

Litorally Speaking



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Four New Plants Added to Maine Watch List in 2023

The State of Maine added four new plants to its Aquatic Invasive Species (AIS) watch list in January of this year. Some of these plants have been found in neighboring states, while others are just over the border in Canada. One of them is already here. All of them have the potential to be invasive in the State of Maine. These plants are giant salvinia, water soldier, starry stonewort, and swollen bladderwort.

Giant Salvinia (*Salvinia molesta*)



Giant Salvinia (*Salvinia molesta*).
Photo credit: Eric Guinther.

Native to South America, giant salvinia is a rootless, free-floating aquatic fern. This curious plant has round and irregularly-shaped floating leaves, which fold in the middle and are covered in fine hydrophobic hairs. The plant forms a thick floating mat on the surface of the water. It grows quickly and can swiftly cover an entire pond, where it blocks out sunlight to other littoral plants. As its foliage decays, it depletes dissolved oxygen. Like many AIS plants, giant salvinia was once popular in the aquarium trade and has escaped into water systems all over the world.

Giant salvinia has been declared invasive in North America, Europe, and Africa. In the United States, giant salvinia is found across the south, from Texas up through Maryland. *It is not yet found in Maine.*

Starry Stonewort (*Nitellopsis obtusa*)



Starry Stonewort (*Nitellopsis obtusa*). Photo credit: NY Department of Environmental Conservation.

Starry stonewort is not actually a true plant, but a colonial macroalgae. Closely resembling native stoneworts like *Chara* and *Nitella*, starry stonewort is distinguished from both by the appearance of small, star-shaped bulbils which it uses in reproduction. Unlike many plants, starry stonewort can survive in deep water beyond the littoral zone. Growing on the bottom of lakes, the plant can form deep mats of vegetation which can change both water and sediment chemistry, inhibiting growth of native plants and removing habitat for native fish. Native to Europe and Asia, it is thought to have arrived in North America in the Great Lakes via ship ballast. Since its discovery, it has spread across the northern US and Canada, coming as close to Maine as Quebec and Vermont. *It is not yet found in Maine.*

Water Soldier (*Stratiotes aloides*)



Water Soldier (*Stratiotes aloides*). Photo credit: Matt Smith, Ontario Ministry of Natural Resources and Forestry.

Another invader from Europe and Asia, and perhaps the most curious plant on the list of newcomers, is a water soldier. Water soldier begins life as either a submerged leaf plant, or an emergent plant, depending on water level. Growing in a basal rosette, its sturdy leaves are long and lance shaped, with pronounced serrations along the margins. Flowers with three white petals emerge from the rosette. Mid-season the plant detaches from the substrate and floats to the surface, clumping together with others to form a thick mat, which shades out other plants. At this stage, it causes a hazard to animals and humans, as their sharp serrations can cause injury. At the end of the season, the plant sinks back down to the bottom, where it decomposes and has the potential to change the water chemistry and harm communities of plants and animals. *Thought present in nearby Ontario, it is not yet found in Maine.*

Swollen Bladderwort (*Utricularia inflata*)



Swollen Bladderwort (*Utricularia inflata*). Photo credit: Debbie Broderick.



Swollen Bladderwort (*Utricularia inflata*).
Photo credit: LSM.

Last, but not least, is a plant that *has already been found in Maine*. Swollen bladderwort was discovered in Maine for the first time in 2021, and was added to the Maine watch list in 2023. Though native to the southern US, swollen bladderwort has been declared invasive in several northeastern and northwestern states. In Maine, it has been confirmed in five lakes around the State, including Lake Arrowhead, Mousam Lake, Little Ossipee Lake, Tilton Pond, and Horseshoe Pond in Chesterville what makes this bladderwort stand apart from its Maine-native cousins is its ability to vigorously spread through fragmentation and outcompete native plants. Swollen bladderwort resembles native floating bladderwort (*Utricularia radiata*), but is much larger. Like *U. radiata*, its flowers are held aloft on a whorl of modified, inflated leaves, but its diameter is several times wider. The foliage is dense, with small bladders scattered throughout its branch- divided leaves. Because it grows aggressively and quickly, bladderwort crowds out native species, including other bladderworts, can create hazards for boaters, and become a nuisance for swimmers and water intakes.

AIS PRINT MATERIALS TO BE UPDATED IN 2024

With the addition of these four new plants to Maine's watchlist, LSM staff are hard at work updating our print resource materials. It is our plan to have these materials ready and printed in time for the 2024 field season.

This winter, LSM will begin to update our Quick Keys, (Un)wanted List poster, and Plant ID Cards with information on the four new invasive plants and how to distinguish them from native plants.

Our field guide, the "Maine Field Guide to Invasive Aquatic Plants" will be given a supplemental booklet that will include detailed information on the new invaders, that can be added to existing copies of the field guide. This booklet will be included in all remaining prints of the current edition of the field guide until the next edition of the guide is written and ready for printing.

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