



Encyclopedia of Life

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Western Silvery Aster Podcast and Scientist Interview

Symphyotrichum sericeum

When biologist Diana Bizecki Robson sits in the middle of the tallgrass prairie in a park near Winnipeg, she sees stars—the tiny, bright flowers of the western silvery aster. The prairie may seem a world away from our modern lives, but Robson shows how this endangered ecosystem's flora and fauna are intimately connected with our own well-being.

Transcript

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

Robson: I feel like a voyeur. Just saw two bees having sex on this flower! So bees really do do it.

Ari: Diana Bizecki Robson is crouched on the ground. It's not really the bees she's interested in. It's more the flowers, and their relationship with the bugs. The transcendent dance between the plants and their pollinators, and ultimately, as you'll hear, even us. Robson is a botanist at the Manitoba Museum in Winnipeg, Canada.

She's brought me here, to a tall grass prairie at Bird's Hill Park – just to the northeast of Winnipeg – to show me one plant in particular. It's a public park, but today, it's just the two of us out here.

Ari: So you look out, I mean, there's some trees ringing the far part of the field, but a lot of grass out there.

Robson: Yeah, it's got a few unique species that are popping out here.

Ari: Robson adjusts her eyes – from gazing outwards across the field to looking downwards. A thicket of plants looms into view for her. She stoops. She's found the one we're after. And before getting to why it is our dinners and our destinies depend on it, let's first get acquainted with the western silvery aster.

Robson: So its scientific name is *Symphyotrichum sericeum*. One of the key things about it is that it's got very fine hairs that are covering the leaves.

Ari: Can you show me?

Robson: Sure. It's quite a nice leaf to touch. It's very velvety.

Ari: Oh yeah, yeah, it's really soft. Tiny thing.

Robson: Yeah, and then it gets really beautiful, vibrant pink flowers on it.

Ari: The flowers are especially conspicuous to pollinating insects.

Robson: You'll get bees, you'll get flies, you'll get butterflies.

Ari: The hot pink flowers of the western silvery aster pop open on the prairie from mid-August to mid-September. Before and after, there are other plants that riot into bloom.

Robson: They hit their peaks one after another, so there's this continuous supply.

Ari: A continuous supply of nectar, that is. The successive waves of floral color that spread across the prairie allow an extraordinary number of insects to thrive here. Robson figures there are at least a hundred species of bees in this park. Bumblebees, leaf-cutting bees, sweat bees. And the pollinators are food for other creatures.

So now that I've painted this bucolic picture for you, let me undermine it a bit.

The western silvery aster is protected under Canada's Species at Risk Act.

Robson: This is one of the few places in Canada where you can actually still find tall grass prairie.

Ari: Here in this park?

Robson: In this park, yes.

Ari: Robson has seen the already small number of prairies across her province of Manitoba shrink even further due to cultivation of the land for agriculture. She's concerned about the loss of prairies, for a few reasons. First of all, destruction of habitat translates into loss of species.

Take the western silvery aster. It depends on insects for cross-pollination. And without this plant, there'd be a couple weeks when the pollinators would have a lot less to eat. This interdependency, says Robson, usually makes ecosystems hardy. But lose too many of the nodes in the web, and things grows brittle.

Robson: It's like a whole line of mountaineers. Right, they're all climbing up a mountain – they're all hitched to each other. Well, if the guy on the bottom falls off the mountain, everybody's probably gonna still stay attached, but once you lose too many of them, eventually everybody gets pulled down.

Ari: And that would be the ecosystem collapse?

Robson: Yeah.

Ari: The second reason is that humans actually depend on the prairies – through the very agriculture that's destroyed them. Some of the pollinating insects that feed on wild pollen in the prairies – they also pollinate, in part, the crops we eat. Things like apples, grapes, and flax fiber.

Robson: These little patches of prairie are habitat for these pollinators, and are a refuge for them. These pollinators are contributing billions of dollars to our economy.

Ari: For free.

Robson: Yeah, it's for free. It's a free service. All we have to do is leave them a little bit of habitat to nest in.

Ari: The final reason is a personal one. Robson's learned about the interconnections between the plants and insects by coming to this prairie throughout the summer with a little stool, and just watching – sometimes for 4 or 5 hours a day.

Robson: Most of the time, it's pretty quiet. You get a feel for the pace of nature. It's like breathing.

Ari: Out here on the prairie, Robson's had time to experience the intangible importance of wild places.

Robson: I think what a lot of people long for in their lives is some sense that they're connected to something bigger than themselves. And one of the things I've learned from biology is that everything is connected. Sometimes I'll get little sweat bees licking the sweat off of my hand. And I just let them do it because it actually makes me feel good. It's like, ok, well, this bee is getting something important from my body.

I like doing fieldwork alone. And I think people think, oh, well, that must be lonely for you. It's like, well, no, I'm not alone. I'm with the tree and I'm with the bees. It's a nice way of feeling connected to the Earth.

Ari: In other words, rescuing the prairie...is a way of rescuing ourselves.

To see a picture of Diana Bizecki Robson (and her western silvery aster), visit eol.org.

Our series, One Species at a Time, is produced by Atlantic Public Media in Woods Hole, Massachusetts. I'm Ari Daniel Shapiro.

Meet the Scientist

Meet botanist Diana Bizecki Robson, the scientist featured in the Western silvery aster podcast:



Where do you work?

The Manitoba Museum in Winnipeg, Canada.

What do you study?

My current research focuses on rare plants and pollination ecology.

What are three titles you would give yourself?

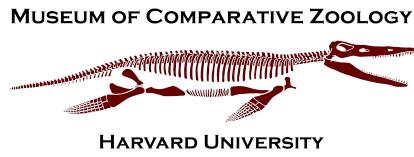
Ecologist, Botanist, Expert Strudel Maker.

What do you like to do when you are not working?

When I'm not in the lab I like to read, garden, bake, cycle and do yoga.

What do you like most about science?

I love being able to explore natural areas and observe interesting organisms when conducting my research.



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