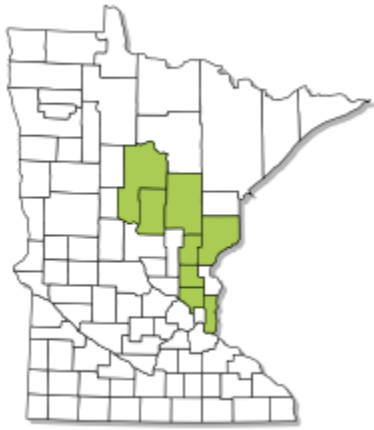


2023 Rare Aquatic Plant Assessment (Lynch & Goggins)



Snailseed Pondweed (*Potamogeton bicupulatus*)



- **Small, delicate aquatic plant**
- **Submerged, hair-like leaves**
- **Floating, oval leaves**

- **Of 2,000 DNR surveys, only found at 14 lakes**
- **Habitat poorly understood**
- **Quiet bays, small lakes, clear/soft water**

History

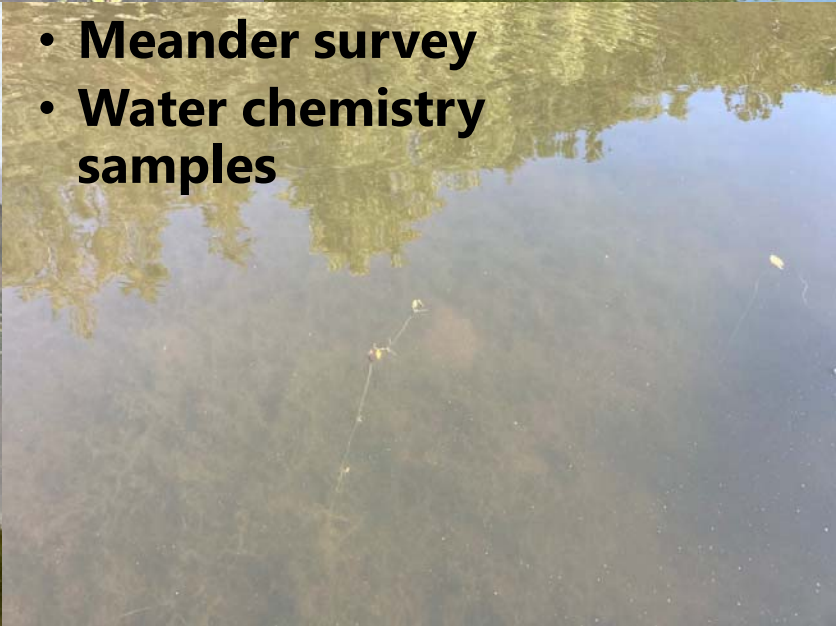
- **First observed at Lynch Lake in 2014**
- **Potential observation at Goggins Lake in 2022**

Purpose

- **Assess the Lynch population and document presence/absence at Goggins**
- **Guide long-term management of the lakes, including potential conservation actions**
- **Inventory unique species**

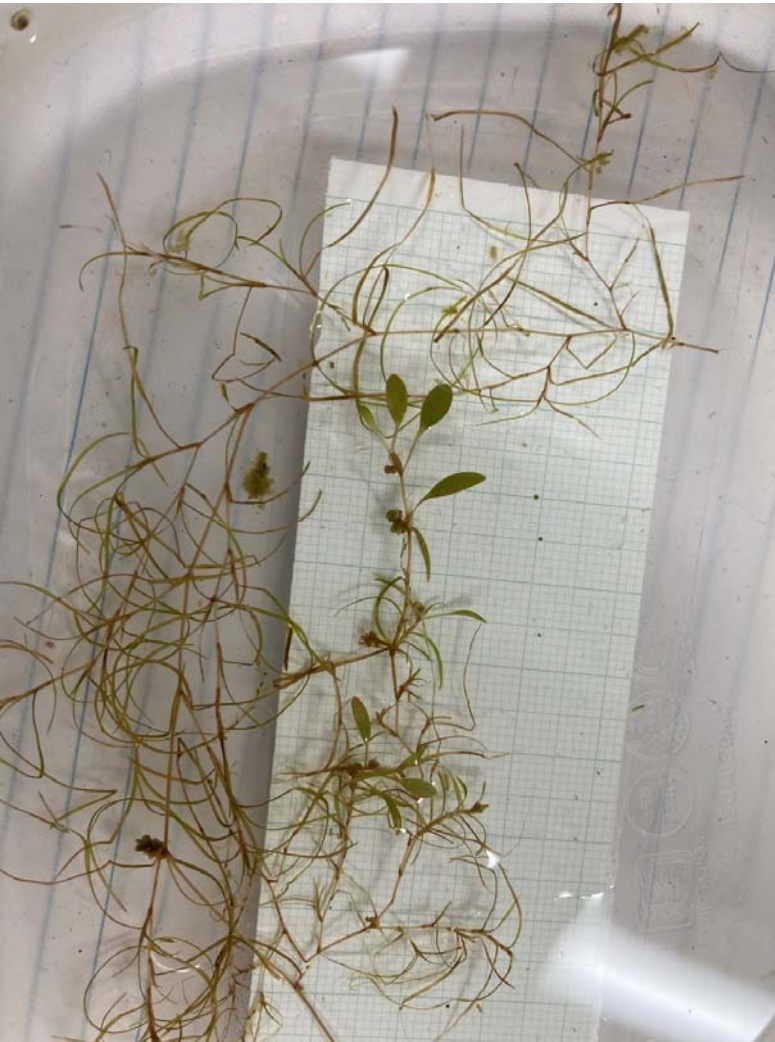


Methods – Field Survey



- **Meander survey**
- **Water chemistry samples**

Methods – Specimen Collection and Verification



- Examined under stereoscope
- Pressed and dried
- Sent for confirmation and annotation to species authority in Alabama



Results – Specimen Identification



- **Goggins specimens confirmed as snailseed pondweed (Lynch specimens re-confirmed)**
- **Bonus: An additional collected species at Lynch Lake is very likely slender naiad, another rare plant. Once confirmed, would be a first County record.**



Lynch Lake

- **Relatively small population (~120 plants)**
- **Population appears stable compared to 2014, but not observed in same locations as 2014**
- **Many uprooted fragments – animal herbivory?**
- **“Bolting”; coated in epiphytic algae**
- **Occurred at depths to 4 feet in sandy silt**
- **Overall sparse/patchy plant cover**
- **Very soft water (hardness = 10 mg/L)**





Goggins Lake

- **Relatively robust population (> 500 plants)**
- **Healthy individuals**
- **Shallow depths/exposed sediment**
 - **Historic water level fluctuations of ~ 12 feet**
- **Variety of sediment types (silt/ sand/gravel)**
- **Dense plant cover**
- **Soft water (44 mg/L); close to moderately hard USGS threshold (61 mg/L)**



Data Submittal

- Support species throughout range
- Support candidacy for MN DNR “Lakes of Biological Significance” list

Outreach and Conservation Measures

- In partnership with DNR and WCD
- General lake-wide recommendations
- Site-specific recommendations

Understand and Support Habitat Requirements

- Not much is known (is soft water an important aspect? What are the dissolved minerals, and could they relate to groundwater composition/ upwelling?)
- Water chemistry sampling in District lakes to direct potential future search efforts
- Support improving water quality trends

Exercise Caution in Invasive Plant Management

- **Invasive aquatic plants are present, but do not pose imminent threat**
- **Thoroughly vet any proposed management and coordinate with DNR**
- **Support water quality and native vegetation through other means**

Lynch and Goggins Monitoring

- **Repeat assessments every 3-5 years, including whole-lake point-intercept surveys to monitor existing populations**
- **Confirm slender naiad and other potential rare plants**

District-Wide Monitoring

- **Implement regular point-intercept surveys of all lakes on 5-10 year cycle**
 - **Aquatic plant data provides good indicator of overall lake health**
 - **Lots of potential for other rare species**
 - **Highlight biodiversity value of District**

Questions?

