

RITA in Action!

Rediscovery of a State-Threatened Ostrich Fern Population

By Casey Venable

RITA Technician 5

Before joining the team as a RITA Technician a year ago, I had immersed myself in Indiana's wild spaces honing my knowledge of plant communities. This journey of appreciating Indiana flora blossomed out of the pandemic. My mother and I bought a hand-illustrated book titled *Wildflowers of Indiana* by Fred and Mary Rose Wampler. We spent the summer of 2020 travelling around the state, checking off plant after plant in our book, and I haven't stopped since!

Because the RITA role offers opportunities for professional growth, I wanted to coordinate with the Indiana Department of Natural Resources (IDNR) to continue developing as a naturalist. I reached out to Wyatt Williams who is a Plant Communities Ecologist within the IDNR Nature Preserves Heritage Data Center. In this role, Wyatt travels around the state discovering, cataloging, and monitoring rare plants. This includes threatened and endangered plant species. Since Wyatt has a close connection to Cass County within my region, I took the initiative to join him in the field this year.

Our day together in Cass County began along roadside limestone bluffs, looking to rediscover a population of state-endangered false melic grass (*Schizachne purpurascens*). In Wyatt's notes, he had an exact location of the population discovered 40 years ago. After traversing and limboing under invasive Asian bush honeysuckle for some time, we concluded this grass population was likely and unfortunately lost. This disappearance was probably due to the expansion of invasive plant presence in the area. Asian bush honeysuckle was even noted in low density on this site 40 years ago.



Wyatt looking for false melic grass

Disappointed but not defeated, we continued onto our next site to survey for rare plants located just north of the Wabash River and west of Logansport. This property was on a rivers edge and had moderately dense canopy overhead. We navigated from a low spot where we had identified a sedge species. Just when we were about to hit the property boundary, I looked to my right and saw some very large plants. “Are those ostrich ferns?” I asked excitedly. Wyatt replied, “I think you just found our rare plant of the day!”

I was familiar with ostrich fern (*Matteuccia struthiopteris*) from other high-quality natural areas in southern Indiana, but I didn't realize it is a state-threatened plant with less than ten known populations remaining in the state. I counted 38 individual ferns including five fertile ferns. These ferns only produce spores on the fertile fronds located in the center of the plant. These fronds were smaller than the larger surrounding radiating leaves. The fertile fronds of this year were a yellowish green, while last years were shriveled and brown. Wyatt then assessed threats to the ferns and scored the population based on its likelihood of persisting there in the coming decades. After some further research, Wyatt learned that I had rediscovered the same population first found more than 100 years ago by renowned botanist Charles Deam. If one thing is certain, there is always more to discover within Indiana conservation.



Me with one of the fertile ostrich ferns