

SLENDER PONDWEEDS

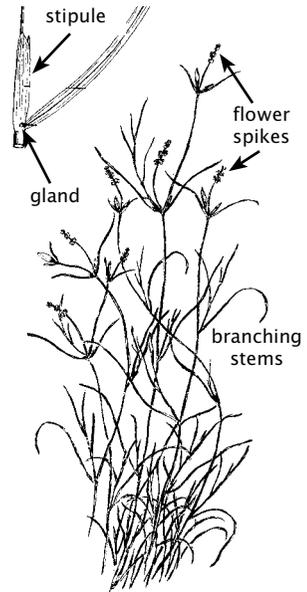
Potamogeton pusillus, *P. berchtoldii*, and *P. gemmiparus*

NATIVE TO MAINE

Recent DNA evidence has identified three distinct species of slender pondweed occurring in Maine: ***P. gemmiparus*** (previously *P. pusillus* var. *gemmiparus*), ***P. pusillus*** (previously *P. pusillus* var. *pusillus*), and ***P. berchtoldii*** (previously *P. pusillus* var. *tenuissimus*). The description that follows has been generalized to pertain to all three species.

Habitat: Slender pondweeds grow in the submersed plant community. They are found in soft sediments in quiet water of lakes, ponds and slow-moving streams, in depth up to three meters. These pondweeds thrive in deeper, darker water and will tolerate turbid and brackish conditions.

Description: Slender pondweeds have submersed leaves only. Sinuous stems (up to 1.5 meters long) emerge from delicate roots. Stems may be round to slightly compressed in cross section, and often branch repeatedly near the growing tips. Narrow leaves (1 to 7 cm long and 0.2 to 2.5 mm wide) are entire, alternately arranged in a spiral, and attach directly to the stems at their base (no petioles). A pair of tiny bumps (actually glands) occur at the nodes, one on each side of the base of the leaf. (Not every node has well-developed glands, so you may need to check several.) The leaves have one to three veins, and the mid-vein may be bordered by one or more light-colored, translucent bands of air-filled cells called lacunae. Leaves taper slightly toward the base; the tips of the leaves are varied depending on sub-species, and may be blunt or sharply pointed. Flimsy, tube-like stipules may occur around the stems, but they are fairly inconspicuous, and are not always persistent. Flowers, followed by tiny fruits, occur in whorls on slender spikes (0.5 to 6 cm long). The spikes grow from stem and leaf axils and may be submersed or emergent. The plump fruits are asymmetrical but somewhat rounded to oval in shape, with a short protrusion (called a beak) at one end. Numerous winter buds (or turions) are produced in the leaf axils toward the end of the growing season. The buds are elongated (1 to 3 cm long), generally dark in color, resembling tiny, partially-unhusked corn cobs. (A hand lens is helpful when observing lacunae, leaf glands, stipules, fruits, and winter buds.) Slender pondweeds are generally light green to olive green (occasionally reddish) in color.



Slender pondweed

Slender Pondweed Species Comparison Chart

	<i>P. pusillus</i>	<i>P. berchtoldii</i>	<i>P. gemmiparus</i>
LEAVES	0.2 to 2.5 mm wide; 0 to 2 lacunae bands on each side of midvein; sharply pointed at the tip	0.2 to 2.5 mm wide 1 to 5 lacunae bands on each side of midvein; bluntly to sharply pointed at the tip	0.2 to 0.7 mm wide; one vein; 1 lacunae band on each side of midvein; sharply pointed at the tip
STIPULES	wrapping around the stem and fused at the margins, forming a tube surrounding the stem	wrapping around the stem, but not fused at the margins	wrapping around the stem, but not fused at the margins
FLOWERS	flower spikes mostly at the growing tip; 1 to 3 per plant; flowers arranged on spike in distinct, interrupted whorls	flowers spikes at the growing tip or along the stem; generally more than 3 per plant; flowers arranged on spike in crowded whorls	flowers uncommon
WINTER BUDS	elongate winter buds	elongate winter buds	very slender elongate winter buds

Range: Slender pondweeds are native to Maine and New England. The range of *P. gemmiparus* is limited to New England. The other two sub-species occur throughout most of the United States.

P. pusillus and *P. berchtoldii* are both known to hybridize with another native pondweed species. Populations of these hybrid pondweeds occur in Maine.



Winter bud (turion)

Annual Cycle: Slender pondweed is an aquatic perennial that propagates by spreading roots, winter buds and, to a more limited degree, seeds. Flowers occur in the spring. Fruits and winter buds mature by early to mid-summer. Plants often die-back to their roots before the end of the growing season, depositing winter buds and seeds on the sediments. New growth sprouts from the roots, the buds and seeds as the water begins to warm in the spring.

Value in the Aquatic Community: Slender pondweed is an important food source for a variety of waterfowl. The fine-leaved plants often form extensive beds, providing food and cover for fish and their fry. Muskrat, deer, beaver and moose are all known to feed upon this plant.

Look Alikes: Submersed leaves of slender pondweed may be confused with other narrow-leaved species of the *Potamogeton* genus, European naiad, slender naiad, thread-like naiad, and some stoneworts.



Slender pondweed has submersed leaves only



The slender flower spikes grow from stem and leaf axils; the fruits are rounded to oval with a short beak (inset)

EUROPEAN NAIAD
LOOK ALIKES