



Monarch Health News

2013 Monitoring Season Summary

June 9, 2014

Contact Information:

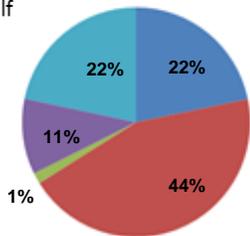
Altizer Lab
 Odum School of Ecology
 University of Georgia
 Athens, GA 30602
 Phone: (706) 542-3485
 Email: monarch@uga.edu

www.monarchparasites.org

2013 Participants

70 observers
 17 states
 2 Canadian regions
 1549 total samples

- Northeast
- Midwest
- West
- South
- Gulf

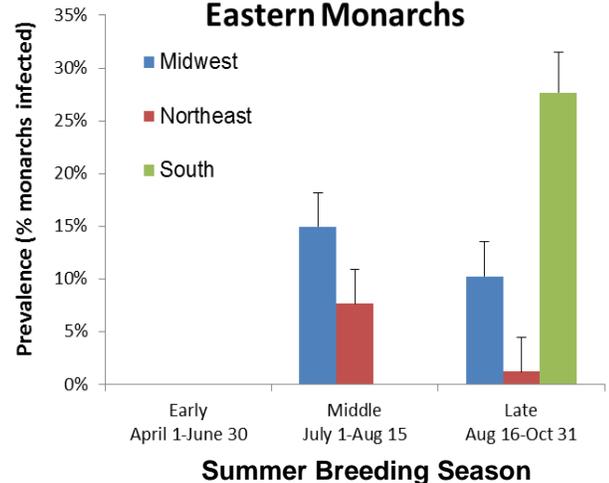


Thank you to all our citizen scientists who participated in *Monarch Health 2013!* We especially need to know how *OE* infection rates will respond to record low numbers of monarchs across North America this year. Your contributions help us understand these questions and how this disease affects monarchs over geography and time. We look forward to working with you this coming season! Kits are still available.

Citizen scientists: 26.3% of eastern monarchs have *OE*

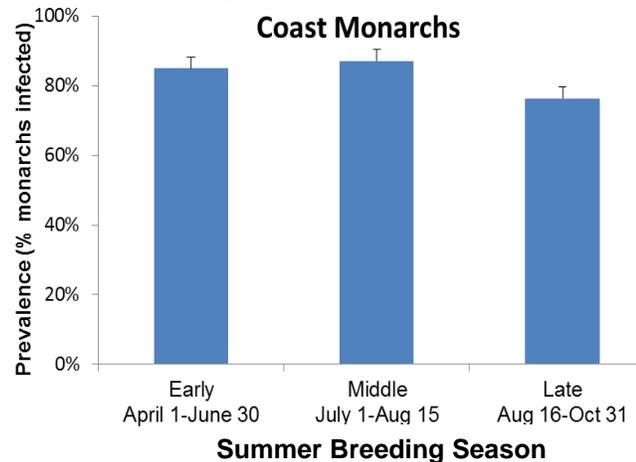
In the past eight years, *Monarch Health* citizen scientists collected thousands of samples to test monarchs for the parasite *Ophryocystis elektroscirrha* (*OE*). These data showed a wide variation in *OE* prevalence year to year, increasing from an average prevalence of 7% to 26% from 2006-2010. **In the past year (2013) 26.3% of monarchs sampled in eastern North America from spring to summer were infected with *OE*.** This is higher than in 2012, when 16.6% of eastern monarchs sampled were infected with this debilitating parasite. Based on past data, we expected to see an increase in *OE* prevalence from early spring to late summer, as parasites tend to accumulate on plants during the breeding season. In contrast, the 2013 data showed a decline in prevalence from middle to late summer in the Midwest and Northeast regions, which is unusual, but 2013 also reported the lowest recorded number of monarchs which might contribute to these results (see top graph). **In the U.S. Gulf Coast region, 83.6% of monarchs were infected with *OE* in 2013.** *OE* prevalence in the Gulf region was consistently high through spring and summer. In the past, monarchs from the Gulf region showed a high *OE* prevalence most likely due to continuous breeding in non-migratory populations.

2013 *OE* Infection Prevalence in Eastern Monarchs



*Early samples not shown due to small sample size (top graph)
 **Note differences in y-axis scale between top and bottom graphs

2013 *OE* Infection Prevalence in Gulf Coast Monarchs



Recent activities and research in the Altizer lab



In fall 2013, the Altizer lab participated in the annual Insectival at the State Botanical Garden of Georgia showcasing the importance of insects in nature and answering questions about monarch biology (see picture).

We also participated in the North American Monarch Institute (NAMI) outreach workshops held in Minnesota (July 2013) and California (December 2013).

On June 2, 2014, the Altizer lab presented 2011-2013 Monarch Health data on winter breeding monarchs at the Ecology and Evolution of Infectious Diseases conference in Fort Collins, CO.