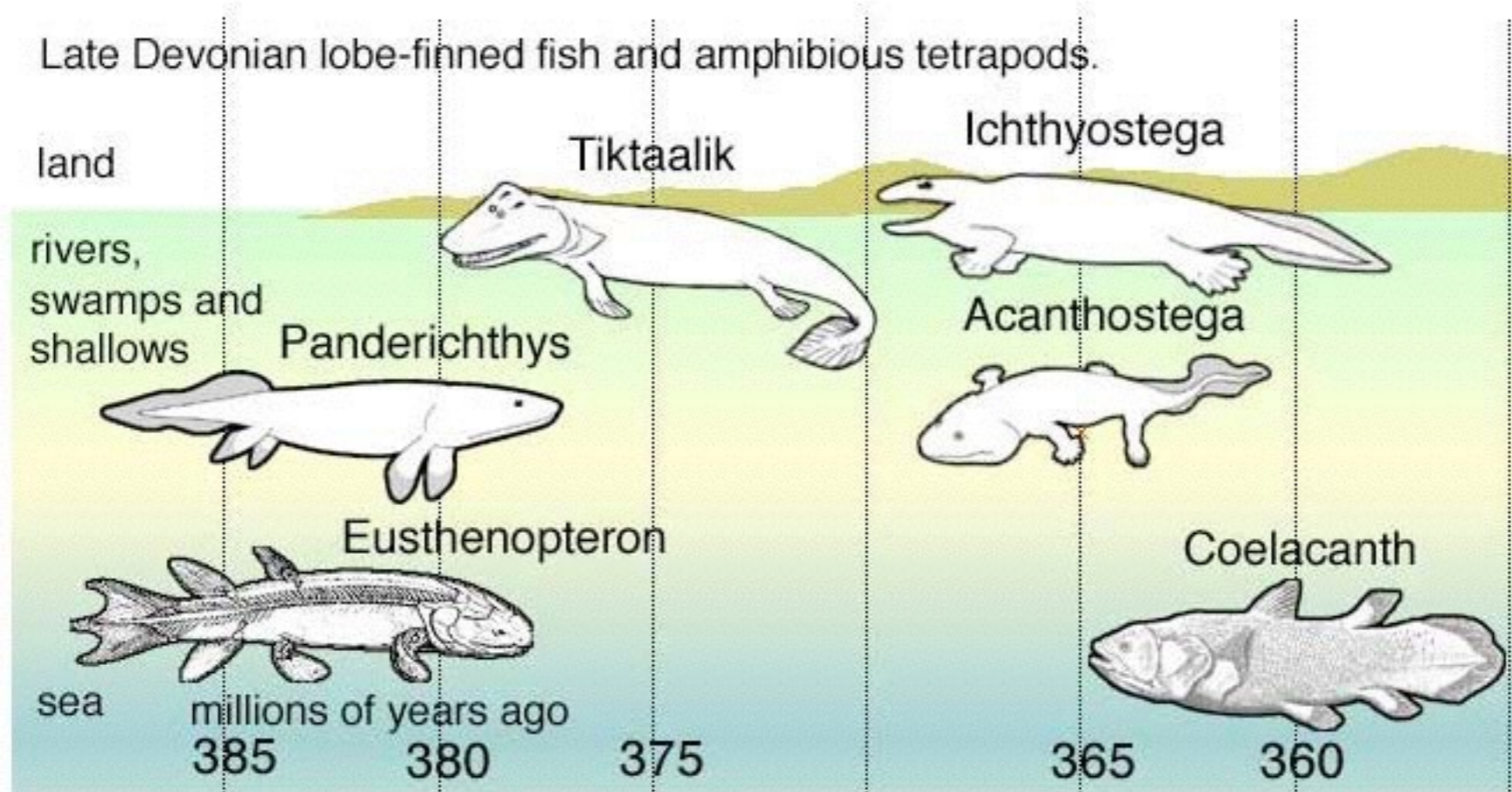
Tulerpeton - Devonian Labyrinthodont



Diadectes - Permian Tetrapod



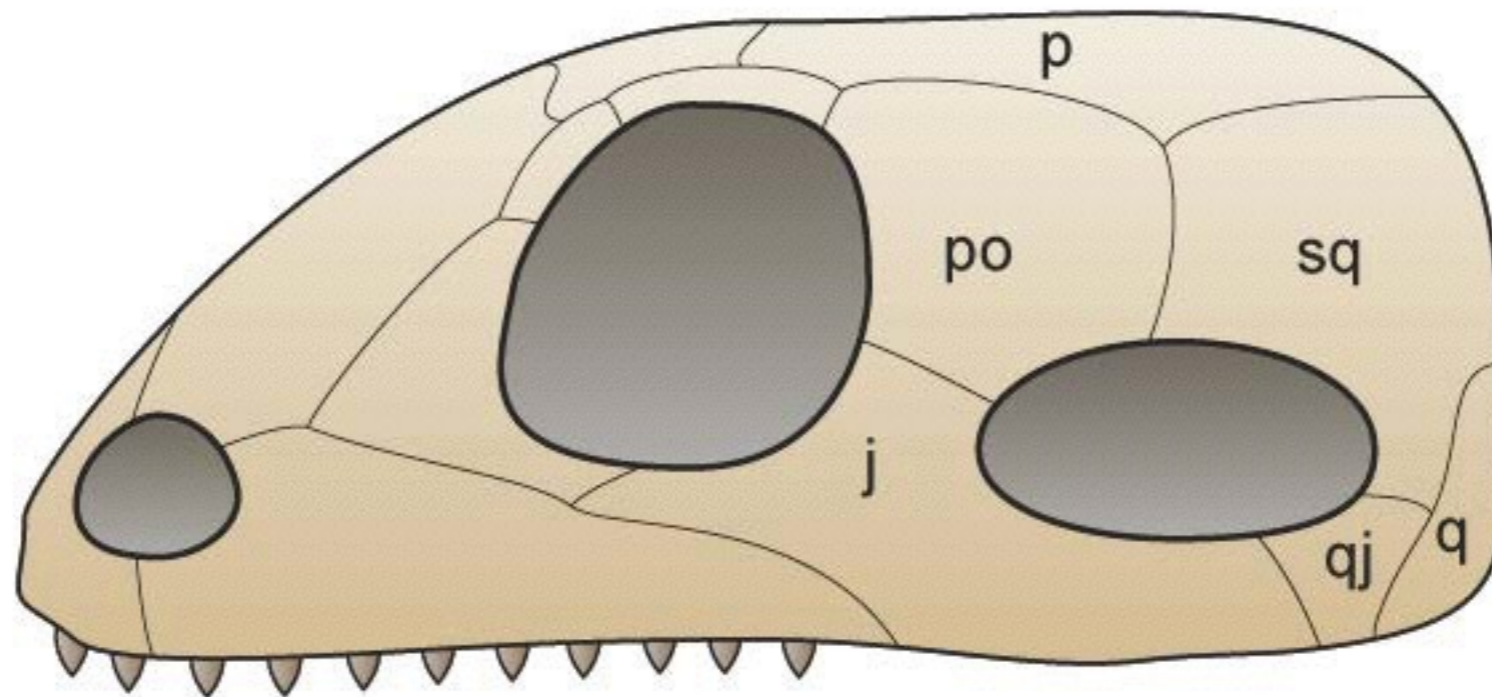
Lobe-finned fish evolve into tetrapods



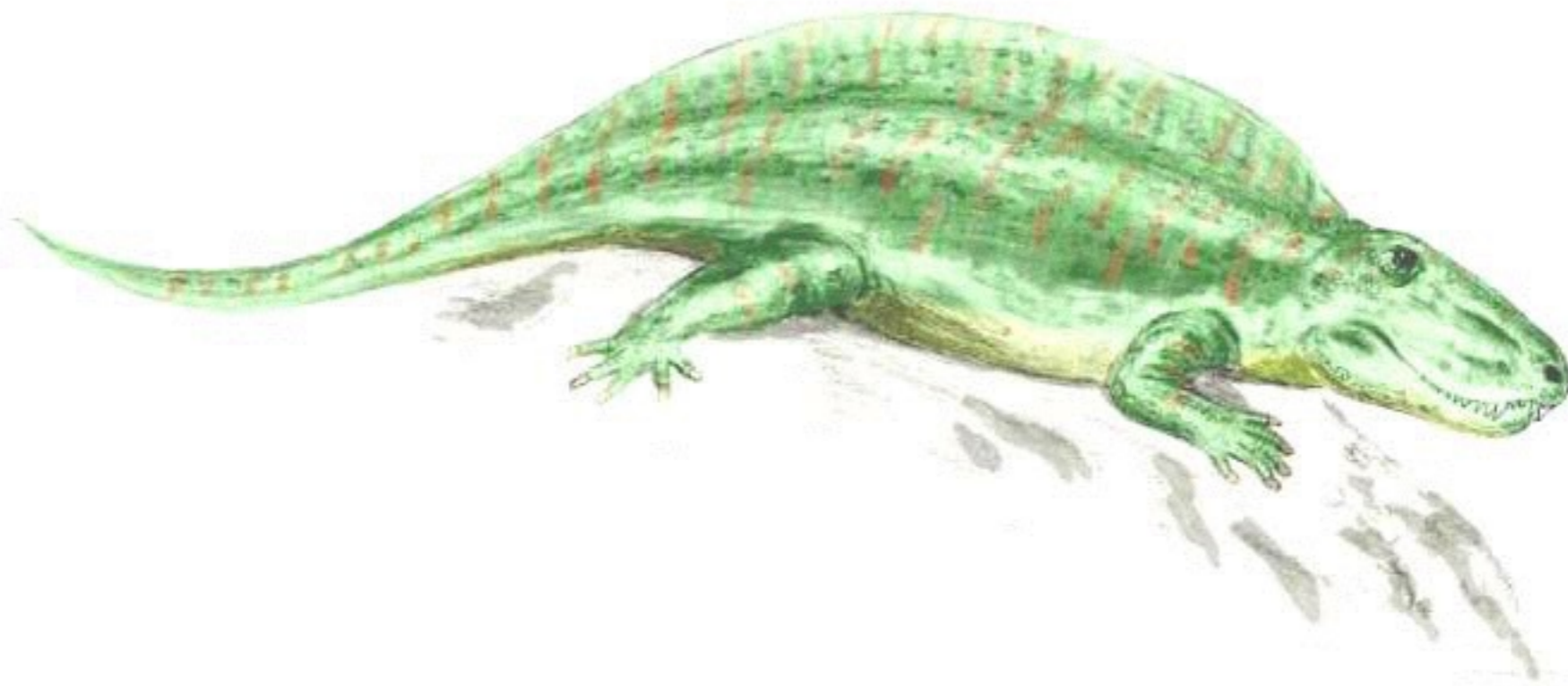
Archaeothyris - a Pennsylvanian Synapsid



Skull of a Synapsid



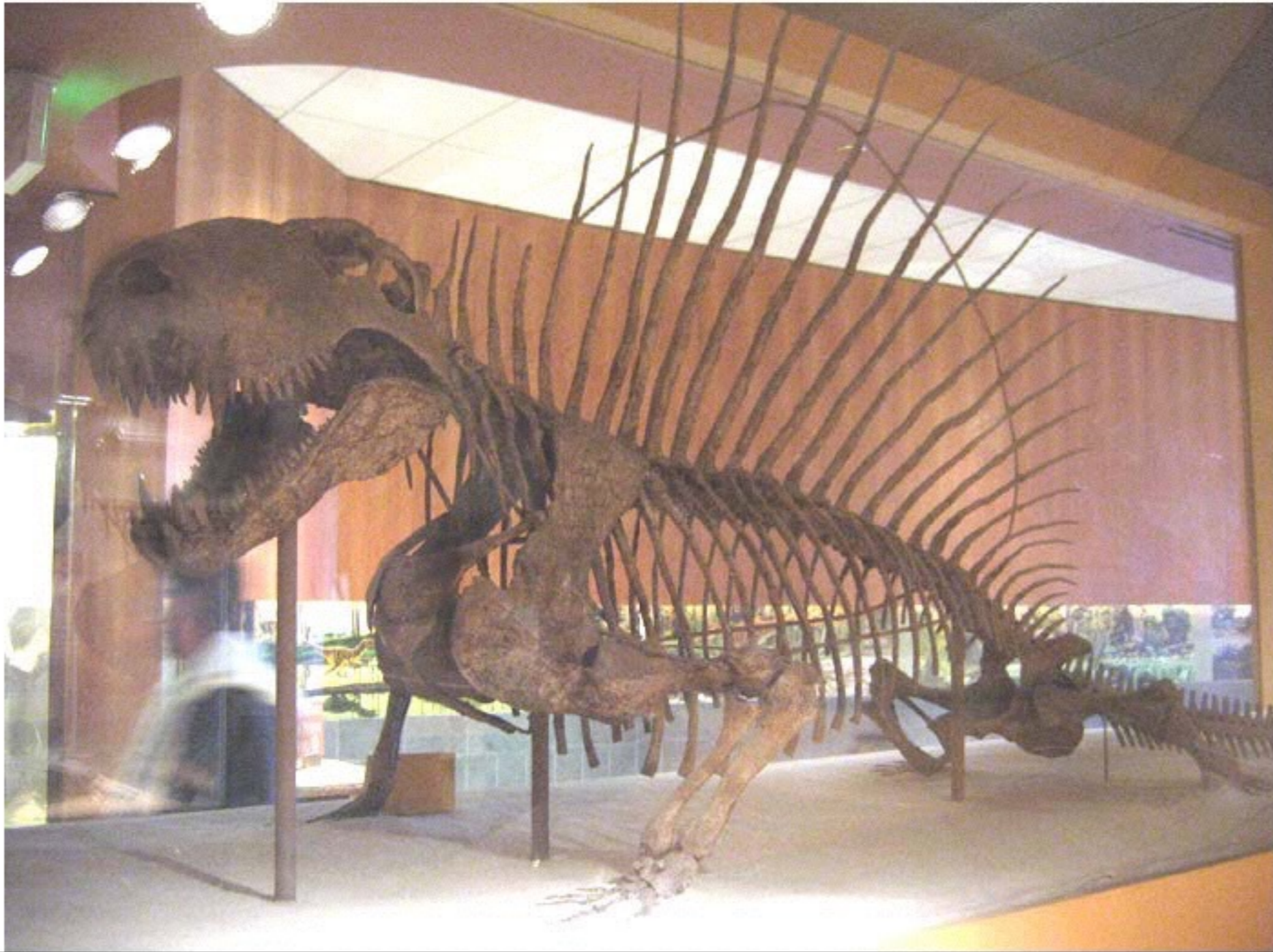
Sphenacodon - Permian Pelycosaur



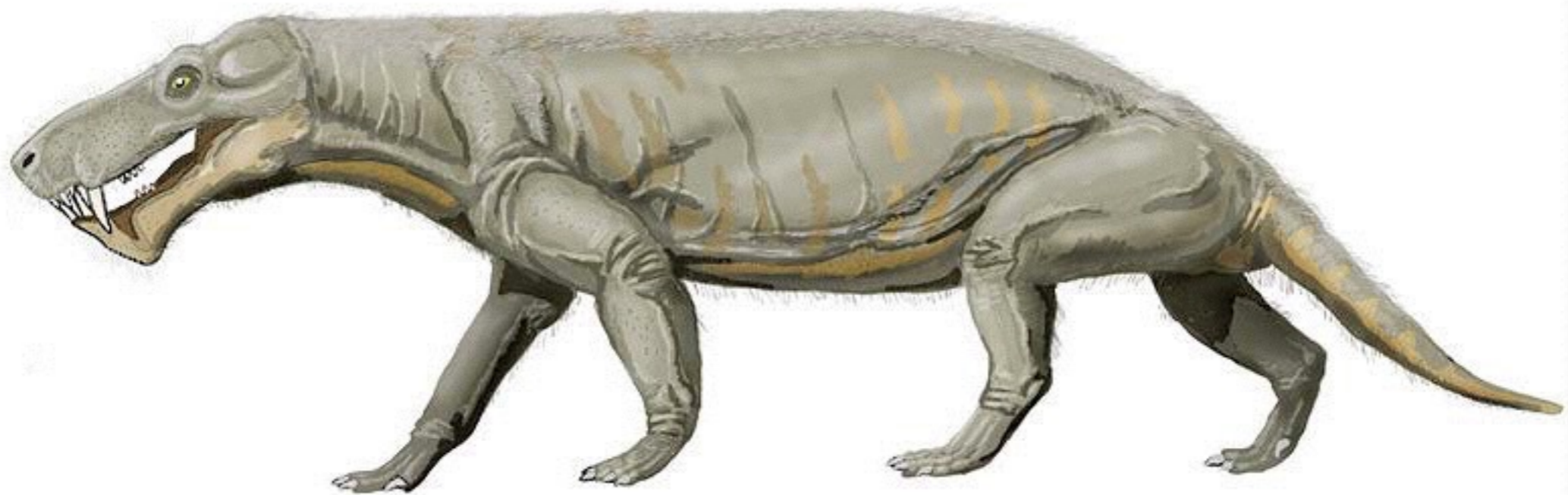
Dimetrodon - a Permian Pelycosaur



Dimetrodon



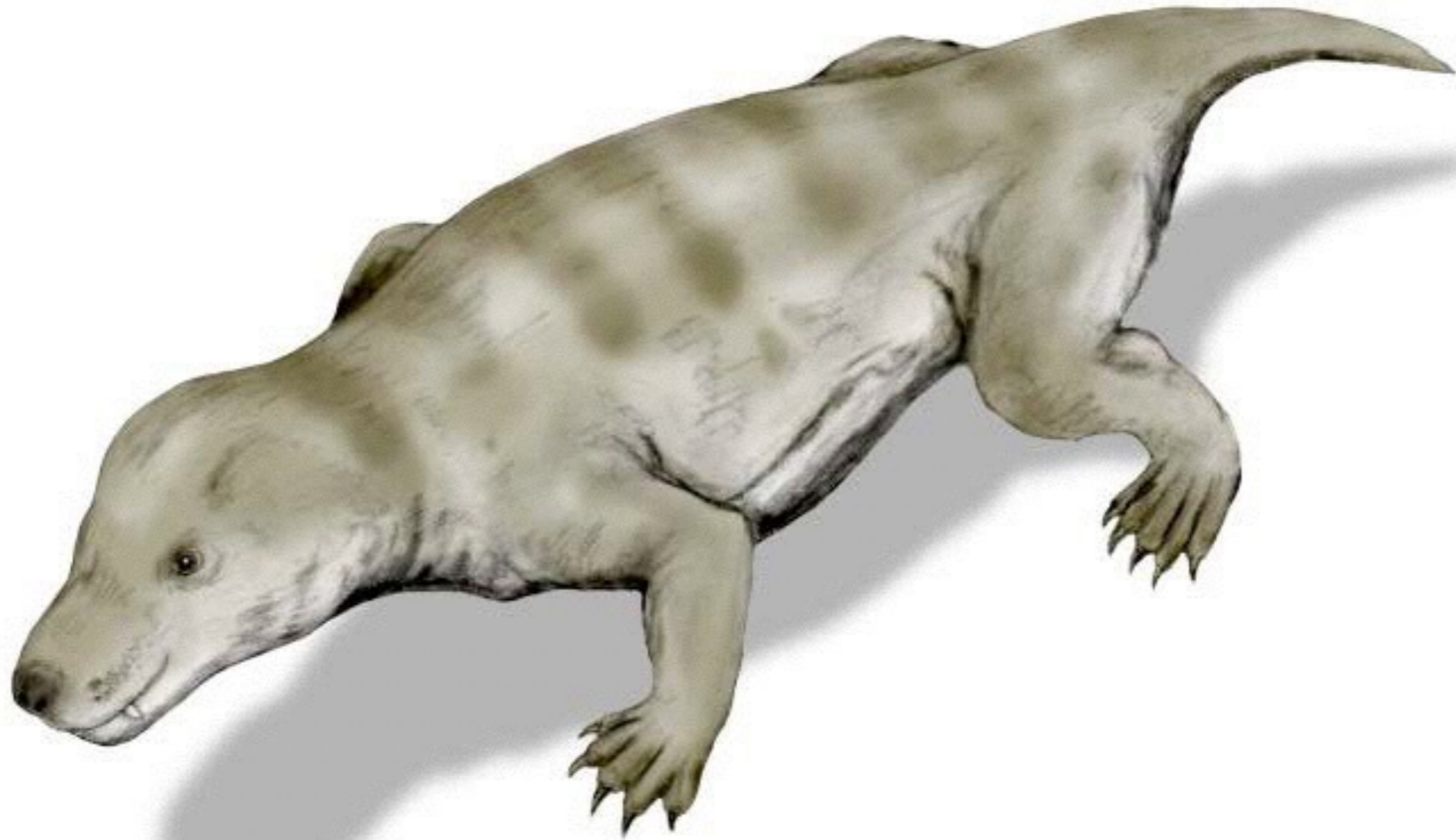
Gorgonopsid - Permian Therapsid



Triassic Thecodont



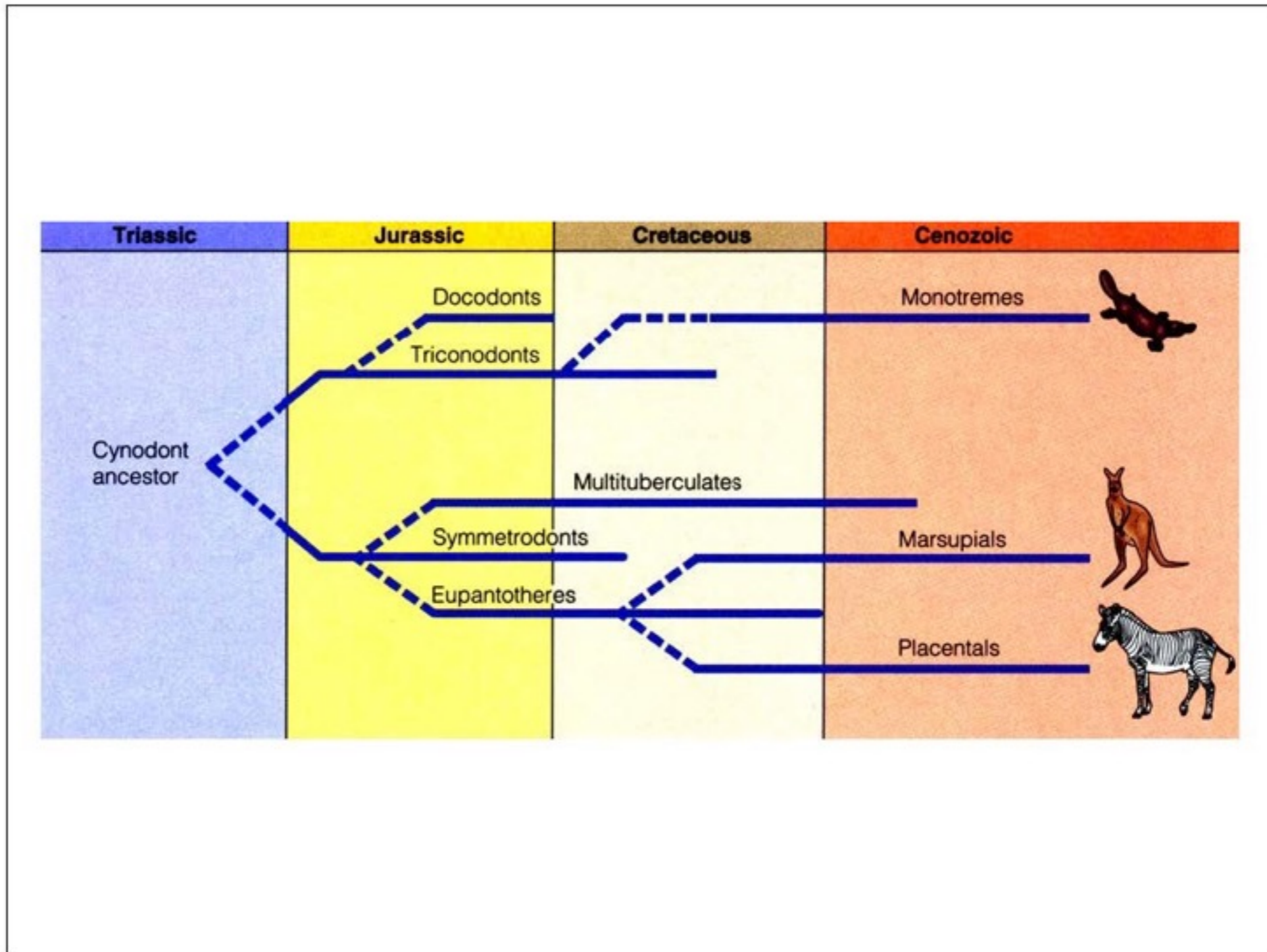
Thrinaxodon - a Triassic Cynodont



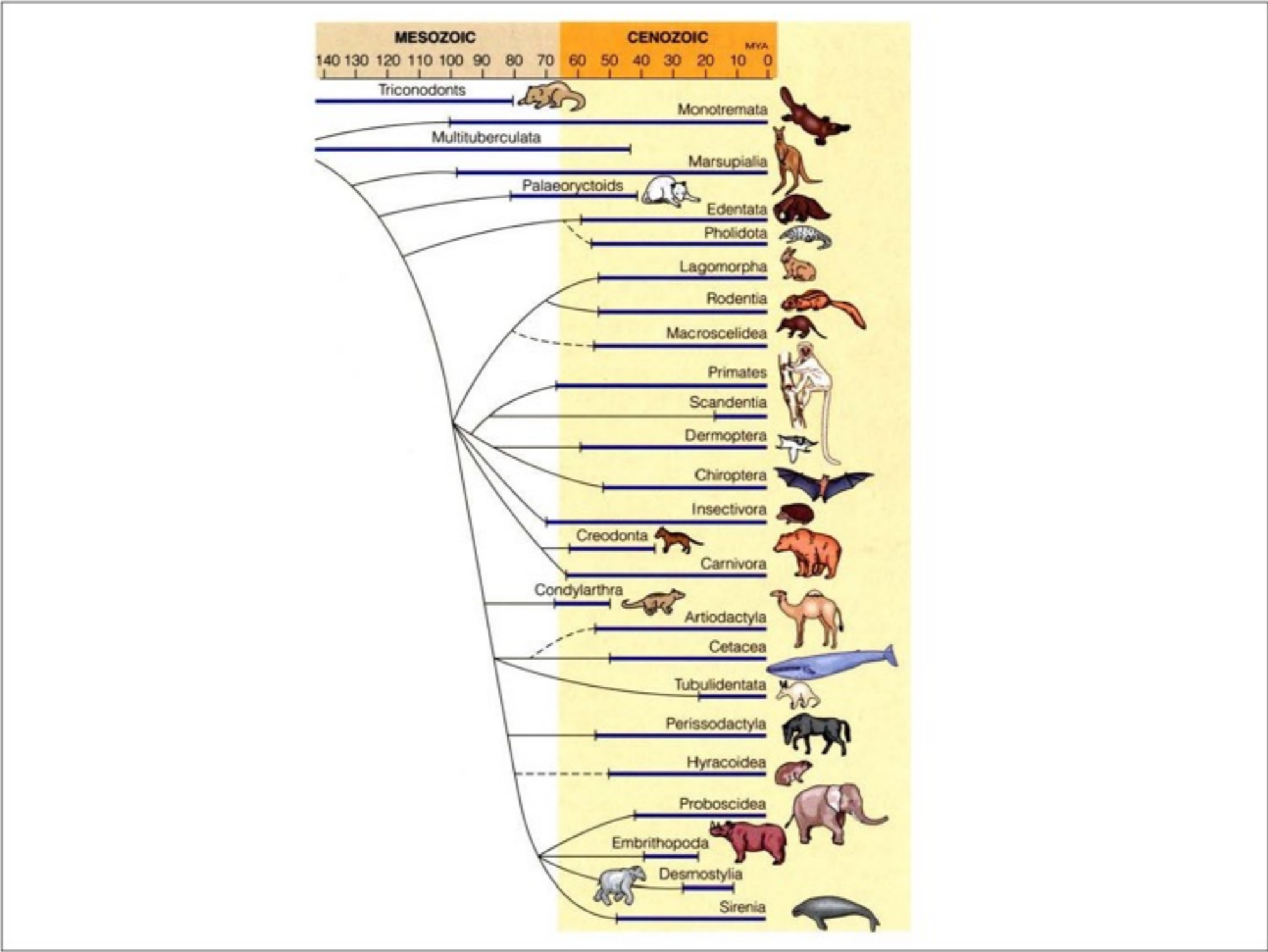
Cretaceous Triconodont



Mammal Evolution



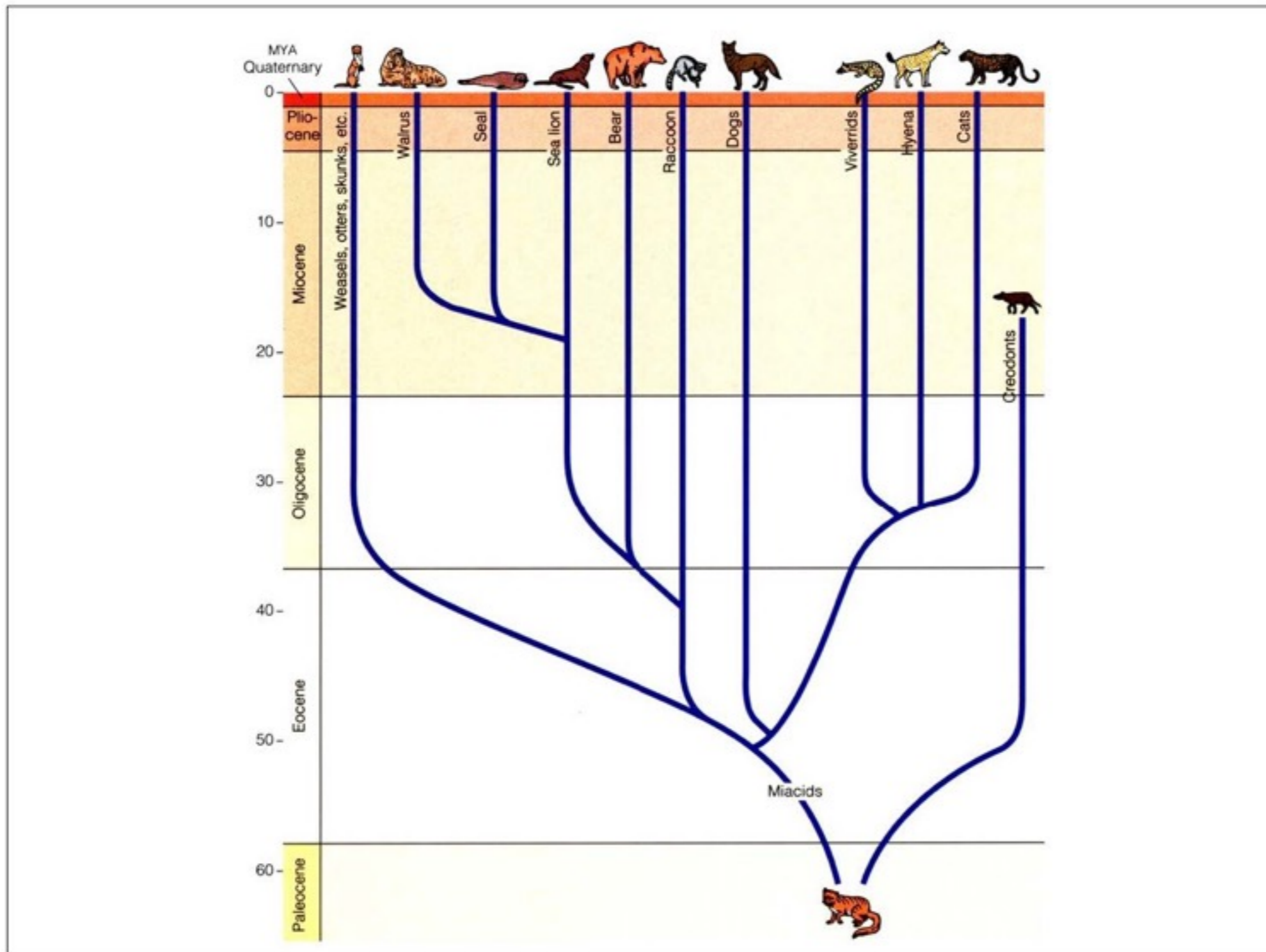
Modern Mammals



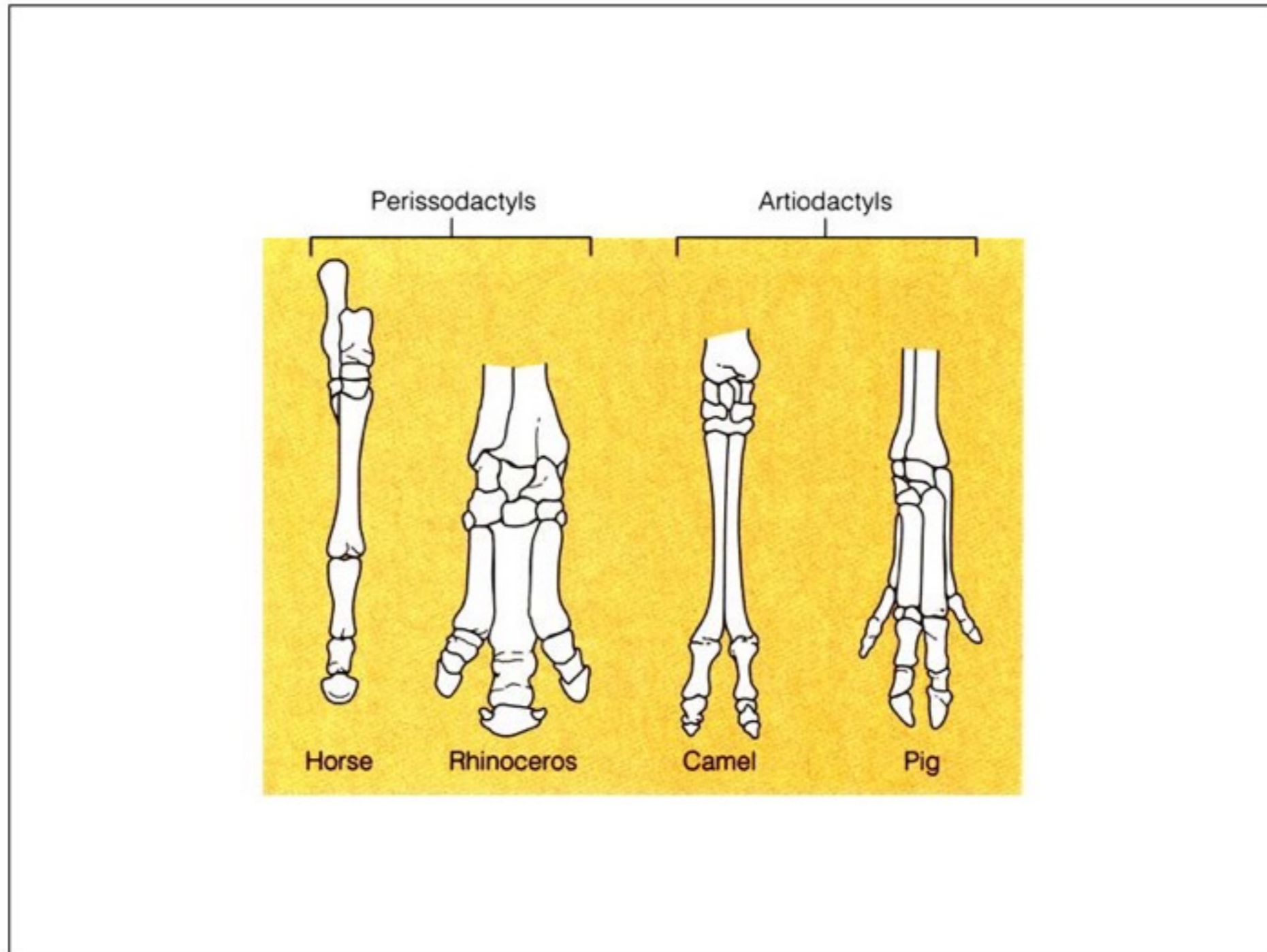
Placental Mammals

- Carnivores
- Ungulates
 - Perissodactyls (odd - toed)
 - Artiodactyls (even - toed)

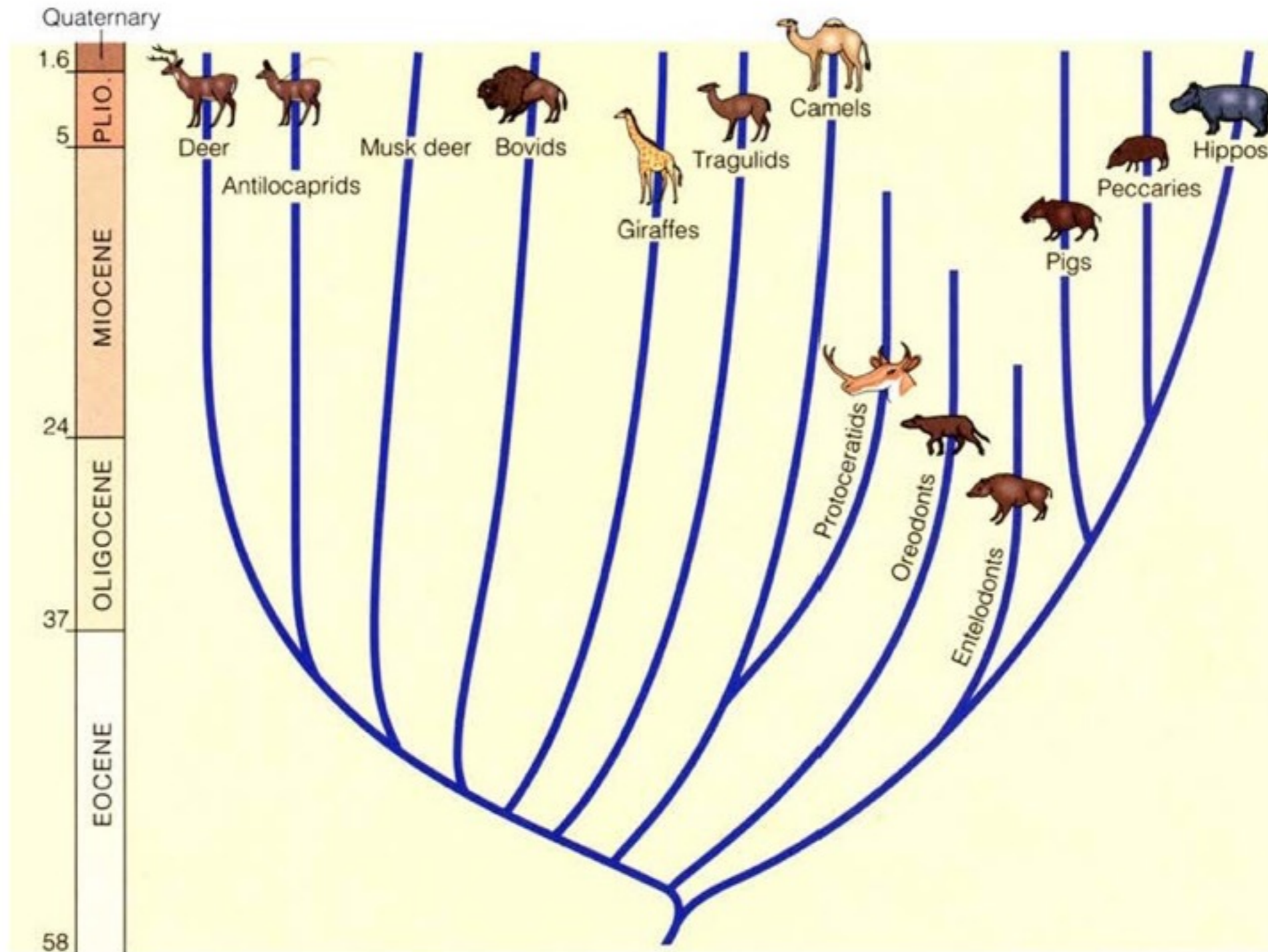
Placental Carnivores

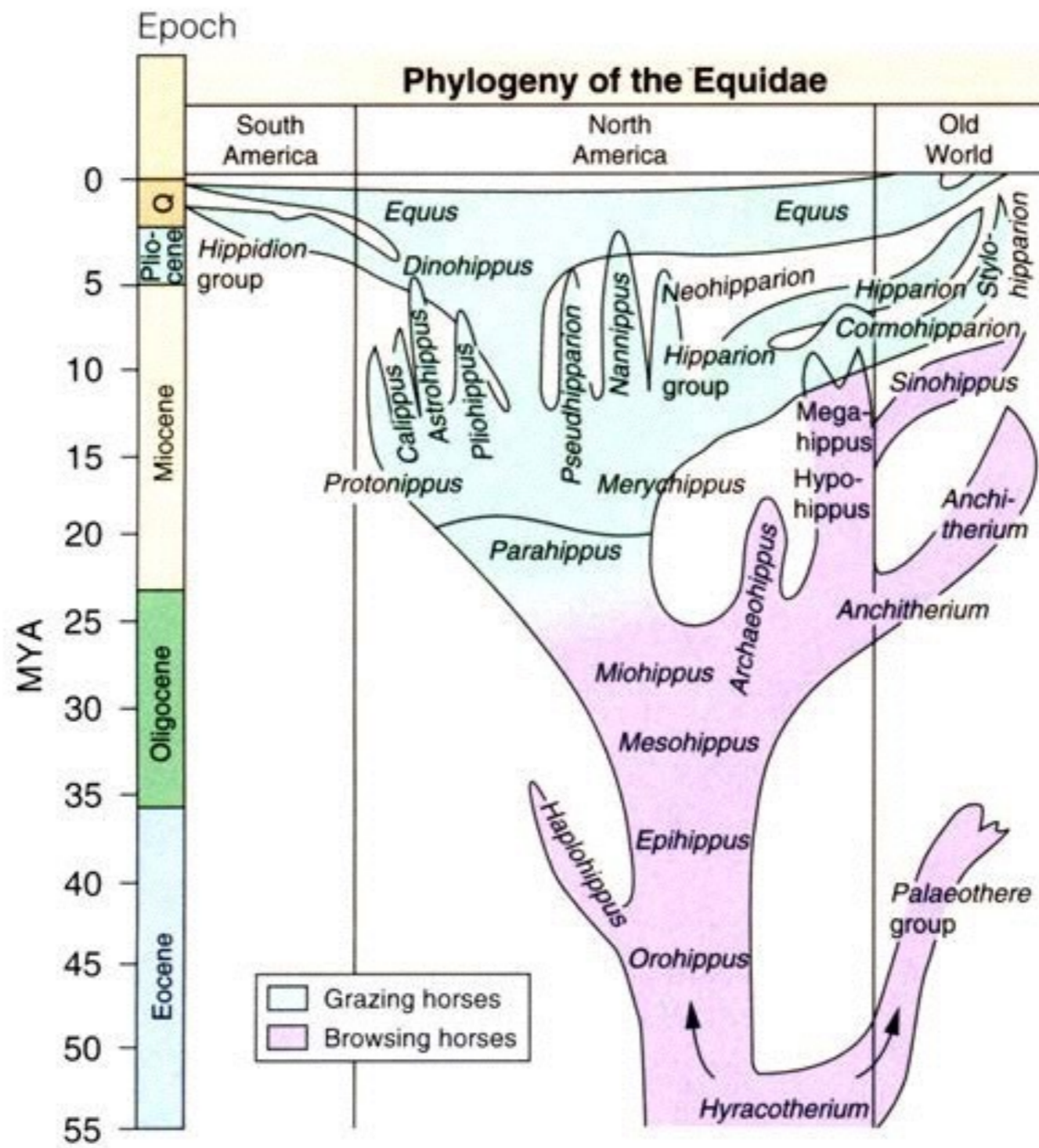


Placental Ungulates

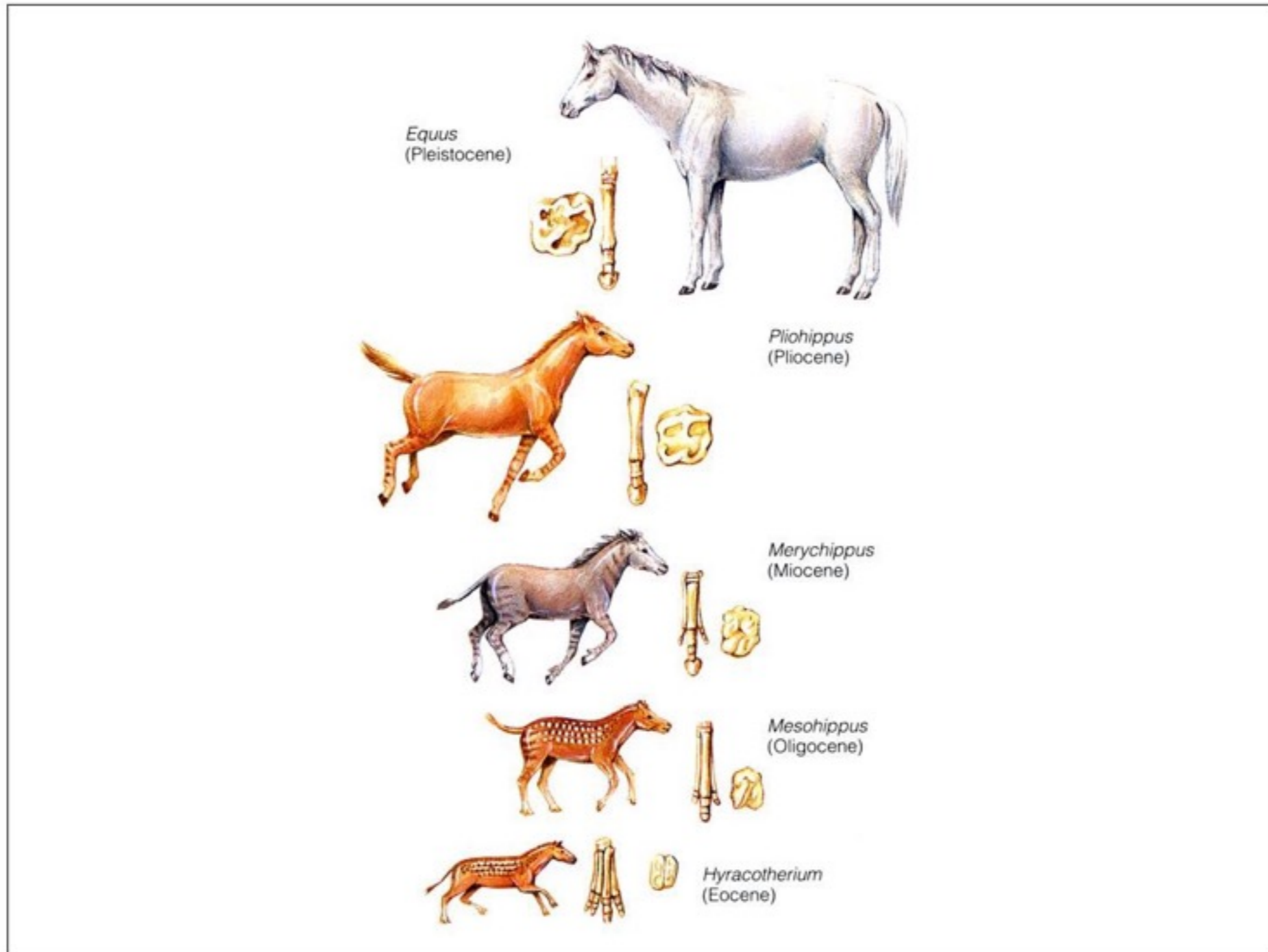


Artiodactyl Family Tree





Evolution of Horses

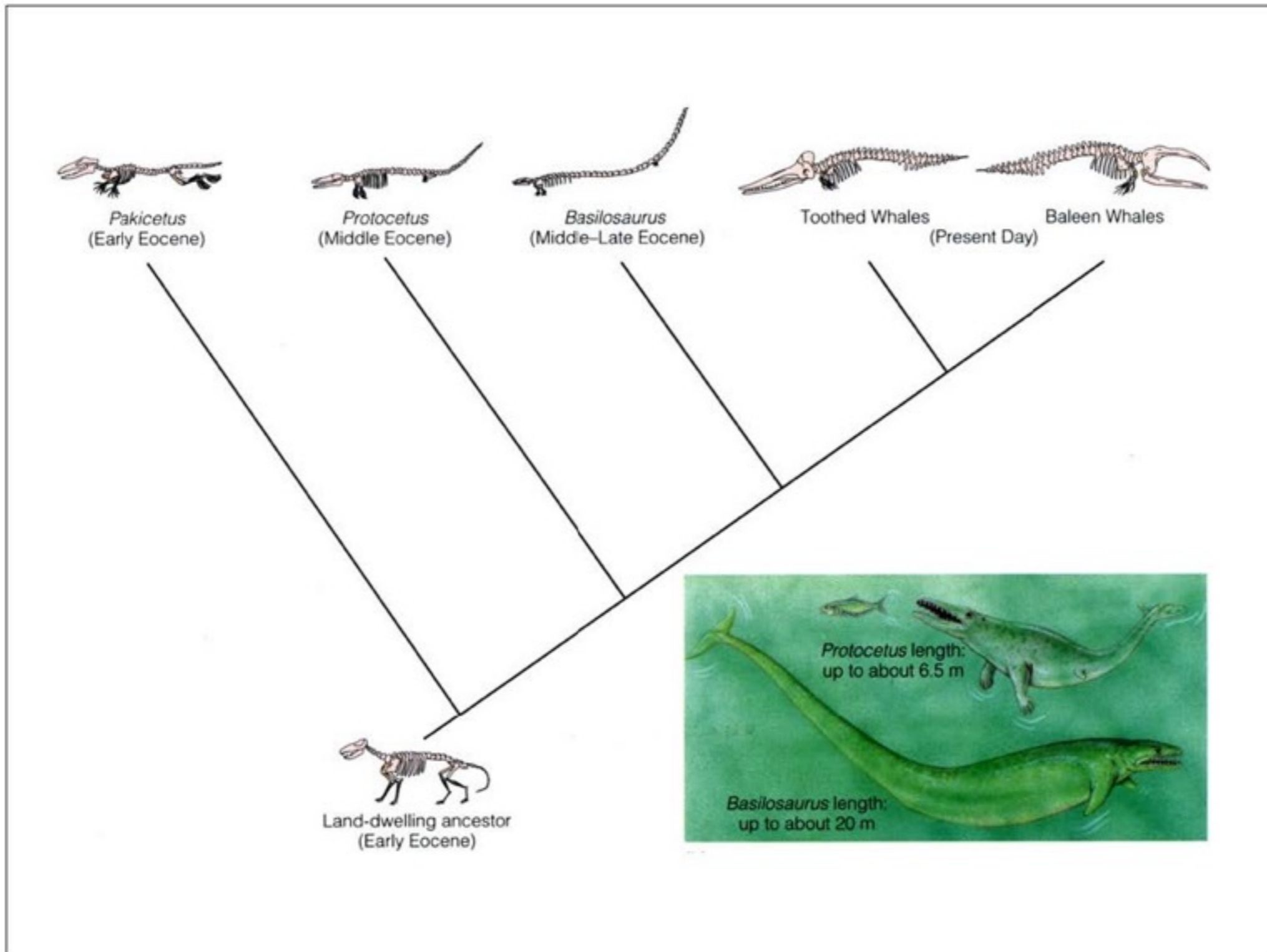


Trends in the Cenozoic Evolution of the Present-Day Horse *Equus*. A number of horse genera existed during the Cenozoic that evolved differently. For instance, some horses were browsers rather than grazers and never developed high-crowned chewing teeth, and retained three toes.

Trend

1. Size increase.
2. Legs and feet become longer, an adaptation for running.
3. Lateral toes reduced to vestiges. Only the third toe remains functional in *Equus*.
4. Straightening and stiffening of the back.
5. Incisor teeth become wider.
6. Molarization of premolars yielded a continuous row of teeth for grinding vegetation.
7. The chewing teeth, molars and premolars, become high-crowned and cement-covered for grinding abrasive grasses.
8. Chewing surfaces of premolars and molars become more complex—also an adaptation for grinding abrasive grasses.
9. Front part of skull and lower jaw become deeper to accommodate high-crowned premolars and molars.
10. Face in front of eye becomes longer to accommodate high-crowned teeth.
11. Larger, more complex brain.

Evolution of Whales



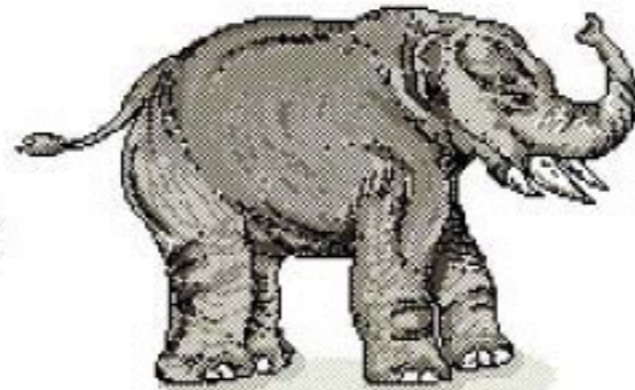
Pleistocene Megafauna



Evolution of the Elephant



Moeritherium



Trilophodon



Deinotherium



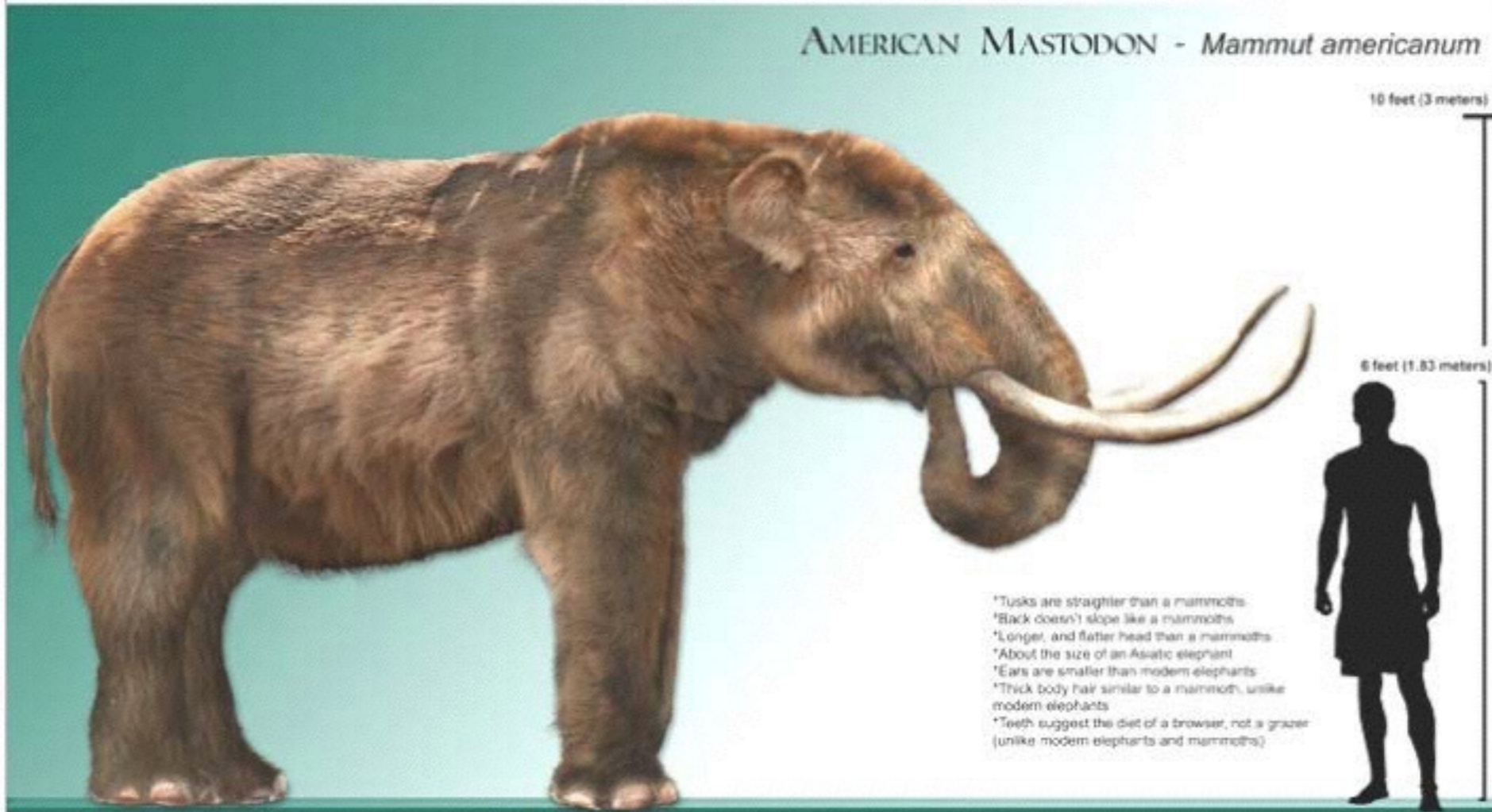
Platybelodon



Mammoth

Pleistocene Mastodon

AMERICAN MASTODON - *Mammot americanum*

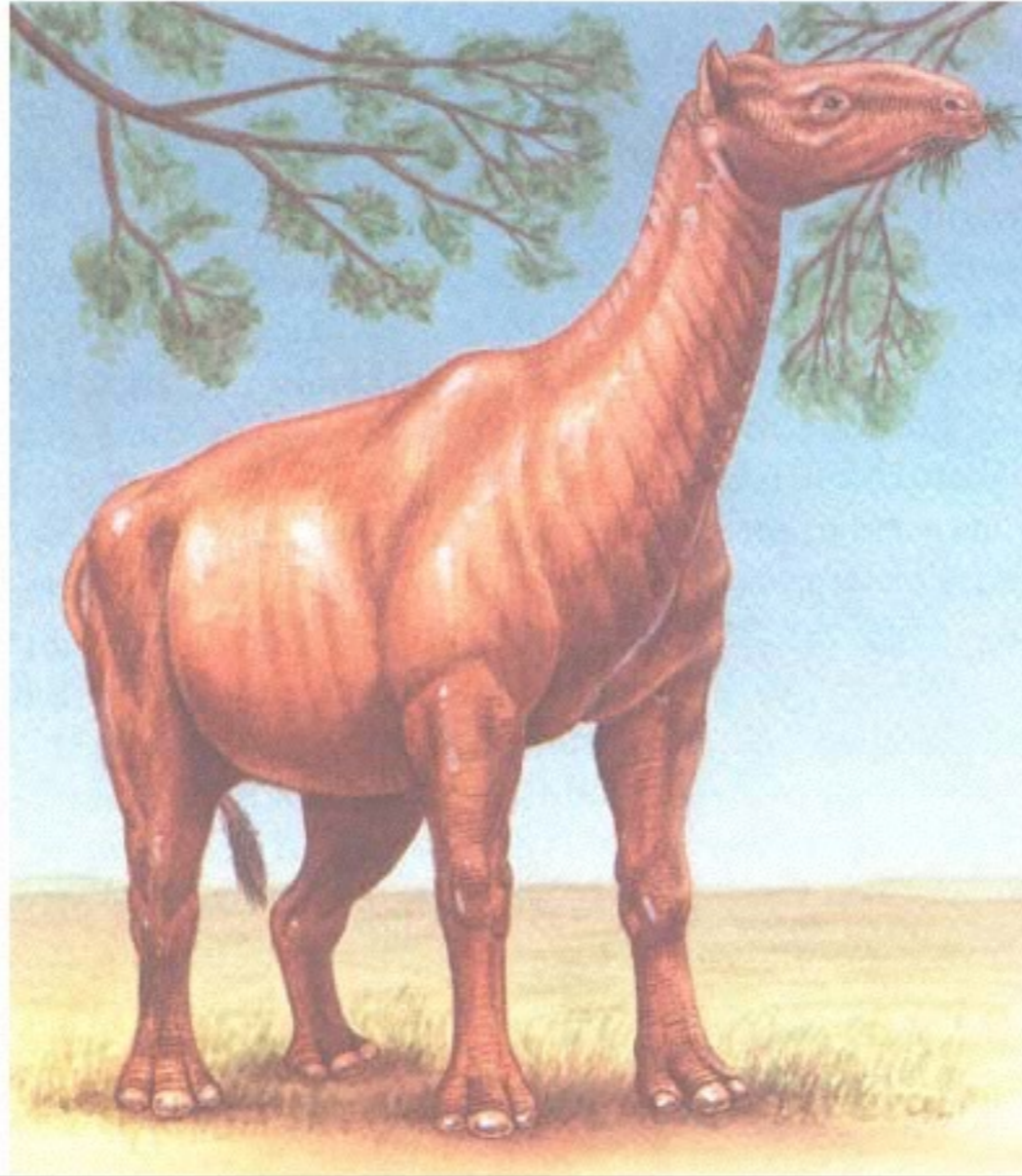


10 feet (3 meters)

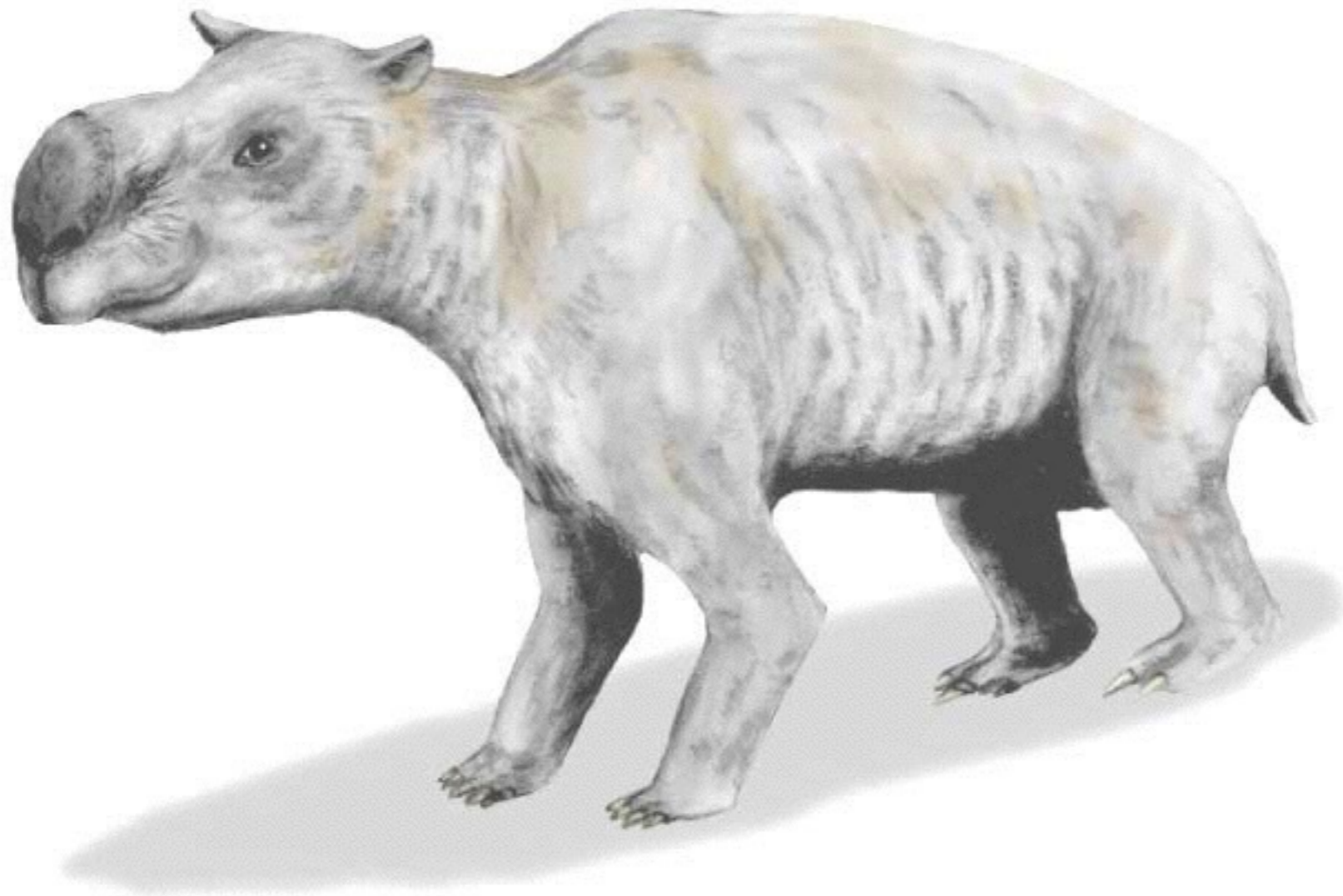
6 feet (1.83 meters)

- *Tusks are straighter than a mammoth's
- *Back doesn't slope like a mammoth's
- *Longer, and flatter head than a mammoth's
- *About the size of an Asiatic elephant
- *Ears are smaller than modern elephants
- *Thick body hair similar to a mammoth, unlike modern elephants
- *Teeth suggest the diet of a browser, not a grazer (unlike modern elephants and mammoths)

Baluchiterium - Ancient Rhino



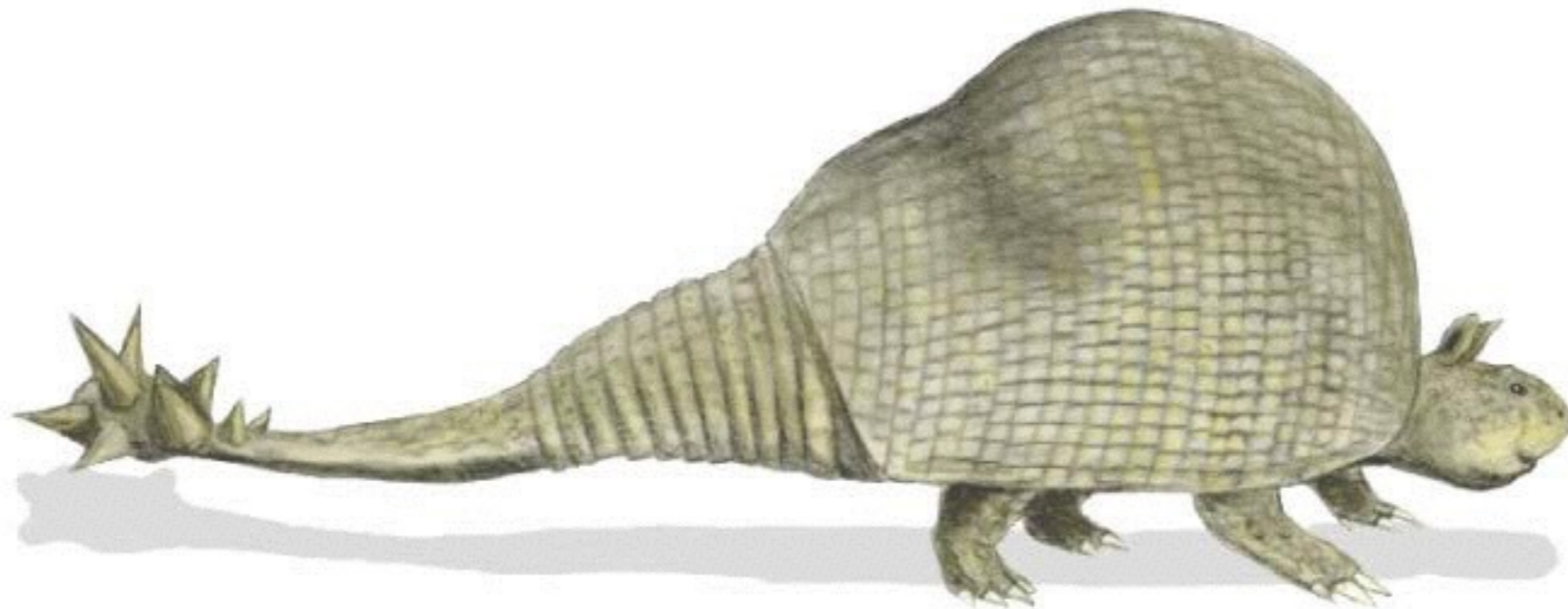
Giant Marsupial - Diprotodon



Magatherum - Pleistocene Ground Sloth



A Pleistocene Glyptodon



Phororhacos - a Pleistocene “Terror-bird”



