UW-Madison graduate student Abi Fergus dreamed of working with wolves at age 11. Now, as a Wildlife Specialist for the Bad River Band of Lake Superior Chippewa Indians and a graduate researcher with the Carnivore Coexistence lab at UW, she’s fulfilling her dream by studying the relationships between wolves and people.

Ever since she interned for the for the Bad River Tribe in 2017, Fergus said she missed the Bad River community, and wanted the opportunity to get back.

“I went for [the wildlife specialist position] because it was a dream job,” Fergus said. “I kind of took the gamble that I could handle full time school in the woods on top of the job, and my advisor Adrian Treves, my supervisor Naomi Tillison, and Tribal leadership have helped me balance both.”

As Wildlife Specialist for the Bad River Tribe, Fergus updated the Tribe’s [Ma’iingan Relationship Plan](http://www.badriver-nsn.gov/wildlife/), or wolf relationship plan, last fall, using both research she’d conducted for her senior thesis in undergrad, along with research she conducted for her master’s degree at UW. Fergus had many conversations with Bad River citizens to shape the updated plan.

This plan was originally written by the previous Bad River Wildlife Specialist and Abi’s mentor Lacey Hill-Kastern. The Bad River Reservation is about 124,459 acres in total, located in northern Wisconsin just west of Michigan’s upper peninsula.

For her undergraduate thesis at Alma College, Fergus also talked with farmers to understand their relationships with predators. This work helped her understand the needs and concerns of farmers, which later helped Fergus foster connections with northern Wisconsin farmers in order to research carnivore coexistence with them.

With wildlife biologist Adrian Treves’ [Carnivore Coexistence lab](http://faculty.nelson.wisc.edu/treves/), which she started her master’s with back in 2019, Fergus studies non-lethal predator deterrents, or methods like flags, lights and noise makers that can protect pets or farm animals from wolves or other predators.

Fergus studied six farms, randomly assigned as either control or treatment first — the treatment farms had lights, noisemakers and flags designed to deter predators, while the control farms had all the equipment set up, but not activated, so for example, the lights wouldn’t actually turn on and the noisemakers would stay silent. Fergus studied predators’ interactions with these deterrents for a month and a half before a brief washout period, and then they switched the control farms to treatment farms, and vice versa.

Now, Fergus has started diving into the data analysis so she can write her master’s thesis.

“It was really beneficial for me to have done that field work, and then in the fall, finish writing my updated Ma’iingan plan, because at that point, I had a lot of on-the-ground experience,” Fergus said. “So, I wouldn't have been able to really write a meaningful plan if I hadn't already been doing that work and experiencing those relationships with farmers and learning from them what they know, based on living on the landscape with predators.”

Both Fergus and Treves said collaborative projects with Tribes help uphold the core values of coexistence, and understanding the Tribal citizens’ attitudes towards wolves can help the lab stay in touch with the human dimension of their research, and figure out how they might apply their research in different settings.

“Anishinaabeg have the most positive attitude towards wolves we've ever seen,” Treves said. “That’s helpful to understand how coexistence would be different in a socio-cultural setting where there's a lot of tolerance for wolves, and a very low inclination to kill them illegally, which we found as a major cause of death across Wisconsin”

The plan includes survey data from a former Carnivore Coexistence graduate student, Victoria Shelley, who polled both Tribal and non-Tribal respondents about wolf relationship practices. Overwhelmingly, Tribal respondents favored protecting wolves. A large majority of Tribal respondents said they believe wolves are essential to maintain the balance of nature. And while a majority of non-Tribal respondents said they believe there should be a public hunting or trapping season allowed for wolves immediately or in a sustainable fashion, only a minority of Tribal respondents said the same.

Treves said collaborating with Tribes also allows them to draw from not just their own western scientific knowledge, but also the Anishinaabeg traditional knowledge system, which is also valuable.

Fergus agreed, and said she’s enjoyed getting to work with both systems and learn how the Bad River Tribe lives sustainably and coexists with local species.

“When you get familiar with the work that Tribes do, you see that they're really leading the way and employing excellent science, but also valuing what has been passed down for generations,” Fergus said. “That is a really holistic way to learn. And I've been really grateful to be learning from the Tribe.”

Fergus and the Tribe determined that instead of setting a specific quota for wolf numbers on the reservation, they’ll work with Tribe members on maintaining a sustainable coexistence. According to the plan, their population goal is to have three wolf packs on the reservation, but they won’t set a hard upper limit to how many wolves they can have. In order to foster carnivore coexistence, the Tribe will use non-lethal deterrents and outreach to continue the Tribe’s history of coexistence and assist neighboring farmers to coexist as well.

While Fergus’ research is interesting, and its implications have value in several spheres, the work doesn’t end after writing the thesis, Treves said. The next step he likes to take is communicating research with the public, to better inform policy.

Recently on a national wolf call, Fergus spoke with over two dozen non-governmental organizations about predator policy, Treves said, and they’ve reached out to media organizations in hopes of their research finding ears that can listen, learn and make a change.

“We reach out to all kinds of broadcast media and post things online and on forums,” Treves said. “We’re hoping to influence public policy and public opinion directly because predators are so widely misunderstood and public policy, currently in the U.S., is quite regressive, in my opinion.”

Last January, Fergus and the Tribe hosted a Ma’iingan Symposium at the Northern Great Lakes Visitor Center in Ashland to bring together conversations and knowledge about the wolf between community members and Tribal, State, and Federal wildlife agencies. People of all walks of life came away from the symposium with something new, from a farmer who benefited from sharing her story in a breakout session and brainstorming with the group on new ways to coexist with carnivores, to a federal agency employee who said the symposium helped him understand that when he lost his bird hunting dog in an unusual encounter with a wolf, the wolf had just been doing its job and defending its own family.

Fergus said overall, the research has helped her better understand how to focus the Tribe’s plan, and from there, gain a deeper knowledge about how to coexist with different types of wildlife. Anishinaabeg have taught her to respect the different roles and values of every living being, in order to live a harmonious life, Fergus said.

Fergus said she wants to help federal and state agencies understand that killing predators doesn’t have to be the answer, that science supports alternative coexistence routes.

“It’s a lot more meaningful to be able to empower farmers and teach state and federal agencies this different path from our history of nearly eradicating carnivore species and acting like our only tool is killing carnivores, which is not supported by science or by [Anishinaabe] knowledge,” Fergus said. “I plan to continue having coexistence of carnivores be a huge focus in the wildlife program for the Bad River Tribe because I see so many issues tying back to a broken relationship humans have with all the other members of our ecosystem.”