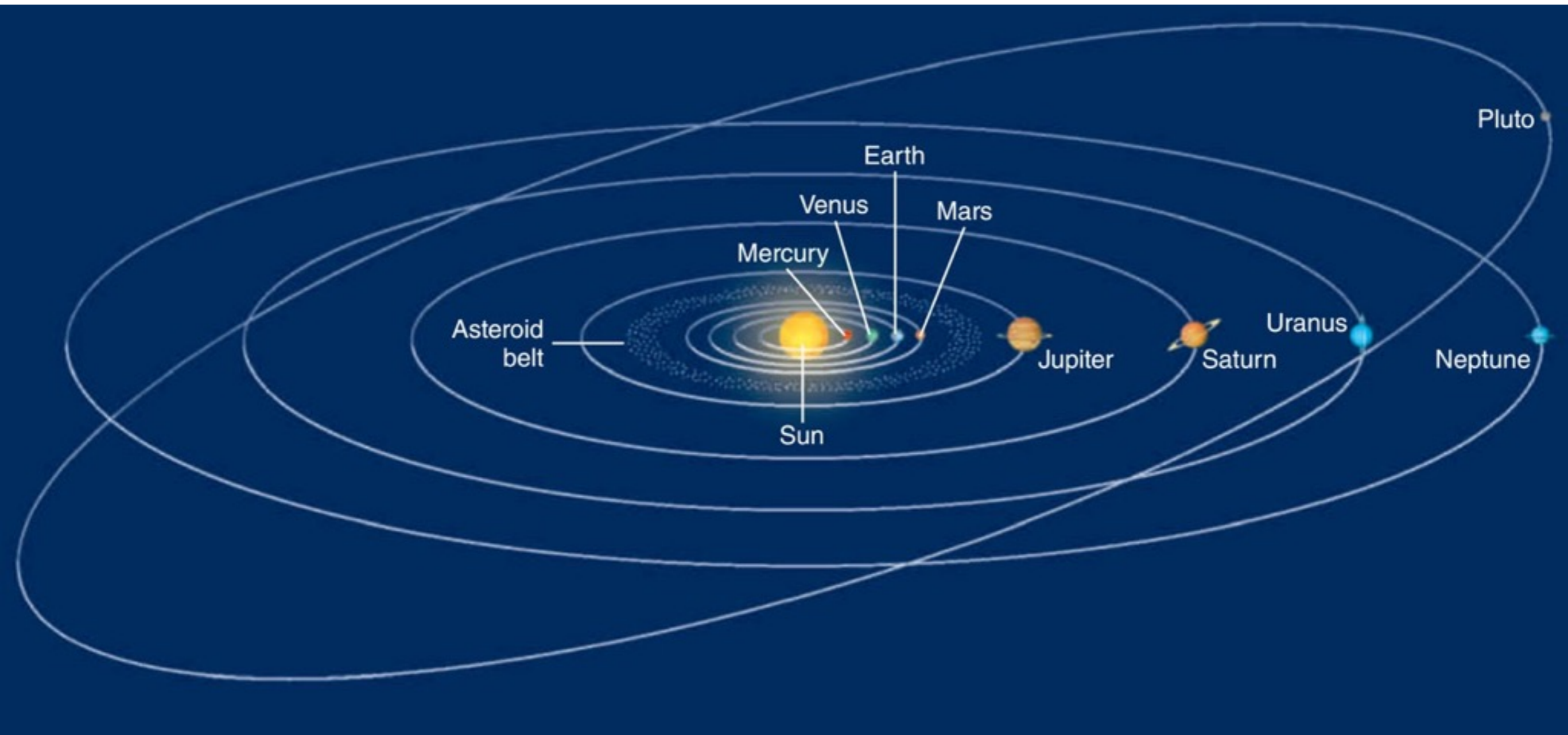
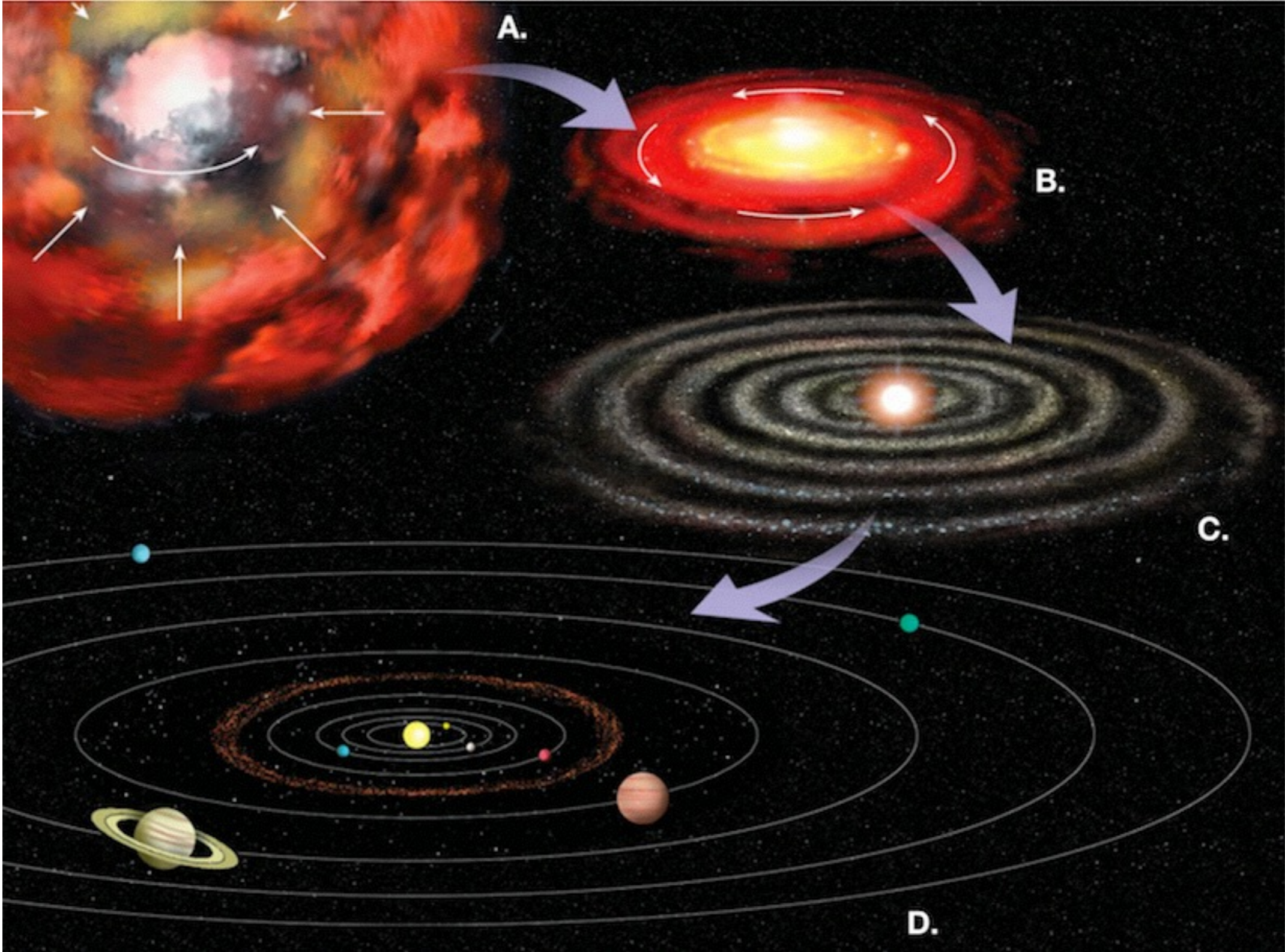


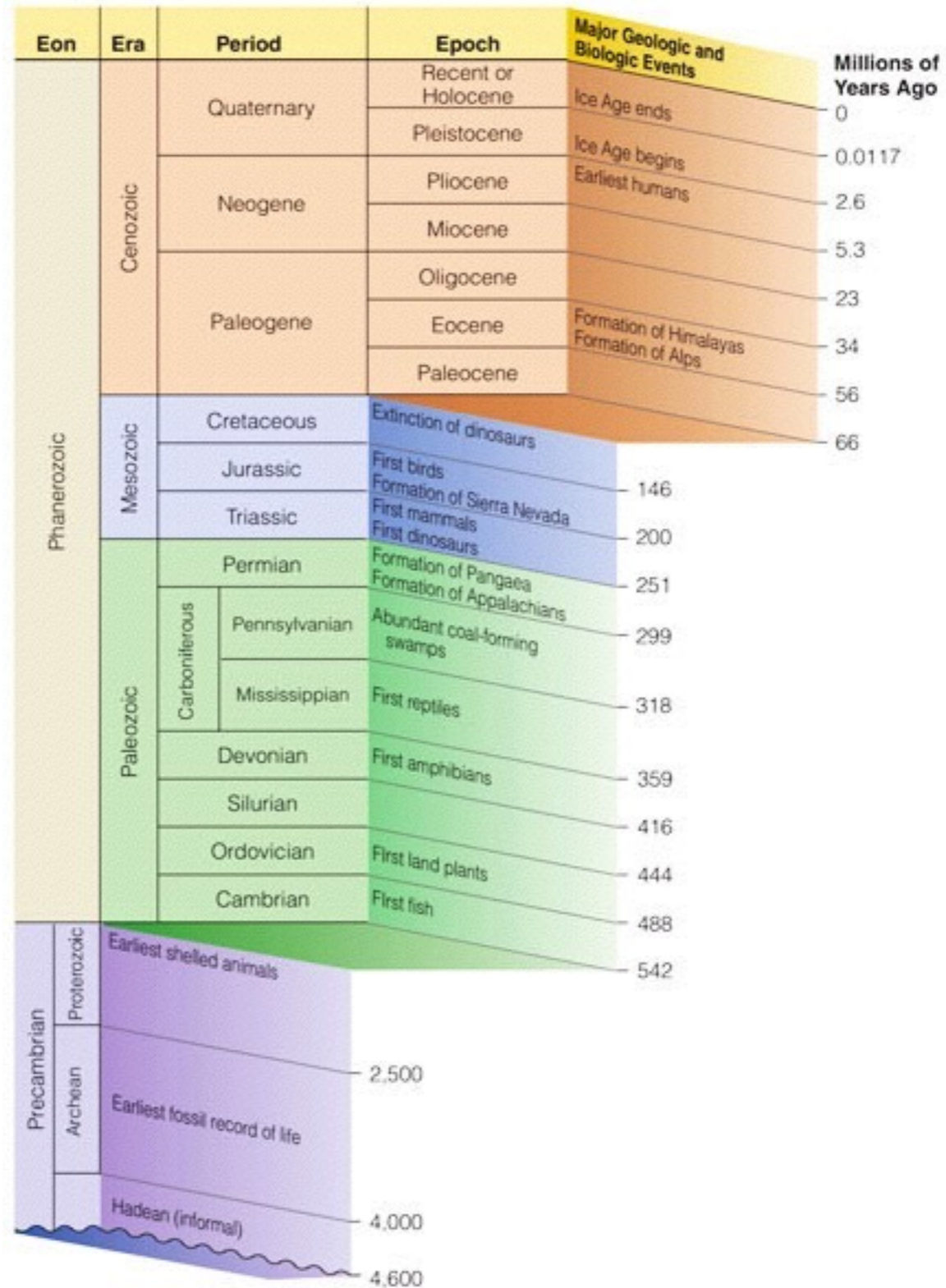
The History of the Earth



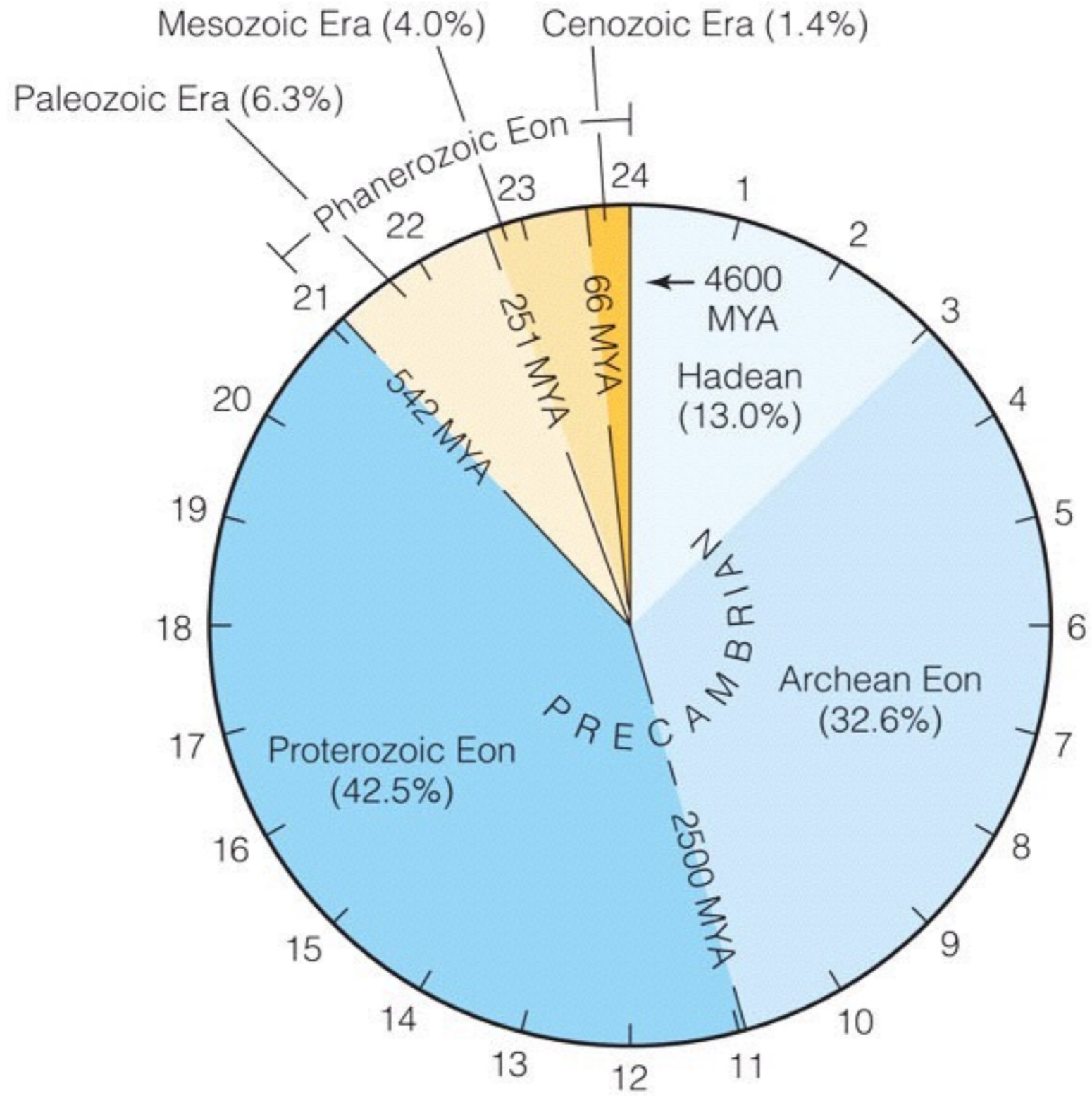
Solar Nebula Hypothesis



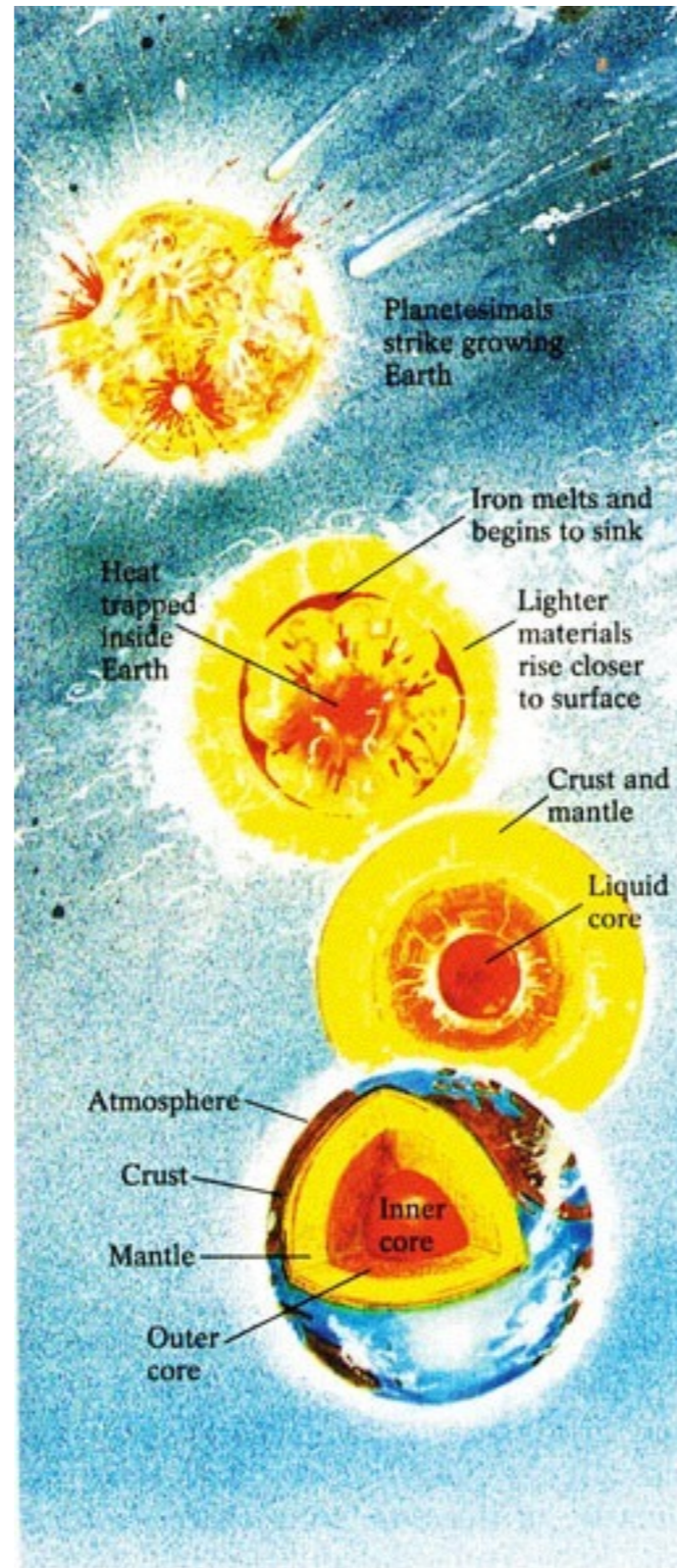
The Geologic Time Scale



The Geologic "Clock"



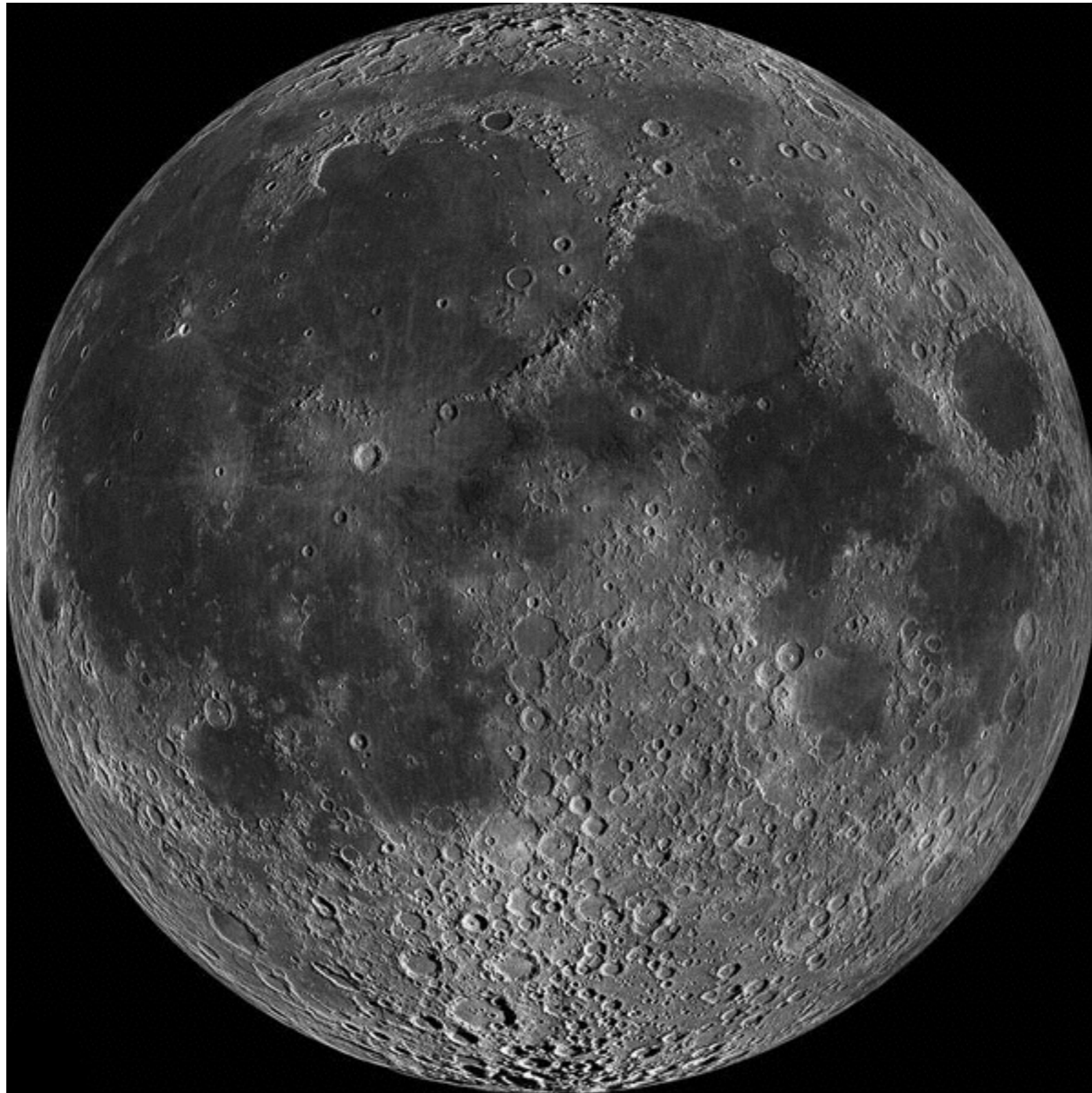
The Hadean Eon - Accretion, Melting and Differentiation



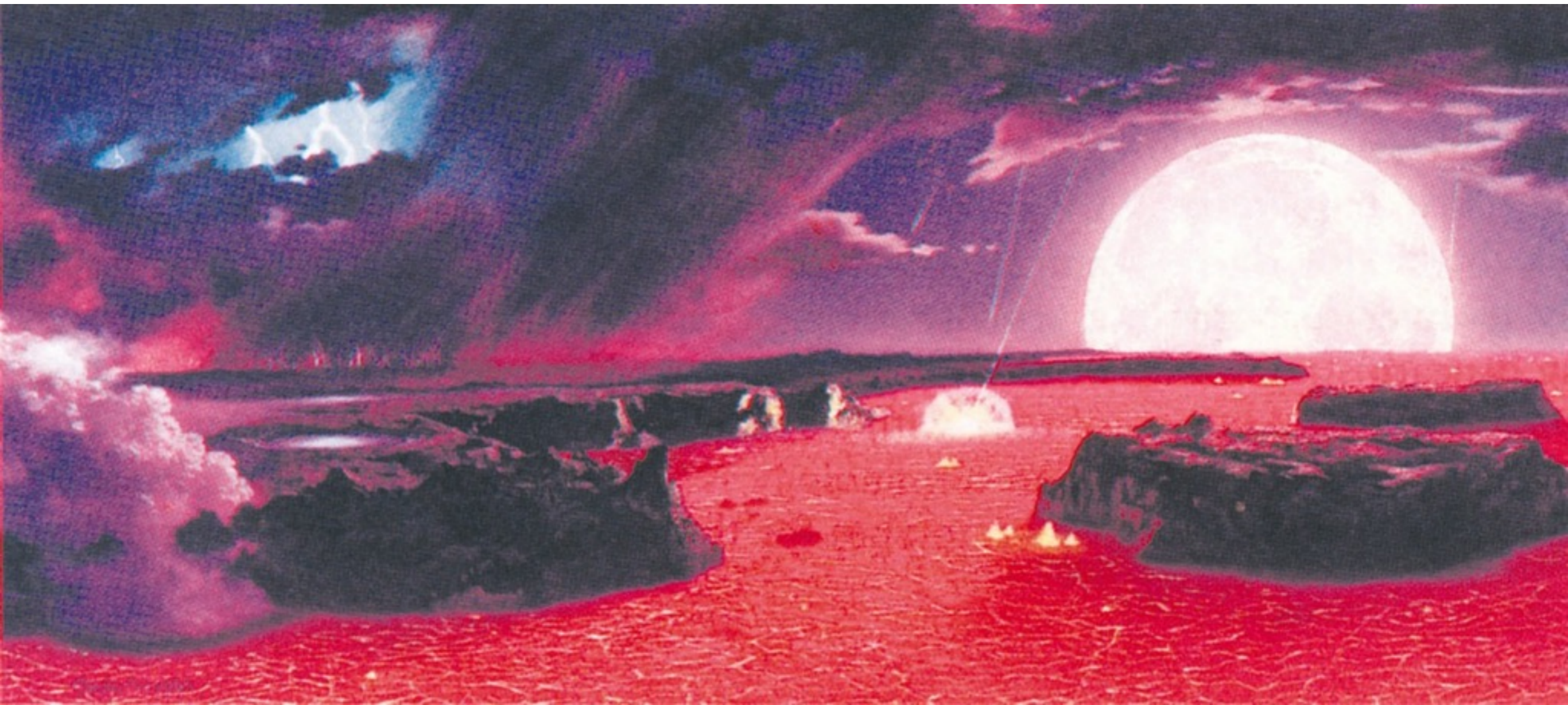
The Mars-size (Theia) Impactor Theory



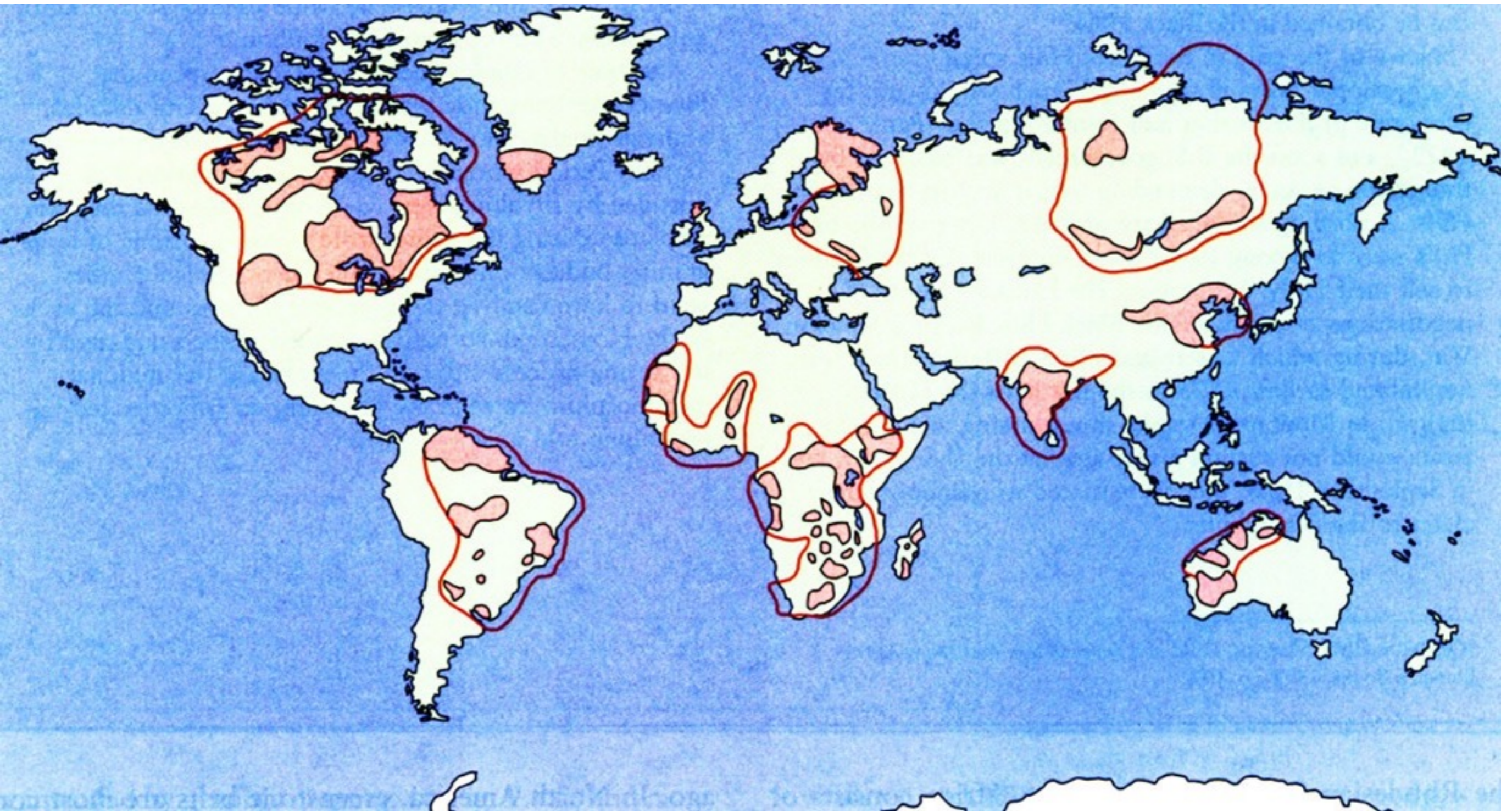
Our Moon



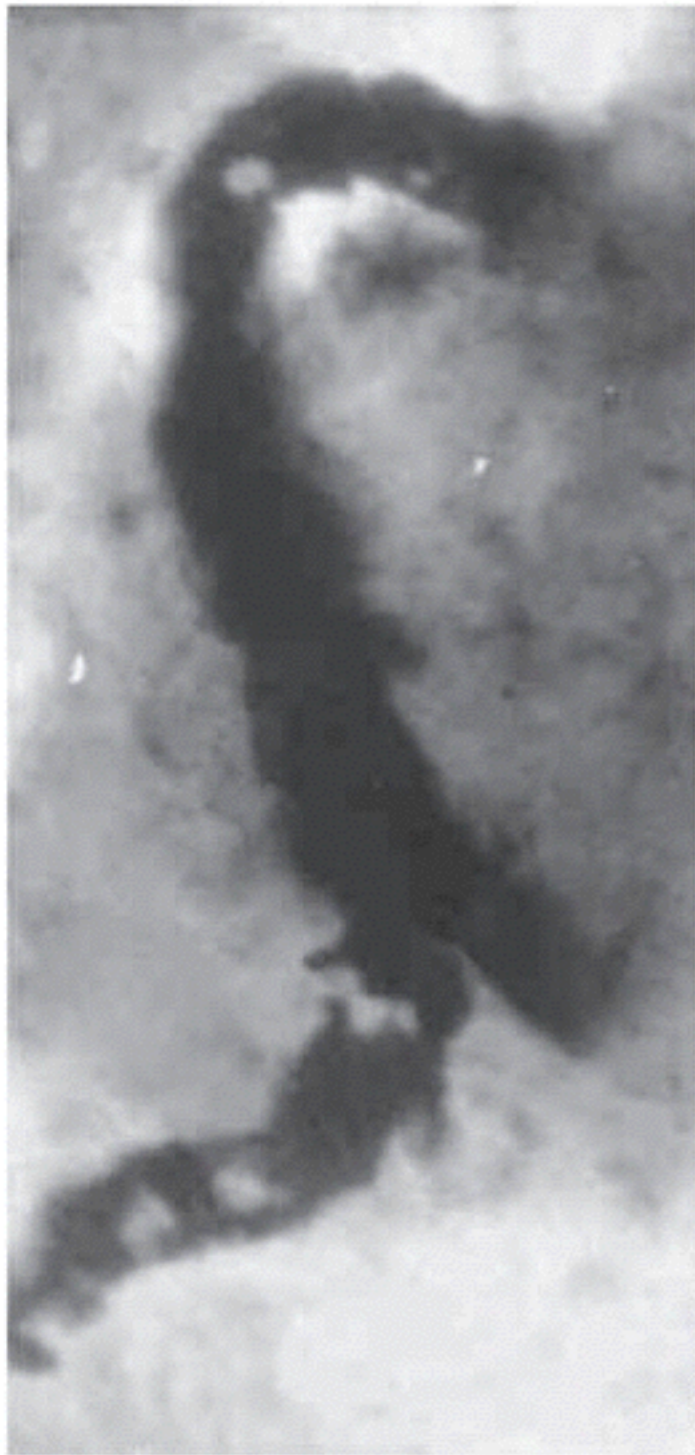
Hadean “Outgassing” to form Atmosphere and Oceans



Archean Eon - the time of crust-building

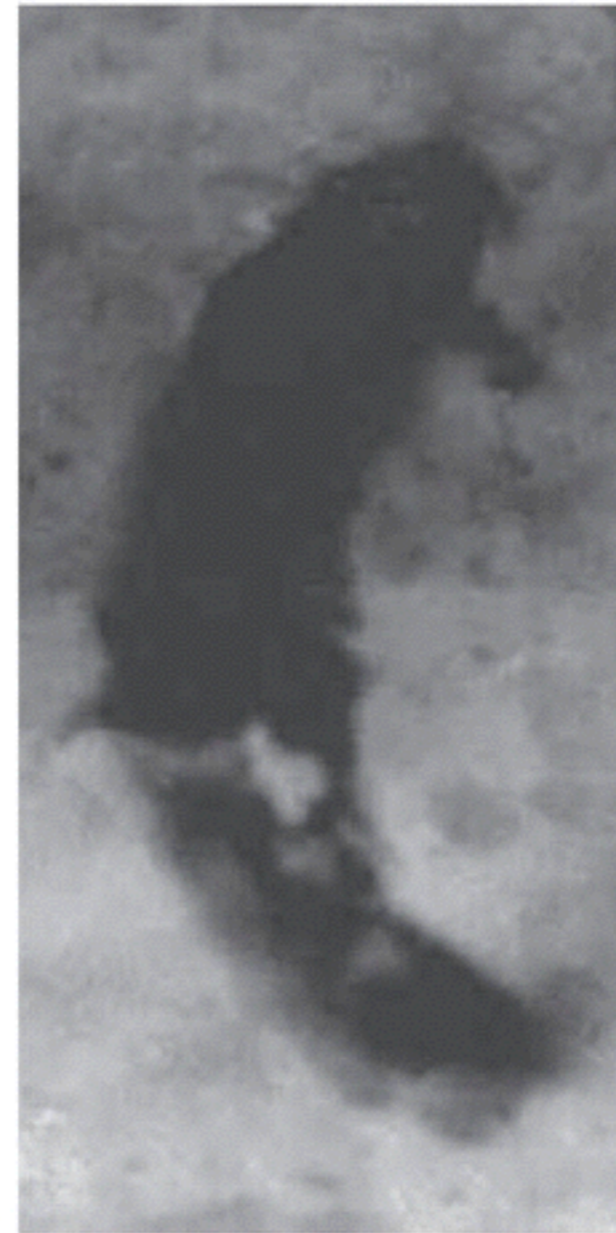
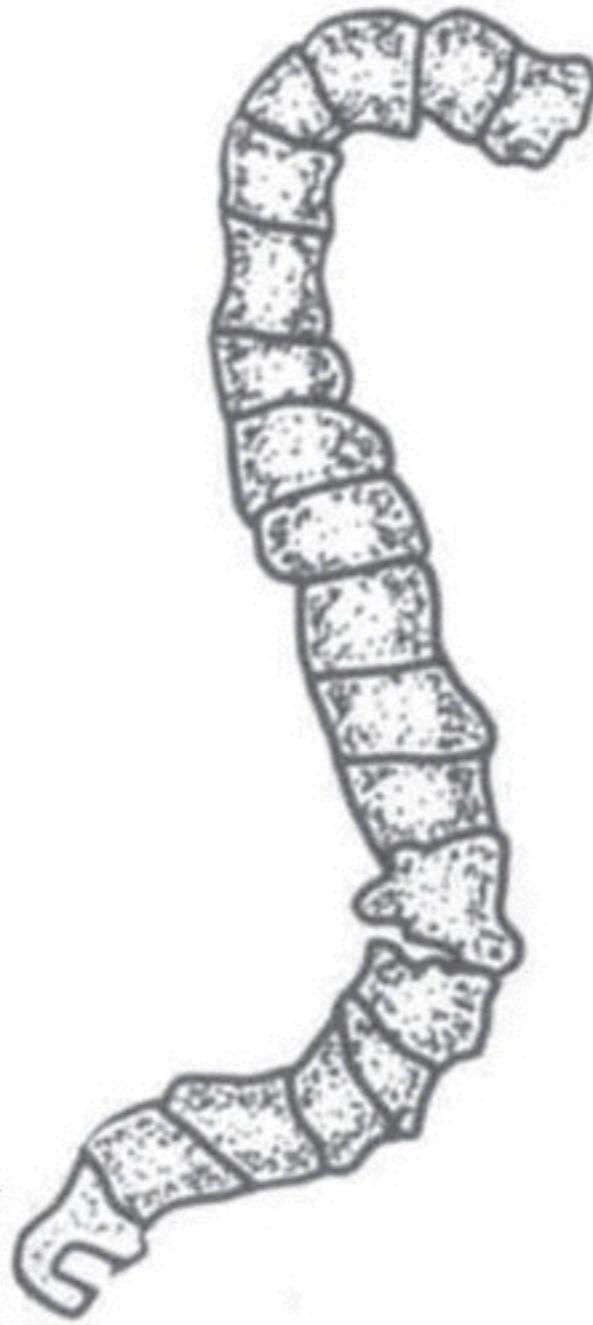


Oldest Known Fossils - 3.5 Ga Blue-green Algae



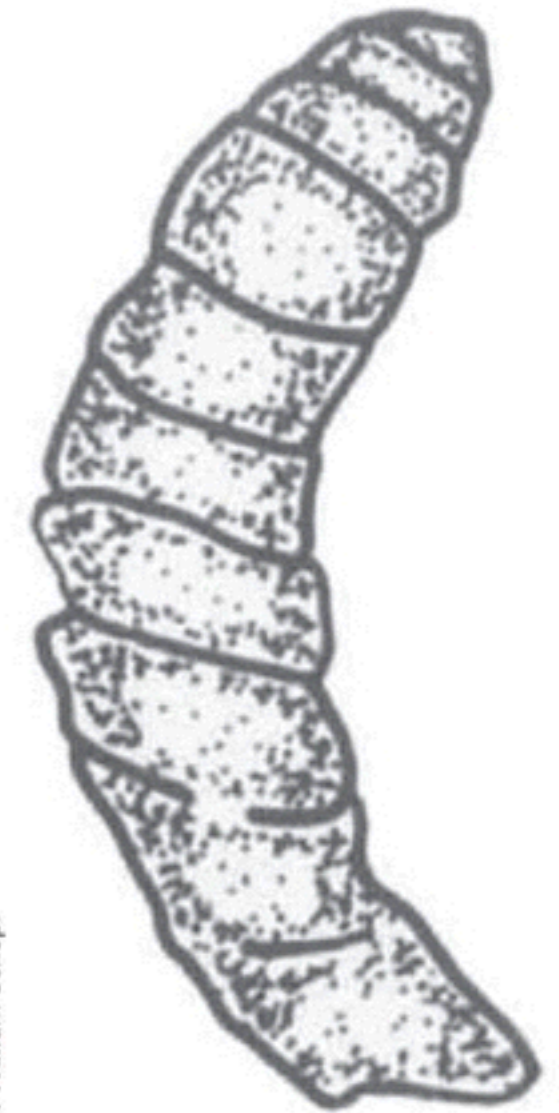
J. William Schopf

0 .01 mm



J. William Schopf

0 .01 mm



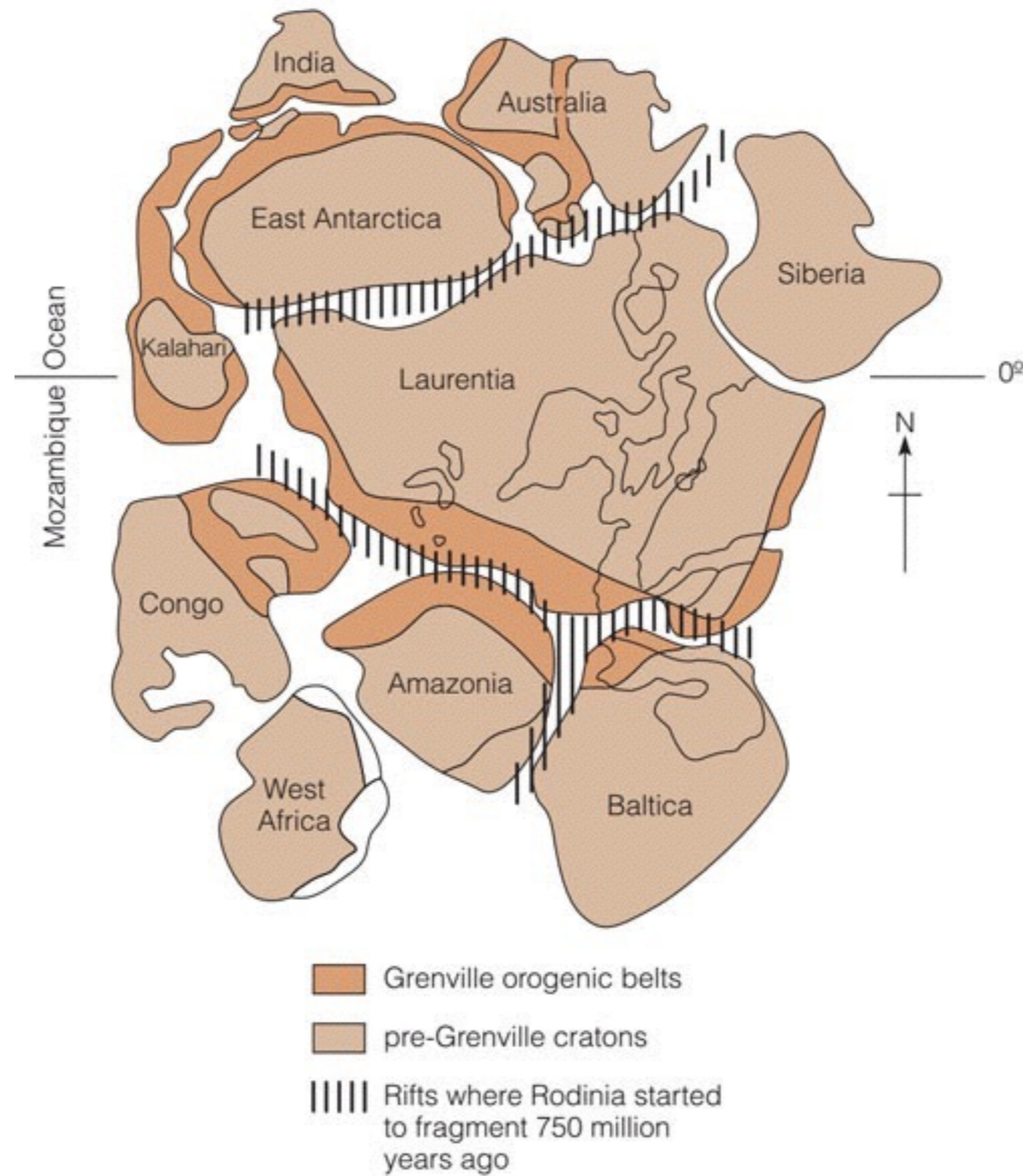
Canadian Stromatolites (3.0 Ga)



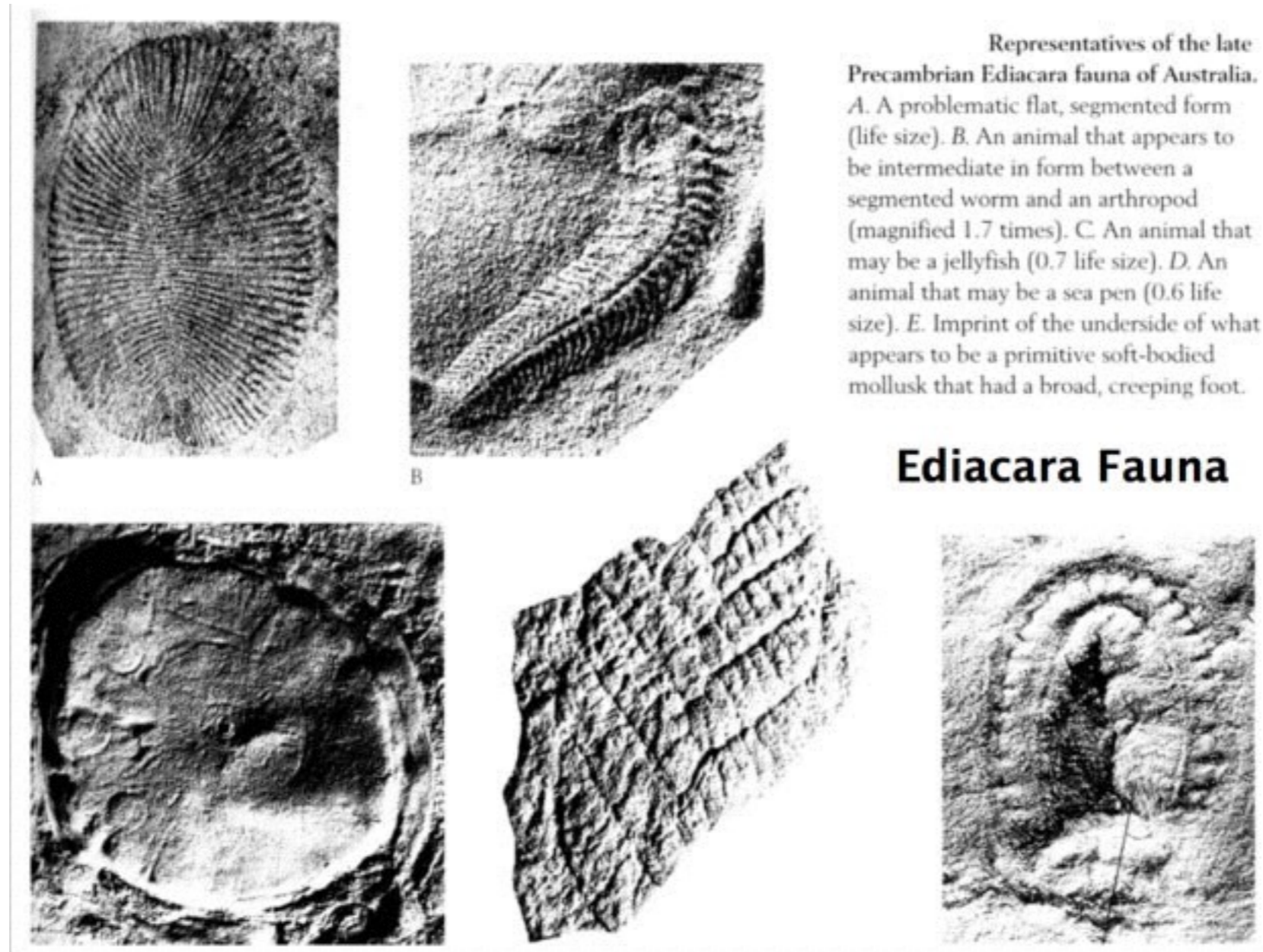
Stromatolites at Shark's Bay, Western Australia



Rodinia - Late Proterozoic Super Continent



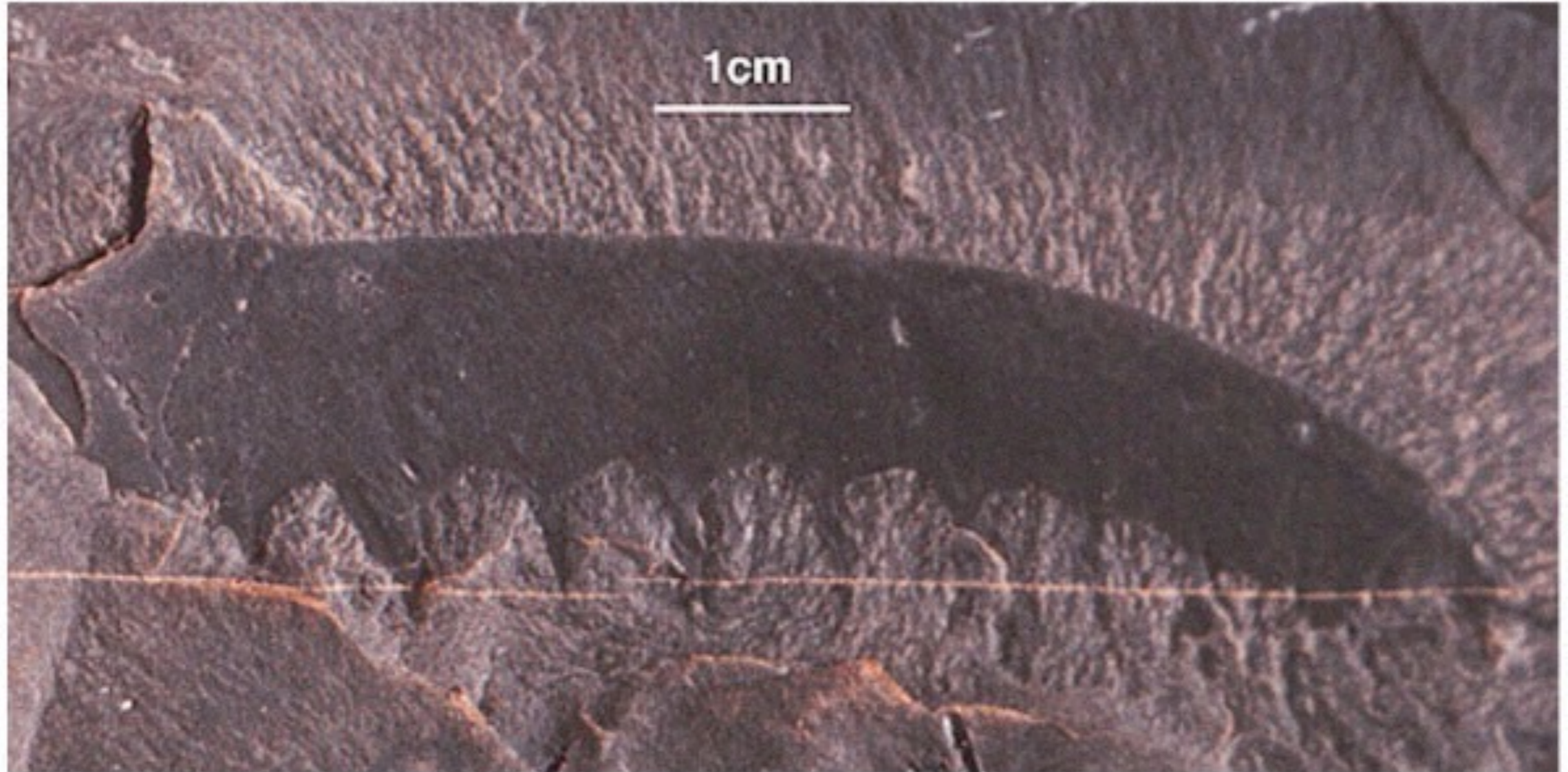
640 Ma Ediacara Fauna - Soft-bodied Metazoans



Beginning of the Phanerozoic Eon (first hard-shelled invertebrate metazoans)



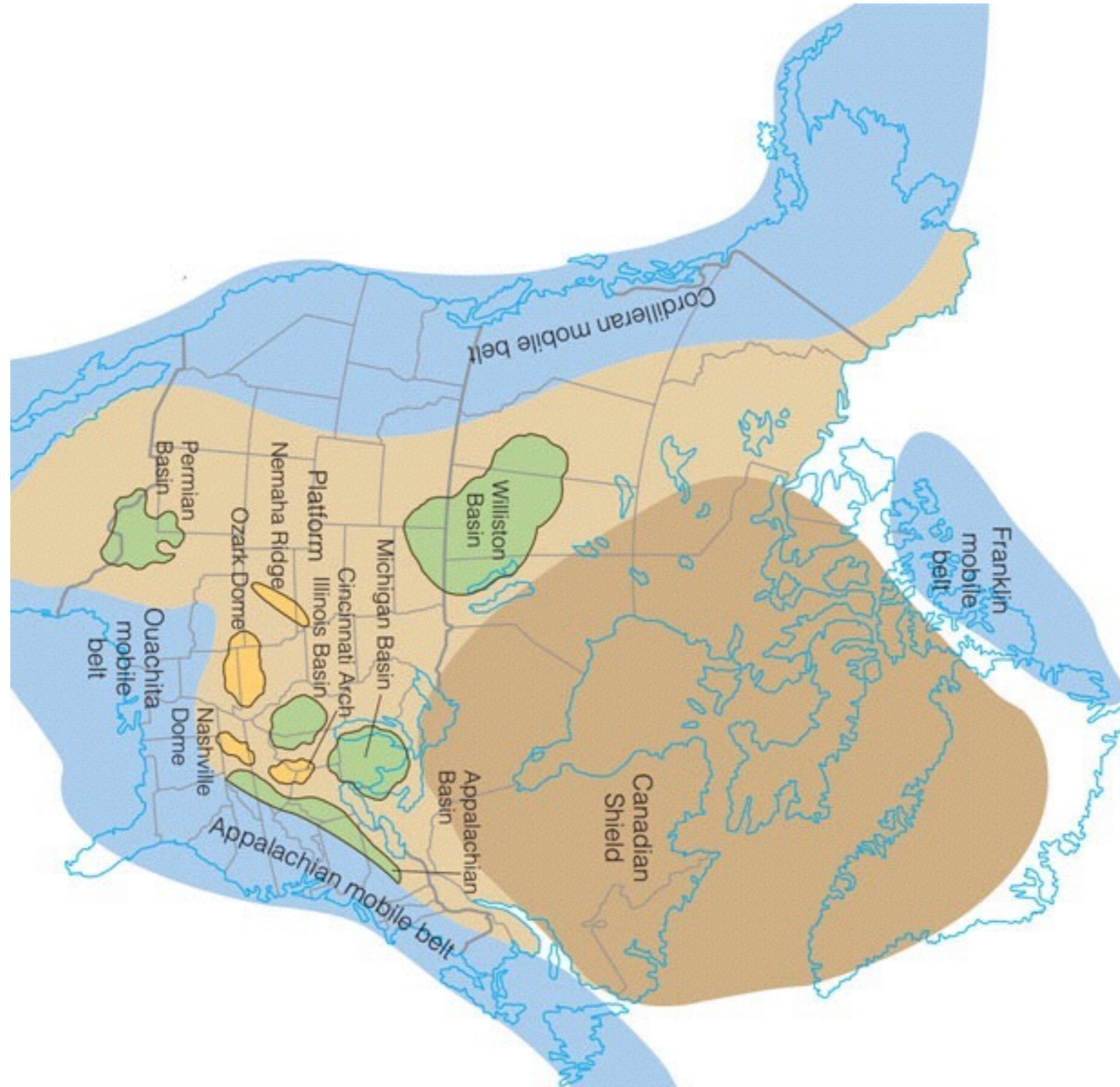
Early Phanerozoic “Anomalocaras”



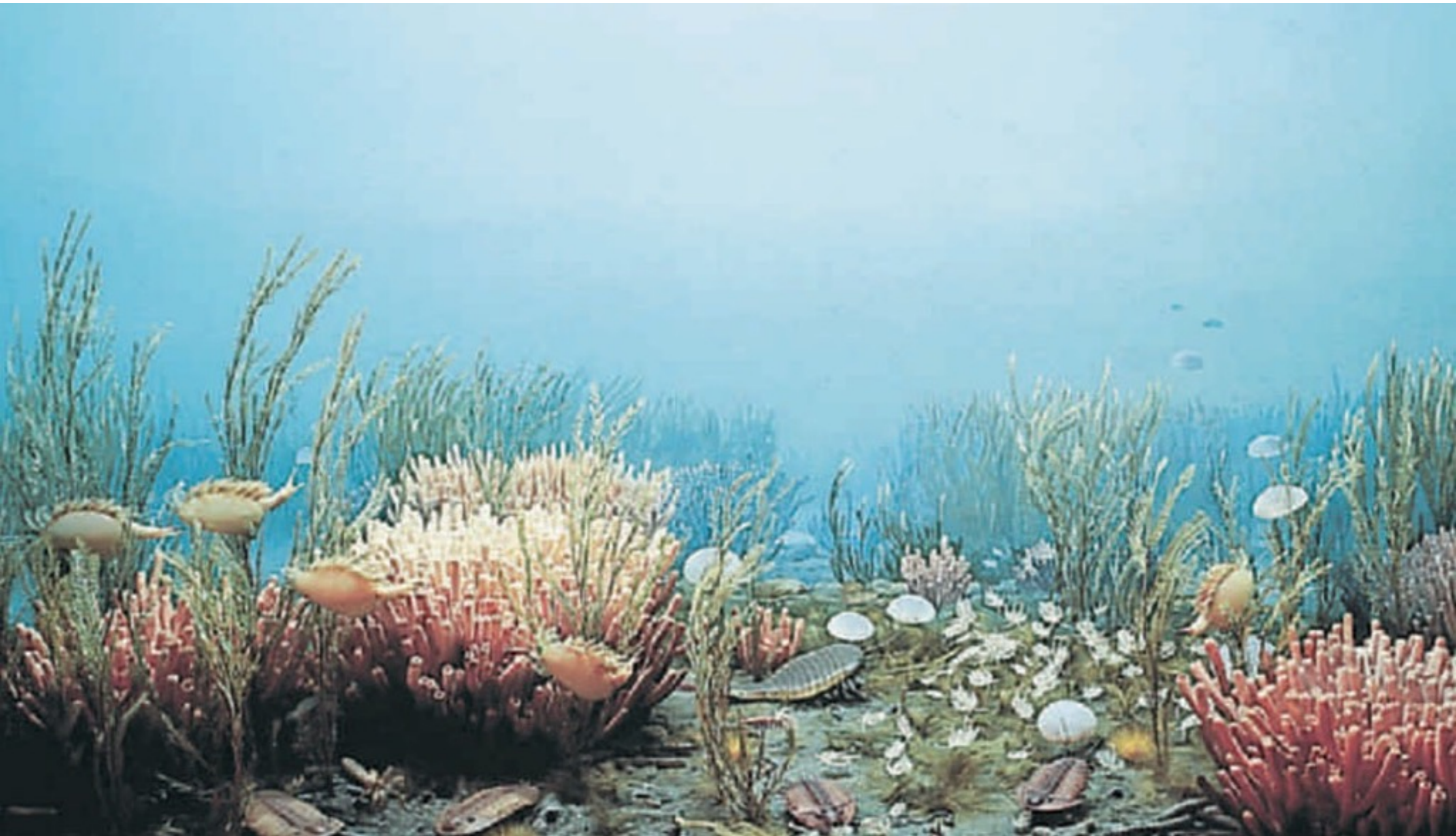
Anomalocaras - (reconstructed)



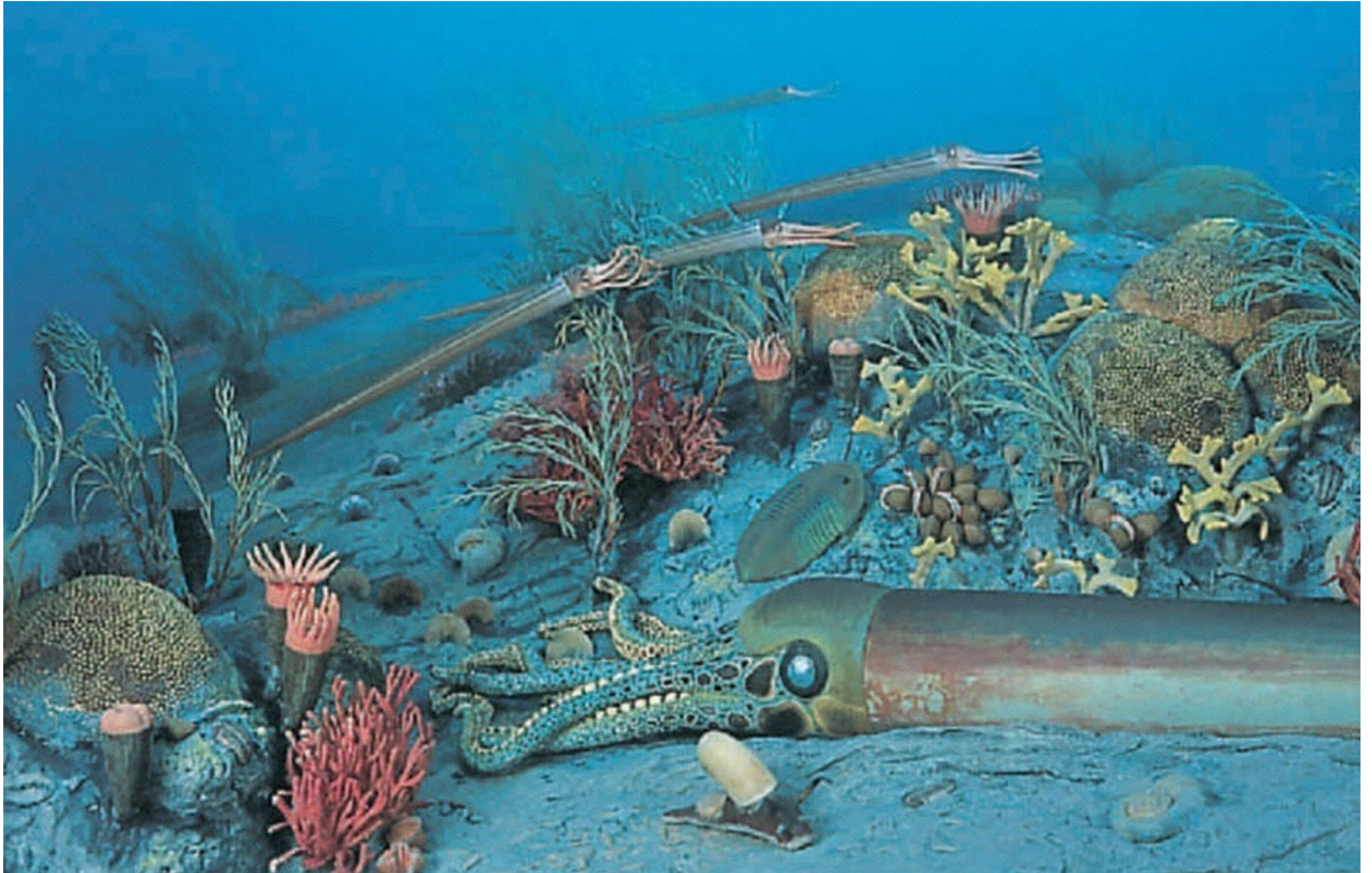
North America during the Lower Paleozoic Era



Lower Paleozoic Era - The Age of the Invertebrates



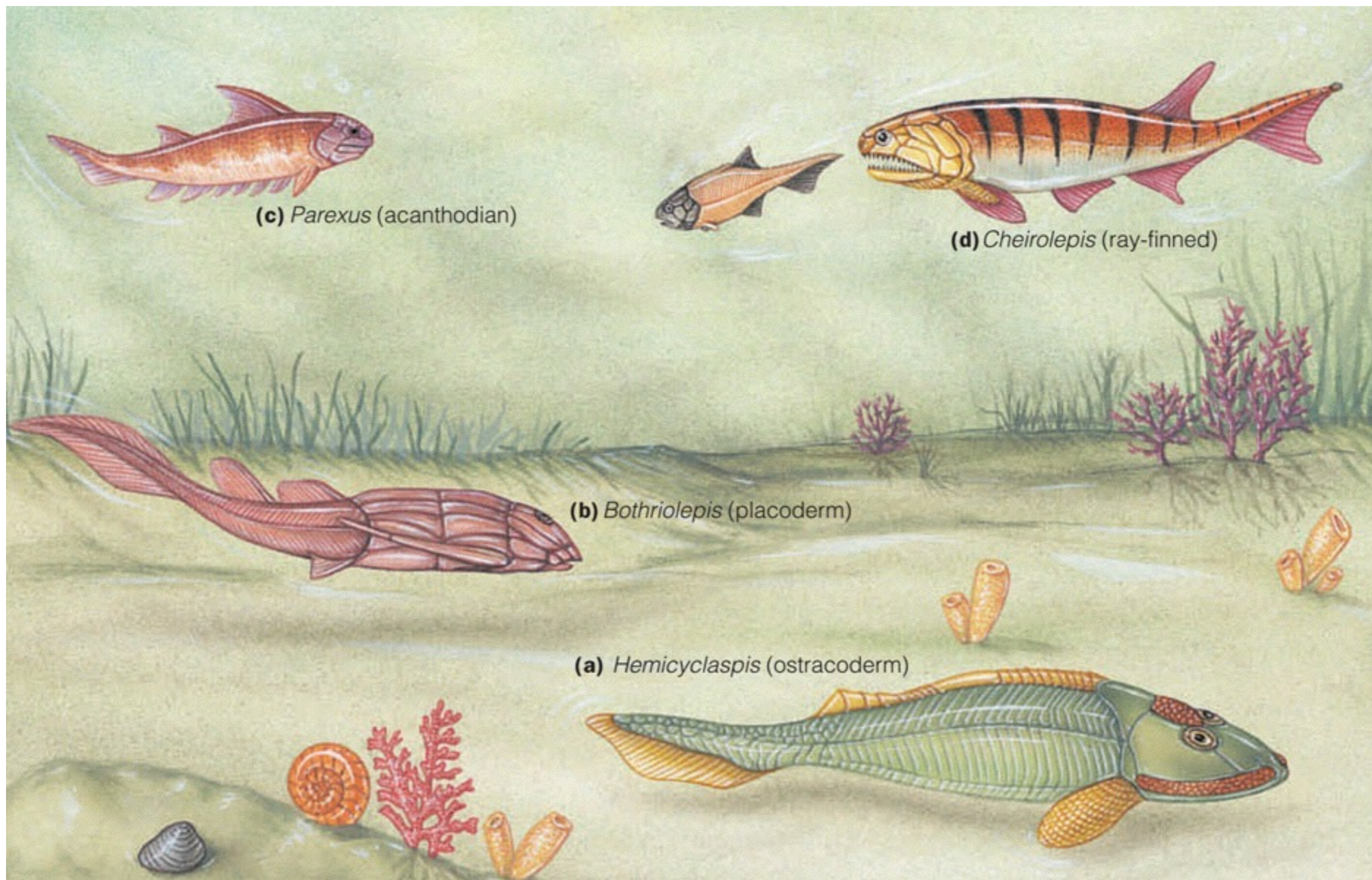
Lower Paleozoic Era Cephalopods

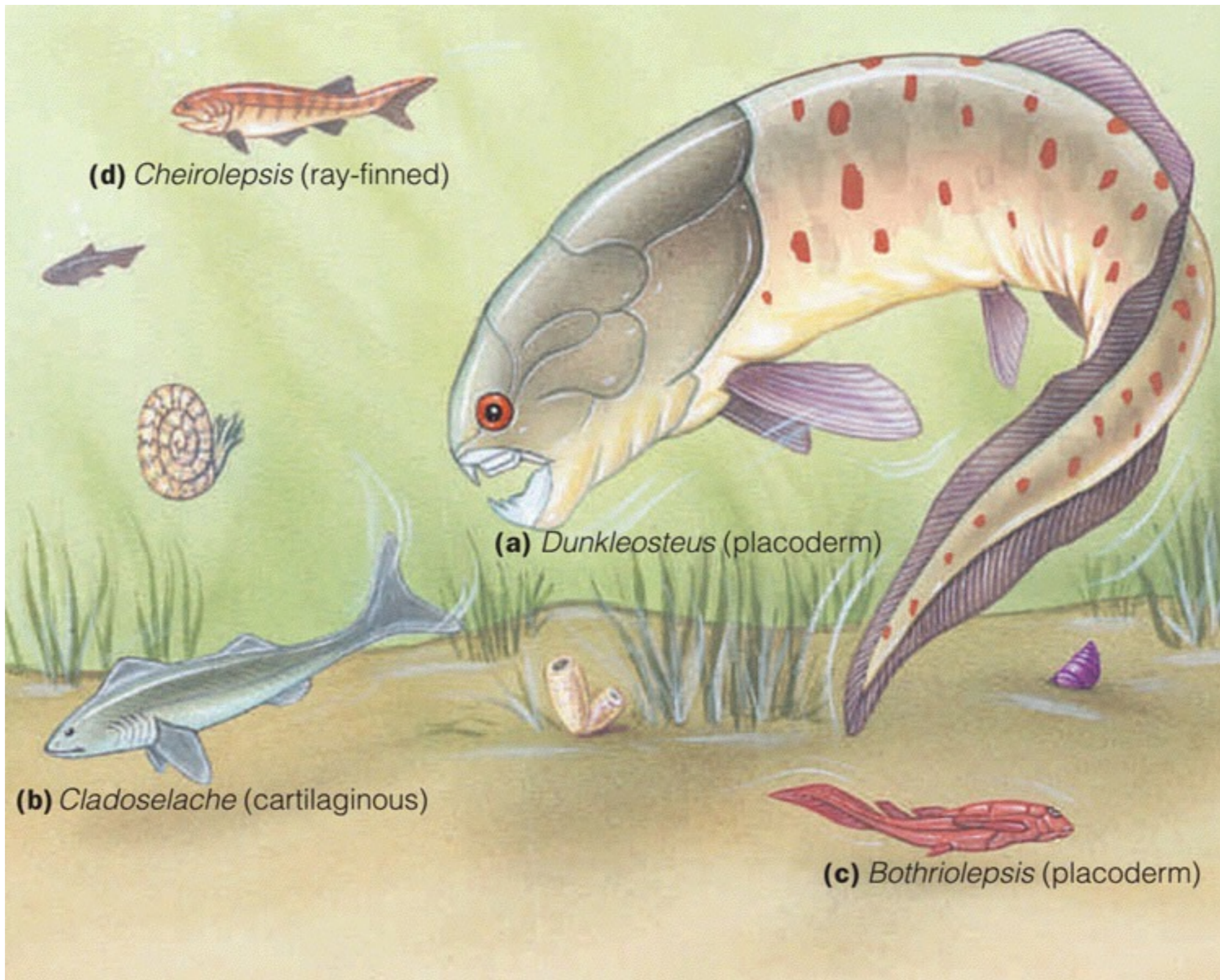


Lower Paleozoic Eurypterids - Sea Scorpions



Middle Paleozoic Era - Age of the Fish





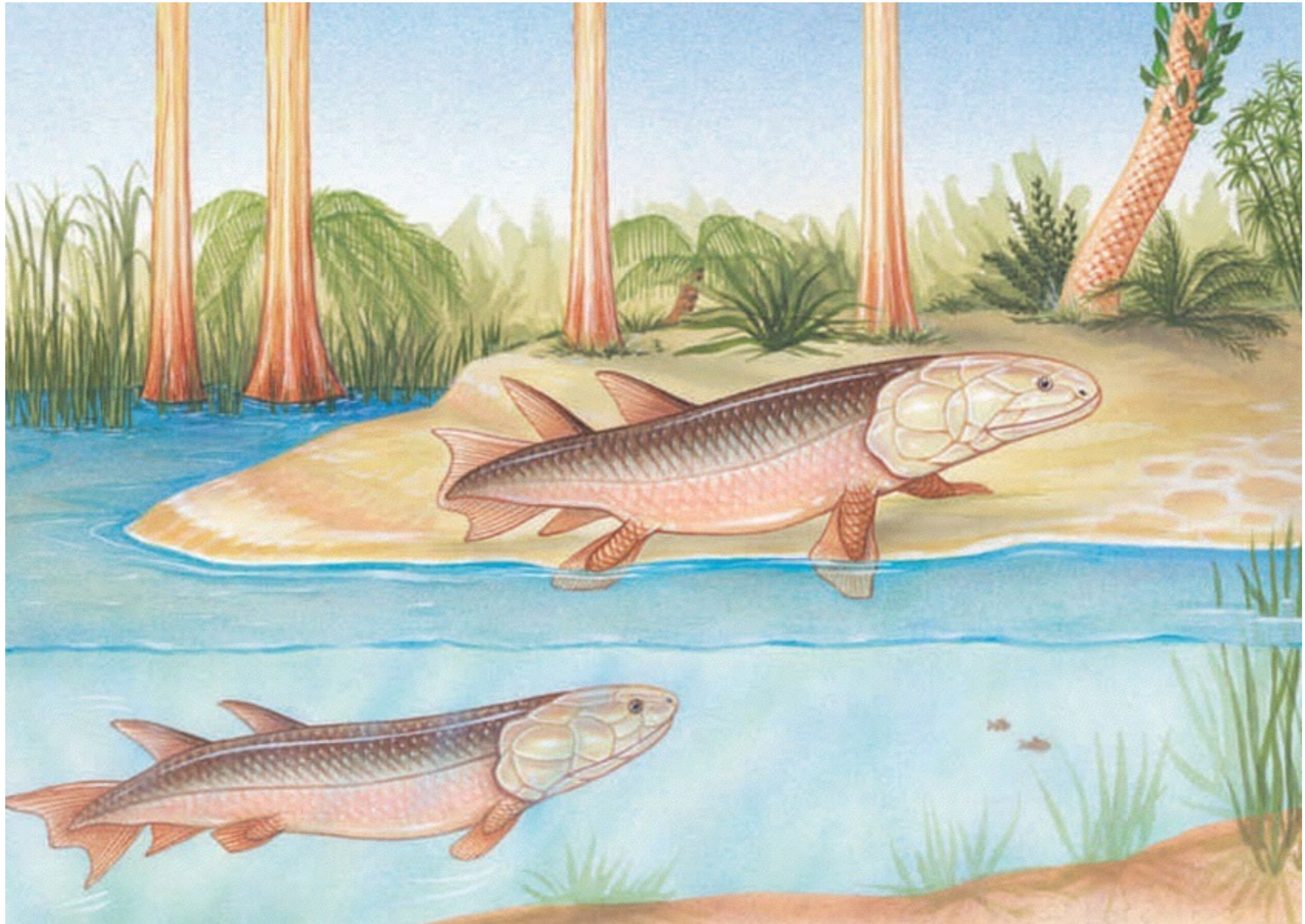
(d) *Cheirolepsis* (ray-finned)

(a) *Dunkleosteus* (placoderm)

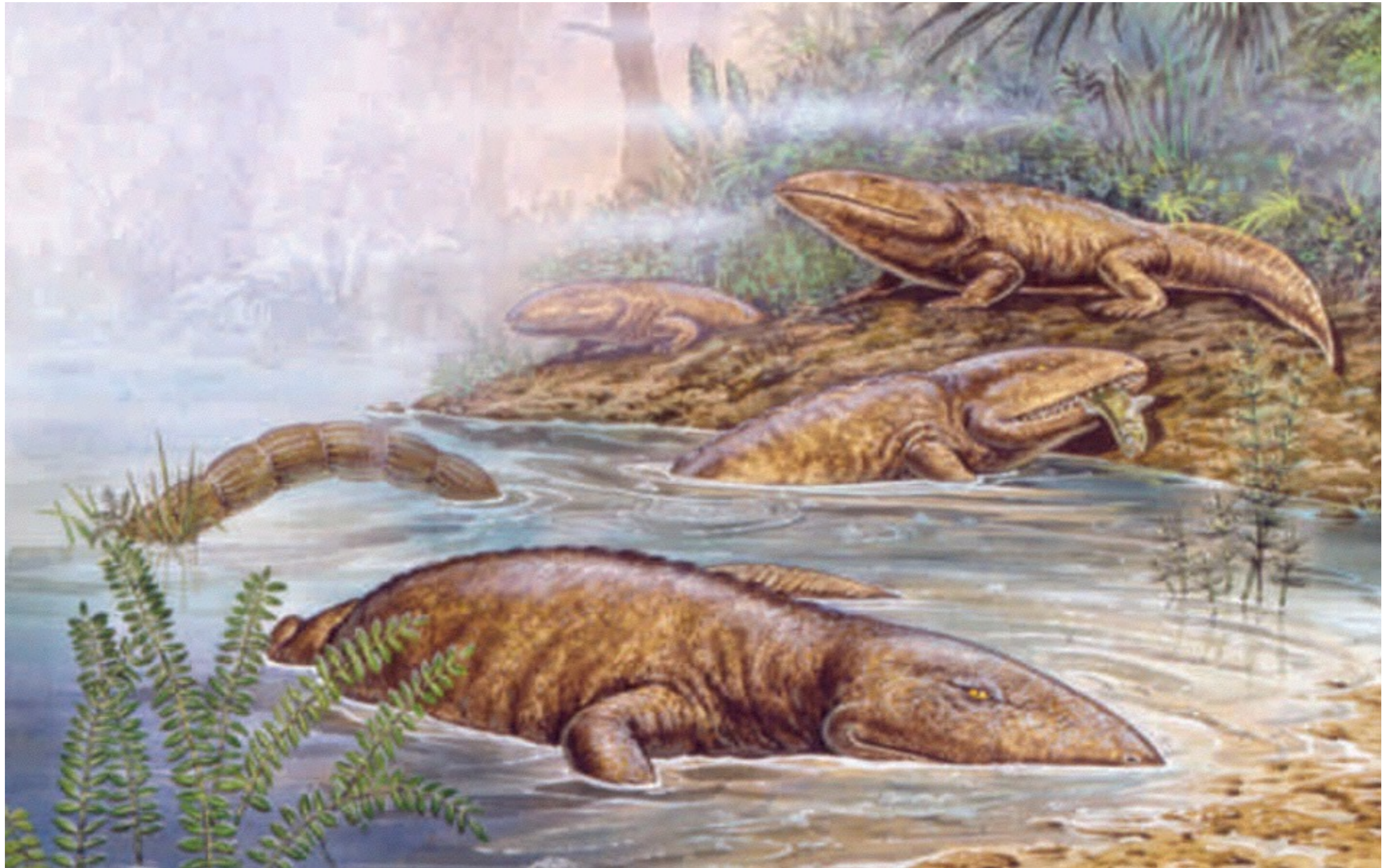
(b) *Cladoselache* (cartilaginous)

(c) *Bothriolepsis* (placoderm)

A mid-Paleozoic lobe-finned fish



Late Paleozoic - the Age of the Amphibians



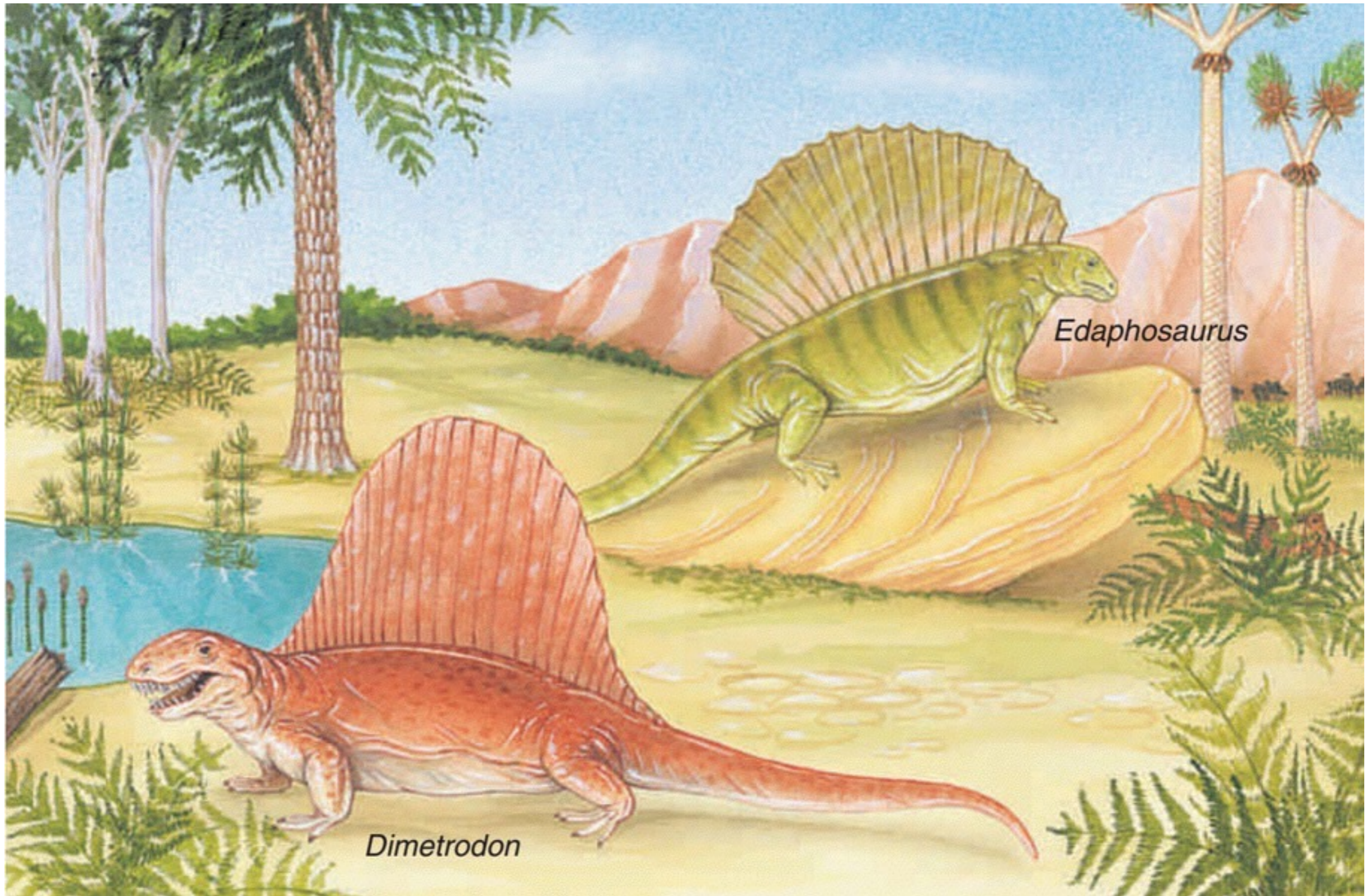
Cooksonia - one of the first land plants



Middle Paleozoic 'forest'



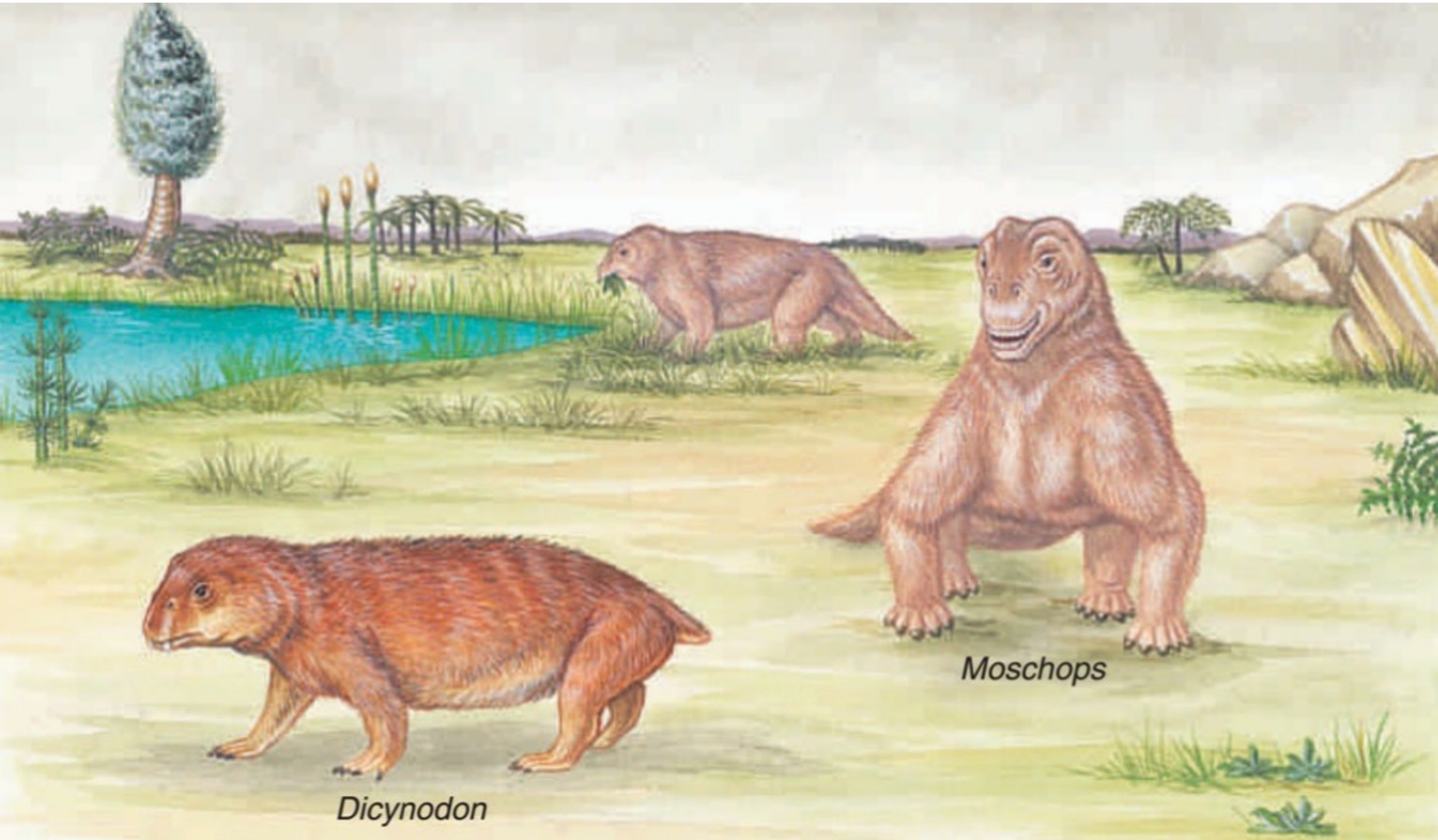
At the end of the Paleozoic - Pelycosaur (early reptiles)



Dimetrodon

Edaphosaurus

Therapsid Reptiles - ancestors to modern Mammals



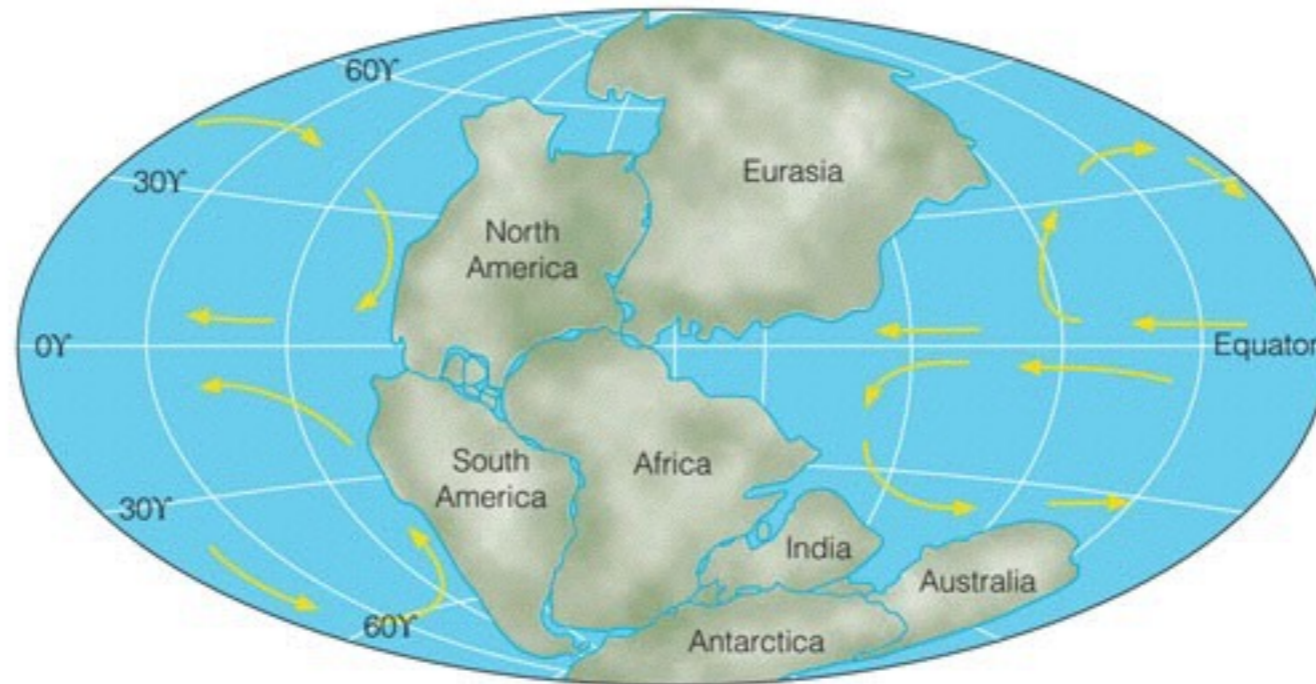
Dicynodon

Moschops

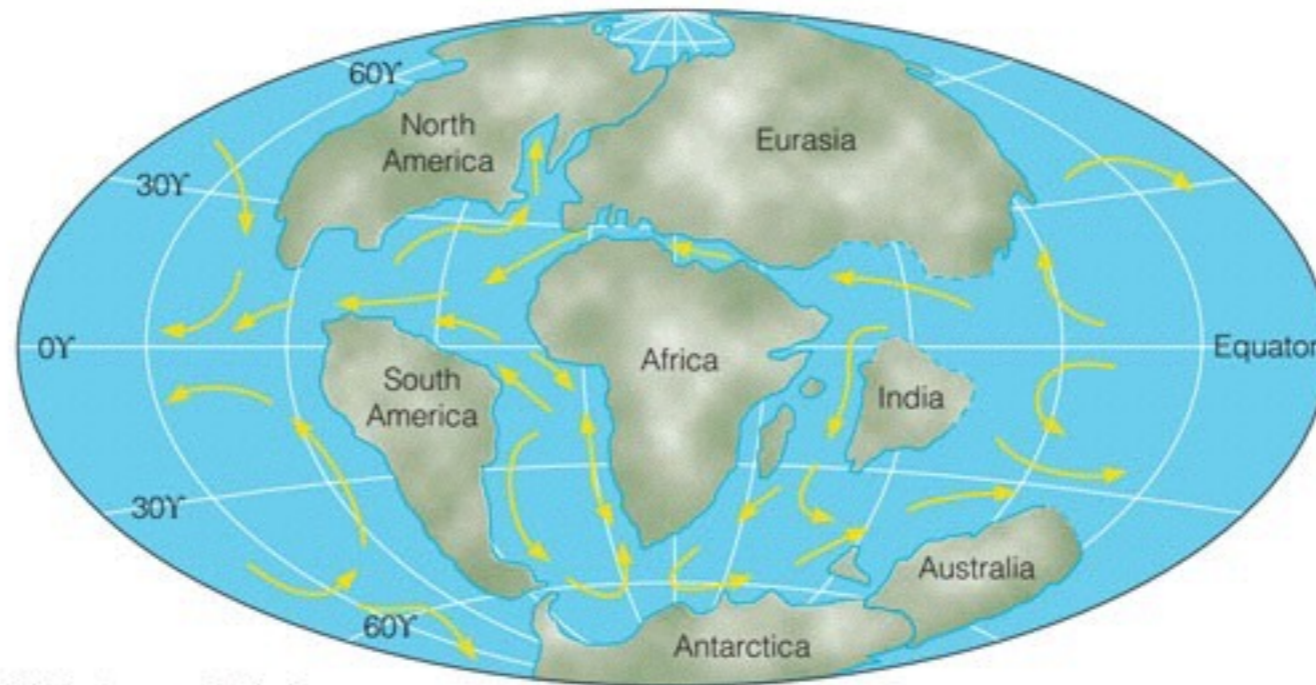
Late Paleozoic Coal Swamps



Mesozoic Era - Pangea



(a) Triassic Period.



(b) Cretaceous Period.

Mesozoic Era - the Age of the Reptiles



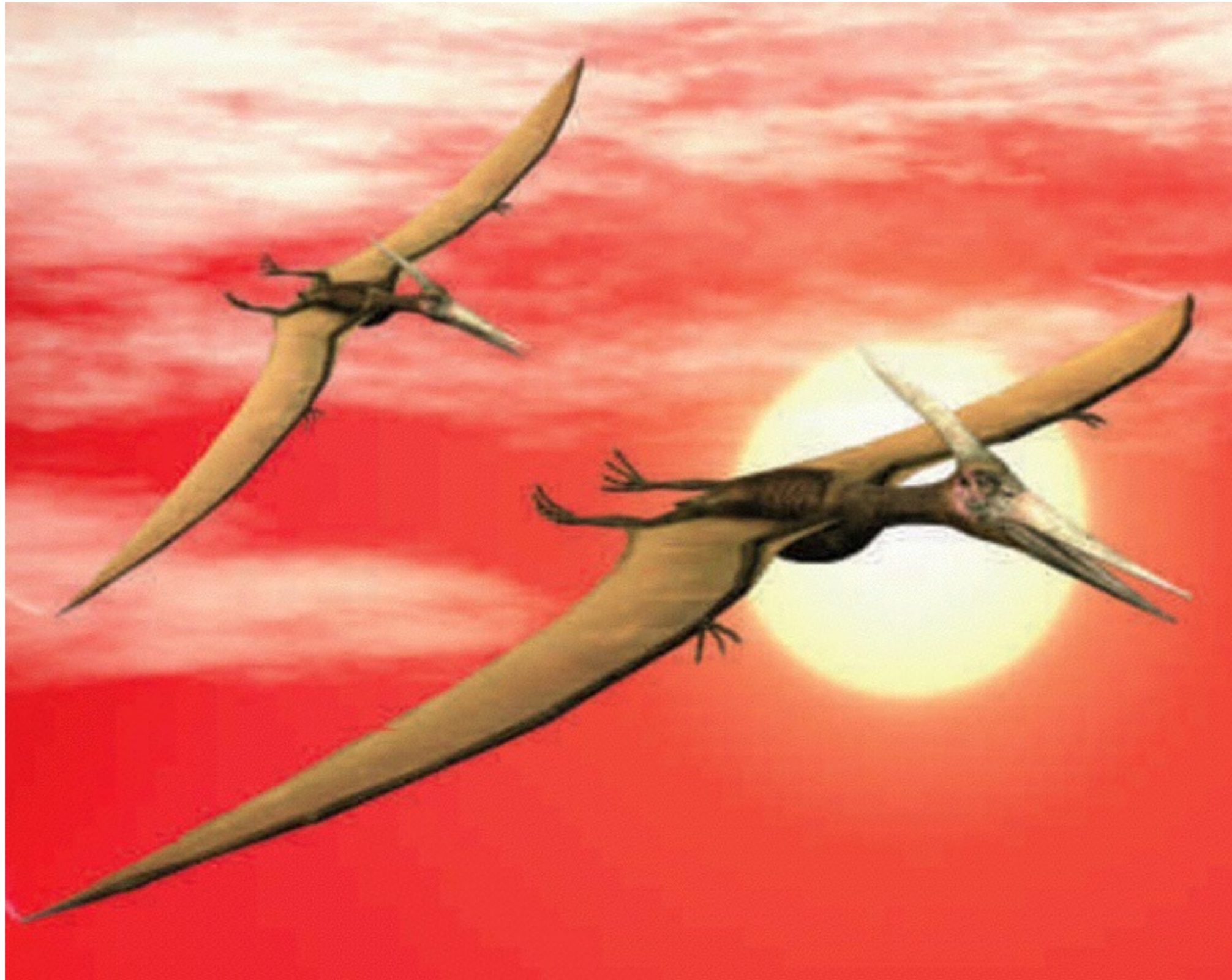
Dinosaurs ruled the land in the Mesozoic Era



Mesozoic Duck-billed Dinosaur



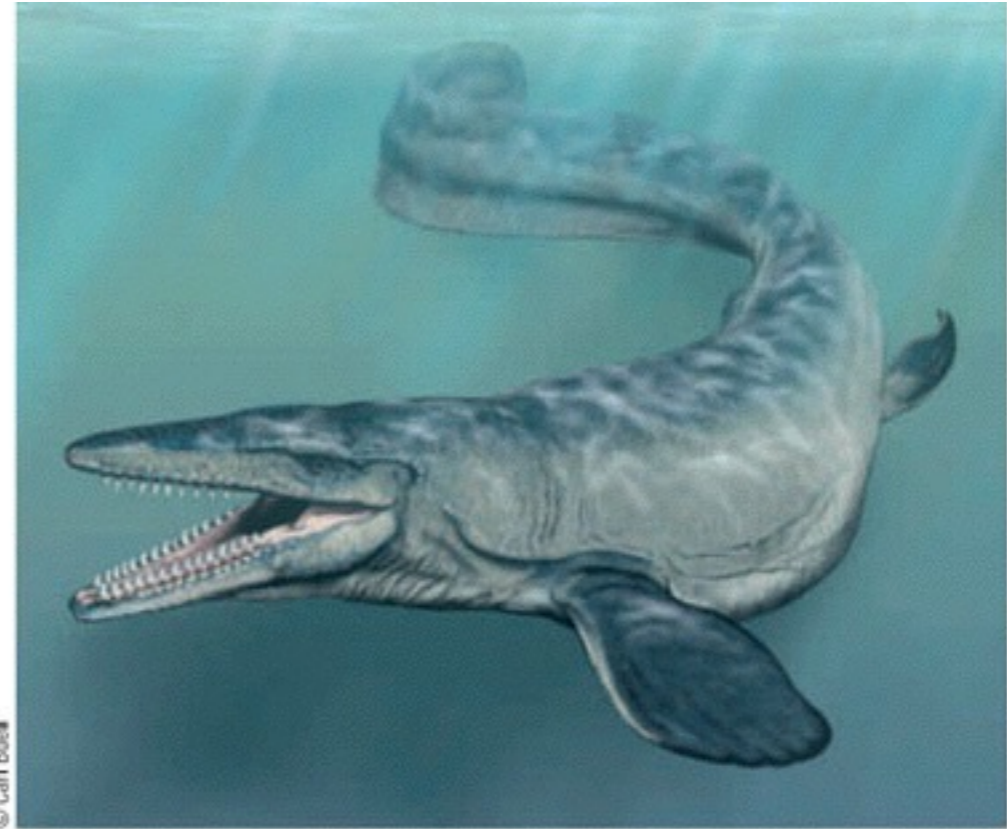
Mesozoic Pterodactyls



Mesozoic Marine Dinosaurs



(a) Ichthyosaurs.



© Carl Buell

(c) Mosasaur.



(b) A long-necked plesiosaur.

Archaeopteryx - Late Mesozoic Bird Ancestor



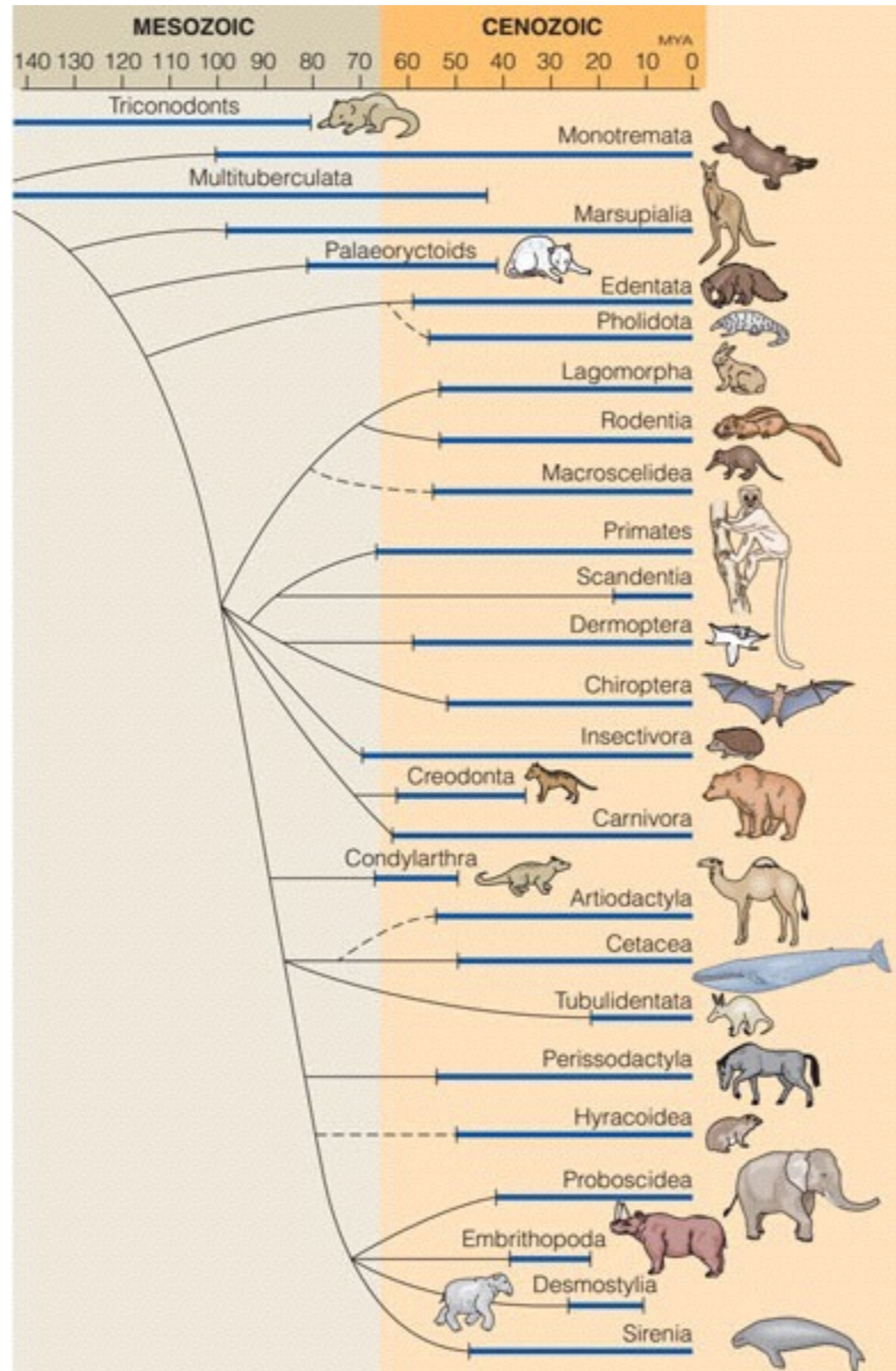
a Triconodont - Late Mesozoic Mammal



Chicxulub Impact Crater, Northern Yucatan Peninsula



Cenozoic Era - the Age of Mammals



Extinct Pleistocene Epoch Mammals



Lucy (*Australopithecus afarensis*) - early hominid



Cro-Magnon - modern hominid

