MPR News | Minnesota Now Bat festival looks to dispel fears around the spooky animal, highlight their importance 01M64HS62JKB7CA0FKDRX0EY8A

NINA MOINI: Halloween is this weekend and that means ghosts, goblins, and maybe a few bats. Bats have a spooky reputation, but they're very important to Minnesota's ecosystems. If you want to learn all about these intriguing animals, the Minnesota Bat Festival is on Saturday at the Minnesota Valley National Wildlife Refuge in Bloomington.

Here with me now is mammal ecologist Melissa Boman with the Minnesota Biological Survey. She's helping put on this annual festival. Melissa, welcome to *Minnesota Now.*

MELISSA BOMAN: Thank you so much for having me.

NINA MOINI: Bats, how fun. So a bat festival. I have to admit, I did not about the bat festival. Will you tell us a little bit about why you put this on and what it's all about?

MELISSA BOMAN: Yeah, so we've been putting this on for about five years now, and it really is an opportunity to try to connect Minnesotans with bats, learning all about their importance, their unique characteristics, and also getting the folks that are working with bats or working on projects related to them connected to the public to help share all the cool things that are going on in Minnesota.

NINA MOINI: And there are eight bat species just in Minnesota, I also learned today. Can you tell us a little bit more about bats in Minnesota?

MELISSA BOMAN: Yeah. So we have, like you mentioned, eight bat species. Four of them will go underground to hibernate in caves and mines for the winter, and four of them will actually migrate out of the state to areas where winters are more mild. So a lot of people associate bats with just caves because they're dark, but it's about the overwintering habitat. And most folks don't realize we've got another set of bats that migrate long distances out of Minnesota and return in the spring.

NINA MOINI: That's fascinating. I would have thought all bats handled it all the same. So the bats, I mean, how important are they for the ecosystem? I mean, particularly the ones that are migrating.

MELISSA BOMAN: All of them are incredibly important to the ecosystem. Especially in Minnesota, our bats, they're all insectivores, which means they only eat insects. So they're really important for forest health.

A single bat can eat nearly their weight in insects each night, especially those mothers that are caring for pups and have to expend a lot of energy raising those baby bats. So they eat a lot of insects, which really contributes to reducing defoliation or damage to trees that insects may cause. And they also consume crop pests that really help reduce our needs for pesticides. So a lot of the cave bats love to forage within forest versus the migratory bats tend to be more open area foragers that might target more of those agricultural areas.

NINA MOINI: And do the migrating bats ever bring anything back, or is there a cross section, I guess, or a crossover of ecosystems to wherever they migrate to?

MELISSA BOMAN: Not that we're aware of.

NINA MOINI: OK, OK. What are the biggest threats to bats in Minnesota right now?

MELISSA BOMAN: So, like I said, we've got those cave bats and those migratory bats. And for the cave bats, their biggest threat is white-nose syndrome. This is a disease that is specific to cave-hibernating bats that is caused by a fungus.

The fungus thrives in cave systems and is non-native to the US, so it's believed to originate from Europe. And essentially, when those bats are underground, hibernating for the winter, that fungus will invade their tissues while their immune systems are shut down. So that causes those bats to wake up way too frequently and deplete their very important fat reserves and ends up causing major mortality.

On the other side, the migratory bats, thankfully, are not impacted by white-nose syndrome since they aren't using those cave environments, but they do face some challenges with mortality from wind turbines. So we see pretty high rates of mortality for those migratory species. So unfortunately, all of our bat species are facing some pretty severe conservation challenges.

NINA MOINI: For the cave bats you mentioned dealing with the fungus, are there any efforts to clean that up or change that, or what can you do once that has arrived?

MELISSA BOMAN: Yeah. So definitely, there's been a lot of work to create vaccines that may help bats fight infections while they're in those cave systems. There's been projects looking at trying to sterilize cave systems, but I think it's important to point out that there's a lot of natural flora and fauna within those caves that we have yet to learn about. And other things that maybe sterilizing the environment is less beneficial for those natural cave environments versus maybe an artificial, like a mine or something like that.

But a lot of effort has gone into trying to prevent infection for bats. One thing that we're seeing now is that it does seem like, after 10 years of white-nose syndrome being in Minnesota, we've stopped seeing those high mortality rates, and we're starting to see some promises in the summer-- promising increases in the summertime of these bats starting to grow in numbers in sites where they've crashed to very few bats. I mean, you had a colony that would have been in the hundreds, went down to the tens of individuals with how severe these declines were for white-nose syndrome.

NINA MOINI: So they're getting used to it, you think? They're just adapting?

MELISSA BOMAN: We're optimistically hopeful that these females that have survived white-nose syndrome are passing on some sort of genetics to their young that would also contribute to their survival. So we're hoping to start seeing increases. But these bats only have one pup a summer. So they're not like other mammals that have big litters. So it will take a significant amount of time before we see any real recovery of these species.

NINA MOINI: Wow, I didn't know they only have one. I love that I'm learning. So we're all learning so much. Thank you, Melissa.

If someone actually sees a bat, what should they do? I was thinking earlier-- the team and I were talking, and I was like, I don't think I've ever seen a bat. And everyone was like, oh, they're out there, and they're everywhere. So I mean, where are they? What should folks do if they see them?

MELISSA BOMAN: Yeah, so one, I would just recommend going out in the summertime and watching bats fly around sunset. If you're near a body of water, I mean, even in Minneapolis, there's a great-- we have important big rivers, the Mississippi, the Minnesota, so you can often see bats flying. It's just really fun to watch them.

I would say, if you see a bat, it's most likely going to be in the fall. During this period, bats will roost on buildings as they're on their migration journeys or as they're even migrating to the caves. And they might pause and rest on a building while they're conserving their energy.

So in those cases, I recommend usually leaving those bats alone. You can look at it, don't touch it, and you can report it to the DNR by using our Bat Observation Report. If you Google that, it'll come up. Or you can go to the DNR website and look up Report Bats.

NINA MOINI: When folks come to the bat festival, what draws folks there? I feel like sometimes bats get a bad rap, but people don't-- some animals have maybe a connotation or a reputation or a connection to Halloween. And sometimes people can forget that they're just innocent animals, part of an ecosystem, and performing tasks that they're supposed to perform. So what are you hoping people take away when they visit the bat festival?

MELISSA BOMAN: Yeah, so I think when they come to the bat festival, they have all sorts of opportunity to talk with experts that can help answer questions and maybe dispel some of the fears or the myths around bats. You start to learn all sorts of different facts about them.

Just in this conversation, I've given you just a couple tidbits. One of my favorite things to share is that bats are very long lived. One of the records we have in the Midwest is a 32-plus-year-old little brown bat.

NINA MOINI: Wow.

MELISSA BOMAN: And when you start to learn these facts about bats, you start to see them in a different light. We also have a ton of fun activities. We have a costume contest this year. So if you come with your bat-inspired costumes, you may win a prize. We have trivia.

And then we also have a live bat that will be there. His name is Eugene. He's a big brown bat. So it's your chance to see a bat, a live one, up close and seeing just how unique they are without maybe seeing the scary images like you find on Google with their teeth exposed.

NINA MOINI: Oh, that's wonderful. Melissa, just lastly, what can folks do in their own space, in their own backyard or neighborhood, to be helpful to bats?

MELISSA BOMAN: Yeah. So I think one thing that you can do is plant gardens that support night pollinators. And by avoiding the use of pesticides, you can support those food sources for bats. You can preserve large trees on the landscape to provide natural roofs.

And I would say the most important thing for listeners might be, when you do have a bat colony residing in a building, to conduct a safe exclusion for those bats, where they can leave but not reenter the building, just to get them out of your space, but also give them an opportunity to move on elsewhere.

NINA MOINI: Absolutely.

MELISSA BOMAN: So that tends to be one of the biggest conflicts with bats.

NINA MOINI: Absolutely. Melissa, thanks so much for your time and wishing you all the best this weekend. Have a great time.

MELISSA BOMAN: All right. Thank you so much.

NINA MOINI: Thank you. Melissa Boman is a mammal ecologist with the Minnesota Biological Survey. She'll be at the Minnesota Bat Festival this Saturday from 10:00 to 4:00 at the Minnesota Valley National Wildlife Refuge Visitor Center in Bloomington.