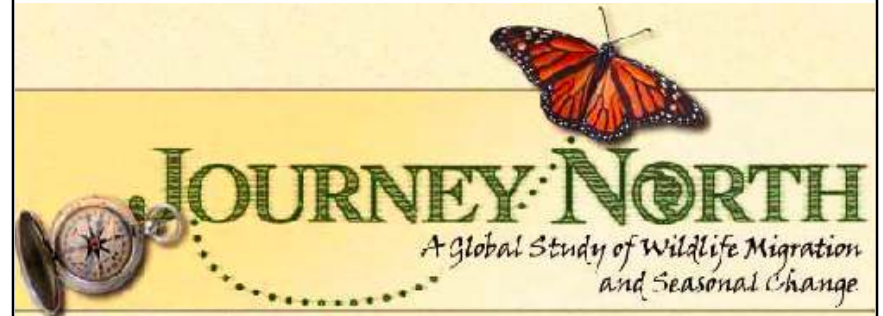




© 2007 Journey North
<http://www.learner.org/jnorth/>
Layout by Margaret Black



Nectar and Migration **Finding Food Along the Way**



Photos and text by Elizabeth Howard

This monarch butterfly is on its way to Mexico. Look closely. Is there anything in this picture that you've never seen before? What do you think is about to happen?



The monarch has stopped in a garden to eat. Monarchs eat a sweet liquid called nectar. They find the nectar in a special part of the flower. Monarchs do not have teeth and they cannot chew, so how do they eat the nectar?

1



Monarchs eat with their proboscis. The proboscis is a long, narrow tube. It works like a drinking straw. The proboscis looks like a monarch's leg in the picture below.



2

The flowers in this garden are asters. They are wildflowers that bloom across the north in the fall. Asters—and goldenrod—are an important food for monarchs as they migrate.



This is a New England aster.

Asters have tiny yellow "florets" which you can see in the center of the picture below. Each floret holds a butterfly-sized sip of nectar. Nectar is about 20% sugar and 80% water.



The florets in this flower have opened (bloomed) on the outside first. Those in the center will bloom later.

Monarchs stand on a flower as they eat. They move quickly from one floret to the next—about as quickly as you can say, *dip and sip, dip and sip, dip and sip...*



Then off the monarch flies!



Its tiny proboscis is rolled up like a party straw. Can you see it? The butterfly will coil the proboscis more tightly as it continues to fly and pull up its legs, the way a plane pulls up the landing gear.

Monarchs must hurry during fall migration. Try to imagine why...



5

Monarchs must hurry because things are about to change. Look at this picture for a clue. Then read below.



Fall is coming. Frost will kill the flowers across the north. Even in the south, the growing season is slowing down and frost is a danger. The flowers in the picture above have gone to seed. Flowers only provide nectar when they are blooming.

Monarchs must hurry because they must eat *enough* nectar during fall migration.

"Monarchs are so intent on eating during fall migration that you can sneak up and grab them with your fingers," says Dr. Lincoln Brower.

6



You know its fall migration when you look at this picture. The asters are blooming, the butterflies are eating so hungrily that they tolerate one another—and they let the photographer come very close to take this picture.

Any extra nectar a monarch eats can be stored as fat. Monarchs store fat in the abdomen.

The fat will help the butterfly survive three seasons:

- the fall migration
- the 5 month over wintering season
- the spring migration

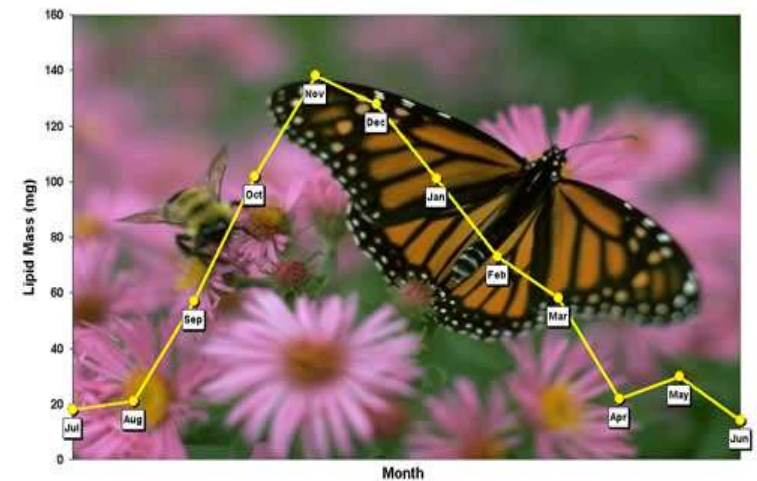
7

Compare the two monarchs below. Which looks better prepared to survive a winter in Mexico?



As adults, monarchs do not need food for growth. Butterflies do not grow as adults. Their wings stay the same size all of their lives.

This graph shows how much fat a typical monarch has each month of the year. Notice what happens during fall migration, between August and November. Notice what happens during the winter and spring months, from November to April.

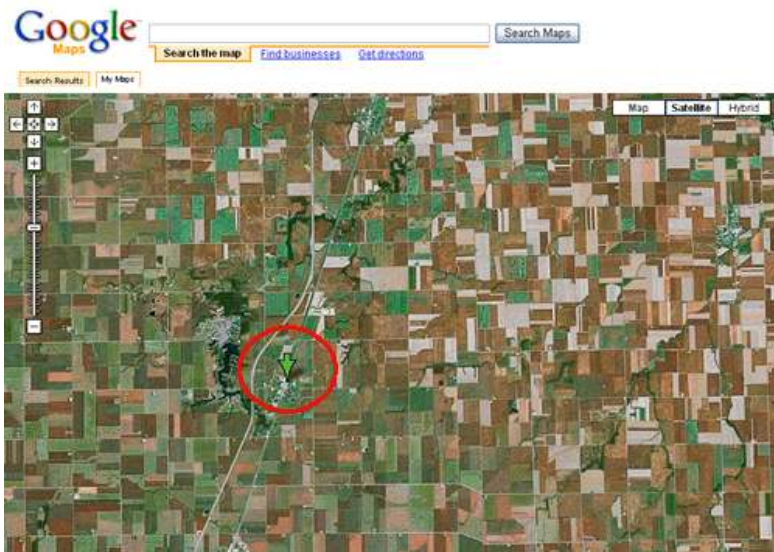


8

You Can Help!

People can help monarchs by providing nectar. A butterfly garden can be an important place for a monarch to refuel. This Google map shows how humans are using some of the land monarchs cross. Find the green arrow on the map where a woman planted a butterfly garden. The monarchs found it!

"We observed around *100 monarchs* resting and feeding today in our front yard butterfly garden. We live out in the country. We are surrounded by corn and soybean fields —for miles in each direction— so we are an oasis."



9

Learn More...

Try This!

- 1) Explore a satellite snapshot of Loda, Illinois on Google Maps.
<http://maps.google.com>
- 2) Using your mouse, "fly" across the landscape. Measure how many miles this patchwork pattern of cropland extends. Where could a monarch find nectar?
- 3) Find out how you can protect monarch habitat.

People are helping wildlife by creating backyard refuges and other forms of habitat restoration. See what others are doing and how you can help:



Un-pave the way for wildlife
<http://www.learner.org/jnorth/unpave/index.html>



Create a Monarch Watch Waystation
<http://www.monarchwatch.org/waystations/>

10