



UNIVERSITY OF MINNESOTA EXTENSION

MAKING A DIFFERENCE IN MINNESOTA: ENVIRONMENT + FOOD & AGRICULTURE + COMMUNITIES + FAMILIES + YOUTH

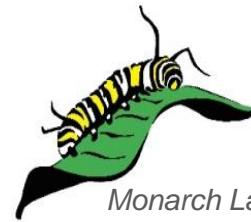
Monarch Larva Monitoring Project

CITIZEN SCIENCE, EDUCATION AND ENGAGEMENT

KATIE-LYN BUNNEY

UNIVERSITY OF MINNESOTA MONARCH LAB

Mission of the MLMP



“To better understand the distribution and abundance of breeding monarchs, and to use that knowledge to inform and inspire monarch conservation.”



Monarch Density

- Eggs and larvae to instar




Monarch Density



Monarch Density

- Entered online (mobile app is in the works)



Monarch Larva Monitoring Project

DATA PORTAL

Login

Username:

Password:

Remember me next time.

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Estimating Monarch Survival



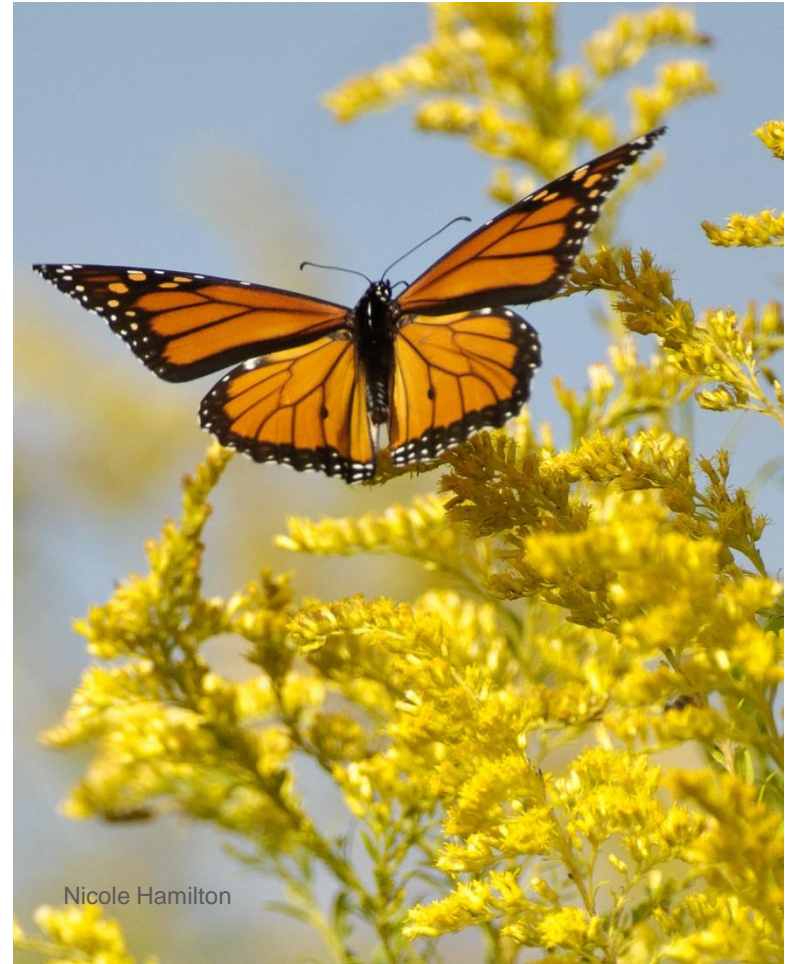
Estimating Monarch Survival



Estimating Monarch Survival



Candy Sarikonda



Nicole Hamilton

Milkweed Density



Denise Gibbs

Publications

Insect
science

Insect Science (2016) 00, 1–14, DOI 10.1111/1744-7917.12404

REVIEW

Monarchs in decline: a collateral landscape-level effect of modern agriculture

Carl Stenoien¹, Kelly R. Nelson²,
Myron P. Zalucki⁶

¹Department of Ecology, Evolution, and Systematics, University of Minnesota, St. Paul, Minnesota, USA; ²Department of Entomology, University of Queensland, St. Lucia, Queensland, Australia; ³Department of Entomology, University of Queensland, St. Lucia, Queensland, Australia; ⁴CSIRO, Ecosystems Science, St. Lucia, Queensland, Australia; ⁵Department of Entomology, University of Minnesota, St. Paul, Minnesota, USA; ⁶Department of Entomology, University of Queensland, St. Lucia, Queensland, Australia

INSTANT SYMPOSIUM



Tachinid Flies and Monarch Butterflies: Citizen Scientists Document Parasitism Patterns over Broad Sp

The Tachinidae represent the largest family of dipterans with ~10,000 species. Most of their hosts are insects and is generally assumed that tachinid flies have

Citizen Science and Youth Audiences: Educational Outcomes of the Monarch Larva Monitoring Project

Dina L. Kountoupes and Karen S. Oberhauser

Abstract

Citizen science projects in which members of the public participate in large scale science research programs are excellent ways for uni-

Introduction

A growing number of citizen science projects engage the public in observing nature using defined protocols that range from



Conservation Action



Conservation Action



Pete Berthelson

Engagement and Outreach



Flagship for conservation



Citizen Science with Youth

Driven to Discover

**Building
Science Skills**

**Contributing
to Citizen
Science**

**Conducting
Investigations**



Citizen Science with Youth

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**Building
Science Skills**

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to Citizen
Science**

**Conducting
Investigations**







I am a scientist because...

Science is fun. Science makes you interactive with the world around you. It's better to see things in real life than just seeing it on a board or T.V. Just think, would you rather sit down and experience nothing, or go out and reach the boundaries of your brain?



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Questions? Contact kbunney@umn.edu

Monarch Larva
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MLMP.org



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