Alec Lackmann, a doctoral candidate at NDSU, believes he has found that bigmouth buffalo can live four times longer than previously believed.

Alec Lackmann, originally from Detroit Lakes, gave a presentation suggesting that despite scientific literature stating that these native fish live to 26 years old, at most, he had aged many specimens from the Red River of the North watershed (none of these fish were from the stream’s main stem) much, much older and that one of them at 104 years old.

Many of these fish had been arrowed by bowfishermen and left to rot on lake banks. “I was shocked, and I was very skeptical myself,” Lackmann told those in attendance.

Lackmann’s presentation, with dots marking the annuli from a 37-year-old bigmouth buffalo collected from the Red River of the North basin, lower, a slide from Lackmann’s presentation, with dots marking the annuli from a 37-year-old bigmouth buffalo collected from the Red River of the North basin. Top, an older bigmouth buffalo with cataracts, collected from the Red River of the North basin. Lower, a slide from Lackmann’s presentation, with dots marking the annuli from a 37-year-old bigmouth buffalo collected from the Red River of the North basin.

Above, two whole otoliths from a bigmouth buffalo before being thin-sectioned with a low-speed Isomet saw.

One doubting DNR biologist prodded Lackmann during the post-presentation question-and-answer session, saying he’d sampled bigmouth otoliths on the Mississippi River that also suggested ages older than previously reported but refused to believe it could be true.

“The only reason people are skeptical (of the age) is because (these fish) are simply that old,” said Lackmann, during one of several phone interviews.

The main point of his early, unpublished research suggested there might be recruitment failure—meaning that for many years fish had failed to spawn successfully—in this system since he found only young and old fish, with a large gap in between.

“I was astonished myself,” he said of discovering such high counts of annuli, which are like tree rings, on the otoliths of these fish. Otoliths are calcium carbonate structures located behind the brains of bony fishes, and counting the rings on them is generally accepted as the standard for aging fish, he said.

As response from the fish-biology community has come back, including from supportive scientists, Lackmann has come around to the idea that he must re-examine his data. “I am skeptical, too,” said Sorensen, reached by phone. “But not because of the data, necessarily, though when you make a claim like that, in the world of science, the bar is pretty high. That is where I am coming from."

Sorensen noted that Lackmann’s work has yet to be published (in a scientific journal), which means it hasn’t gone through the peer-review process.

“No it has to be considered tentative,” said Sorensen, who is experienced in aging otoliths, and said that it can be difficult to do so. “I was encouraging him to be cautious.”

Another way to verify age, Sorensen said, is the mark-recapture method, where fish are captured, marked with an antibiotic, then recaptured and sacrificed to science, which gives the process of aging thin-sectioned otoliths more certainty (such work is being done by DNR biologists on the Mississippi River, where the fishery is hit hard by commercial enterprises).

As has been said by others, Sorensen believes there are a number of things that could have added false annuli lines, such as spawning and cold weather.

He said he admires Lackmann’s work, and hopes validation proves him correct. Sorensen added that it wouldn’t completely surprise him if they are that old (he has aged common carp at 65 years old). He agreed with Lackmann’s notion that the species is under-studied.

Lackmann said thin-sectioning otoliths is considered “the gold standard” for aging fish and noted that several papers have been published without testing that measures carbon 14, which spiked in the atmosphere in the ‘50s and ‘60s when nuclear weapons began to be tested.

He’s reached out to a number of experts on aging fish, including Dr. Peter Sorensen, of the University of Minnesota. “I am skeptical, too,” said Sorensen, reached by phone. “But not because of the data, necessarily, though when you make a claim like that, in the world of science, the bar is pretty high. That is where I am coming from."

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Turkey Calls

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taken to its new heights by slight changes in geometry and the introduction of these exotic. If this was not the case, in the friction, call competition would still be operating original Cost-style callers. This dis- cussion can apply to the Turpin-style boxes.

Watkins introduced a different concept in his box design: a curved side. "To my knowledge no one had ever used a curve side. You now see this concept being used by compo- nent manufacturers. It may not be curved but it's wide at top narrow in center and wide at bottom," he said.

Box calls today do more than just produce solid yelps of a hen. Many are capable of offering up seduc- tive clucks and purrs, or even the keek-kee of a lost hen, which is an overlooked call option in the spring.

Other calls
Calandrelli says turkey hunters, whether beginning or experienced, shouldn’t overlook the simple push- pull call, known for its ease of operation.

“The push-pull calls are one of my all-time favor- ites,” he said. “It’s hard to make a bad sound, you use minimal movement and they are pure murder calling calls for many, as far as I am concerned. Push-pulls have come miles from where they used to be, but they were always good, solid turkey-killing calls for hunters who did not have a lot of time to practice—and also for those who had plenty of time to practice.

Today’s turkey hunters simply have no legitimate excuse for not sounding like a turkey when they’re working a gobbler, no matter which call they pull from their vests.