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Scientists Recommend Banishing Dangerous Aquatic Weed from Water Gardens

LAWRENCE, Kansas – January 14, 2013 – If you are tempted to purchase a lovely specimen of crested floating heart (*Nymphoides cristata*) for your backyard water garden, you might want to reconsider. While this plant is marketed as an ornamental lily, experts from the Weed Science Society of America (WSSA) say it can be a real nuisance if it escapes its intended home – impacting water supplies and hydropower production, disrupting natural ecosystems and impeding recreational activities such as boating, swimming and fishing.

Crested floating heart has highly invasive traits that are making it a major weed in Southeastern bodies of water. Despite intense control efforts, escaped plants have thrived in cypress swamps, lakes and water management canals across Florida since the late 1990s. By 2006 crested floating heart had made its way to South Carolina's Lake Marion, a large body of water sometimes characterized as an inland sea. In just two years, a 20-acre infestation ballooned to more than 2,000 acres. The latest estimates suggest it now covers 6,000 acres of the lake's surface.

"Despite the danger it represents, crested floating heart is still readily available online and through local garden stores," says Ken Langeland, Ph.D., University of Florida Center for Aquatic and Invasive Plants. "Until regulators address the problem by eliminating the source of supply, buyers are encouraged to beware."

Crested floating heart was introduced to the U.S. from Asia. It grows quickly and forms dense canopies that float along the surface of a body of water.

Unfortunately crested floating heart is also easily spread. Small plant fragments can be transported by wind, flowing water, boats and trailers. In addition, clusters of miniature plants called "ramets" can easily break away from established colonies of the plant to spread and take root elsewhere.

To date, scientists have found little in their aquatic weed toolbox to be effective in the battle against crested floating heart. Despite the large mass of leaves floating on the water surface, foliar herbicides, including those that work effectively on other floating-leaf aquatic weeds, have had little success. Weed-eating sterile grass carp don't like crested floating heart, and attempts at mechanical harvesting have actually spread the plant by breaking off small fragments. It has survived a lowering of water levels and even freezing temperatures.

In the absence of effective control measures, many communities have resorted to training volunteers to detect and report new infestations in the hope that the weed can be isolated and contained. They also caution water enthusiasts to clean boats and trailers carefully after navigating waters and shorelines that might be infested.

"It is clear that additional research is necessary to develop effective controls," Langeland says. "In the meantime, it is important that each of us do our part to minimize the spread of crested floating heart. Buy native species for your water garden or those non-native species that have proven unlikely to become invaders. If you already have crested floating heart, remove it immediately and dispose of it far from any body of water."

Additional Background on Crested Floating Heart and Its Relatives

- Crested floating heart reproduces vegetatively from tubers, daughter plants, rhizomes and small fragments.
- It features small white flowers that bloom from summer to fall.
- Each flower has five petals with ruffled crests that resemble a rooster's comb.
- Heart-shaped leaves float on the water's surface, supported by slender tuberous roots that are typically submerged in sediment.
- The plant can grow in shallow drainage ditches and along shorelines, but also has been found to thrive in 10 feet or more of water.
- Yellow floatingheart (*Nymphoides peltata*) and water snowflake (*Nymphoides indica*) are also known to be invaders.
- Big floatingheart (*Nyphoides aquatica*) and little floatingheart (*Nyphoides cordata*) are native to North America.

For further information on crested floating heart and other invasive species, visit www.invasive.org.

About the Weed Science Society of America

The Weed Science Society of America, a nonprofit scientific society, was founded in 1956 to encourage and promote the development of knowledge concerning weeds and their impact on the environment. The Weed Science Society of America promotes research, education and extension outreach activities related to weeds, provides science-based information to the

public and policy makers, fosters awareness of weeds and their impact on managed and natural ecosystems, and promotes cooperation among weed science organizations across the nation and around the world. For more information, visit www.wssa.net.