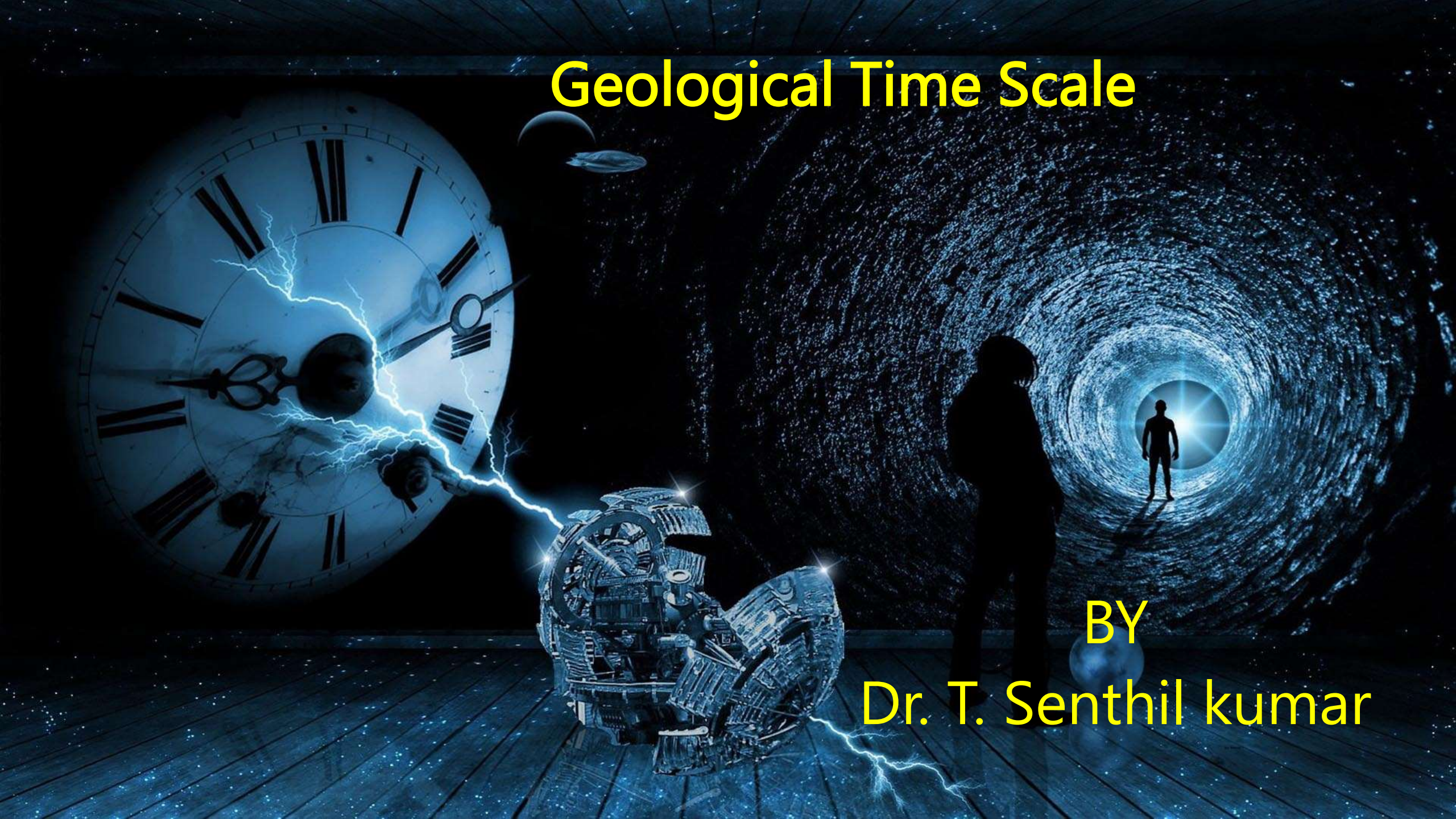


Geological Time Scale



BY
Dr. T. Senthil kumar

Geological Time Scale

A record of life and events on Earth

EONS

ERAS

>

Periods

Epochs

EON	ERA	PERIOD	EPOCH	Ma
Phanerozoic	Cenozoic	Quaternary	Holocene	0.011
			Pleistocene	0.8
		Tertiary	Late	2.4
			Early	3.6
			Pliocene	5.3
			Late	11.2
			Early	16.4
			Miocene	23.0
			Late	28.5
			Early	34.0
			Oligocene	41.3
			Late	49.0
			Early	55.8
			Eocene	61.0
			Late	65.5
			Early	65.5
	Mesozoic	Cretaceous	Late	99.6
			Early	145
		Jurassic	Late	161
			Middle	176
		Triassic	Early	200
			Late	228
	Paleozoic	Permian	Middle	245
			Early	251
			Late	260
		Pennsylvanian	Middle	271
			Early	299
			Late	306
		Mississippian	Middle	311
			Early	318
			Late	326
		Devonian	Middle	345
			Early	359
			Late	385
		Silurian	Middle	397
			Early	416
		Ordovician	Late	419
			Early	423
			Middle	428
	Cambrian		Early	444
			Late	488
			Middle	501
Precambrian	Proterozoic	Neoproterozoic (Z)		513
		Mesoproterozoic (Y)		542
		Paleoproterozoic (X)		1000
	Archean	Late		1600
		Early		2500
	Hayden	Late		3200
	Early			4000

Why Geological Time Scale ?

Because Earth is so old a geologic time scale is used to show Earth's history

➤ Earth forms about 4.6 billion years ago.

➤ Hot gases spew from volcanoes.

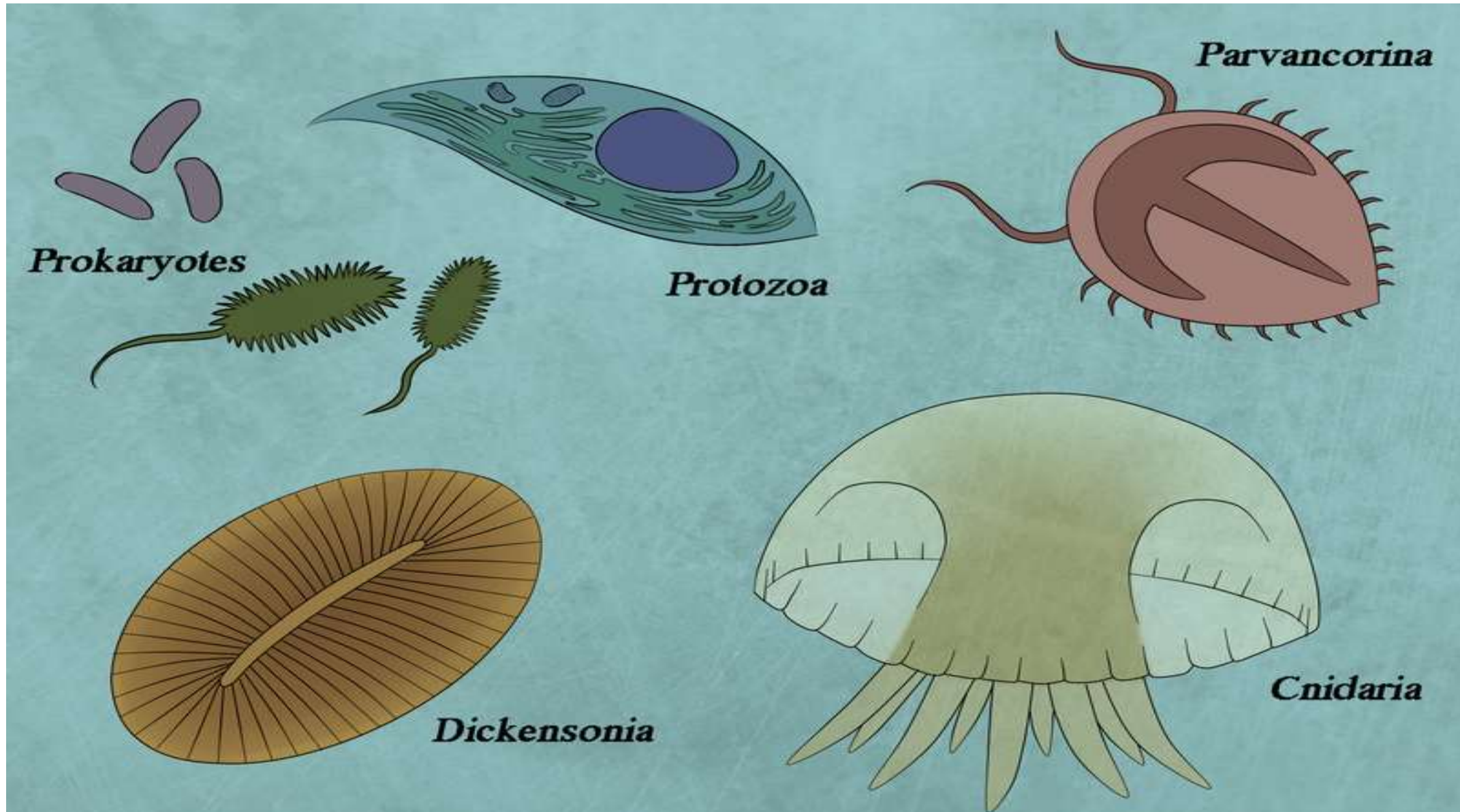
➤ Asteroids and meteors bombard the surface.

➤ Shallow seas form and bacteria like critters appear.

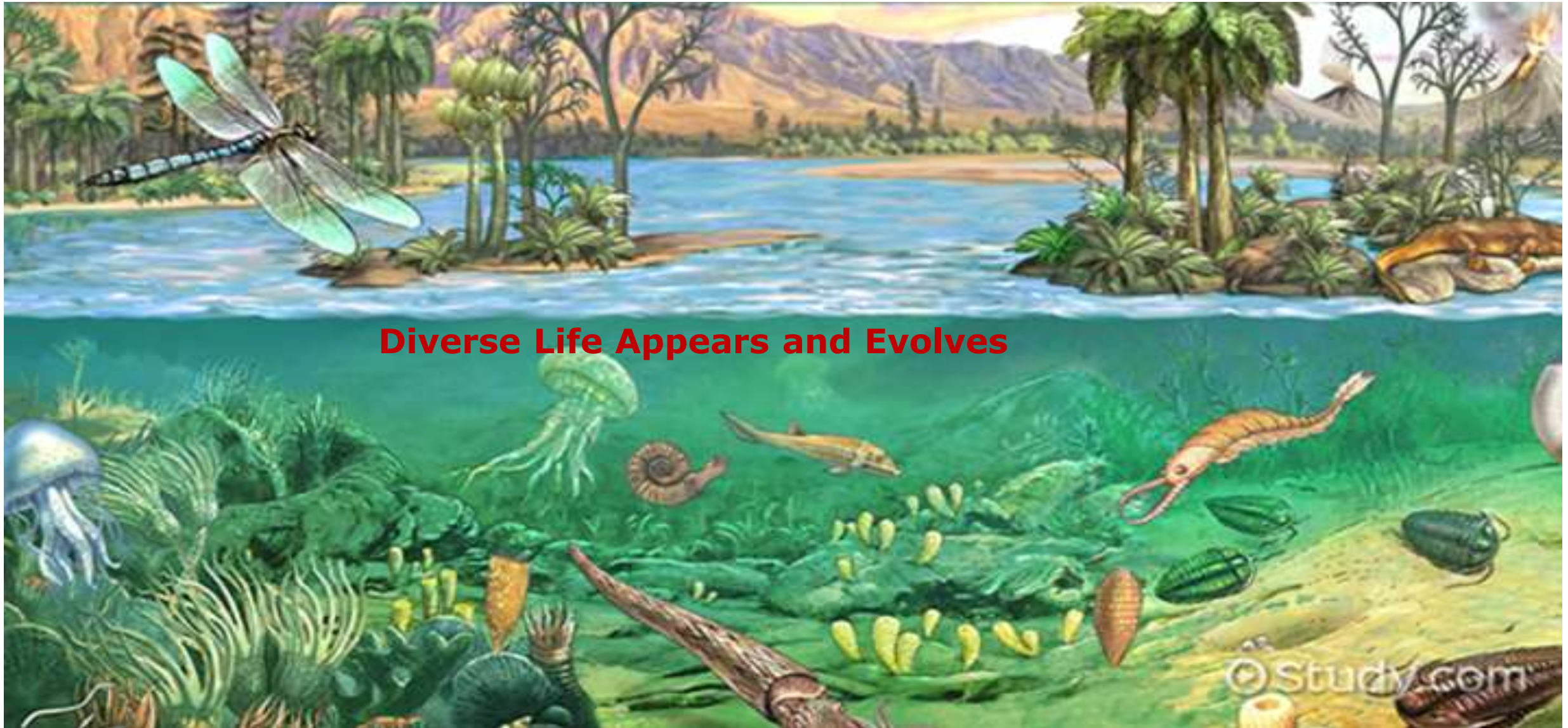
Precambrian Era



Appearance of Bacteria



PALEOZOIC ERA 544-245 mya



Cambrian Period : 500 – 570 ma



- Age of Trilobates.
- All Phyla existing today develop.
- First Shells appears on Mollusks.
- Cambrian explosion of Life occurs

Ordovician Period : 430 – 500 Ma



- Jawless fish appear.
- First Corals.
- Fungi and sea weed.
- First Non-Vascular land plants



Silurian Period : 405 – 430 Ma

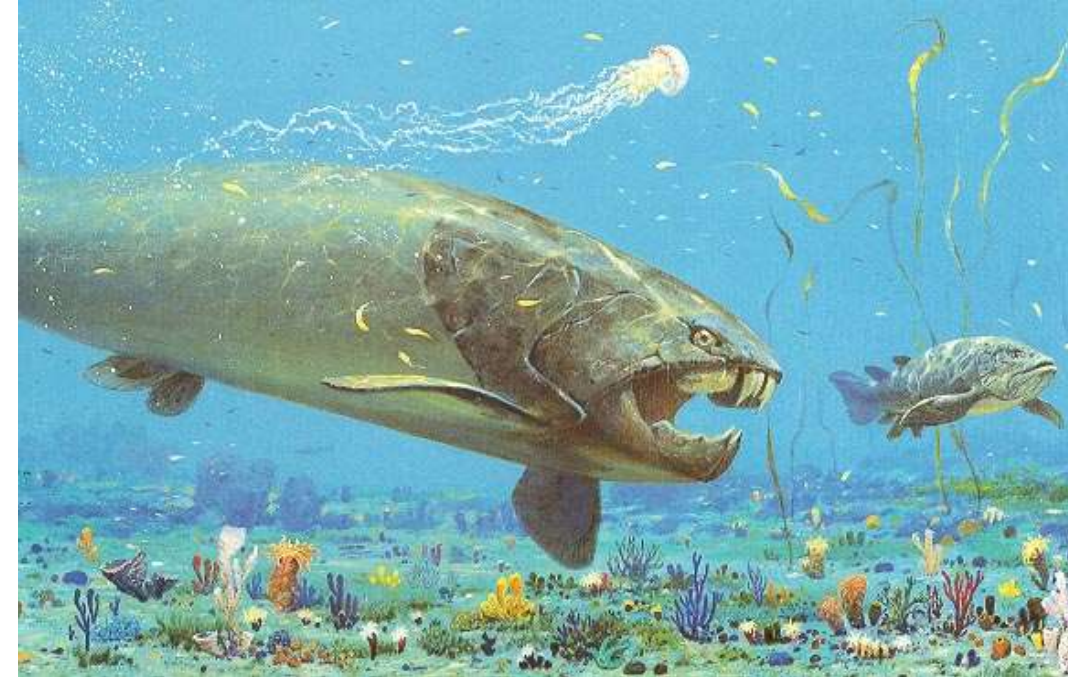
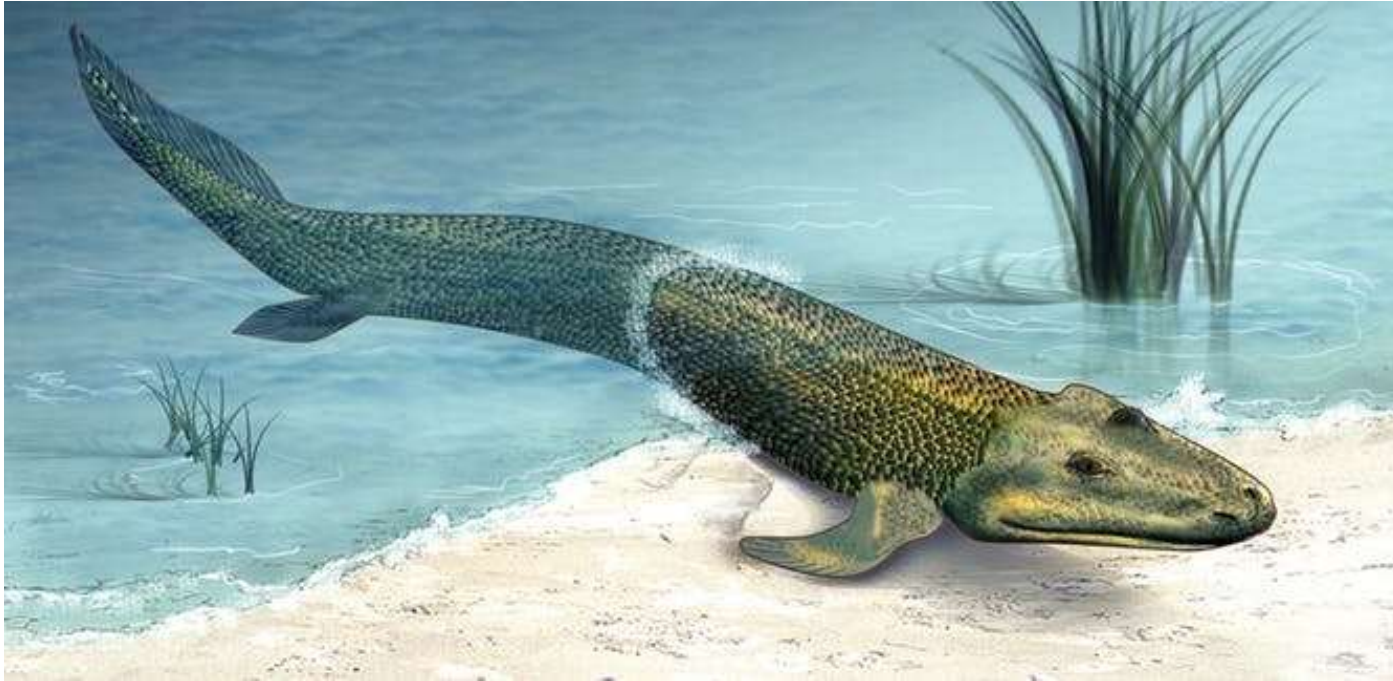
Life reaches land during the Silurian period. Plants become abundant



- First Insects.
- Jawed Fish.
- Vascular plants.
- First Vascular land plants

Devonion Period : 365 – 405 Ma

Animals *invade* the Land and Amphibians evolve



- Age of Fishes.
- First Shark.
- Earliest Amphibians.
- Ferns and Mosses



Carboniferous Period : 290 - 365

Carboniferous forests expand over the Earth. Reptiles evolve. Later these forest form coal deposits.



- Large Primitive Trees.
- First Winged Insects.
- Earliest Amphibians.
- First Reptiles



Permian Period : 250 – 290 Ma

The Permian Mass Extinction : The End of Palaeozoic Era

Trilobites go Extinct



Pangaea – The Super Continent

CONTINENTAL DRIFT

➤ During the **Permian**, Continents form a great Super continents.

Pangaea



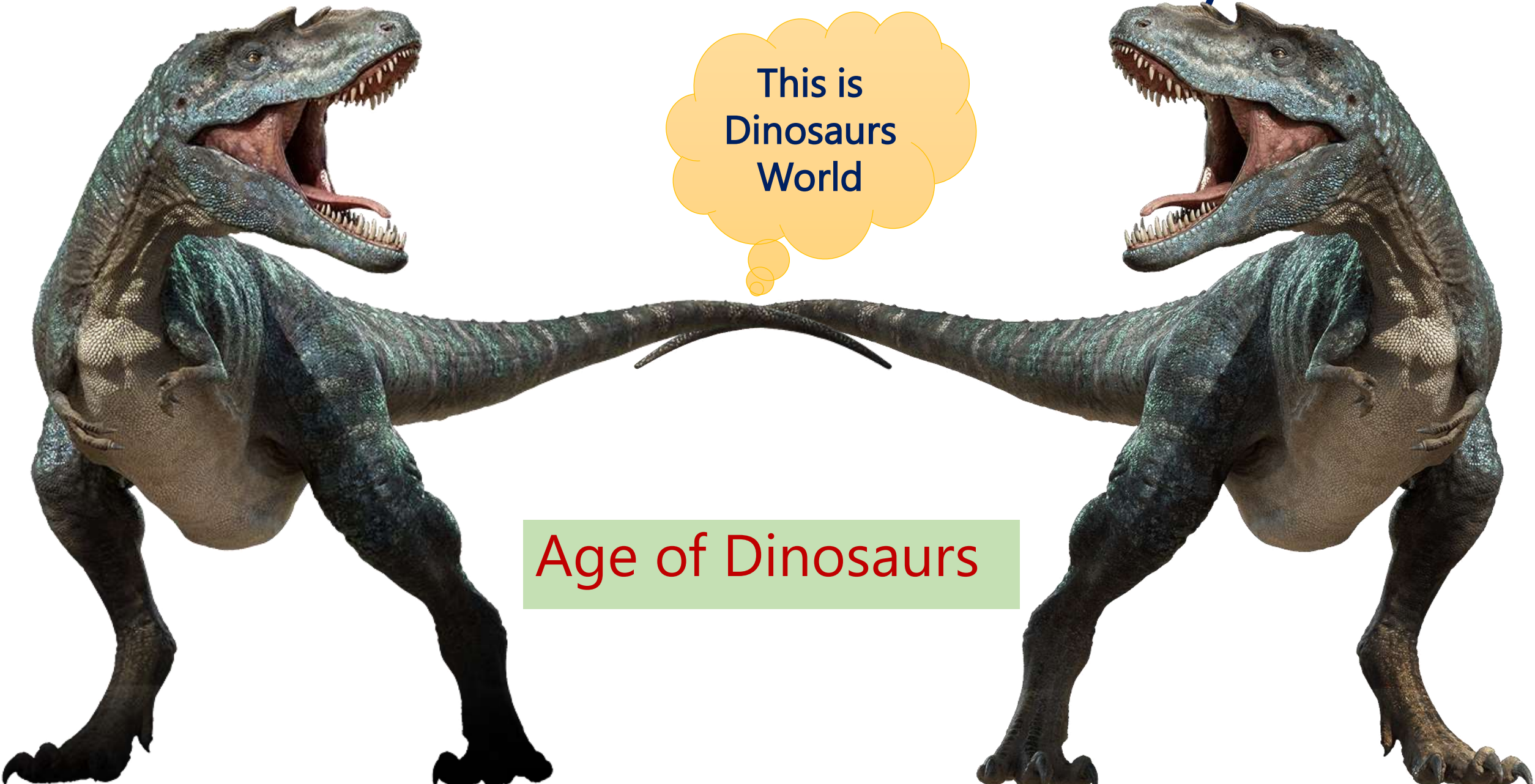
Laurasia and Gondwana



Modern world



The Mesozoic Era : 245 – 66 Mya

Two Tyrannosaurus Rex dinosaurs are shown in a confrontational pose, facing each other with their mouths wide open, revealing sharp teeth and red tongues. They have dark green, scaly skin with lighter patches on their chests and bellies. A yellow thought bubble with a small tail pointing to the space between them contains the text "This is Dinosaurs World".

This is
Dinosaurs
World

Age of Dinosaurs

Triassic Period : 208 – 250 Mya

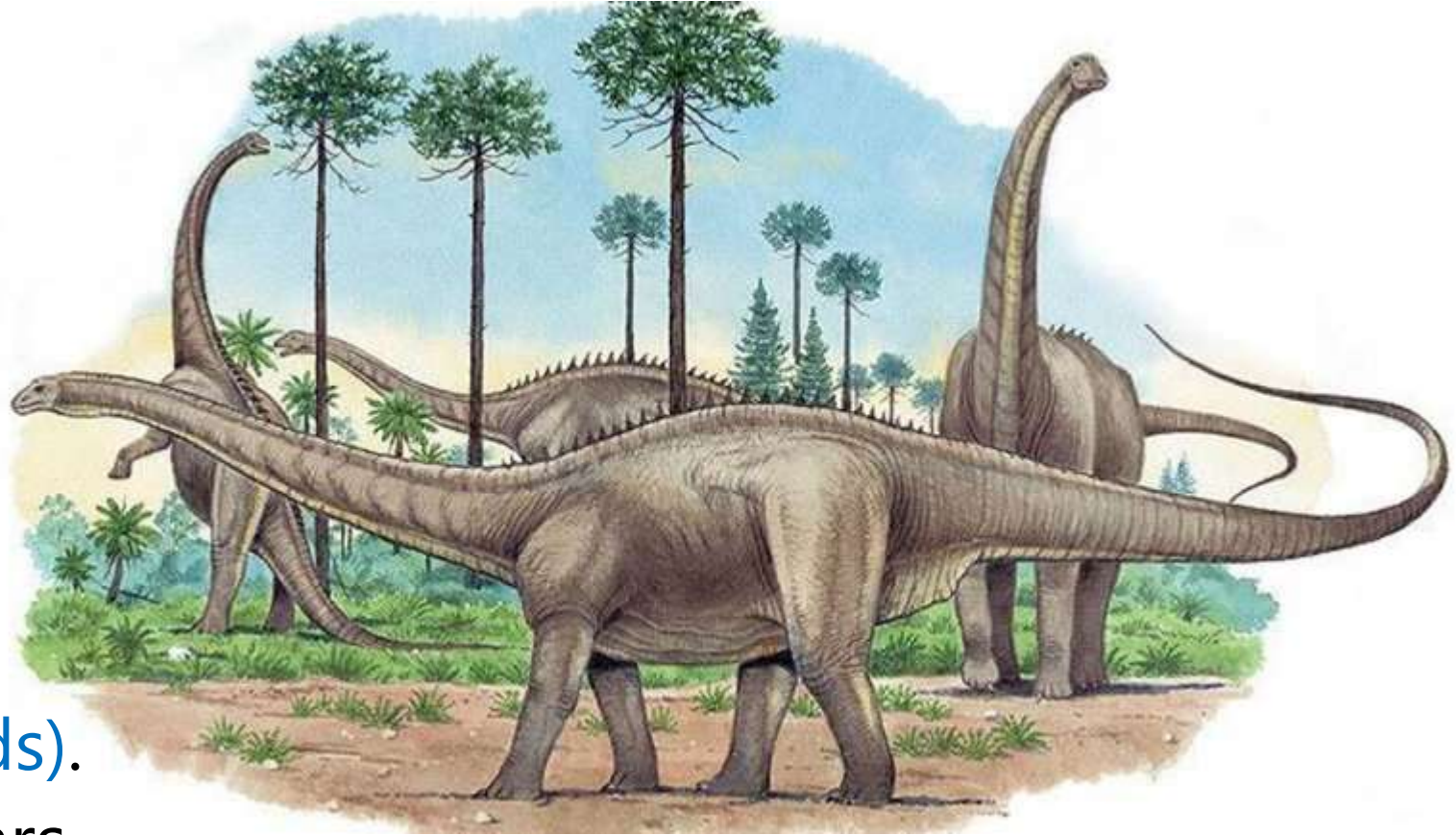
Plants and animals that survive the 1st mass extinction include insects fish, reptiles, mammals, cone bearing trees



- Age of Dinosaurs begins.
- **First Mammals.**
- Molluscs are Dominant invertebrate.
- First Reptiles

Jurassic Period : 140 – 208 Mya

Dinosaurs become the dominant animals



- Earliest Bird appear.
- Giant Dinosaurs (Sauropods).
- Ferns, Cycas, Ginkos appears.

Cretaceous period : 67 – 140 mya

Flying reptiles and birds compete for places in the sky.



- Heyday of Dinosaurs
- Until their extinction.
- First Flowering plants.

Mass Extinction # 2



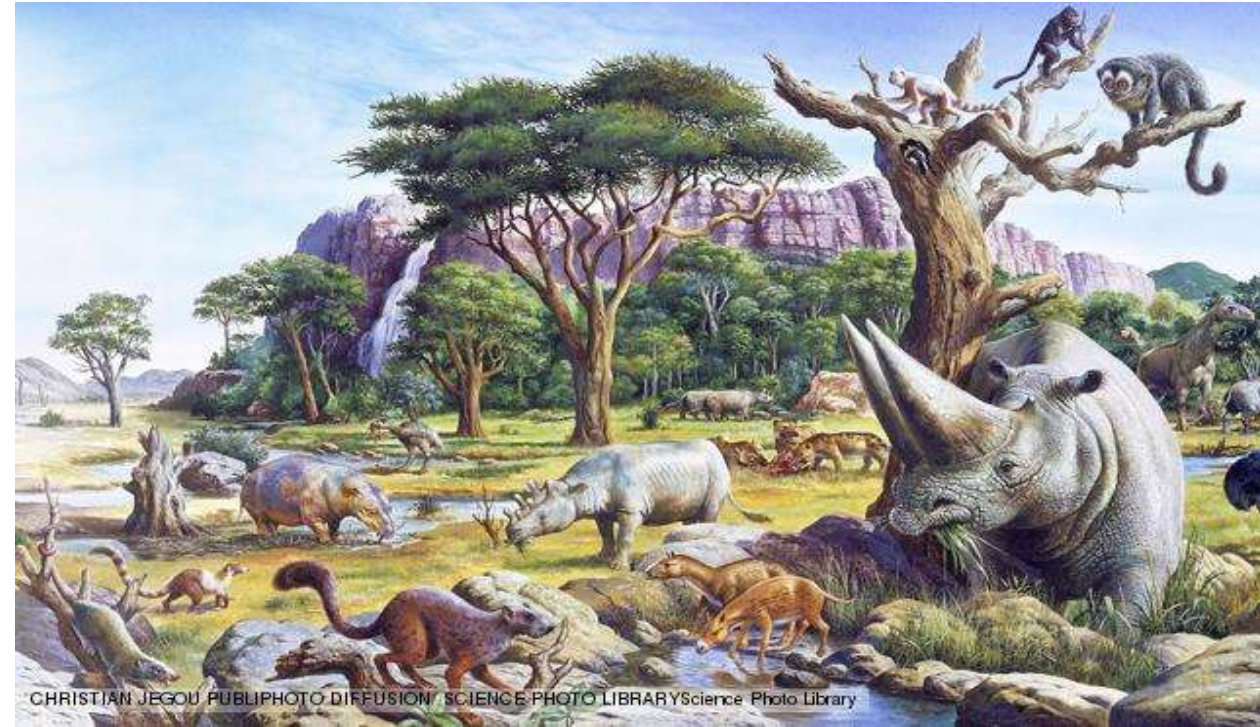
- **End of the 65 million year dinosaur age**



The Cenozoic Era : 2 – 67

Mya

Age of the mammals



Tertiary Period : 2 – 67 Mya

Warm climates, evolving marine mammals, flowering plants

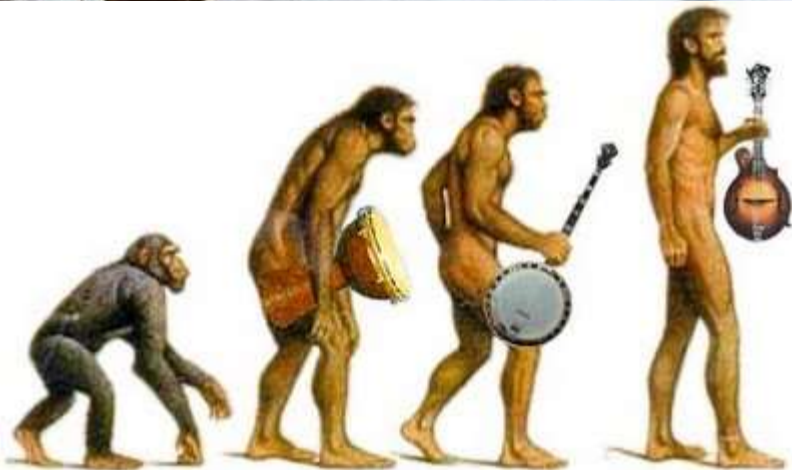


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- First large mammals appear
- Abundant mammals.
- First Hominids.
- Grasses and modern birds

Quaternary Period : 0 – 2 Mya

Changing environment, large mammals, ice ages, Homo sapiens and Modern Humans evolve



WHAT NEXT.....????????????



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