Invasive Species Profile: Lesser Celandine (*Ficaria verna*)

By Greg Sykes (greg@grsykes.com)

Native Range: Europe, northern and western Asian, North Africa
U.S. Introduction: 1867, southeast Pennsylvania
Life Cycle: herbaceous perennial
Means of Spreading: seeds and tubers
Commercially Available: yes
Control Method: hand-pull small plots, herbicide-treat large areas
Good Alternative Species: marsh marigold (*Caltha palustris*)

Figure 1. Lesser celandine flowers usually sport at least eight petals. Leaves are shiny, fleshy, and kidney-shaped.

Comments:
Lesser celandine also goes by "fig buttercup;" *Ranunculus ficaria* was its previous Latin name which some folks still use erroneously. Whatever it's called, this plant is a non-native invasive weed. Introduced to America in the mid-nineteenth century for its vibrant yellow flowers, lesser celandine has escaped cultivation in at least 19 states, nine of which—including Virginia—list it as "invasive."

Lesser celandine emerges by mid-winter and enters dormancy in late May. However, that short active season is plenty of time for it to wreak havoc in moist woodlands. Making the most of waterways and floods to disperse seeds, lesser celandine carpets areas quickly. The alien monoculture squeezes out native plants, especially other spring ephemerals and emerging seedlings. With *Ficaria* displacing the naturally diverse flora, the pollinators and other wildlife depending on those native species also suffer.

Lesser celandine's brittle roots only penetrate several inches into the soil. Manual extraction often leaves some tubers behind. Like the starfish effect, remaining root fragments will certainly sprout new plants. Thorough root removal requires significant soil disturbance, which may encourage erosion or prime the site for introducing other exotic invasive weeds. Any tubers accidently dropped may facilitate the spread. To combat lesser celandine, Early Detection Rapid Response (EDRR) volunteers find and document infestations within parklands and send the GPS coordinates to Fairfax County Park Authority (FCPA) naturalists. These biologists prioritize the sites and send contractors to spray glyphosate-based herbicides onto designated targets. The small treatment window is between the

Figure 2. In this advanced infestation, lesser celandine carpets Accotink Creek's floodplain at Wakefield Park, displacing the naturally occurring native populations of wild ginger (*Asarum canadense*), Virginia bluebells (*Mertensia virginica*), and dwarf ginseng (*Stellaria pubera*) among other species.

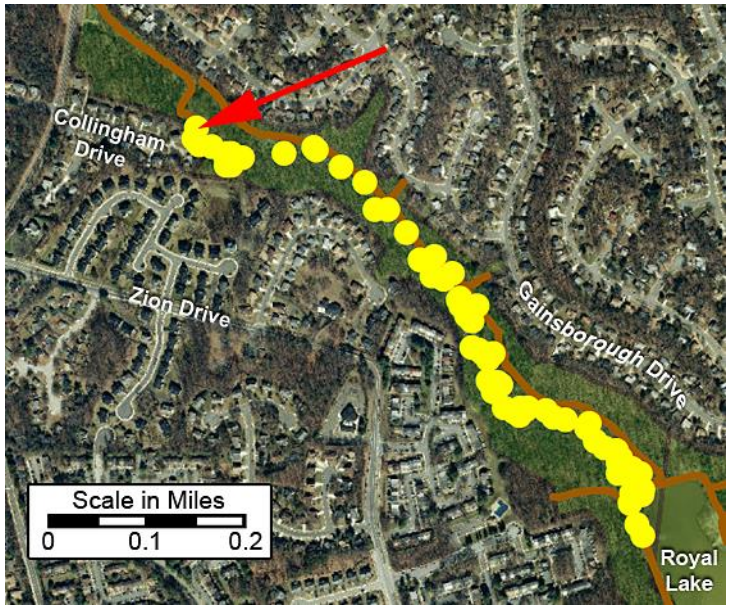

Figure 3. This map shows the 2013 GPS positions of lesser celandine (yellow dots). It originates from a storm drain outfall flowing from Collingham Drive (arrow) and continues downstream of Shanes Creek to Royal Lake. A handful of small, isolated patches near Rabbits Branch were not yet treated; EDRR monitoring continues along both stream valleys. Map created by Justin Roberson, FCPA, using Fairfax County GIS Data.

time lesser celandine leaves emerge and before the weed fruits. Targeted spaying usually happens while many other plants remain dormant, thereby limiting damage to neighboring species. **Herbicide usage is an absolute last resort. Any chemical applications within parklands must be done by trained, professional contractors and not volunteers or other members of the general public.** In 2013, an EDRR patrol discovered lesser celandine infestations originating from a storm drain outfall near Shanes Creek (Figure 3). To stem the spread, contractors treated this manageable area—in this case, better to hit the smaller plot with fewer chemicals than waiting and try combating a larger problem. EDRR volunteers will continue monitoring parklands for lesser celandine and other designated weeds.

Important to note is how the bulk of Royal Lake's lesser celandine was introduced: through an outfall. That means the seeds or tubers washed in from a neighbor's property. Lesser celandine can overtake gardens and yards just as easily as it does woodlands. Residents are urged to check their land for non-native invasive weeds and avoid purchasing them from nurseries. If you would like a brilliant native plant with canary yellow vernal blossoms, please consider marsh marigolds (*Caltha palustris*) or green and golds (*Chrysogonum virginianum*).

To lean more about different FCPA volunteer opportunities at Royal Lake, send a message to me.

For more information on lesser celandine:

https://www.invasiveplantatlas.org/subject.html?sub=3069
https://www.invasive.org/weedcd/pdfs/wow/lesser-celandine.pdf
http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/dcnr_010251.pdf
http://www4.ncsu.edu/~jcneal/journal-manuscripts/193-209_PostKrings_RanunculusFicaria_JBRIT3(1)_24.pdf

* * * * *