Special - Invasive Species

There is a lot of talk about, and interest in, invasive species these days, yet humans have been carting their favorite plants and animals all over the world for centuries. We have many non-native species that have naturalized and appear to be "at home." What is different today is the speed of transportation, the variety of modes of transportation and a global economy that provides constant transport from every corner of the world. Unlike unwanted plants, like dandelions, invasive species pose exceptional problems.

According to NYS DEC, "An invasive species is a non-native species (plant, animal, insect or disease) that is accidentally or intentionally introduced and **causes harm or has the potential to cause harm to the environment, the economy or human health.** Because invasive species did not evolve with the other species in their new location, they often do not have natural predators and diseases that would normally control their population within their native habitat. Thus they can reproduce quickly and out-compete native species."

So, while dandelions may be a nuisance to some, it is not considered an invasive species (IS). Below are six specific examples of IS: two by air, two by land and two by water.

Air

The Emerald Ash Borer or "EAB," is an invasive wood-boring beetle. Native to Asia, there are no natural predators in North America. The EAB feed on and eventually kill all native ash trees. Adult EAB are a bright metallic emerald green color and can be found from late May to mid-August. The back side of the abdomen, which can be seen when the wings are spread, is a metallic purplish red. Adult EAB average 3/8 to 3/4 inch long and 1/6 inch wide. EAB has been located, with heavy infestations, in Onondaga County. Slowing their spread is imperative, but before taking direct action, be sure to verify and contact the DEC or CCE to find out the best way to address your specific tree(s). **The DEC has set up a hotline for EAB at (866)640-0652**

Hemlock Wooley Adelgid or "HWA," is a tiny, aphid-like, invasive insect that poses a serious threat to forest and ornamental hemlock trees in eastern North America. HWA are most easily recognized by the white "woolly" masses of wax, about half the size of a cotton swab, produced by females in late winter. These fuzzy white masses are readily visible at the base of hemlock needles attached to twigs and persist throughout the year, even long after the adults are dead. Late fall to early spring is the prime time to detect HWA, as the white sacs are most apparent. An inexperienced observer may confuse several look-alikes with HWA, so professional identification is recommended before any response is taken. Owners can reduce hemlock tree stress by watering during drought periods and pruning dead and dying limbs and branches. Avoid the use of nitrogen fertilizers on infested hemlocks as it will actually enhance HWA survival and reproduction. Take care moving plants, logs, and mulch from infested to uninfested areas, particularly when HWA eggs and crawlers are present (March – June). HWA has recently been found nearby, in the Skaneateles Watershed, so we need to be on the lookout. Please refrain from pesticide use until consulting your local CCE or the NYS DEC for the best approach.

Land

Giant hogweed, is a striking and dangerous invasive plant. Contact with the sap from this plant can cause severe, painful blisters that scar the skin and can cause long term sensitivity to sunlight. It is a member of the carrot family and, except for its size, it can be mistaken for a number of native, noninvasive plants such as cow parsnip, angelica and poison hemlock. The plant develops numerous white flowers that form an umbrella-shaped head up to two and a half feet across, resembling "Queen Anne's Lace on steroids." Flowers form from late-spring through mid-summer. Numerous, (up to 100,000) half inch long, winged, oval seeds form in late-summer. These seeds turn from green to brown, and can be spread by animals, runoff from rain, or the wind. Seeds can remain viable in the soil for up to 10 years. The plant's stems die in the fall and remain standing through the winter, topped with the huge, brown flower heads. The hollow stems are one to four inches in diameter. The leaves are lobed, deeply incised, growing up to five feet in width. The plant may grow to 15 to 20 feet in height.

Giant hogweed is one of a very few North American invasive plants that can cause human health impacts as well as ecological damage. For the plant to cause human harm, the sap from a broken stem or crushed leaf, root, flower or seed must come into contact with moist skin (perspiration will do). The skin must then be exposed to sunlight. Irritation is not immediate,

and generally appears one to three days after exposure. This plant has been located in many parts of CNY. If you suspect that you have found a giant hogweed please don't hesitate to call **NYS DEC's Giant Hogweed Hotline: 845-256-3111**

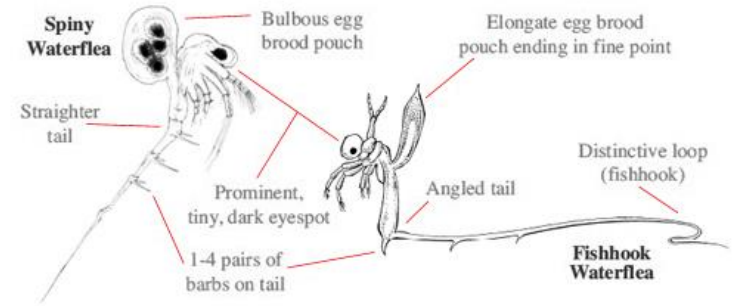
Black and pale swallow-wort, also known as "dog-strangling vines," are perennial, herbaceous, twining vines that grow from 2 to 6 1/2 ft in length. Native to Eurasia, these species are adapted to a variety of habitats. Swallow-worts grow rapidly and once established can completely smother native vegetation. Related to milkweeds, swallow-worts are extremely toxic to livestock and monarch butterfly larvae, which are sometimes fooled into laying their eggs on this plant. Pale swallow-wort prefers limestone-based soils, but it has been found in nearly every county in NYS. It is drought tolerant and will thrive in a wide range of soil, moisture, and light conditions with the exception of extremely wet soils. If you think you have a swallow-wort, please call one of the numbers below.

Pale swallow-wort in bloom - Photo: Kristine Averill, Cornell University

Water

Hydrilla is one of the world's worst aquatic invasive plants. It blocks sunlight and displaces native plants below with thick, dense surface mats. Stratification of the water column and decreased dissolved oxygen levels can lead to fish kills. The weight and size of sportfish can be reduced when open water and natural vegetation are lost. Waterfowl feeding areas and fish spawning sites are eliminated by dense surface mats and these thick mats of vegetation can obstruct boating, swimming and fishing. The value of shorefront property can be significantly reduced, hurting both homeowners and the communities that rely on taxation of shoreline property.

Hydrilla can invade deep, dark waters where most native plants cannot grow. The plant growth is aggressive with 20 - 30 foot stems that can add up to an inch per day. It can spread into shallow water areas and form thick mats that block sunlight to native plants below, displacing the native vegetation of a waterbody. Major colonies of hydrilla can alter the physical and chemical characteristics of lakes. Hydrilla has been found in Cayuga Lake and the Erie Canal.



Illustrations: Michigan Sea Grant Program, Ontario Federation of Anglers and Hunters

Fishhook Waterflea is an aggressive, predatory creature, no bigger than a pinky finger, (about ¾ of an inch long) that preys on smaller microscopic water animals. It belongs to the same family as the **spiny water flea**, and has a long tail with up to three pairs of barbs near its end. It spreads on fishing gear or in bait buckets. It now dominates the summer and fall zooplankton communities in the Great Lakes and the Finger Lakes. The species has been observed at densities of 170 to 600 individuals per square meter. They reproduce both sexually and asexually, which allows them to establish populations very quickly. In addition, eggs can successfully overwinter in an inactive state and replenish the population after hatching in the spring. The barbed tail allows for easy transport as it can attach to ropes, fishing lines, waterfowl feathers, aquatic gear, vegetation and even mud. In addition to out-competing the native fish for food, small and young fish can choke on its barbed tail when they try to eat it.

The image is at: www.seagrant.umn.edu/ais/waterflea

Invasive Species – What we can do

Citizen observations for finding potential invasive species is critical. If you think you have observed any of the following please do contact Cornell Cooperative Extension (CCE) office for identification assistance at: **www.cce.cornell.edu**, or the NYS DEC Forestry office at: **www.dec.ny.gov** Most of the information in this article comes from the NYS Invasive Species Clearing house at **nyis.info/index.php.** This website has extensive information on the few species listed here, and completes coverage of all NYS invasive species. Song Lake is considered part of the Finger Lakes Partnership for Invasive Species Management, or Finger Lakes PRISM, and our direct contact is Gregg Sargis: (585)546-8030 gsargis@tnc.org or cce-flprism-L-request@cornell.edu.

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