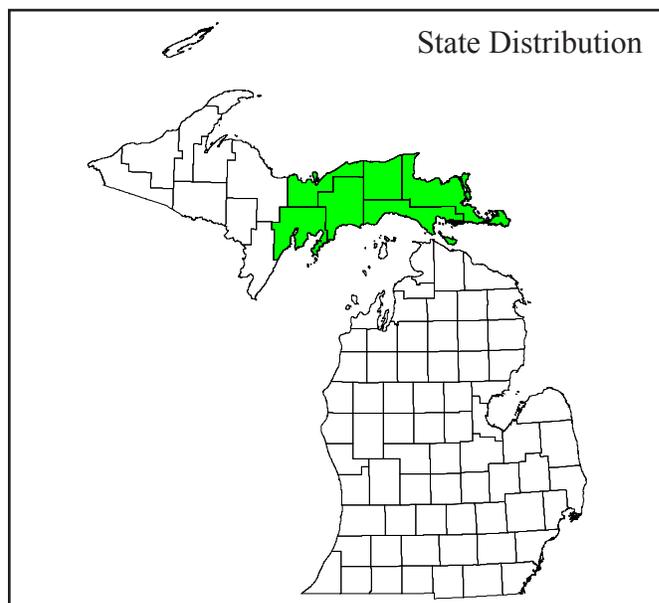
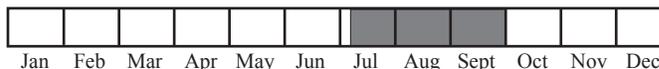




Photo by Ryan P. O'Connor



Best Survey Period



Status: State special concern

Global and state rank: G4/S3

Other common names: algae-like pondweed, alga-like pondweed

Synonym: *Potamogeton tuckermannii* J.W. Robbins

Range: Primarily an endemic species of the Atlantic Coastal Plain and considered rare throughout much of its range, alga pondweed ranges from Labrador and Newfoundland south to North and South Carolina, with outlier populations occurring in the northern Great Lakes region. It is considered rare in Connecticut, Labrador, Maine, Massachusetts, Newfoundland, New Brunswick, New Hampshire, New Jersey, New York, North Carolina, Nova Scotia, Ontario, Pennsylvania, Quebec, South Carolina, Vermont, and Wisconsin, and is known only from historical records in Rhode Island (NatureServe 2006).

State distribution: There are 17 occurrences currently known for this pondweed, all within in the central to eastern Upper Peninsula region, with localities documented in Alger, Chippewa Delta, Luce, Mackinac, and Schoolcraft counties. The majority of the localities (12) are concentrated in Chippewa, Luce, and Schoolcraft counties.

Recognition: Although it could be easily overlooked, alga pondweed is a delicate, distinctive species. Growing from **elongate, slender, creeping rhizomes, the much-branched, roundish stems, which range up to ca. 8 dm in length, produce numerous, spirally-arranged fans of fine, hair-like submerged leaves (no floating leaves are developed) that are filamentous (0.25 mm wide by 5-20 cm long), flat, and have only one nerve. The fine, membranous stipules do not adhere to the leaf bases.** Overwintering buds known as turions can be produced, and when present, occur in the axils (bases) of old leaves or within senescing branches. **A single globular cluster of fruits is borne on a long peduncle (5-20 cm) arising from the stem tip. The combination of fine leaves and an unusually long terminal peduncle are diagnostic for this species.**

The only other pondweed with leaves this fine and narrow is *P. bicupulatus* (known in older manuals as *P. capillaceus*), a species known from southwest Lower Michigan and very unlikely to occur with or near *P. confervoides*. However, it can be distinguished by the presence of floating leaves with broader blades, stipules that are attached to the leaf base for up to half their length, and markedly smaller peduncles and fruits (achenes).

Best survey time/phenology: As for other pondweeds, this species is most distinctive and best identified when



in fruit. However, owing to its distinctive habit, it can be reliably verified in vegetative condition by experienced botanists. All Michigan observations and collections of this species have occurred from early July through late September, with most observations occurring in July and August.



Photo by Robert W. Freckmann

FQI Coefficient and Wetland Category: 10, OBL

Habitat: *Potamogeton confervoides* is a species of acidic (soft-water) lakes, and especially in the eastern portion of its range, occurs in the acid waters of higher elevation bog lakes and ponds (Flora of North America 2000). In New England it has been found in water with a pH as low as 5.0 and alkalinity near 0 mg/l, with an average pH of 6.3 and alkalinity of 3.6 mg/liter (Hellquist and Crow 1980). This species has the greatest preference for acidity of all North American *Potamogeton* species (Hellquist 1987). It may occur in both shallow and deep water, and is usually rooted in muck. Most collections are of fragments which have blown to shore. Hellquist (1987) notes it as also occurring in slow-moving streams in Ontario.

In Michigan, alga pondweed typically occurs in soft-water lakes at the transition zone of emergent/submergent vegetation, where it roots in sandy-mucky substrates. The most thorough data for associated species is provided by Voss (1965) in an overview of the rich aquatic flora of Cusino Lake in Schoolcraft County, a site with a large population of *P. confervoides*. Associates included such species as *Eriocaulon septangulare* (pipewort), *Isoetes macrospora* (quillwort), *Sparganium angustifolium* (narrow-leaved bur-reed), *S. fluctuans* (bur-reed),

Potamogeton oakesianus (Oakes' pondweed), *Xyris montana* (yellow-eyed grass), *Brasenia schreberi* (water shield), *Nymphaea odorata* (water-lily), *Elatine minima* (waterwort), the state threatened *Myriophyllum farwellii* (Farwell's milfoil), *Myriophyllum tenellum* (slender water-milfoil), *Utricularia geminiscapa* (bladderwort), *U. purpurea* (bladderwort), *U. resupinata* (bladderwort), *Lobelia dortmanna* (water lobelia), and the state special concern *Littorella uniflora* (American shore-grass).

Biology: *P. confervoides* is usually found fruiting in July in Michigan. Overwintering buds (turions) are produced in leaf axils and on disintegrating branch tips (Fernald 1932). The fact that pieces of the plants are often found floating on lakes suggests that fragmentation be an important mode of vegetative dispersal. A high germination rate (over 80%) was observed for seeds of this species in the laboratory (Muenscher 1936). Philbrick and Anderson (1987) studied the pollination system in selected species of *Potamogeton*, and hypothesized that sexual reproduction in the submerged-flowered taxa such as *P. confervoides* was completed largely through selfing (autogamy).

Conservation/management: Maintenance of water quality and natural water chemistry may be essential for this species' conservation. Two Michigan localities lie in Hiawatha National Forest, one in Seney National Wildlife Refuge, three on state park lands, and at least one on state forest lands.

Research needs: Beyond knowledge of the distribution of this species, there is relatively little knowledge of life history, the structure and diversity of populations, and many other aspects of natural history. Thus virtually any studies in these areas are likely to provide information useful to the long-term conservation and management of the species in Michigan.

Related abstracts: Emergent marsh, submergent marsh, American bittern, black tern, Blanding's turtle, Forster's tern, king rail, least bittern, spotted gar, panicked screw-stem.

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