localnews

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LIVING

Aliens threaten native plants

Most serious of invading plants arrived from Europe and Asia

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Bree Walpole and Carolyn Bonta of OMNR standing in a field of dog-strangling vine

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Phragmites - Common Reed

Drew Monkman
OUR CHANGING SEASONS

The wetlands, woodlands, fields and roadsides of the Kawarthas are alive right now with luxuriant green foliage and brilliant flowers. Unfortunately, not all of these trees, shrubs and flowers are welcome components of our local plant community.

Of the approximately 2,600 vascular plant species that grow wild in Ontario, some 700 are exotics or aliens. In other words, nearly one plant in four is a species that is not native to the province. The most serious invaders have arrived from Europe and Asia. Some of these species were introduced for beauty, some for food, and others for their medicinal qualities.

Most, however, simply showed up as seed "hitchhikers" in shipments of grain or other goods. Many are thought to have arrived in the soil used as ballast in sailing ships. When the soil was removed from the ships at ocean ports, the seeds germinated and the plants spread inland along roads and railway lines.

Not all exotic plants are created equal. Some, like ox-eye daisy, are generally harmless and co-exist peacefully with the native vegetation. Many others, however, are what we call invasive species. They have come armed with aggressive reproductive qualities that enable them to displace our native plant communities. These so-called invasive exotics spread and survive so effectively that they choke out native plants. This, in turn, degrades habitats and can greatly reduce biodiversity.

Invasive exotic plants tend to mature quickly, produce enormous amounts of seed every year, and establish themselves easily on disturbed sites. They can also be very difficult to remove or control.

An important first step towards protecting our natural heritage is to familiarize ourselves with at least the most threatening invasive exotics. We can then avoid inadvertently planting them and, if already present, begin to remove them.

One way to make sure you are not planting an invasive species is to check the botanical names of all plants before purchasing them. This is because common names can lead to confusion. For example, "red maple" is the common name for both a highly desirable native tree (Acer rubrum) and an invasive exotic (Acer platanoides), a variety of Norway maple.

It's important to avoid planting invasive species on your property. Unfortunately, many invasives such as Norway maple are still readily available at garden centres. Other trees to avoid introducing are black locust, white poplar and Scots pine. It's particularly tragic when people with cottages on the Kawartha Lakes "landscape" with invasive plants, which will in time destroy the beautiful native species that are still abundant in cottage regions.

Although most people are familiar with species such as purple loosestrife, Norway maple and European buckthorn, there are some very aggressive newcomers to our area. This week, I'd like to present four other species of invasive plants that everyone needs to know.

Dog-strangling vine (Cynanchum)

Purple loosestrife, move over. An invader from southern Russia has arrived with the potential to cause even more strife for our flora and fauna than loosestrife has.

Also known as swallow-wort, dog-strangling vine is a perennial which reproduces by seed and by underground rhizomes.

The herbaceous, vine-like stem measures three to seven feet in length and has opposite leaves with pointed tips. The flowers are small, mauve or purplish in colour. A member of the milkweed family, the plant produces narrow seedpods which taper to a slender tip. The pods release small brownish seeds with long, white, silky parachutes. The seeds are carried far and wide by the wind.

Dog-strangling vine grows in nearly all types of open and semi-open habitats, including pastures, hillsides, waste areas, fence lines, and in the understory of woodlots.

Agricultural lands such as orchards and hayfields are vulnerable, as well. It sprawls and twines over fences and other vegetation and often forms impenetrable masses, hence its "strangling" moniker.

It ends up smothering other plants and creates a near monoculture. This reduces not only plant diversity but also that of invertebrates and vertebrates.

The spread of this plant appears to be increasing exponentially as more colonies are established and become seed sources.

Nearly all of the open areas along the Don Valley Expressway in Toronto are already covered with this plant. A good place to see it locally is along Clifford Line, just west of Highway 7 near the interchange with Highway 115.

Dog-strangling vine is very difficult to get rid of. Periodic mowing and pulling up of the heavy rootstocks can be effective in small areas.

However, the only effective control for large invasions of this plant is by herbicides. The hope for the future is that biological control agents will be found.

Garlic mustard (Alliaria petiolata)

Ontario woodlands and fencerows are also under siege by a rather gentle looking flower known as garlic mustard. This European biennial is named for the garlic fragrance produced when the leaves are crushed. It grows in both dense shade and sunny sites and can sometimes exclude nearly all other plants.

The leaves are triangular to heart-shaped and coarsely toothed. The flower stalks grow two to three feet tall with clusters of small white flowers. They have four petals in the shape of a cross. By early summer, most of the leaves have faded away, but the plants can still be recognized by the dead stalks with pale brown seedpods containing shiny black seeds. The seeds are spread to new habitats by humans, animals and water.

Sometimes called the "purple loosestrife of woodlands," garlic mustard often out-competes native vegetation for light, moisture, nutrients, and space. It also produces chemicals that may affect the health of native plants nearby.

Where once there were bloodroot, trilliums, and spring beauty, only garlic mustard remains.

Not only are humans deprived of the vibrant display of beautiful spring wildflowers, but wildlife and insects that depend on early-blooming native wildflowers for food soon disappear, too.

Garlic mustard is harming one insect in particular, namely the rare West Virginia white butterfly.

These butterflies are fooled into laying their eggs on garlic mustard plants because of their close relationship to toothwort, the host plant of the West Virginia white.

Chemicals in garlic mustard appear to be toxic to the eggs of the butterfly and many don't hatch. Caterpillars from those eggs that do hatch don't live long.

Garlic mustard has already become a major threat to woodlands, especially in southwestern Ontario and in large cities including Toronto and Ottawa. It can be seen locally at the Ecology Park on Ashburnham Drive where volunteers will point it out to you.

Prevention is the recommended control option. Monitor your property regularly, since early detection is critical and removal of well-established colonies is very difficult and expensive.

If you find plants, cut them at ground level prior to seed production and dispose of them.

They may still form viable seeds if simply left lying on the ground. A single plant is capable of populating a site.

Common Reed (Phragmites australis ssp. australis)

Common reed, or Phragmites, is a tall, perennial grass that can grow to over 15 feet in height and form dense stands. The leaves are long and narrow. The flowers form bushy, purple or golden panicles in late July and August. Later in the season, these panicles become grey in colour and fluffy in appearance because of the hairs on the seeds. Below ground, Phragmites forms a dense network of roots and rhizomes which can spread out more than 10 feet horizontally in a single growing season under optimal conditions.

Both native phragmites and an introduced, non-native sub-species exist, but the non-native variety is by far the most invasive.

Phragmites can take over a marsh or damp meadow community, crowding out native plants and seriously degrading the area as wildlife habitat. It blocks light to other plants and takes over nearly all the growing space below ground. Soon, a phragmites monoculture is all that remains.

On Lake Erie, when it forms dense clumps along previously open beaches, it prevents rare Fowler's toads from reaching their breeding pools.

Large stands of phragmites can be seen growing alongside the 401 in drainage ditches. It is also beginning to turn up in many areas around Peterborough, such as at the corner of Airport Rd. and Fisher Dr. Once again, control is difficult but a combination of prescribed burning and herbicides may be effective. Prevention is by far the best method to stop the spread of this and other invasive plants.

European frog-bit (Hydrocharis morsus-ranae)

Frog-bit is a free-floating aquatic plant that has invaded the calcium-rich waters of wetlands and the quiet bays of lakes. It is identified by its small, heart-shaped floating leaves and single white flower with three petals and a yellow centre. It can form thick, almost impenetrable mats of floating vegetation. This prevents sunlight from getting through to the submerged native plants below. The mats can also obstruct the movement of large fish and ducks.

When the frog-bit plants decompose in the fall and winter, the decomposition process can use up dissolved oxygen levels in the water, thereby killing fish and other animals.

Frog-bit has become common in many aquatic habitats south and east of Peterborough.

It has even shown up in Chandos Lake.

Presently, there are very few ways to control it. However, if you do have a water garden, be sure to purchase native aquatic plants in order to prevent an accidental release of yet another exotic species.

Frog-bit is believed to have escaped from an ornamental pond in Ottawa in the 1930s.

Clarification regarding last week's article

Last week, I neglected to point out that a significant amount of funding for the acquisition of land for the new Carden Alvar Provincial Park was contributed through the Ontario Parks Ecological Lands Acquisition Program (ELAP).

It provided over 40% of the $1.6 million needed for the Cameron Ranch portion of the new park.

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