

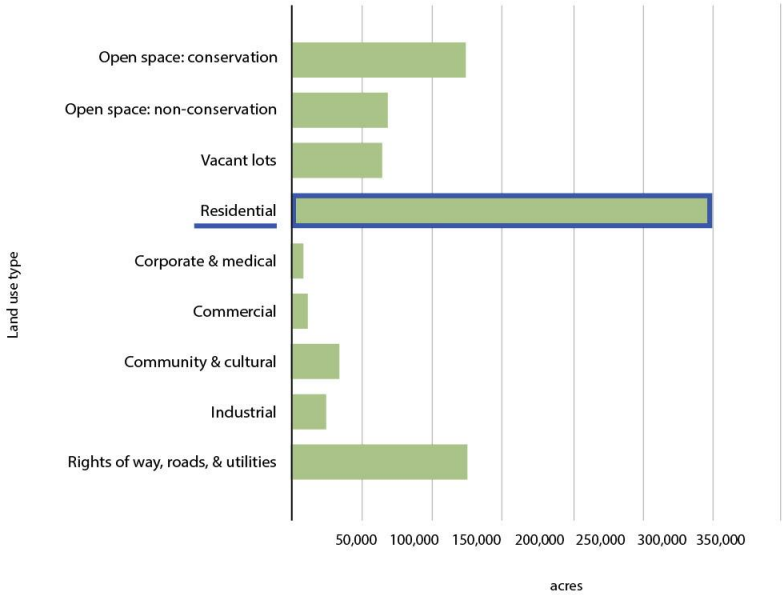
# Field Museum Monarch Community Science



**Aster Hasle  
Karen Klinger**

# Does Nature Need Cities?

Plantable space by land use type: Chicago Region



\*Agricultural land removed





# Urban Residential Milkweed Gardens



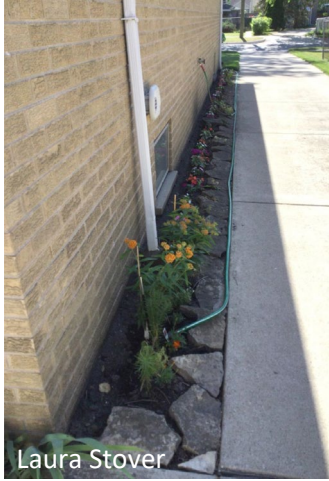
Marjorie David



Dawn Kursar



David Shepherd



Laura Stover



Imeña Valdes



Cathy Streett



Shirley Davis



Phyllis Schulte



# Community Science



**FIE Monarch Community Science** About Recursos en español Training Resources Results FAQ

## Why Monarch Community Science?

The eastern monarch butterfly population has declined over 80% in the last two decades. The data collected by community scientists, like yourself, helps researchers at the Field Museum understand how successful milkweed plants in cities and towns are at providing habitat for monarch caterpillars.

Photo by Robb Teifer

[Learn More](#)

### How can you get involved?

- 1** Join Our Community  
Create an account (above) or join our email list to stay informed.  
[Join Email List](#)
- 2** Attend a Training  
Register and attend a training to learn how you can participate.  
[Training Resources](#)
- 3** Tell us about your Site  
Tell us about the site and milkweed patches you are monitoring.  
[Site Survey](#)
- 4** Monitor your Patch  
Monitor your patches and record your observations each week.  
[Weekly Monitoring](#)

**1st Instar**

- Neither the front nor back tentacles are fully visible to the naked eye.
- Newly hatched caterpillars are a faint pale green or white in color.

**2nd Instar**

- The front tentacles now resemble nodes, while the back tentacles resemble small bumps.
- The white, black, and yellow banding is now clearly visible.

**3rd Instar**

- The front tentacles now almost extend to the face.
- The banding is now darker and more distinct.

**4th Instar**

- The front tentacles now extend past the face.
- The banding pattern on the front of caterpillar has continued to darken.

**5th Instar**

- The front tentacles are about twice as long as a 4th instar.
- The coloring is more vivid and the black bands become almost velvety in texture.
- They also feed at a much faster pace on milkweed.

**FIE** Visit [bit.ly/monarchchomboxes](http://bit.ly/monarchchomboxes) for additional project resources and further information.



FIELD REPORT Prepared by Monarch Community Science Team

## Monarch Community Science Report

SUMMER 2019 - PILOT YEAR

**COMMUNITY OVERVIEW TOTALS**

UNIQUE MONITORS	SURVEYS ENTERED	NUMBER OF PATCHES	AVERAGE STEMS PER PATCH	EGGS OBSERVED
72	739	129	23	5,109

**FIELD'S RESULTS**

**EGGS OBSERVED**

Number of eggs observed over time (Week 1-13). Legend: Individual Eggs Observed, Average Eggs Observed.

**COMMUNITY 1ST INSTAR TOTALS**

Common Milkweed	48
Spotted Milkweed	20
Swamp Milkweed	18
Whorled Milkweed	5
Purple Milkweed	5
Other Milkweed	2
<b>TOTAL 1ST INSTARS</b>	<b>104</b>

**MESSAGE FROM THE TEAM**

We first year of our Monarch Community Science report was a tremendous success with the help of monitors, like you! We conducted ground-truthing surveys and corrected our initial estimates in the training session. This report marks the first part of our community science year and will be followed by a report on egg counts, caterpillars, and chrysalises. Our next job is to analyze all of this data, and with your input, learn how to make our year and our science program for Monarch Community Science 2020 have already begun.

[Back](#) [Home](#) **FIE**



## FIE Keller Science Action Center

Dear Monarch Enthusiasts and Monitors,

It's been another great start to data collection this year from our participants! Since the start of the season, **94 sites** have been submitted and participants have monitored over **200 times**, recording **176 eggs** and **78 caterpillars**. No chrysalises have been seen yet but at least **6** participants have seen an adult monarch flutter by.

**It's not too late!**  
If you haven't started monitoring yet, don't worry, it's not too late to start. Once you've submitted your [Site and Patches Survey](#), check your email for your customized links to submit your weekly data for the patch(es) you are monitoring. Every time you submit the weekly patch survey, you will receive an email with a summary of your observations and a link to use for submitting your next week's data. You will also receive a reminder email 6 days after your last observation.





**Plant giveaway recap**  
Thank you to all those who came out for one of our plant giveaways at the beginning of June. We had over **150 people** attend and we handed out **401 milkweed** plants and **390 other native** plants.

We really enjoyed meeting many of you in person, answering garden questions and getting more milkweed out into yards around the city.



# Community Science

**Monarch Community Science**  

Name \_\_\_\_\_ Total # Patches \_\_\_\_\_ Please fill out the survey for each patch you are monitoring

Patch Name \_\_\_\_\_ Patch location (front, back, etc.) \_\_\_\_\_

Notes \_\_\_\_\_

Please enter your patch data each week at [bit.ly/monarchmonitors](http://bit.ly/monarchmonitors)

Weekly Monarch Monitoring

Date	Start Time	Stop Time	Species Name	# Plants	# Eggs	#1 <sup>st</sup> Instar	#2 <sup>nd</sup> Instar	#3 <sup>rd</sup> Instar	#4 <sup>th</sup> Instar	#5 <sup>th</sup> Instar	# Pupae	# Adults

**Site and Patches Survey**

Welcome to the Monarch Community being a part of groundbreaking science helping monarchs.

In this one-time survey, we would like patches you will be monitoring through your site is your home and all of the n monitor around it. Each site could cor milkweed, separated by non-natural l You only need to fill this survey out o the milkweed patches you plan to mo you do not need to monitor every pat For questions, please email [monarchs@fieldmuseum.org](mailto:monarchs@fieldmuseum.org)

\*Name

\_\_\_\_\_

\*Email

\_\_\_\_\_


**Please tell us about your site.**

Please provide a short description of your site.

\_\_\_\_\_

\*Please select the location of your site on the map.

Please enter the address of your site in the search bar or use the map to select the location of your site. (Note that a map showing site locations will be visible to participants on the project website. Site locations show the general neighborhood and not the specific address of your site.)



If you would like to, please provide a short label that will be publicly visible when your site's general location is shown.

Examples include: Hase family garden, Erik's yard, etc.

\_\_\_\_\_

**Weekly Patch Survey**

Welcome to the Monarch Community Science Project being a part of groundbreaking science to show helping monarchs.

In this survey, we would like you to tell us about monitoring this week. Please fill out this survey for week. If you have used the emailed survey link, r (including patch name, milkweed species, and n plants) will automatically be filled in based on y Please make sure to fill in any remaining fields or number of plants) if there are any changes. For q [monarchs@fieldmuseum.org](mailto:monarchs@fieldmuseum.org).

\*What is the name of your patch?

Please make sure you are consistent with how the patch is nam

\_\_\_\_\_

\*What day did you monitor?

**Tell us about the first milkweed species in your patch.**

\*Please select your milkweed species.

-Please Select- \_\_\_\_\_

Common Milkweed (*Asclepias syriaca*)

Butterfly Milkweed (*Asclepias tuberosa*)

Swamp Milkweed (*Asclepias incarnata*)

Whorled Milkweed (*Asclepias verticillata*)

Selected above did you count?  
(Default value is your last plant count. Please changed. The number will likely change)

Did you count any eggs?\*

Yes

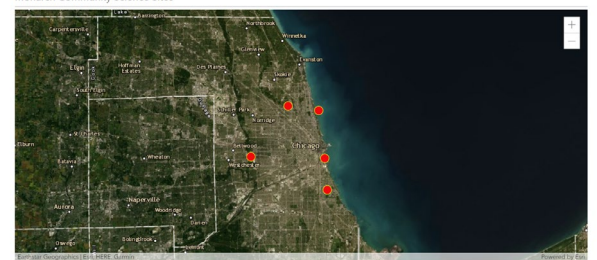
No

\*How many eggs did you count?




Check out our 2020 Monitoring Results so far....

Participants	Patches	Monitoring Visits
5	11	3
Total Eggs	Total Fifth Instars	Total Adult Monarchs Observed
10	6	4



**Reminder: Monitor your milkweed patch**

 [monarchs@fieldmuseum.org](mailto:monarchs@fieldmuseum.org)  
 to me ▾

Dear Karen Klingler:

Thank you for participating in the Field Museum's Monarch Community Science Project. This is your friendly reminder a weekly survey for your patch, **north corner**, which you monitored on 03/31/2022.

[Click here to complete your weekly survey of this patch.](#)

To review all of your submitted data, please [click here](#) and sign in with your community account. Please note that this : GPS location, so the map will show your patch in the ocean. If you would like to edit any of your records, make sure th top is turned on, select the desired row, and then select the pencil icon towards the top right of the form. After making : the **Submit** button to save your changes.

Please email us if you have any questions. Thanks!

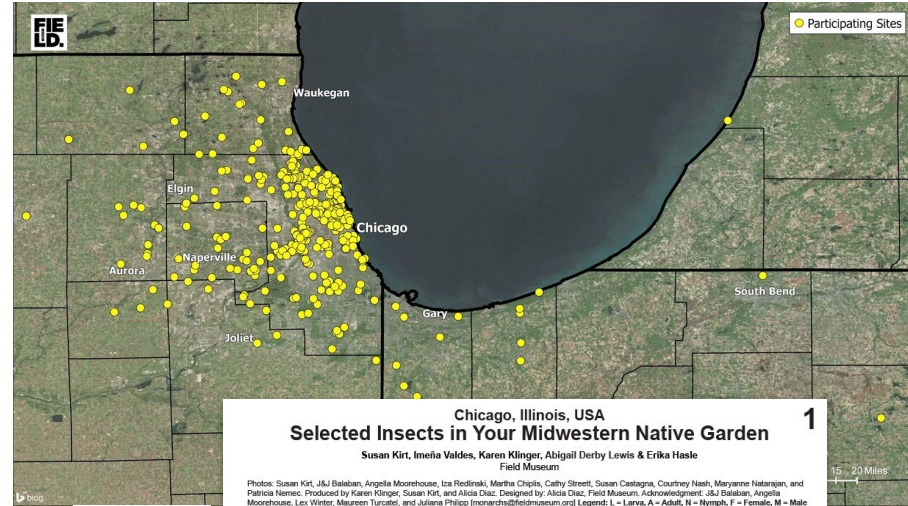
Monarch Community Science Team





# Participation and Retention

- 410 Participants submit 428 Sites
- 100 Participants & Sites returned
- Avg weeks monitored: 4.66 - 8.125
- 5,900 Monitoring observations
- 1,600 Photos received



**Chicago, Illinois, USA**  
**Selected Insects in Your Midwestern Native Garden** 1  
Susan Kirt, Ineña Valdes, Karen Klinger, Abigail Derby Lewis & Erika Hasle  
Field Museum

Photos: Susan Kirt, J&J Balaban, Angella Moorehouse, Iza Redinski, Martha Chipils, Cathy Street, Susan Castagna, Courtney Nash, Maryanne Natanjan, and Patricia Nemeec. Produced by Karen Klinger, Susan Kirt, and Alicia Diaz. Designed by Alicia Diaz. Field Museum. Acknowledgement: J&J Balaban, Angella Moorehouse, Lex Winter, Meazem Turabati, and Juliana Philip ([monarchs@fieldmuseum.org](mailto:monarchs@fieldmuseum.org)). Legend: L = Larva, A = Adult, N = Nymph, F = Female, M = Male

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**ABOUT THIS GUIDE**  
Each section of this guide highlights a different group of insects or spiders commonly found in midwestern gardens. While this is not an exhaustive list of insects, it is intended to spark your curiosity to find examples in your garden. In the references, we provide suggestions for other sources of identification information. Taking a photo and posting it to iNaturalist is also a good way to get your species identified.

**YOUR MIDWESTERN NATIVE GARDEN**  
Native plant gardens attract a host of native and non-native wildlife. Most of the images in this guide were captured in and around the Chicago area and were supplied by local gardeners and nature enthusiasts, just like you! Gardens change throughout the day and over the course of the season, be sure to note how your garden changes week to week.

**MILKWEED & OTHER POLLINATOR FRIENDLY NATIVE PLANTS**  
The term "native plant" refers to plants that evolved along with the landscape over thousands of years. These plants have unique relationships with local wildlife and some, like milkweed, are host species, meaning they are the only food source for part of the insect's life. Milkweed plants are the host species for monarch butterfly caterpillars. If you have milkweed in your garden, consider reporting your sightings to our Monarch Community Science Project ([bit.ly/monarchcommunity](http://bit.ly/monarchcommunity)). Milkweed is also home to a wide range of other species. See if you can spot them this year!

**FIND THESE MILKWEED-RELIANT INSECTS THIS YEAR!**

- 1 *Aphis nerii*  
Oleander aphid
- 2 *Danaus plexippus* (L.)  
Monarch butterfly
- 3 *Euchaetes egle*  
Milkweed tussock caterpillar



Martha Chipils



Deb Link



Patricia Nemeec



Jeri Webb





# Eggs and Caterpillars



Courtney Nash



Elizabeth Kochvar



Susan Sevcik



Dawn Kursar



Cathy Streett



Karen Klinger



Phyllis  
Schulte



# Garden Characteristics



Lindsay Fullerton



Angie Hernandez



Janelle Khesghi



Debra Leingang



Holly Rowe



Francie Muraski-Stotz



Lisa Loberg



Jamie Symons



Bill Carroll

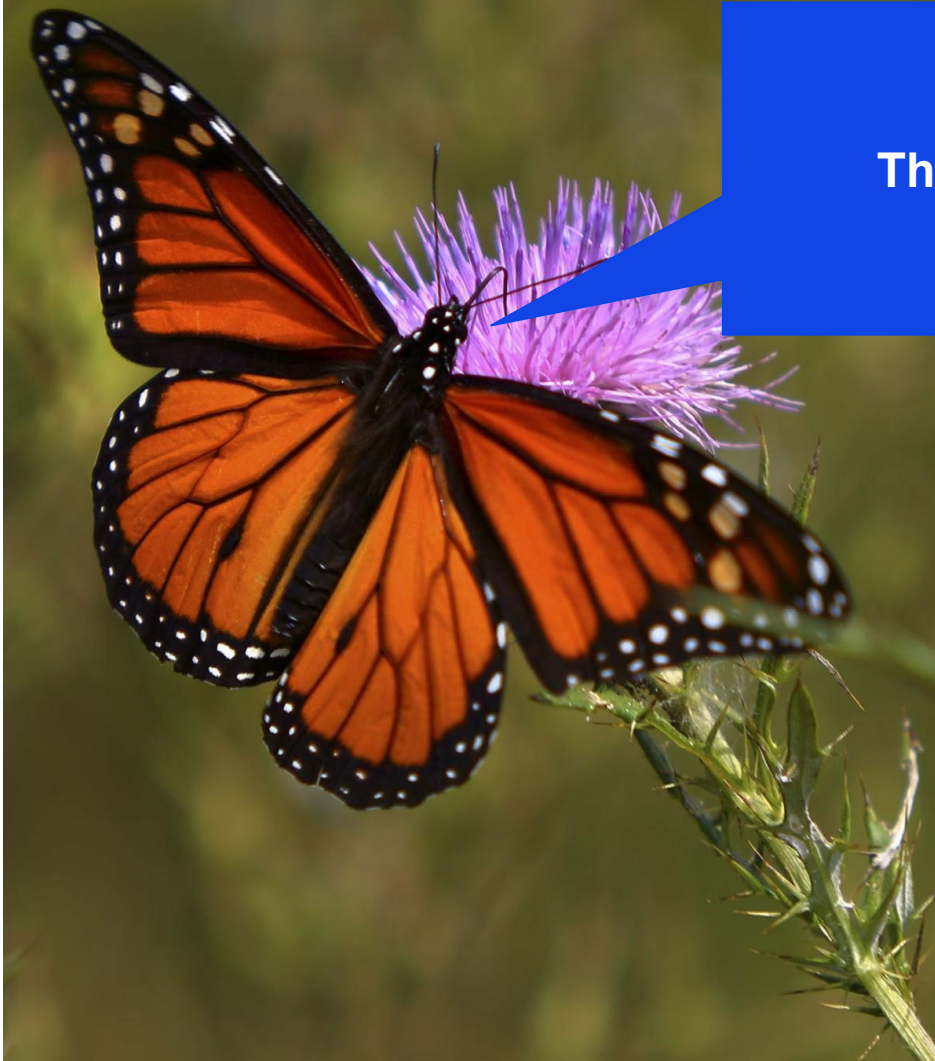


# Key Takeaways

- Reduce barriers
  - Free plants, Training, Data entry
- Engage participants
  - Newsletters, Emails, Celebrations
- Collect data
- Time and teamwork
- Sharing results







Thank You!