

Milkweed Adaptation Research and Education Network (MAREN) Summer Workshop 2022

FREE

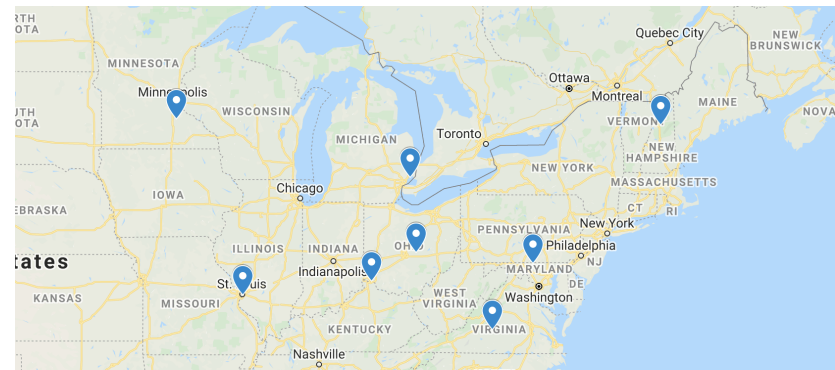


The Milkweed Adaptation Research and Education Network (MAREN) Workshop will introduce educators to methods for observing the phenology, or timing, of milkweed development and the interactions between milkweed plants and the community of milkweed herbivores and pollinators. Over the past two decades the population of the iconic migrating monarch butterfly has declined, prompting widespread efforts to plant more milkweed, the only food source for monarch caterpillars. What do we need to know to make wise decisions about restoring milkweed populations to support monarchs, even as the climate changes? At MAREN, we hypothesize that we need a great deal more data about the phenology milkweed interactions that can be collected by educators, like yourself, and your students. Using intersections of both scientific and indigenous ways of building knowledge, educators will be immersed in the ecological relationships of monarchs and milkweed, explore existing data about the phenology of milkweed plants, learn to make careful observations about milkweed growth and interactions with invertebrates at a field site, analyze and discuss the data they collect, and consider how to use data to make predictions and restoration decisions.

Given the evolving nature of the Covid-19 landscape... Hybrid MAREN Summer Dates & Location

Participate on a Drop-In or Ongoing basis.

- All attend Virtual Orientation: **June 27, 2022** (Zoom, full day).
- Ongoing Participants also complete
 - Field Training: **June 29, 2022** (half day) at St. Olaf College in Northfield, MN, or at one of several “Milkweed Research Hubs” with experienced educators.
 - Debrief and Data Discussion: **June 30, 2022**, virtually or in-person at St. Olaf College (half day + course prep time).
- Contingent upon campus policy, St. Olaf College in Northfield, MN, will host the workshop in-person on June 29-30 for Ongoing participants who wish to travel (current policy would require participants to be fully vaccinated and boosted) with dormitory lodging and meals on campus provided.



Milkweed Research Hubs are in or near: Detroit, MI; Granville, OH; Cincinnati, OH; Emmitsburg, MD; St. Louis, MO; Lynchburg, VA; and Bethlehem, NH

Opportunities and Needs

- Draft instructor's manual with future NGSS (2013) alignment can be found [here](#) and at marenweb.com
- Milkweed phenology data collection can occur in the spring, summer, and/or fall.
- Most MAREN protocols require learners to access existing populations of at least 30-45 milkweed plants, but spring observations may be conducted on potted plants grown from seed and placed outdoors.
- We expect educators from a variety of settings, including grades 6-16 and informal educators, to be able to implement protocols successfully.

Stipends and Reimbursement

- The workshop is FREE for all participants. Drop In participants will attend virtual sessions only and are not eligible for stipends. Ongoing participants are expected to attend all sessions, complete data collection with learners at least once, and to submit data and evaluations.
- Ongoing Participants will receive \$150 after completion of the MAREN workshop and \$150 after submitting data.
- Ongoing Participants will be reimbursed up to \$400 for traveling to St. Olaf College or to research hubs. *Research hubs have capacity for up to 10 participants, so apply early!*



Questions: Please contact Emily Mohl, Ph.D
(mohl@stolaf.edu) at St. Olaf College, Northfield, MN

[Click Here to Apply](#)

Review of Applications begins March 30, 2022