



**Jill Fredericksen Adams**

## Endowed Biology Seminar

By: Dr. Michael Donoghue

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### Biogeography, biome shifting, and functional traits in a widespread plant clade



**Wednesday, October 25, 2017 | 12:00pm**  
**HCK 132 Refreshments at 11:45am**

In connection with our development of *Viburnum* (Adoxaceae) as a model lineage for studies of plant evolution and ecology, we have inferred a comprehensive dated phylogeny based on multiple lines of evidence. Jointly with our phylogenetic inference, we have estimated past geographic movements and shifts between mesic forest biomes. This provides us with reliable estimates for movements within and between continents throughout the Cenozoic, as well as for multiple instances of adaptation to colder climates. Much of the action took place in Asia, with monsoonal broadleaved evergreen (lucidophyllous) forests playing a key role in transitions in both leaf form and

phenology. From Asia there were multiple movements both to Europe and to the New World. The radiation of one New World lineage into montane cloud forests of the neotropics was fueled by replicated ecological speciation that resulted in two distinct leaf types in multiple regions.

