



# 2012 Yosemite Forum

Sponsored by Resources Management and Science, Yosemite National Park

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An interactive lecture series designed to bring evolving knowledge of the Sierra Nevada to the public and the park.

## Adaptation and Speciation in California Monkeyflowers

**DOUG SCHEMSKE, PHD, PLANT BIOLOGY PROFESSOR, MICHIGAN STATE**

Our research team investigates adaptation and speciation in two closely related species of California monkeyflowers (*Mimulus*) that differ in their mode of pollination. *Mimulus lewisii* is found at high elevation in the Sierra Nevada and is pollinated by bees, while its close relative, *Mimulus cardinalis*, is found at low elevation, and is pollinated by hummingbirds. Our team has employed field experiments and molecular genetic techniques to identify the adaptive steps in the evolutionary trajectory from bee to hummingbird pollination. We find strong evidence that large genetic changes have contributed to the evolution of the pollination system, a view consistent with new theoretical insights into the mechanisms of adaptive evolution

**Tuesday, July 10, 2012**  
**Auditorium, Yosemite Valley**  
**Noon to 1 p.m.**

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Yosemite Forum is a partnership among:

- ☞ Yosemite National Park, Resources Management and Science Division
- ☞ USGS, Western Ecological Research Center, Yosemite Field Station
- ☞ University of California, Sierra Nevada Research Institute
- ☞ The Yosemite Conservancy

