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Monarch Butterflies Podcast and Scientist Interview

Danaus plexippus

Episode I

Every year monarch butterflies begin a journey north from their overwintering grounds in Mexican forests. The epic migration spans generations and the better part of a continent. In this first of two episodes, we'll meet a pair of women united by their fascination with this iconic insect. Mexican geographer Isabel Ramírez and American biologist Karen Oberhauser are working to save monarch habitat on both ends of this remarkable insect's 2,500 mile journey.

Transcript

Ari: From the Encyclopedia of Life, this is One Species at a Time. I'm Ari Daniel Shapiro.

We've recently finished a Google Earth tour showcasing the migration of monarch butterflies or Danaus plexippus, and the people that help them out along the way. We're devoting our next two episodes to these butterflies, to give you an audio preview of the tour, which you can find at eol.org.

Our story starts in the mountains of Michoacán, in western Mexico – in mid-February. This is Sierra Chincua, and Isabel Ramírez stands among the trees. Her orange outfit matches the monarch butterflies surrounding her. You can tell from her voice that she's a butterfly lover.

Ramírez: They are beautiful – it's impossible not to be attracted by monarch butterflies. They provide a feeling of tranquility and peace and wonder.

Ari: Ramírez is a geographer at the National Autonomous University of Mexico. She's working to conserve the forests of Michoacán, to prevent illegal logging – for the sake of the trees, and the butterflies. Because literally millions and millions of monarchs call this sanctuary home in the wintertime.

Ramírez: Maybe around 50 million butterflies around us in this moment.

Ari: And that's just in these couple acres. Monarchs coat the ground, the trees, and before long – Ramírez has a couple in her hands.

Ramírez: I think they are small pieces of sunlight.

Ari: Such a delicate animal – each one the weight of a paper clip. And yet, by the middle of March, it's time…for the monarchs to begin one of the most epic journeys in the animal kingdom.

Oberhauser: Their incredible migration is unparalleled.

Ari: Karen Oberhauser has studied monarchs for 25 years. She's a biologist at the University of Minnesota. Ok, cue the epic journey music.

Oberhauser: The males and the females leave the overwintering colonies, and fly up into southern Texas.

Ari: The butterflies fan out, covering the southeastern quarter of the US, laying eggs as they go.

Oberhauser: They're looking for specific kinds of habitat along the way.

Ari: Habitat that must include milkweed – it's the only kind of plant that the caterpillars can eat – as well as other nectar sources for the adults. Now, let's pause for a moment here, and consider the monarchs laying their little eggs on the milkweed.

Oberhauser: We have this caterpillar that's kind of like a worm – they're this earthbound thing that's kind of squishy. And kind of mushy. And then they go through this transformation where it's almost like they die when they get into the chrysalis. So they're in this stage that from the outside at least, they don't even look alive. And then, they transform into this incredibly beautiful organism that throws off the chains of the Earth, and is able to fly away.

Ari: Ok, back to the journey. The butterflies from Mexico live no more than a month after leaving their overwintering mountaintops and laying their eggs. And so it's this next generation, born in the southeastern US, that picks up the next chapter of the migration.

Oberhauser: Which goes northward, so this is everything kind of from a line through the middle of the United States up into southern Canada.

Ari: The migration is filled with peril. Butterfly eggs are gobbled down by ants and spiders and wasps. Most animals avoid eating the adult monarchs because they taste bad, but there are a couple types of birds that do find them palatable – the black-headed grosbeak and the black-backed oriole. Then there's bad weather. A drought or a really bad storm can decimate the

monarch numbers. But perhaps the biggest threat on their journey these days is habitat destruction. And that habitat consists of milkweed.

Oberhauser: The middle of the United States used to be one big prairie, and all of that land was suitable habitat. We now have a patchwork of cities and agricultural fields broken up by completely inappropriate habitat, which would be things like roads and parking lots.

Ari: As a result, monarch butterfly numbers are down. Now, Oberhauser told me that cities aren't necessarily bad for monarchs. Take Minneapolis, where residents have planted milkweed and other butterfly-friendly plants in parks, lawns, and gardens.

Despite the difficulties…there are still many butterflies that do make it, that find milkweed, and that lay more eggs.

Oberhauser: They go through 2 or 3 more generations in the northern part of their range. And then, after about August 15th, the butterflies fly south again to the overwintering sites in Mexico. Yeah, it's incredible.

Ari: No one butterfly completes the whole journey – and for those of you keeping score, it takes up to 4 generations to finish the full migration – to leave Mexico, and to get back again. As for how these butterflies know where to go from generation to generation? We don't really know. It's still an active area of research.

Now, that's just one part of the story. The story told from the butterfly's point of view. We'll pick up here in our next episode. But in the meantime, visit eol.org and check out our monarch butterfly Google Earth tour.

Meet the Scientist

Meet scientists Isabel Ramírez and Karen Oberhauser, who you heard featured in our first Monarch Butterflies podcast:

Isabel Ramírez Karen Oberhauser

Where do you work?

Isabel: I work at the Centro de Investigaciones en Geografía Ambiental, Universidad Nacional Autónoma de México.

Karen: I work at the Department of Fisheries, Wildlife and Conservation Biology, University of Minnesota.

What do you study?

Isabel: I work on landscape ecology topics applied to conservation and natural resources management of the monarch butterfly habitat in Mexico.

Karen: I study several aspects of monarch butterfly ecology and conservation: how climate change might affect monarchs, what eats them, how many times they mate in their short lifetimes, how many eggs they lay, and what habitats are important to them.

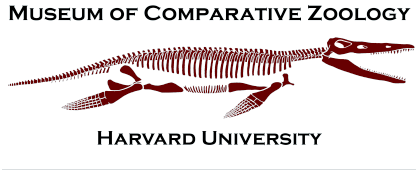
What are three titles you would give yourself?

Isabel: Geographer, environmentalist, committed with the welfare of local communities.

Karen: Biologist, Lepidopterist, Teacher.

What do you like to do when you are not working?
Isabel: I juggle to, at the same time, attend to my family (I have two children), do some exercise, enjoy time with my friends, watch movies and read historical novels.
Karen: I like to hang out in prairies and woods with my family, friends, and dog; do yoga; and read murder mysteries.

What do you like most about science?
Isabel: I really like this planet, its nature and its people. So, doing this work, I think I can contribute a little bit to a better world: to help create a balance between nature and society and justice among all people.
Karen: I get to work with incredibly interesting and brilliant people in amazing settings, and love knowing that my work is leading to an understanding of how we can conserve a little corner of the planet's biodiversity.



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