

Monarch Migration

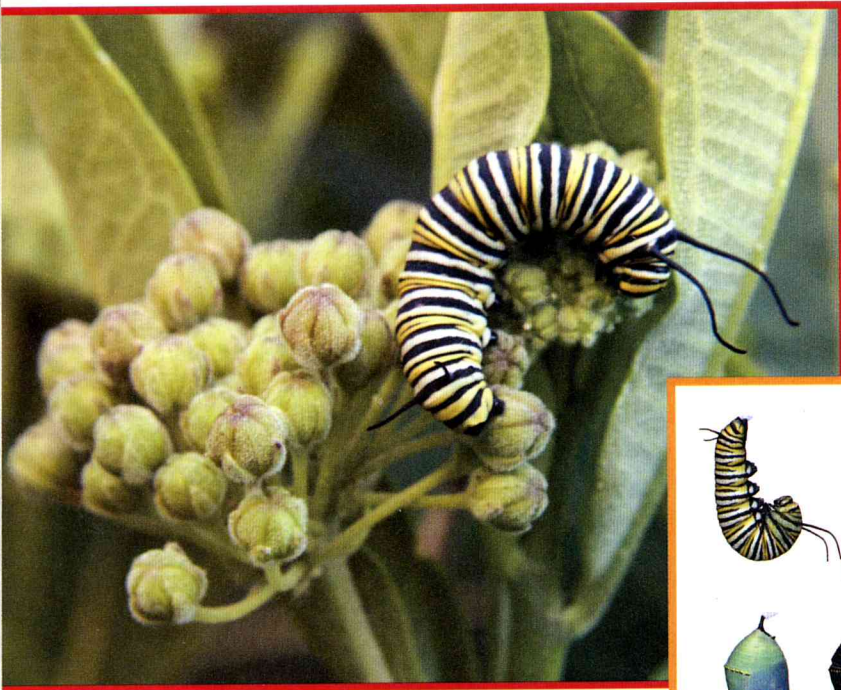


The monarch butterfly is a migratory animal. It travels from the northern United States and southern Canada to Mexico, and then comes back. But no one butterfly makes the whole round trip.

The migration system involves several generations of butterflies.

Let's start with a female monarch butterfly in Ohio. It's August. She hatched farther south, maybe on a farm in Kentucky. After she mates, she looks for a place to lay her eggs. She lays her eggs on milkweed because milkweed is the only food source for monarch larvae.

Soon after laying her eggs, the female butterfly dies. Her eggs hatch in a few weeks. The larvae eat milkweed leaves for several weeks, until they are about the size of your index finger. Then the monarch larvae pupate. They spend a few weeks inside the protective chrysalis. After the change from larvae to adult, each chrysalis splits open. The new adult butterflies climb out and pump up their new wings.



By this time, it is fall. The young monarchs have an adventure ahead. They must fly from Ohio to Mexico. Fall monarch butterflies instinctively start to migrate south all by themselves. The young monarchs head for a place they have never seen before. They take off without a map or a leader. They fly and fly, guided by instinct. Their need to migrate south is an **inherited trait** shared by all the fall monarchs.

Migrating monarchs from all over the eastern half of the United States end up in a small pine-oak forest in the mountains in central Mexico. Here the butterflies settle down with millions of other monarchs from the north. It is a safe place to spend the winter. The millions of monarchs crowd together for protection from predators and weather. They are inactive throughout the winter.

In spring, the days get longer and warmer. The butterflies become active, drink water, and start flying north. But the butterflies that migrated from Ohio do not fly back to Ohio. They fly as far as Texas, Louisiana, or Mississippi. They look for fields of milkweed and lay their eggs. The monarchs that made the long migration to Mexico die. Their offspring, generation 1, continue the northward migration.



When the weather gets cold, monarchs migrate from the eastern United States to central Mexico. They cluster in the pine-oak forest.

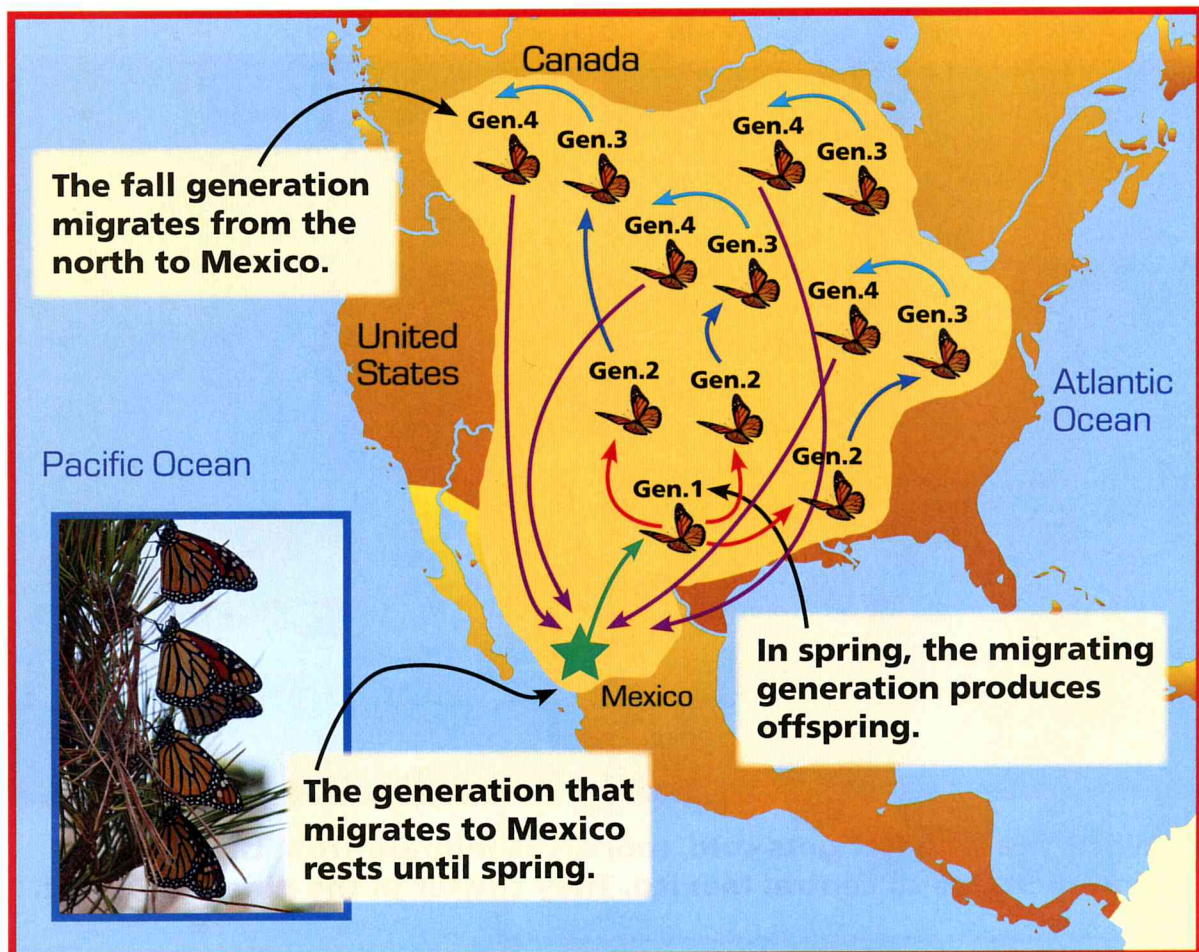
These first generation (Gen. 1) spring monarchs grow to be adults and fly a short distance north. They find milkweed, mate, lay eggs, and die. Their offspring, the second generation (Gen. 2), continue the northward migration. They find milkweed, mate, lay eggs, and die. Their offspring, generation 3, continue the journey.

The third generation (Gen. 3) monarchs fly north. They reach the limit of the monarch's range. By now, it is well into the summer. Some adult monarchs make it to Ohio, completing the Ohio monarch cycle. Others end up in Wisconsin, Michigan, or Maine. Some continue north into Canada. These third generation migrants find milkweed, mate, lay eggs, and die. By the time the fourth generation (Gen. 4) hatches, it is fall.

The adults in generation 4 live much longer than their parents or grandparents. They live for 6 to 7 months. They start to migrate south, responding to the shorter, cooler days of fall.

Look at the map of the monarch migration. Can you trace the northern migration, generation by generation?

The monarch butterfly migration system



Monarch observers have recently seen many fewer monarch butterflies arriving in Mexico. The reasons for the decrease are not fully understood. One reason is a decrease in milkweed plants along the monarch's migratory path. Milkweed used to grow as a weed on farmland. Now farmers have better ways to prevent milkweed from growing. So monarchs have a harder time finding safe locations to lay eggs. The monarch larva depends on the milkweed plant for food. Any change in milkweed growth affects the survival of monarch populations.

How can you help the monarch populations? You can help teach people in your community about the migration system of monarchs and their need for milkweed. You can find out what native milkweed plants grow in your state and plant milkweed seeds. You can work with others to make sure milkweed plants thrive.



Thinking about Monarchs

1. Think about the monarch migration system. What are the parts?
2. What natural causes might affect the growth of milkweed plants? How might humans affect milkweed growth?
3. Predict the effect of logging in the pine-oak forest of central Mexico where monarchs spend the winter.
4. What are communities doing to protect monarchs?