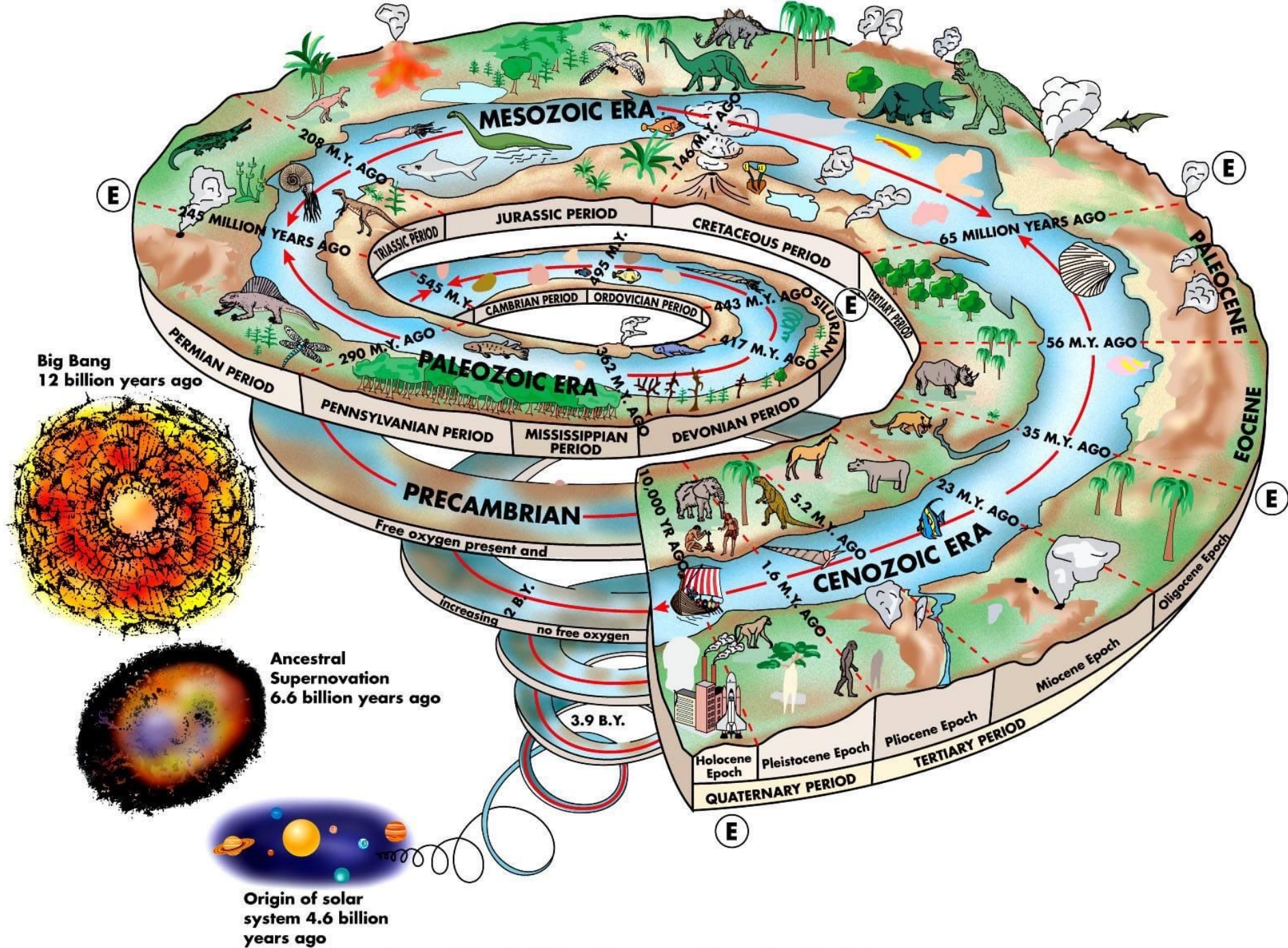


Tales of the Earth & Moon



Early Earth



- Formation (4567 Million years ago)
- Melting Distillation & Gravitational Settling
- **BIG THWACK!** (Moon formed 4500 million years)
- Late Heavy Bombardment (~ 4000 million years)
- Hadean (until ~ 4000 million years)
- Origins of Life (about 3800 million years ago)
- Archaean (until 2500 million years ago)
- Proterozoic (“Boring Billion”)
- Snowball Earth (725 million, 640 million years ago)
- “Cambrian Explosion” 541 million years ago



Mustafar



Hoth



THE STORY OF EARTH

THE FIRST 4.5 BILLION YEARS,
FROM STARDUST TO LIVING PLANET



ROBERT M. HAZEN



**The Big
Thwack!**



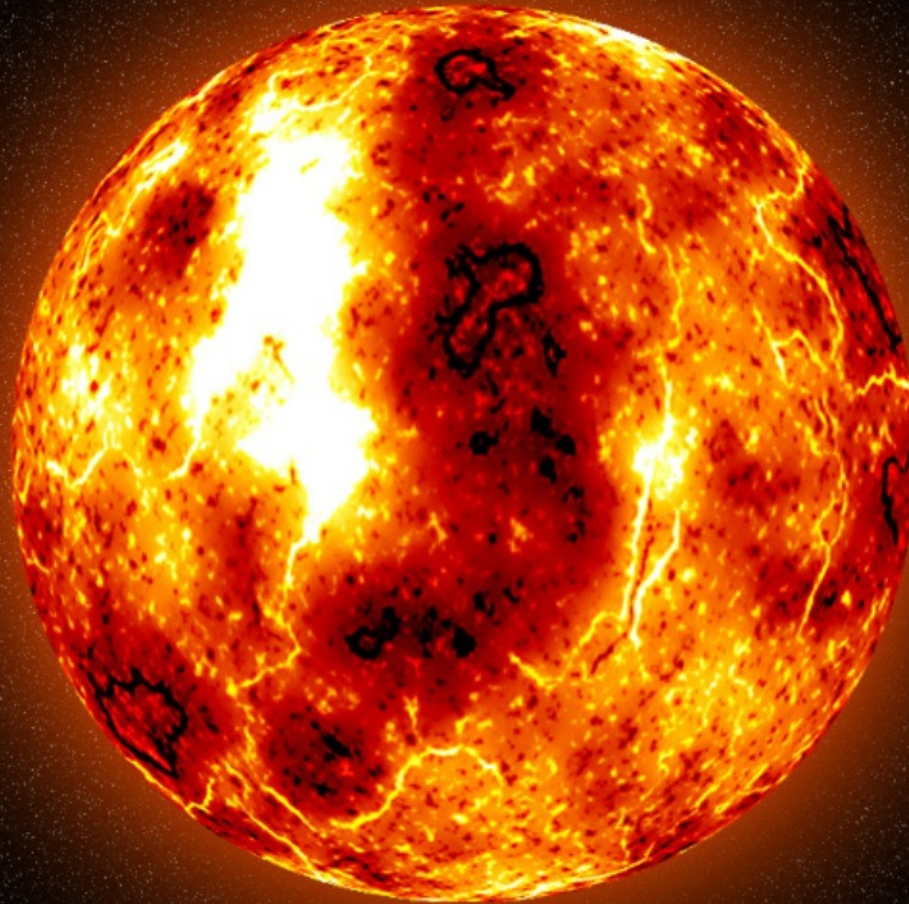
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02:19

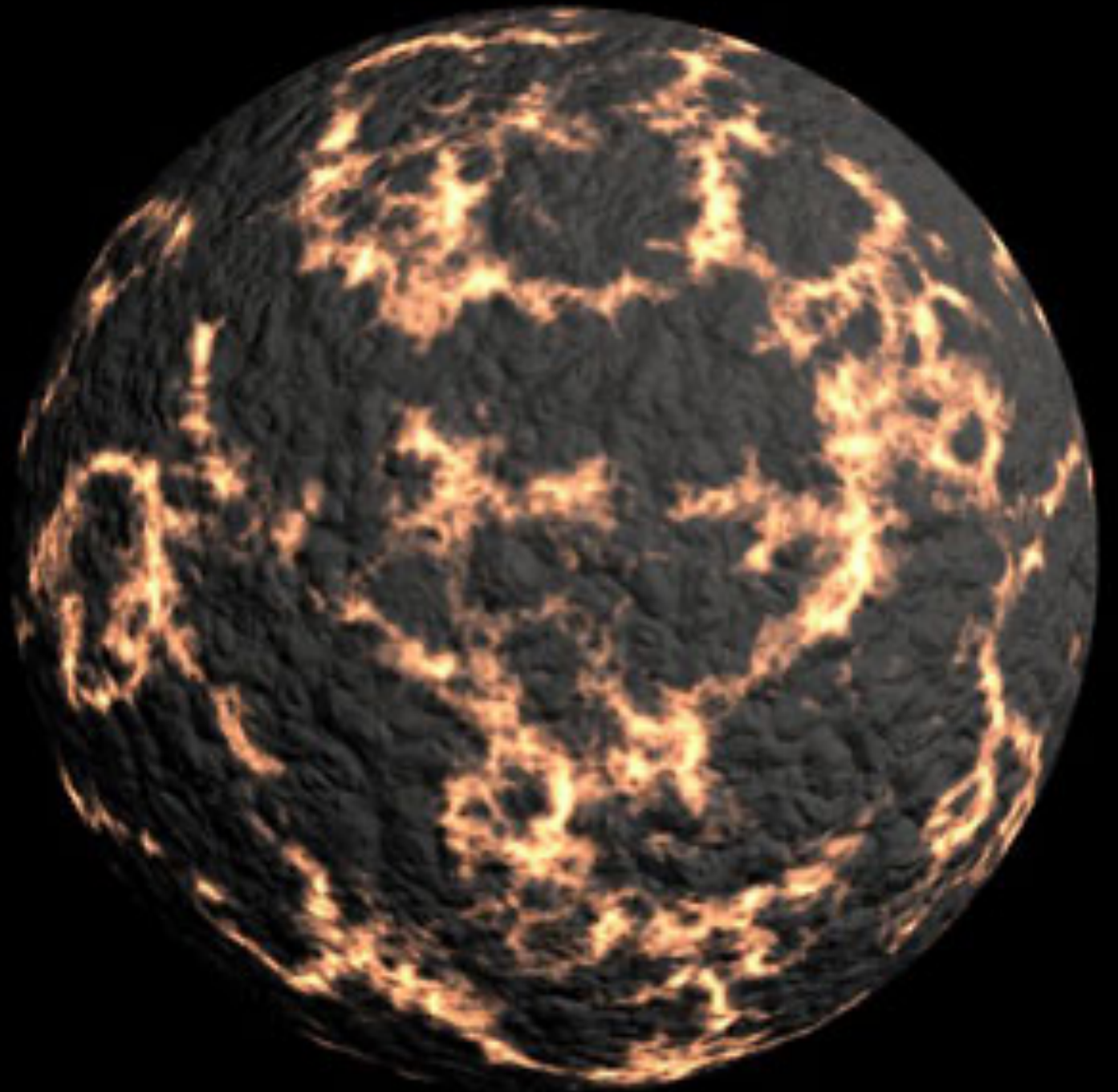


Red Earth



4500 million years ago

Black Earth



Blue Earth



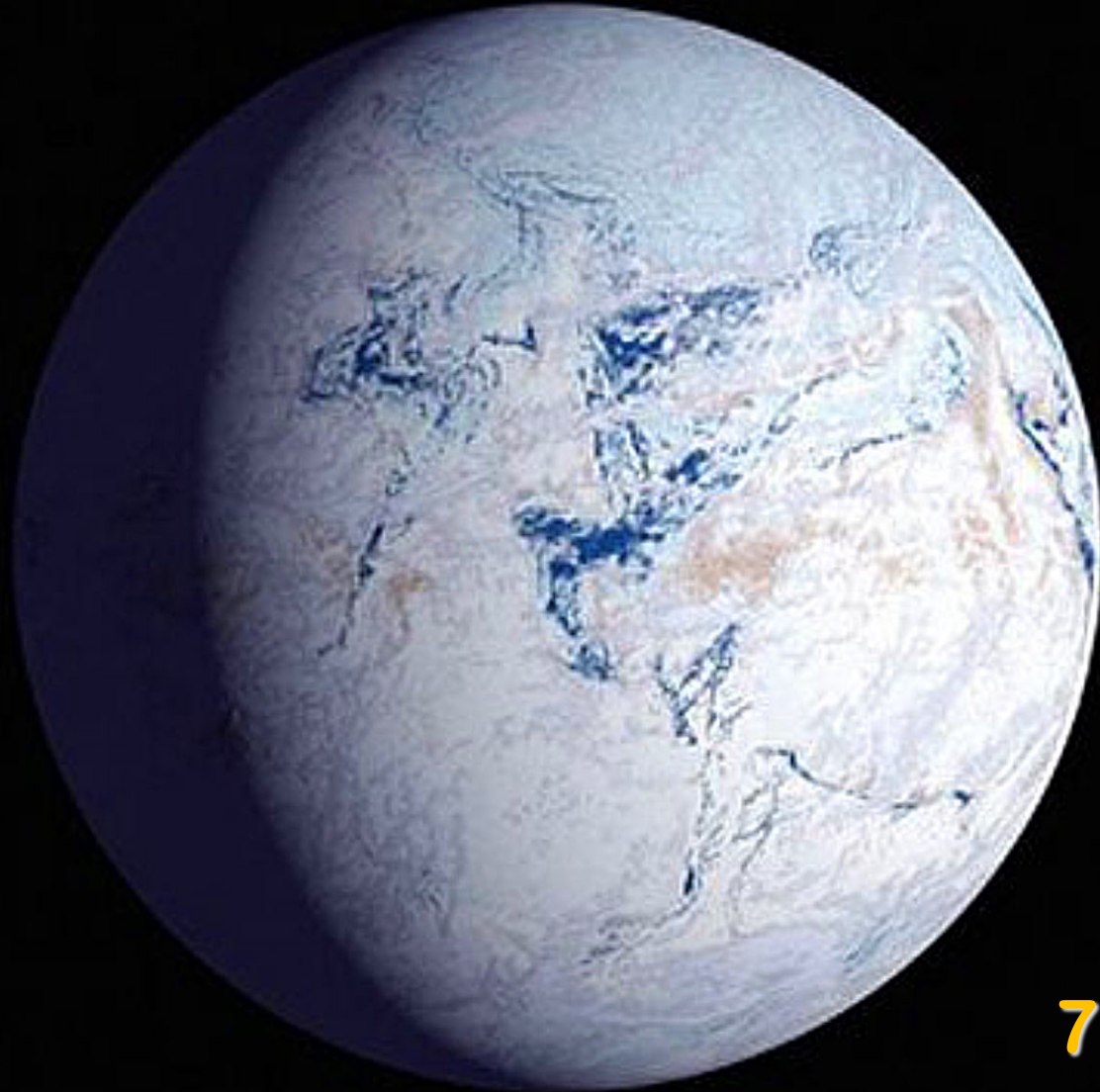
4000 million years ago

Gray Earth



3000
million
years ago

White Earth



700 million years ago

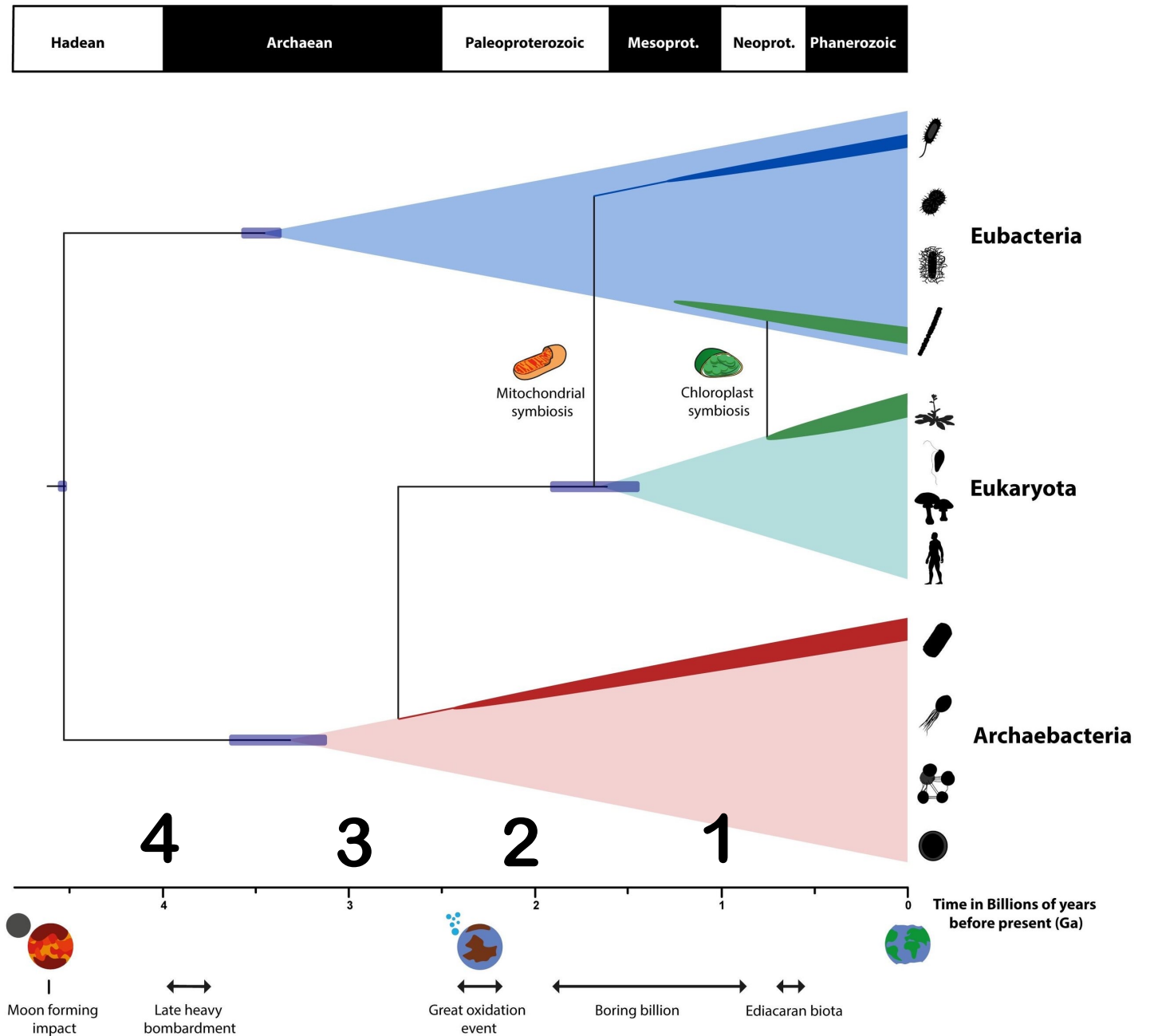
Green Earth

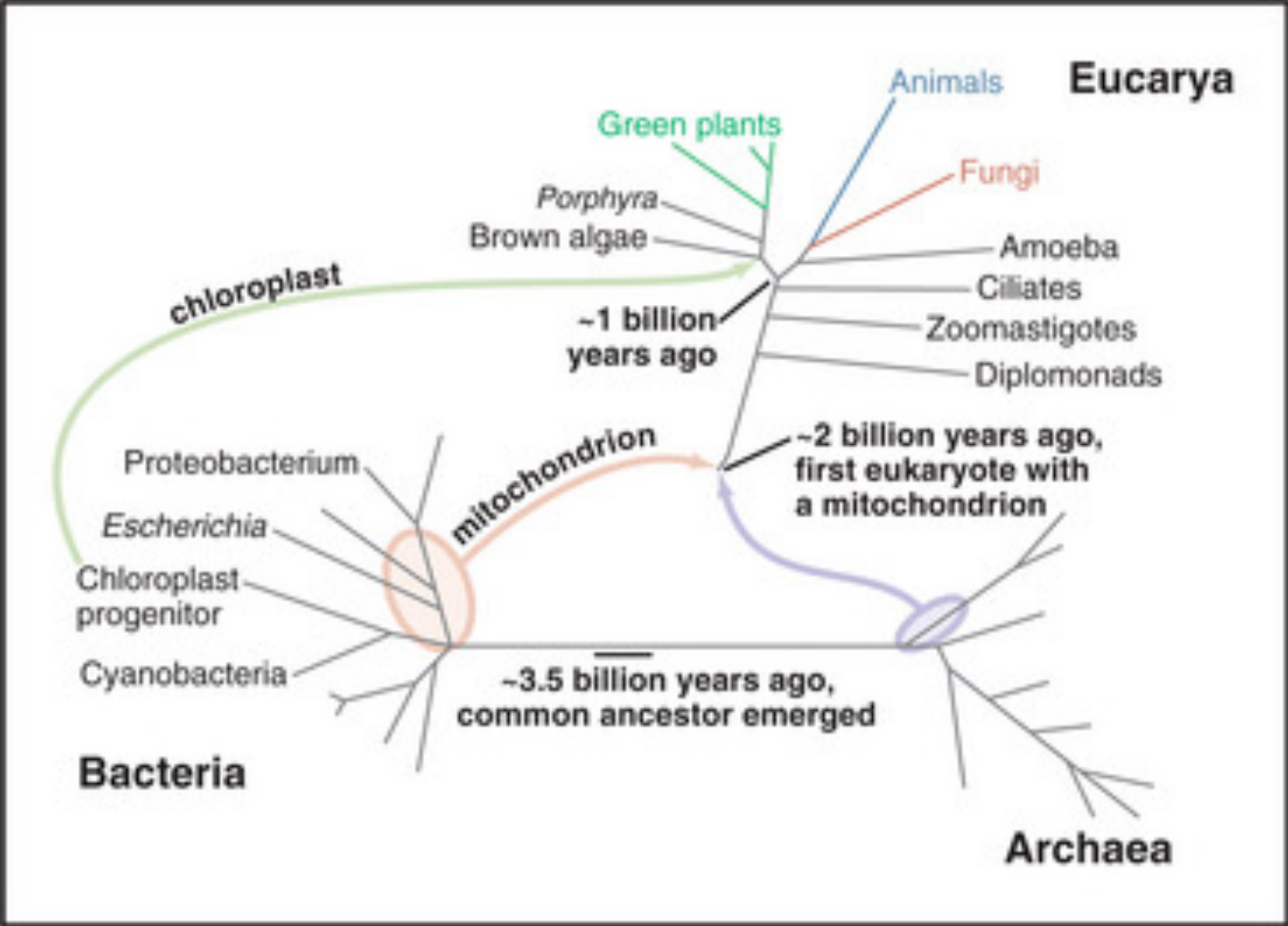


300 million
years ago

Life

A story of
4000 million
years





Next Up: Cosmic Origins & Destiny

- **Formation of the Solar System**
- **The Lives of Stars**
- **Cosmic Carbonaceous Crud**
- **Galaxies are Dirt Factories**
- **Where are We Going?**

**Sagan
“Cosmos”
Animated
Life**

