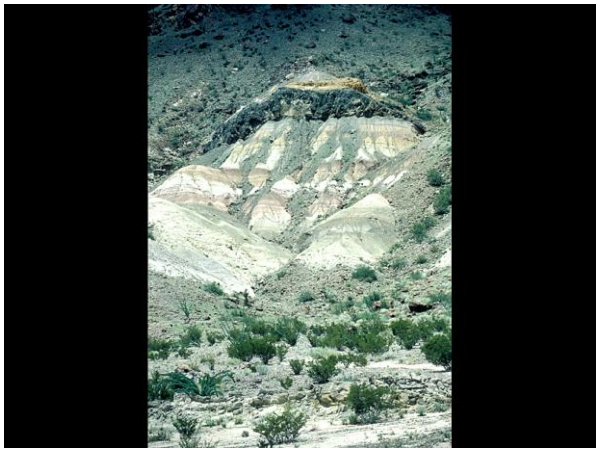
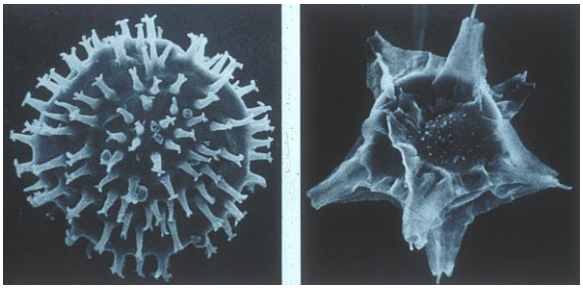
What Happened to the Dinosaurs?





Walt Disney's view….

Plate Tectonics

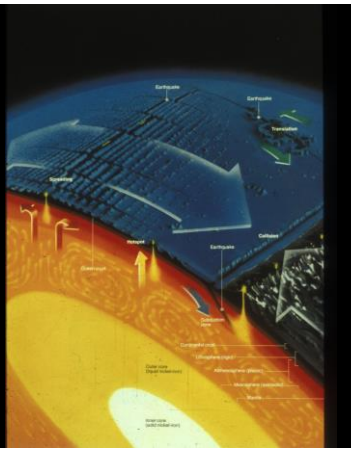
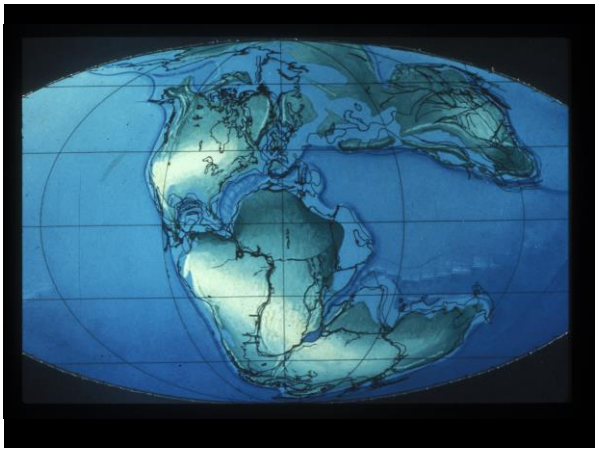
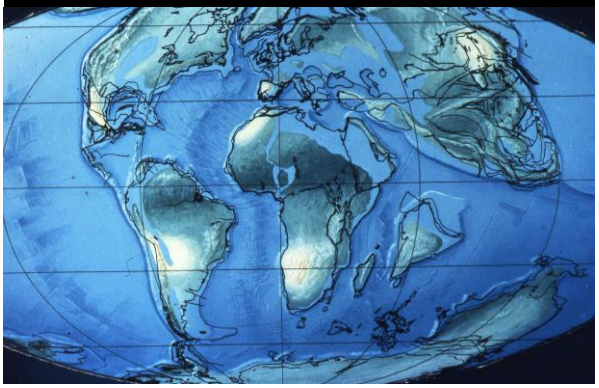
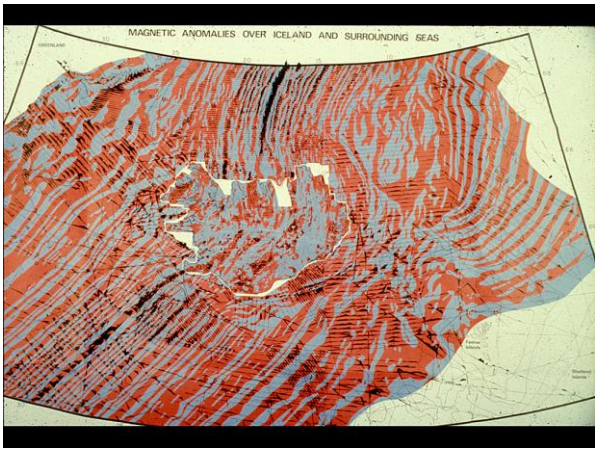


Plate Tectonics….



Peter Vogt – Naval Research Laboratory, Washington DC (1972)





The Volcanic hypothesis asserts that:

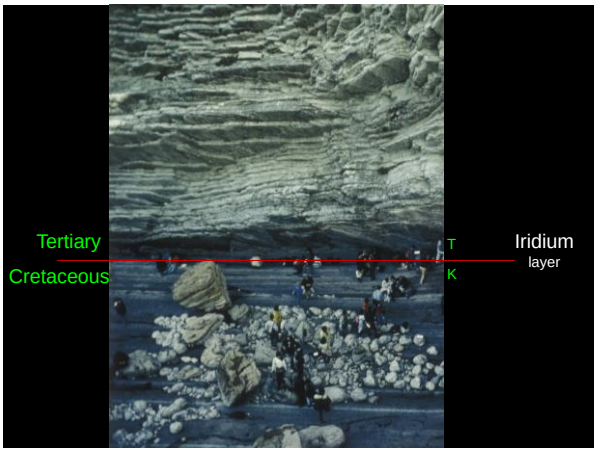
- mass extinction occurred gradually, acting over 3.6 million years, between 68.5 – 64.9 Ma (65.01ms +\- 30,000 yrs is date for last dinosaur in Montana).
- atmosphere was gradually polluted by high level of dust, ash, and toxic gasses, including trillions of tons of sulfur and carbon dioxide dumped into atmosphere
- 480,000 cubic miles of lava flows piled up over large regions of the globe, chiefly India and the southern ocean floors
- In some places the flows reached 8000 feet thick
- Atmospheric, water pollution, acid rain degraded terrestrial environment
- deteriorating environmental conditions caused decline in population levels of many species globally
- winter temperatures progressively cooled; summers became hotter
- one by one, species died off until perhaps as many as half the world's species were gone

Walter Alvarez
UC Berkeley

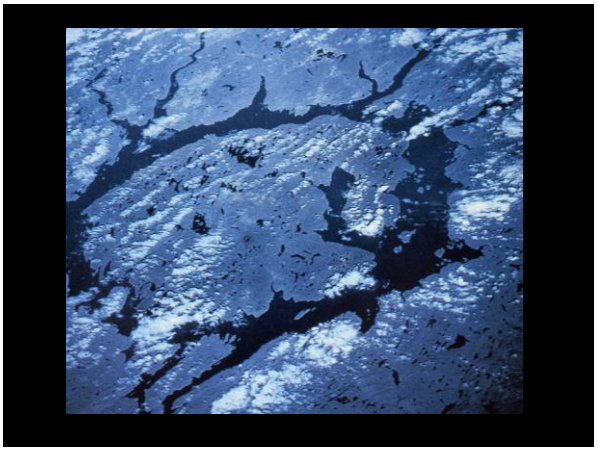
Iridium

at K/T boundary

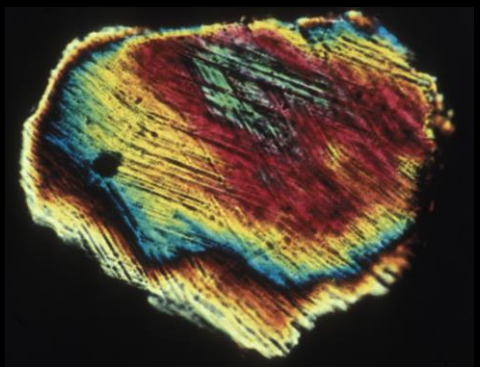
(1980)



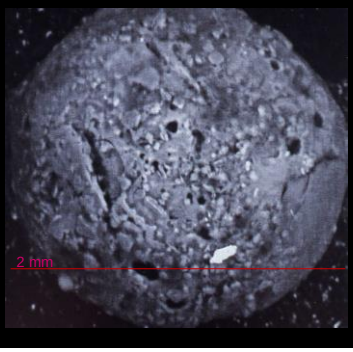
Dale Russel - NC State – Supernova(1971)

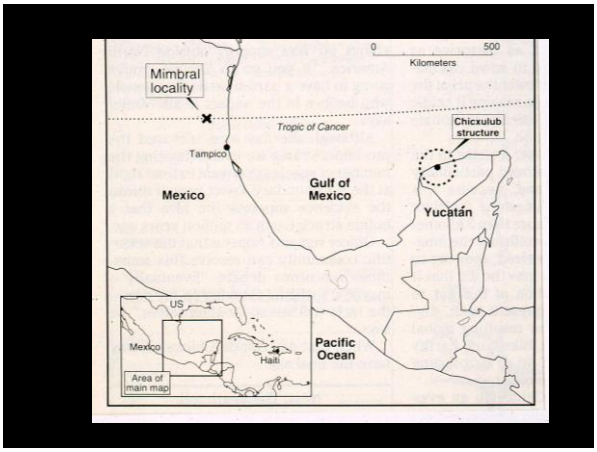


shocked quartz grains



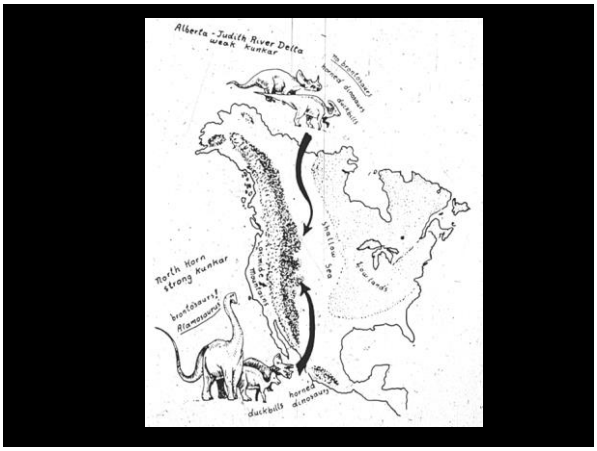
Tectites, or microspherules

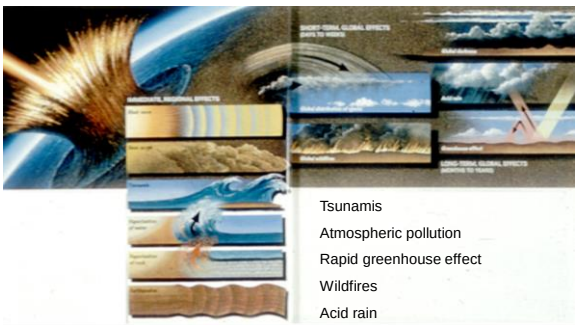




The Asteroid Hypothesis asserts that:

- mass extinction occurred instantaneously - in a few days or a few years - one generation, at 64.96 Ma +\- 26,000 years
- an asteroid of enormous proportions strikes the Earth at between 50,000 to 150,000 miles per hour
- the impact blast is more than 1 million times greater than the strongest earthquake ever recorded
- about 5000 cubic miles of debris is ejected from the crater, throwing a great dust cloud into the atmosphere
- atmosphere was instantly polluted by high level of dust, ash, and toxic gasses, including trillions of tons of sulfur and carbon dioxide dumped into atmosphere
- huge tidal waves scour across the continental margins
- wildfires incinerate the more inland regions
- atmosphere becomes so choked with debris and smoke that no sunlight penetrates to the ground
- plants died, herbivores starved, and so did the carnivores





Tsunamis

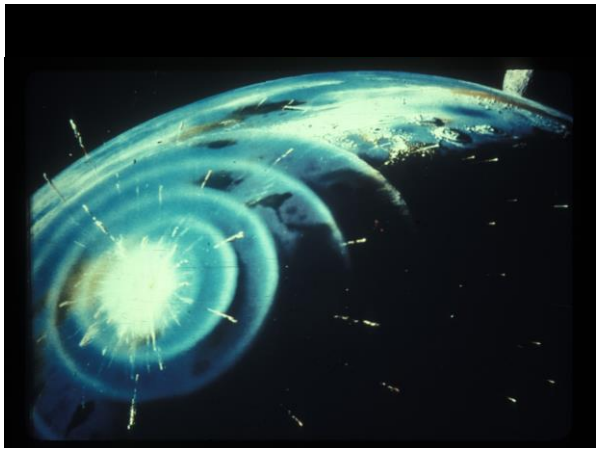
Atmospheric pollution

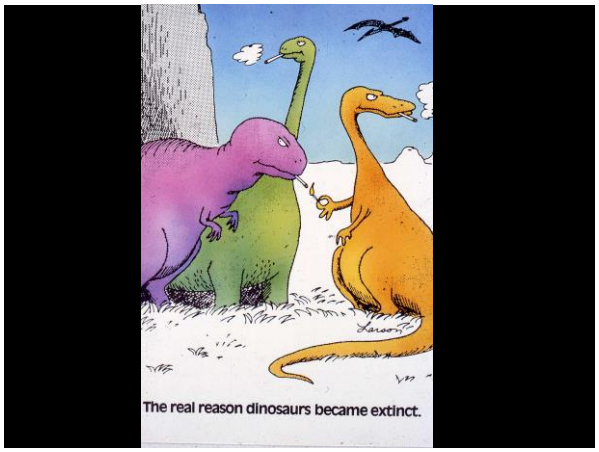
Rapid greenhouse effect

Wildfires

Acid rain

"Nuclear winter?"





Is either or some combination of both of these hypotheses true? There are three important criteria in testing the hypotheses:

1) Is there any geological evidence for the proposed mechanism?
2) How did the effects of that particular mechanism affect the organisms that died, and why did the survivors survive?
3) How well does the time-line for the proposed mechanism match the evidence in the rock and fossil record?


WEEKLY WORLD
NEWS
40¢
Psychic warns Liz:
Your new home in
Hollywood is jinxed
PAGE 5
Incredible discovery!
DINOSAURS STILL
ROAM THE EARTH
Scientists find fresh tracks of 30-ton horror beast