



Bladderwort: A carnivorous plant in your lake?!

Yes, it is true—many of New Hampshire’s approximately 1,000 lakes are home to a carnivorous plant that traps, kills, and digests its victims. Its name is ‘bladderwort’—a somewhat sinister name which was derived from the fact that the plant has bladder-like structures and from the old English word ‘wort’ which meant ‘plant.’

Don’t be alarmed—bladderwort is not a “man-eater.” Instead, bladderwort feasts on microscopic aquatic creatures in the water. Lucky for us, it has a big appetite for very small animals without backbones, including insects, insect larvae, and other microscopic animals which float through the water. Bladderwort’s exceptional predatory skills provide it essential nutrients, allowing it to survive in many of New Hampshire’s relatively clean and low-nutrient lakes.

Here are some bladderwort facts:

- Scientific Name: *Utricularia*, spp.
- Status: Native (a plant that occurs naturally in the place where it evolved). Approximately 10 species of bladderwort are found in New Hampshire.
- Habitat: Lakes, ponds, slow-moving streams and rivers, bogs.
- Height: 2 – 3 feet.
- Distinguishing feature: A single plant can contain hundreds of flattened, pear-shaped “bladders” ranging in diameter from 2 millimeters (the size of a pinhead) to about 4 millimeters (the size of a BB).
- Stem: Long, slender, flexible, branched, loosely anchored to substrate and typically becoming detached from roots and free-floating as mats in a waterbody.
- Leaves: Alternate (one leaf at each nodule), filamentous, finely-forked, with attached “bladders.”
- Flower: Stalks occurring at regular intervals along stem. Each stalk bearing 6 – 20 small, pink to yellow “snapdragon-like” flowers and emerging several inches out of the water or mud.
- Flowering Period: June into September.
- Fruit: Capsule containing many seeds.
- Value: Provides food and cover for fish.



Bladderwort

Bladderwort has a unique feature allowing it to capture its prey. Bladderwort is the only carnivorous plant with a true “trap-door” to seize its prey. In fact, some scientists believe that this plant has one of nature’s most rapid and precise traps. It has trigger hairs on each bladder resembling the antennae of a tiny crustacean or insect. When triggered by a microscopic organism floating by, these hairs open the trap-door which sucks in

water along with the organism. The trapping process takes approximately 15 to 20 milliseconds—just fractions of a second. Once inside the bladders, the victim dies and is digested by enzymes and acids. Cells within the plant then distribute the nutrients from the digested material to the stem, a process that allows the plant to grow.

Bladderwort is often mistaken for an invasive (exotic) aquatic plant. Due to its finely divided leaves, people often confuse bladderwort with the invasive (exotic) plant variable milfoil which is devastating some of New Hampshire's lakes. More often than not, when an upset lake enthusiast reports that they have discovered milfoil in their lake, after asking a few simple questions, lake biologists are typically able to assure them that what they really found was bladderwort—a fascinating and relatively harmless native plant!

If you find a suspicious plant in the lake, here's what you can do to determine if it is bladderwort. Look for small circular air sacs ("bladders") that are green, brown, or clear in color coming off the leaves and that can be squished when squeezed (listen carefully and you might hear a "popping" noise). If the plant has this unique feature, then it is definitely bladderwort and not an exotic look-alike plant. However, if you still aren't convinced that the specimen isn't milfoil or some other unwanted plant, take a digital photo and email it to the New Hampshire Department of Environmental Services (NHDES) Exotic Species Program at Amy.Smagula@des.nh.gov, or snail mail the specimen to NHDES at PO Box 95, Concord, NH 03301. (If you mail the suspicious plant specimen, make sure to wrap the sample in a moist paper towel, put it in a zip lock bag, and write your name, phone number, email address, and in what waterbody you found the suspicious plant on the outside of the bag in permanent pen so that you can be contacted once the specimen has been identified.)

Bladderworts can become invasive. In some New Hampshire lakes, bladderwort is the most abundant plant and lake-users report that it is "taking-over" the waterbody. While bladderwort is a native plant that has its own predators that like to eat it in New Hampshire, it can occasionally become overly-abundant. There really is nothing to do about this excessive plant growth except to let nature take care of it. Like all natural populations, bladderwort plant communities will experience "boom and bust" cycles. In some years, the plant may found floating in dense mats throughout the waterbody, and, in other years, it may not be noticeable at all. You can attempt to remove the free-floating mats of bladderwort in the lake if you find the growth offensive—you'll at least get some exercise and some excellent compost for your garden!

NH LAKES is the only statewide, member-supported nonprofit organization working to keep New Hampshire's lakes clean and healthy, now and in the future. The organization works with partners, promotes clean water policies and responsible use, and inspires the public to care for our lakes. For information, visit www.nhlakes.org, email info@nhlakes.org, or call 603.226.0299.

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