

# FSERC Special Seminar

Friday 13<sup>th</sup> 10.00am-  
March 2020

## Phenology as a process rather than an event: from individual reaction norms to community metrics

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### Speakers:

**Dr. David Inouye (University of Maryland)**

**Dr. Brian Inouye (Florida State University)**

**Dr. Nora Underwood (Florida State University)**



**Abstract:** Phenology, the seasonal timing of biological events, is important for understanding how communities may respond to climate change. We will describe a long-term study on the phenology of plants (since 1973) and bees (since 2009) from the Rocky Mountains in Colorado, USA, which has recorded flowering and flight times across the growing season. The timing of snowmelt is the most important factor for flower phenology in this high elevation ecosystem; years with earlier snowmelt also have earlier flowering. However, shifts in the timing of the first flowers may not match changes in the timing of peak flowering or the end of flowering. Studies that record only the first event in a phenological distribution may give a biased estimate of the sensitivity of species to climate change. We will also discuss results from a long-term monitoring project of flying insects (since 1984) at the same field site, finding declines in insect abundance even though total flower abundance has not declined.

**Place:** Rm. N283, Faculty of Agriculture Main Building 2F, Kyoto University

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