



Monarch Butterfly Frequently Asked Questions

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Answers provided by Dr. Karen Oberhauser, University of Minnesota.

Do monarchs live everywhere in North America?

Monarchs live everywhere milkweed grows. There are a few monarchs high in the mountains in the Rocky Mountain range because there is not much milkweed growing there, and it is cooler than is ideal for monarchs. In northern Canada, the climate is too cool for milkweed to grow, so the current northernmost distribution of monarchs is southern Ontario.

Are monarchs in western North America the same species as those in eastern North America?

Yes.

Is there a location in North America with the most number of monarch butterflies?

The Midwest tends to have the highest numbers of monarchs; and, these are the areas where the most milkweeds grow. In North America, 40 to 45 degrees latitude and 90 to 100 degrees longitude have the most monarchs.

How can you tell a monarch from a Viceroy?

The Viceroy butterfly is smaller than the monarch butterfly, on average, but some monarchs are smaller than some Viceroys are, so size is not a good way to tell them apart. Viceroys have a black line across the hindwing vein.

How much do monarchs weigh?

Monarchs weigh less than one gram, and vary from approximately 0.75 of a gram for large monarchs to smaller monarchs, which weigh as little as 0.25 grams. On the average, the adults weigh about half a gram.

Do monarchs eat the same thing everywhere they live in North America?

Yes and no: larvae require milkweed as food but the adults will nectar on many different flowering plants. There are many species of milkweed, and monarch larvae eat most of them. Because different milkweed species grow in different regions, there are regional differences in what they eat.

Is it true that butterflies taste flowers with their feet?

Monarchs have sensory organs on their feet and heads that help them identify different plants. It is uncertain whether insects “taste” as we are able to do.

Can monarch larva eat other plants in addition to milkweed?

Host plants in the milkweed family are essential to the developing larva; without it, they would not survive. However, there are many species of milkweed, and monarchs can eat most of them. They also eat a plant that is not called milkweed, but is in the same family: *Cynanchum laeve*, or sand vine.

What do monarchs eat in Mexico when overwintering?

Monarchs store enough fat so that most of them do not need to eat when they are overwintering. That is why it is so important to have flowering plants available along their spring and fall flyways. They do need to drink during the winter, so it is crucial that water or dew is available to them.

Do all monarchs go to Mexico to overwinter?

Monarchs west of the Rocky Mountain Range overwinter in California along the coast. There are many roost sites along the California coast. The coastal forests provide a similar microhabitat to the mountains in Mexico where the monarchs east of the Rocky Mountains overwinter.

If monarchs live several weeks as adults, then how can they overwinter as adults?

Typically, monarchs live between 2 and 6 weeks. The last generation of the year (determined by the decline of nectar plants and environmental factors) do not become sexually mature right after they emerge as adults, as the summer generations do. The late summer butterflies go into what is called reproductive diapause, which means they cannot reproduce. Once spring arrives, the monarchs become mature and reproduce starting the new first generation that make their way north. These monarchs can live much longer for two reasons. They are not using energy to reproduce, and they are in a very cool location. Cool temperatures slow their metabolism, allowing them to live longer.

Why do monarchs gather on trees?

This is called clustering. There are no definitive answers to the question of why they do it; they could either all be attracted to the same conditions that exist in a particular spot, or they could benefit from being a group. Possible benefits they could gain from being together include protecting themselves from the elements and or overwhelming predators. Perhaps a group of monarchs can share body heat, and thus gain protection from cool temperatures. Alternatively, a single butterfly in a large group would have a smaller chance of being eaten by a predator.

What happens to other butterflies in the winter? They do not migrate and yet they survive?

Most butterflies can survive freezing temperatures during some stage of their lives. Each species winters in a particular stage. For example, swallowtails overwinter as pupae, mourning cloaks overwinter as adults, and viceroys overwinter as small larvae. Monarchs cannot tolerate the cold winters and must migrate to survive the winter temperatures.

Is there more than one generation of monarchs each year?

There are multiple generations of monarchs each year. The monarchs that arrive in Texas in February are usually those that overwintered in Mexico, but the offspring of these monarchs move further north. The monarchs that arrive in the northern part of their range are the offspring of the generation that wintered in Mexico. There are then two generations that do not migrate. The monarchs that travel south in the late summer to Mexico have never been there before!

How many eggs do monarchs lay?

Female monarchs can lay over 1,000 eggs in their lifetime. However, in the wild they probably lay an average of about 400 to 500 eggs.

How long do monarchs stay in their cocoon?

The pupa of a butterfly is called a chrysalis rather than a cocoon. The difference in the structures is that many moths spin a layer of silk for protection and this structure is called a cocoon. They remain in the chrysalis for about 8-12 days, depending on temperature.

What is a chrysalis made of?

The chrysalis is simply the word for the butterfly during the pupa stage. The outside of the chrysalis is the exoskeleton, or skin, of the pupa. When it becomes time for the larva (caterpillar) to become a chrysalis, the caterpillar spins a silk button from which it hangs. The larva forms its body in a J-shape and the skin splits and falls away. Underneath the old skin is the jade green chrysalis.

How do monarchs get out of the chrysalis?

The front of the chrysalis splits open and the butterfly emerges. At this time, their wings are folded.

How do the wings unfold?

The wings have veins that fluid is pumped through which inflate the wings to their proper shape and size. The butterfly waits until its wings are dry to fly. If the butterfly cannot hang upside down while its wings are inflating and hardening, the wings will not form properly and the butterfly will not be able to fly.

Can you tell from the chrysalis whether the butterfly will be a male or female?

Yes, but it is a little difficult. There is a very small line present in one of the abdominal segments of the female that is not present in the male.

How can you tell a male monarch from a female?

Males have a dot on the vein on their hindwing. The dot is not coloration; it is made of specialized scales. In related species, the male produces a scent called a pheromone that attracts females. The male and female also have differently shaped abdomens, and the female's wing veins look slightly wider than the males.

How long do monarchs live?

Monarch butterflies typically live from 2 to 6 weeks except for the last generation of the year, which can live up to 8 to 9 months.

How can I get monarchs to come to my flower garden?

Any flowering plants will attract monarchs, which will nectar on the flowers. Planting milkweed in your garden will assure that monarchs will be present and will give you a close-up look at their eggs and larvae.



For additional Frequently Asked Questions answered by monarch butterfly expert Dr. Karen Oberhauser, see [Monarch Lab, Monarchs in the Classroom - "Ask the Expert"](#).