

INFORMATION MORNING - NS

INTERVIEWER: Well, for generations New Brunswickers have been curious about what is lurking under the surface of Lake Utopia near St. George. Now there are of course the tales about the legendary lake monster, Old Ned, but there are other fascinating creatures that have actually been proven to exist in the lake. And Erin Francheville at Saint Mary's University is studying them and she has a call out to anglers for help on this. Erin, good morning.

MS. FRANCHEVILLE: Good morning. Yeah, thank you for having me.

INTERVIEWER: Pleasure to have you here. So first things first, no evidence of lake monsters, right?

MS. FRANCHEVILLE: Not yet.

INTERVIEWER: Not yet. I like that there's still hope. Okay. So there's no monsters, but what species are you studying and how did you come to study these things?

MS. FRANCHEVILLE: Yeah, so Lake Utopia is actually home to kind of a very unique species pair, and so it is the Rainbow Smelt. And then what's unique about this population is there's kind of two genetically and ecologically different populations of Rainbow Smelt, what we refer to as the small body population and the large body population, and so these evolved from one kind of

ancestral primary population of Rainbow Smelt. And so this is really unique and ecologically interesting.

And so Lake Utopia is home to this kind of unique pair that's not often seen elsewhere. And so both of these Rainbow Smelt populations were classified as endangered in 2018. So it's really important that we study Lake Utopia and kind of look more into the health of these two Rainbow Smelt populations, specifically because there has been historical data collection in the lake, primarily focussed on these Rainbow Smelt populations.

So we have a very unique opportunity to compare the contemporary data that I'm collecting with my advisor, Dr. Linda Campbell, with this historical data so we can see long-term trends in the food web and the fish community structure.

INTERVIEWER: Okay. So how did the Rainbow Smelt come to be endangered?

MS. FRANCHEVILLE: Yeah, so the Rainbow Smelt are native to this lake, to Lake Utopia. It's ... that's kind of exactly what we're looking to do, is just provide evidence. And so we can't move forward usually with recovery efforts and management without extensive evidence and a better understanding of why. And so the focus of this project is to determine the potential

impacts of other fish and predator-prey relationships and what these may have on the Rainbow Smelt population.

INTERVIEWER: Right. So aren't Rainbow Smelt actually an invasive species in other places that aren't Lake Utopia?

MS. FRANCHEVILLE: Yeah, they can be an invasive species, more specifically often in Ontario and other provinces. But for this specific lake, Lake Utopia, they are land-locked and they are native to Lake Utopia.

INTERVIEWER: Where did Chain Pickerel come into this story?

MS. FRANCHEVILLE: Yeah, so Chain Pickerel, they were first introduced into Atlantic Canada so they are not native to New Brunswick nor Nova Scotia. They were introduced to certain lakes for sport fishing purposes but they have expanded drastically in recent decades.

They're a piscivorous fish meaning that they eat other fish. So they can very quickly kind of occupy a high trophic level or a top predator position in a lake that they become established in. So this makes them very threatening to native fish species in lakes that they inhabit and they can have kind of very pervasive impacts on food webs.

INTERVIEWER: Right. So you're trying to figure out if the introduction of Chain Pickerel for sport

fishing might have had an impact on the Rainbow Smelt population?

MS. FRANCHEVILLE: Yeah, exactly.

INTERVIEWER: So how can anglers help you with this?

MS. FRANCHEVILLE: Yeah. We have been so grateful so far for I guess the passion of local residents to share their locally got ecological knowledge and to help. And so what we're looking for is if local anglers who fish Lake Utopia were willing, they could volunteer to provide fish samples that they catch for this study. So they can reach out to me.

And, yeah, any fish that they catch under their local provincial angling permits would be fantastic because the larger and more representative sample of the lake food web that we have means that we can have kind of a more comprehensive food web model that will really help.

INTERVIEWER: Okay, so any fish that are caught in Lake Utopia could be helpful to your research?

MS. FRANCHEVILLE: We definitely want to talk to local anglers first to provide more details about the project and discuss, I guess, the fish that they are comfortable catching under their local provincial fishing permit. But it is true that the variety of species is

really helpful so we can get, yeah, a more comprehensive look at this food web.

INTERVIEWER: So what would you do with those samples that the anglers provide to get the info that you're looking for?

MS. FRANCHEVILLE: Yeah. So we employ a method called Stabilize Utop Ecology or Stabilize Utop Analysis. What this really means is that we take a tissue sample and we look at the stomach contents of the fish collected and in this way we're able to analyze them and determine how energy flows through the food web and through the ecosystem. And so in this way we can create kind of a comprehensive model of the lake food web so we can look at predator-prey relationships and interactions between fish within the fish community.

INTERVIEWER: So if anglers want to help you with this, how can they reach out to you?

MS. FRANCHEVILLE: The best way to reach out to me is through my email. It is erin, E-R-I-N, dot francheville, F-R-A-N-C-H-E-V-I-L-L-E, @smu.ca and we would love, yeah, any interest in the project. I'd love if you reached out to me or even to find out more about our research.

INTERVIEWER: Erin, thank you so much for telling us about it. And if you do find lake monster evidence,

please call me. I'll give you my number. I'll stop whatever I'm doing I promise. We'll stop the presses and we will cover that as well.

MS. FRANCHEVILLE: You'll be the first to know.

INTERVIEWER: Erin, thanks a lot. Have a great day.

MS. FRANCHEVILLE: Thank you.

INTERVIEWER: That was Erin Francheville, a Master's student in Applied Science at Saint Mary's University. And you heard her email address there. She is looking to hear from anglers for help with her research and all of that is happening in Lake Utopia.