

## Special Seminar:

"The smell of change: climate change can alter floral scent and pollinator attraction"



Please join us for a special seminar

"The smell of change: climate change can alter floral scent and pollinator attraction"

By: Justin B. Runyon, Ph.D, US Forest Service Rocky Mountain Research Station



**Abstract:** The worldwide decline in pollinators highlights the importance of understanding how factors associated with climate change may affect plant-pollinator interactions. Components of climate change have the potential to strongly influence plant traits important for attracting pollinators, including floral volatile organic compounds. We examined how drought, elevated CO<sub>2</sub>, and leaf herbivory—key components of climate change—affected floral display, floral volatiles, and the visitation rates and community

composition of pollinators to four forb species in Montana. Leaf herbivory changed floral scent and reduced pollinator attraction in one forb species. While experimental drought reduced flower size and floral display in all species, there were species-specific effects of drought on volatile emissions per flower, the composition of volatile compounds produced, and subsequent pollinator visitation rates. Drought also influenced the floral visitor community across forb species, indicating that some groups of pollinators were deterred while others were attracted. Preliminary data suggest that elevated CO<sub>2</sub> can also influence floral traits and visitation by pollinators. These results suggest that floral volatiles provide information-rich signals to pollinators under shifting environmental conditions and that floral volatiles may be relatively more important than visual plant traits for pollinator attraction, particularly under climate change. The potential implications of these findings for pollinator and habitat conservation and restoration will be discussed.

- **When:** Thursday, June 2<sup>nd</sup>, 2016
  - **Where:** Yates Building, Conference Room: Leopold Training Room (2SE01)
  - **Time:** 12:00pm – 1:00 pm EST
  - **Phone:** 1 (888)-844-9904, access code 9166560#
  - **Live Meeting (for slides only; call in for audio):**  
<https://meet.usda.gov/nzimmerman/1P3H6VT9>
- Dr. Runyon will be available in the Sweetgrass room (2NE) for further discussion after the seminar 1 to 2PM.

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