



Mentoring Lecture Series

Empowering Women to Develop Academic Careers

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Mass extinction, climate change and feedback effects on fire ecology and the hydrological cycle

The collapse of terrestrial ecosystems at the Triassic-Jurassic boundary (T/JB; ~200 million years ago) resulted in high species level turnover and extinction. The ecosystem collapse was preceded by prolonged ecological degradation. A common response of fossil plant communities to global environmental perturbation includes increasing dominance, decreasing evenness, loss of biodiversity and likely reduced productivity. Fossil floras of Greenland witness that ecosystem diversity can be maintained in response to major climatic change via continental scale migration and recruitment of immigrant taxa, yet the functional consequences of these changes are difficult to evaluate.

The presentation will focus on the ecological and evolutionary consequences of a global warming event at the T/JB and the feedback effects of plant adaptation on fire ecology, hydrology and marine biodiversity and on the use of palaeoatmospheric simulation experiments to improve understanding of the causes of mass extinction in the fossil record.

The science lecture (ca. 1 hour) is followed by a Question & Answer period on issues specific to career development of women in academia (e.g., options, barriers, how to overcome them, good practices and strategies).

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