The Azolla Event

***Azolla,* colloquially known by such names as "fairy moss" is a genus composed of seven species of aquatic ferns. Today used as a form of wastewater treatment, livestock feed, and biofuel, this humble fern may have had a large part in helping create today's icebox world.**

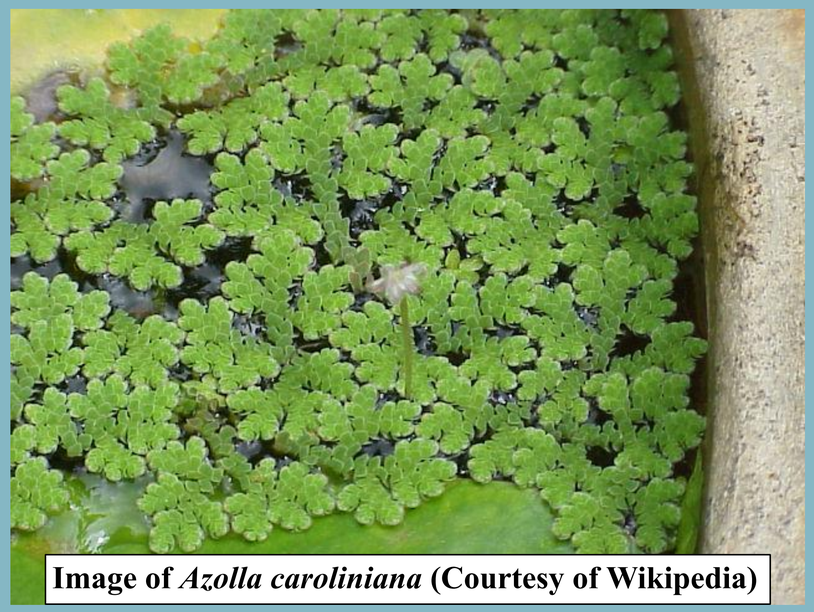


Image of *Azolla caroliniana* (Courtesy of Wikipedia)

Basic facts on the Azolla Event:

- Occurred between the **Paleocene and Eocene epochs**, during the PETM
- Occurred at what is today known as the **Arctic Ocean**
- At this time, there was a **greenhouse climate**
- Involved the proliferation and, later, death of millions of miles of *Azolla* blooms
- Sunken *Azolla* are thought to have **absorbed carbon**, helping **change the tropical climate to an icebox climate**

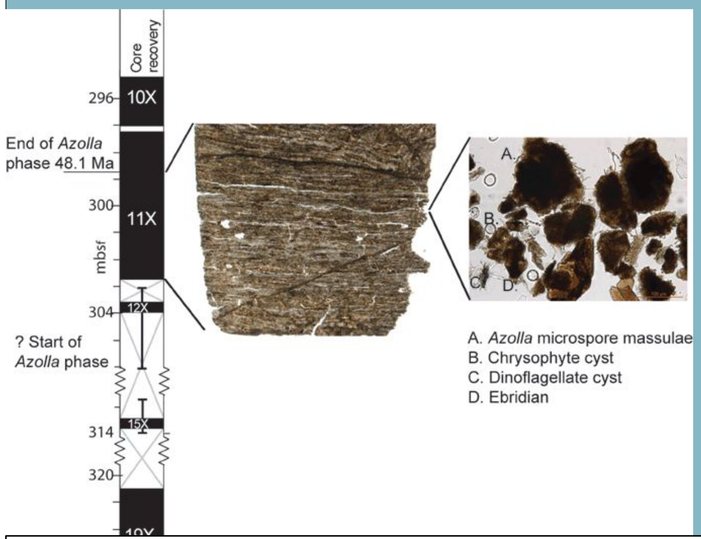
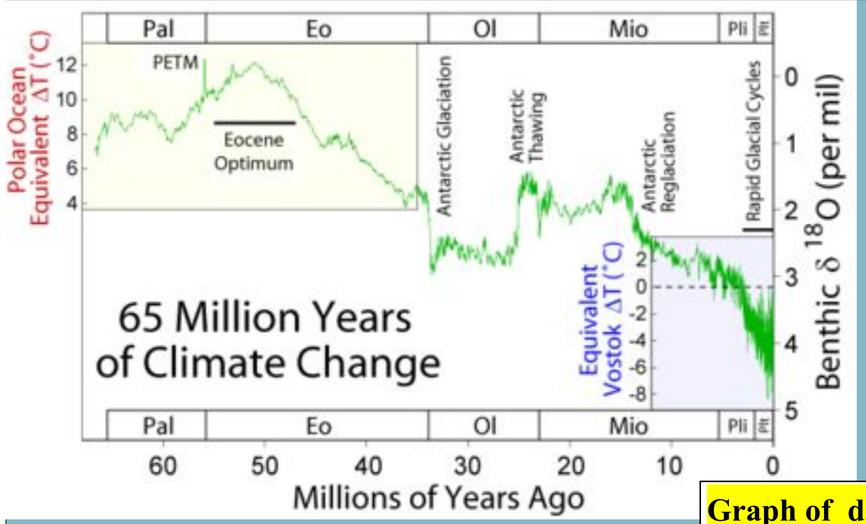


Image of Azolla sample. (Photo courtesy of Speelman, et al. 2009)

Sediment samples from the ACEX core recovery suggest *Azolla*'s **carbon absorbing abilities** and the effect of this on the climate.



Graph of drop in global CO_2 levels around Azolla event (Courtesy of Wikipedia.)

Image of Azolla event area. (Courtesy of Wikipedia.)

Evaporation, rising temperatures, and increased rainfall caused the Azolla event. The red circle shows what is today the Arctic ocean; **inside this circle the Azolla blooms are shown in the lighter blue.**

As a result of this event, **CO_2 levels dropped drastically**, as shown in the **downward slopes** of these CO_2 graphs.

GEOL 204 The Fossil Record

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