

What caused the mass extinction events in Earth's history?

OROVICIAN-SILURIAN EXTINCTION EVENTS (450m-440m years BCE) **1**

- 60%-70% of all species died
- ↳ Caused by global warming prompted by volcanic eruptions and hypoxia (low oxygen conditions)

LATE DEVONIAN EXTINCTION (360m-370m years BCE) **2**

- 70%-80% of animal species died
- ↳ Caused by multiple supernova 65 light-years away which reduced the protective ozone levels in our atmosphere

TRIASSIC-JURASSIC EXTINCTION EVENT (201m years BCE) **4**

- 70%-75% of all animal species died.
- ↳ It is unclear why, but studies have shown a lowering ocean level, acidification of the oceans and volcanic eruptions.

PERMIAN-TRIASSIC EXTINCTION EVENT (252m years BCE) **3**

- 90%-96% of all animal species died.
- ↳ It is unclear what caused this event. Catastrophic volcanic eruptions which causes runaway greenhouse affect and ocean acidification is suspected.

CRETACEOUS-PALEOGENE EXTINCTION EVENT (66m years BCE) **5**

- 75% of all animals died (including all non avian dinosaurs).
- ↳ Earth was hit by an 6-9 mile wide asteroid, which caused a "impact winter", acidification of the oceans and ecological collapse followed.

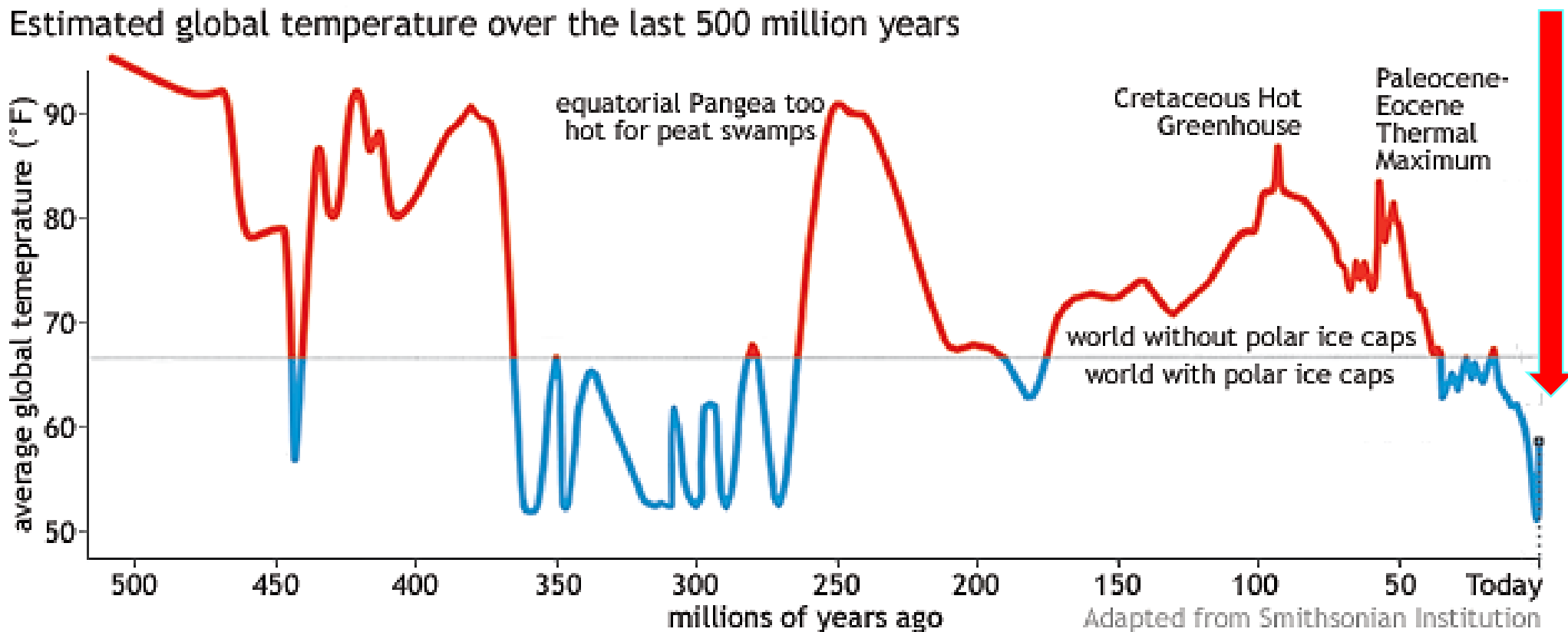
HOLOCENE EXTINCTION (currently occurring) **6**

- Out of an estimated 8 million species, 1 million plant/animal are currently threatened with extinction
- ↳ Caused by human activity (driven by population growth, pollution, and overconsumption).

Little Ice Age

- A period of unusually cool conditions between 1300 CE and 1850 CE
 - ↳ Humans experienced increased famine and illness.
 - ↳ Livestock survival and crop productivity decreased. The cost of food increased due to shortages and low crop yield
 - ❖ Caused by large volcanic eruptions and reduced solar activity
 - ❖ Ended by a tilt to the Earth's axis

Estimated global temperature over the last 500 million years



Global Average Temperature Change

