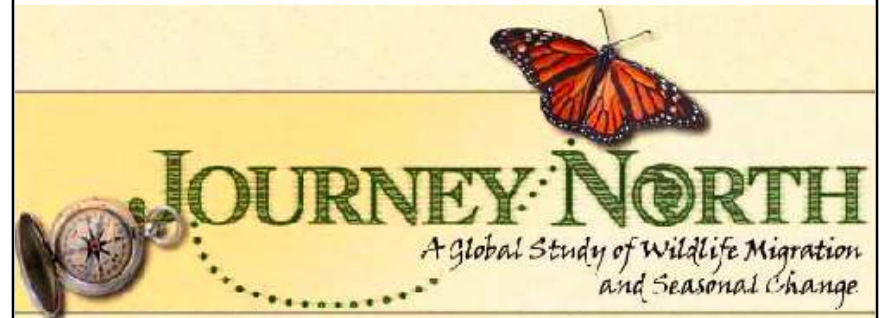




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Let's Find Monarchs! Clues in the Milkweed Patch



by Elizabeth Howard

Look closely. Can you find the monarch in this picture? Monarchs leave tell-tale signs on the milkweed they eat. This "leaf damage" gives clues about when and where monarchs have been feeding. Let's see what stories milkweed leaves can tell.



Milkweed is the only food monarch caterpillars eat, so it's the best place to find one. Do you know milkweed when you see it?

1

Notice the milkweed leaf that is circled in the picture below. That fallen leaf is like a flag that says, "There's a monarch under me!" Look underneath and you are likely to find a hungry caterpillar.



What happened to the leaf? Monarchs do a curious thing. They chew a notch in the stalk of a leaf before they eat it.

2

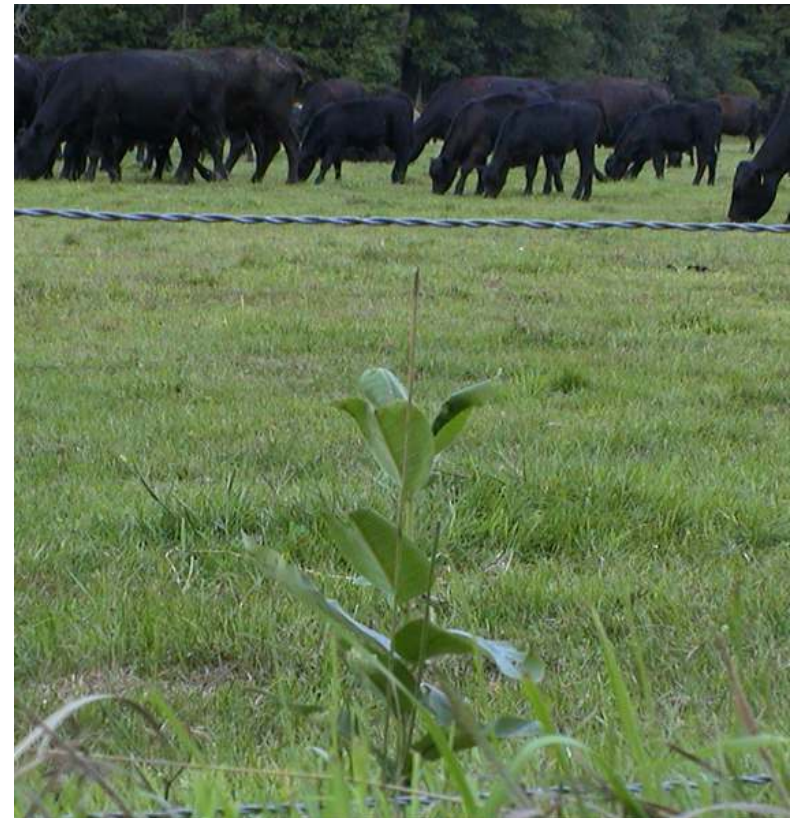
This behavior is called "leaf-notching."

Why would a monarch cut the very leaf it is standing upon, until it dangles like a loose tooth? Because milkweed contains a sticky, white juice called latex. Leaf-notching cuts off the supply of latex to the leaves. This makes milkweed safe for the monarch to eat.



3

Most birds and mammals avoid eating milkweed because it contains chemicals that affect their hearts. (The chemicals are called "cardiac glycosides.") Just look at the pasture below! The cows left the milkweed behind as they grazed.



4

When you go monarch hunting, you can find monarchs of different sizes and ages. Monarch caterpillars grow through 5 stages. Each stage is called an "instar." This picture shows a monarch at each of the five instars.



Photo © Karen Oberhauser

*"Larva" is another word for caterpillar.
"Larvae" is the plural. It means caterpillars.*

You might see a larva like this one on a milkweed leaf. What is happening here? List three things you notice. Then read below.

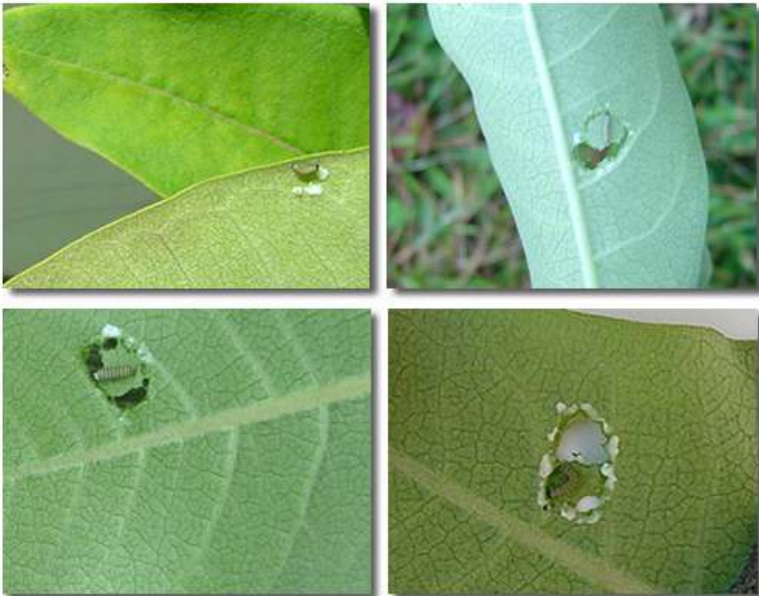


This monarch has just molted. You can see the skin behind the larva. Molting is the process of changing from one instar into the next.

Always be gentle when you turn over a milkweed leaf. You may find a tiny 1st instar larva underneath.



Here are four different leaves. Each is being eaten by a 1st instar larva. Take a close look. Describe what you think the caterpillar did before each picture was taken. What do you think will happen next?



7

There must be a reason that tiny monarchs make the same pattern whenever they eat. If you guessed they are avoiding latex, you are right. Latex is especially dangerous to monarchs this small. It can glue their mandibles closed! By cutting a circle they stop the latex from flowing in the center portion, which they then eat.



8

Sometimes you will turn over a leaf and discover a monarch egg. It's fine to collect eggs and raise monarchs yourself. You will be protecting the egg from predators and disease. These strike 90% of all monarchs before they complete the 5th instar stage. "I call them 'rescued eggs'," says naturalist Carol Cullar.



9

If you find an egg that is black on top you have found an egg that's about to hatch. Watch carefully. You may have the chance to see the monarch hatch...



...and then eat its own shell!



10

Just as you think you're becoming an expert you are sure to find something new. Hmmmm.... Is this a monarch egg?



Or was that a drop of latex? Here is a close-up view of a monarch egg for comparison. How are they different?



Notice the creamy white color of the egg, its football shape, and the pattern of ridges on its surface.

Is everybody ready to go outside? It's time to go monarch hunting in the milkweed patch. Enjoy!



Photo courtesy of Margaret Black

Also see:

<p>Now Playing...</p> <p>What is the Caterpillar Doing... and Why?</p>	 <p>The <i>petiole</i> is the stalk of a leaf.</p>
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<http://www.learner.org/jnorth/images/graphics/monarch/LeafNotch.wmv>