



Trowel Talk

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Native Cranberries Bring the Festivities

Penka Matanska

As the winter holidays approach, cranberries bring the festive feeling in every heart with their cheerful red colour as a centrepiece on the dinner table or as a wonderful dinner condiment. This tiny tart berry has its origin in North America's colder climate regions. The cranberry (*Vaccinium macrocarpon*), a superfood, has been known for centuries by the aboriginal people. The Algonquin people called it 'sassamenesh', which means 'a bitter/sour berry'. They used the leaves for medicinal purposes, the fruit for cooking, and the juice for making fabric dyes for clothing. Today cranberries are widely used fresh, frozen, and dried. Their sweet and tart taste blends well in sweet and savory dishes.

The cranberry name of the plant comes from the Germanic word for the crane bird, as the resemblance of the flowers arching from the stems look like a crane's neck and beak. Cranberries are part of the *Ericaceae* family, which also includes blueberries. It is a very hardy plant and can be found in most of North America's plant zones 2 to 7. This evergreen ground cover perennial with trailing habit grows in bogs and marshes in the wild. It forms dense mats with upright woody stems and glossy dark green leaves. The best conditions for growing are moist peat acidic soil in full sun. The plant can be spotted by riverbanks and moist valleys in full

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You Know You're a Gardener When...



Shelley Pelkey
Photo: **Julianne Labreche**

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sun. The leaves are glossy green in the summer that turn bronzy brown in fall. The red fruit is a true berry consisting of four locules each containing a few small seeds. Relative to the size of the plant, the berries are very large hence the name 'macrocarpon'.



Cranberry fruit

Penka Matanska

The first cultivation of cranberries dates from the early 1800s, when cultivars with large fruit like 'Stevens' and 'Pilgrims' were created, allowing for large production. The Massachusetts and Boston areas became the marketing centres from where cranberries were shipped to cities in America and to Europe. Soon, many North American areas with suitable climates created cranberry farms. These are made in large dug out areas resembling marshes where initially the plant grew in the wild. The rest of the dug out areas are filled with peat, sand, and clay. Keeping the soil consistently moist and acidic is the keys to successfully growing cranber-

ries. It is important to know that cranberry plants do not like being always covered in water. Deep flooding happens using special 'channels' just for brief periods in early spring to prevent late frost killing the flowers, and at harvest time to get the berries to float to the surface for easy picking.

How to grow cranberries in your own garden? The conditions can be adjusted in a home garden by modifying the existing site to provide the growing medium that these plants require. Enriching the soil with peat to lower the pH level to 5 and making a bog-like condition, rich in humus, where the roots can be moist at all times, are easy ways to provide a natural wild habitat of cranberries. Cranberries do require 2 to 3 months of cold temperatures between 0 and 7 °C to form proper fruit. Large colonies of plants will form if these conditions are provided continuously. A good start will be to plant 7 to 9 plants. The plants will grow for decades if left undisturbed. Cranberries are self-pollinating and do not need a second variety to produce fruit.

For home gardens, the best time to prepare the ground for the cranberry plants is in late fall or early spring when the ground is partially frozen. It is easier to dig the shape and size of the space that the garden can accommodate. Filling the space with peat and moisture-retaining soil will create a good start for early spring planting. During the first two years, the plant forms runners trailing on the ground. Soil amendments like sand and peat are important, as well as nitrogen rich fertilizer during this time. Providing extra water in hot summers and mulch in winter to protect the young plants is beneficial. When the plants are well established, upright stems start growing. On these vertical stems white to white-pink flowers emerge in mid-May to early June. The stems where the flowers bloom bend as the round fruit starts forming. Initially the fruit is small, but it grows to 6 to 13 mm in diameter as it matures and slowly changes colour from white to pink, red or deep burgundy. The fruit ripens in late October to early November. It is important to pick the fruits before the first heavy frost. Since the fruit consists of the four locules containing large amounts of air, that makes them easily exposed to frost damage. Once

harvested, cranberries preserve well in the fridge for a couple of weeks.

Cranberry fruits left in the garden are an important food source for many wild animals and birds, especially when other food supplies from plants are long gone. Cranberries are favored by cardinals, finches, nuthatches, and blue jays as part of their natural diet. Small mammals like squirrels and rabbits will feed on the fruit in wintertime.

This deep red berry packed with nutritious vitamins, is widely used in making wine or juice, and serves as an enhancement for many baked goods. It not only brings joy for the festive dishes, but also brings cheer in arrangements too. Paired with holly (*Ilex*) as a centerpiece for this holiday's dinner table, it will brighten any mood and will be a good conversation topic.

Get into the spirit and plan for some cranberry cre-



Cranberry arrangement

Penka Matanska

ations that will impress your guests this holiday season. Create long lasting memories of winter chats around the fireplace about a mighty North American berry that is the cranberry! 🌿

Ask a Master Gardener

Compiled by Amanda Carrigan, Agnieszka Keough

Master Gardeners answer helpline questions.

We have had peonies in the side garden of our house for years, but I've noticed that in the last few years the number of flowers they produce has been decreasing. How do we get them flowering again?

Generally garden peonies (*Paeonia lactiflora*) are easy to grow, but sometimes you need to give them a little help. If the peonies have been in the same place for years, conditions in that site could have changed gradually over the years, and started affecting the peonies. There are several causes you could explore.

First, how are the light levels? Peonies do need a certain amount of sun to bloom well. Over time, any nearby trees will have grown, and could be making the space shadier than it was initially,

causing the peonies to bloom less. Changes in fences or buildings nearby might also have affected how much sun the plants are getting.

Next, how are the soil fertility and moisture? If the soil hasn't been getting nutrients added back regularly, such as by applying compost, then decreased soil fertility could be the issue. If it has been getting fertilized, make sure what was used wasn't too high in nitrogen, as this will give you lovely leaves, but no blooms. And while established peonies seem to do fine in fairly dry conditions, they do like some moisture, and too dry a soil could stress the plants.

Another factor to consider is depth of planting. Planting too deep can compromise the plant's flowering. Although they can adjust slowly after planting at the wrong depth, if soil or mulch has been added repeat-

edly over time, the peony crowns may now be buried too deeply to flower well.

If the conditions are otherwise good, perhaps the clumps need to be divided and re-invigorated. Although peonies are tough and will keep blooming for years with little care, sometimes large old plants will bloom less. Note that after dividing, the plants can take a couple of years to settle in and start flowering again. Dig the plants up in late summer or fall and divide the root clumps, replanting each section with at least 3-5 buds or eyes, and with the buds planted no more than 3-5 cm below the surface.

Now, if all that is good and your plants should theoretically be blooming, it might be the weather, especially in spring, that is causing the problem. A lack of winter and spring moisture can decrease bud set in peonies, and strong fluctuations in temperature in spring can also cause problems. Since we had a low-snow winter and a dry spring, with temps varying by almost 20 °C over a few days, it's probably not surprising that the peonies are not blooming. Perhaps if a similar set of circumstances turns up this year, piling extra snow on top of the peonies would help add moisture and regulate the temperature as they come out of dormancy in spring.

I left a few tender things (a dahlia and a few cannas) in the garden this fall – I wasn't sure I wanted to keep them for next year, but I've changed my mind. Is December too late to dig them up and store them?

Winter cold has been starting later the last few years, so depending on the microclimate where the plants were, there's a chance to save them. Dahlia tubers will die if the ground gets too cold, but if there haven't been many times the temperature has dipped below -5 °C, they might be alive. Cannas are a bit tougher and could still be fine even if the air temperature has gotten to -10°C. So dig them up, brush the dirt off them, and see how your dahlias and cannas look – if the tubers are starting to rot or get mushy, they won't be good, but if they are still nice and firm, store them in a cool but frost-free location, wrapped up so they won't dry out too much or get too damp and go moldy. Some people like to wrap in newspaper, some in plastic bags with peat moss or vermiculite – you may have to adjust depending on the conditions in your space. Check on the tubers at intervals during the winter, remove any going bad, and verify they aren't too dry (shrivelling up) or too damp (mold and rot). 🌱

Everything you Always Wanted to Know about Biocontrols (but were afraid to ask): Part 2

Rebecca Last

Will biocontrols save biodiversity?

Invasive species are recognized as a major contributor to loss of biodiversity. Along with habitat destruction and over-harvesting, the introduction of a novel species that lacks competitors and has aggressive behaviours, can be a significant threat to native species.

One way to address the harms of invasive species is by using biocontrols. Biocontrols can be plants, animals, fungi or microbes. Their important characteristic is that they prey on invasive species, eating it or infecting it so its vigour is reduced, and it be-

comes less of a threat to native species. In terms of Integrated Pest Management, biocontrols are at the upper end of the spectrum because preventive and monitoring strategies have already failed.

Biocontrols are not a panacea. They cannot eliminate an invasive species. They can only help to bring the environment back into balance – but it is a new equilibrium that includes some populations of the invasive species.

New biocontrols for two invasive species

Among the nastiest of invasives species in Ontario is phragmites (*P. australis*), which flourishes in ditch-

es along roadways, easily outcompeting native wetland species, such as cattails (*Typha* spp.), wild rice and orchids. Introduced to North America as an ornamental species in the 1800s, phragmites has taken more than a century to become truly problematic. Now, at last, there are biological alternatives to labour-intensive weeding and costly chemical sprays.

The phragmites controls are two species of moths (*Archanara neurica* and *Lenisa geminipuncta*), whose larvae bore into the plant's stems. Both moth species reproduced well in field trials and have done a good job of controlling the invasive phragmites, while leaving the native species alone. The releases mostly took place in south-western Ontario, so it will be some time before populations of these two moth species extend their range as far as the Ottawa area.



Garlic mustard

Steven Katovich, USDA Forest Service, Bugwood.org, CC BY-NC 3.0

The second pernicious invasive species is garlic mustard. One of the oldest spices used in Europe, garlic mustard was probably introduced to North America by the first European settlers. While it has few predators in North America, one group of European beetles, weevils of the genus *Ceutorhynchus*, do feed almost exclusively on garlic mustard. One species focuses on eating the crown of the plants, while another eats its seeds.

Three challenges have been identified with the introduction of these *Ceutorhynchus* weevils. First,

the samples collected in Europe were infected with a parasitoid, so researchers had to make sure that rearing and releasing the weevils didn't also inadvertently introduce this European parasitoid. Second, the weevils are picky little critters and rearing them requires precise conditions. At a Master Gardener conference this past spring, Dr. Michael McTavish, who has been working with University of Toronto researchers to raise these insects, noted they had only successfully raised a few hundred of them. "*We could almost name them individually!*", he said. Third, garlic mustard is in the same family as other economically important brassicas like broccoli and cabbage. So, the biocontrols must be specific to garlic mustard and not expand their diet to these other species.



Univoltine root mining weevil

Hariet Hinz and Ester Gerber, CABI Biosciences, Bugwood.org, CC BY-NC 3.0

The crown-boring weevils have now been introduced into south-western Ontario, but with an introductory population of only a few hundred, it will take years before they become an effective control.

Examples of biocontrols in action

There are several other invasive species for which we now have effective biocontrols. These days, I hardly see any red lily beetles (*Lilioceris lillii*), because they are effectively controlled by a small parasitoid wasp (*Tetrastichus setifer*) that is otherwise harmless.

For years, purple loosestrife (*Lythrum salicaria*) all but disappeared from our ditches and marshlands because two species of black-margined loosestrife beetle (*Galerucella californiensis* and *G. pusilla*) damage its buds and shoots, and interfere with its ability to flower, seed and overwinter.



Purple loosestrife growing in a ditch on Moodie Drive, Ottawa.

R. Last



Japanese beetle adult with two winsome fly eggs on pronotum.

Mark Holle, Shoreview (Ramsey Co) MN, 2000, Image courtesy of University of Minnesota Extension.

There is even a range of biocontrols for the dreaded Japanese beetle (*Popillia japonica*). In Ontario, the parasitic winsome fly (*Istocheta aldrichi*, family *Tachinidae*) is proving effective. I see fewer Japanese beetles and the ones I do see seem smaller and less vigorous. In the image below, note the two white dots on the insect's upper back. These are eggs of the parasitic fly. If you catch a beetle with these white dots, don't kill it! We need these infected Japanese beetles, more specifically their parasites, to multiply.

Limits to biocontrols

The relationship between a target invasive species and its biocontrol is essentially one of a prey and its predator. As a result, biocontrols can never eliminate an invasive species. They just keep it under control.

Many invasive plants leave seeds in the soil where they grew. When the population of the biocontrol species drops, those seeds have the chance to grow. This is the case with purple loosestrife. A plague in the late 1990s, this invasive, albeit pretty, wetland plant all but disappeared by the 2010s. Now it's back. In another five to ten years, populations of its biocontrol species will have rebounded enough to get it back under control.

Biocontrols are not a panacea and they will never allow us to restore an environment to its original state before the introduction of an invasive species. However, biocontrols will help to keep invasive species under control, creating a new environmental equilibrium where native species once more have a fighting chance.

Finding ways to effectively reduce the number of invasive species entering Canada would be a much better alternative! As my old Mum used to say, "An ounce of prevention is worth a pound of cure." 🌱

"A garden is like a river. It flows, it's always moving, and it's never the same. It never reaches anywhere other than this moment." – Monty Don

Celebrating the Season with Indoor and Outdoor Arrangements

Claire McCaughey



Indoor arrangement with yellow winterberry branches, cedar, and curly willow

Claire McCaughey

The arrival of winter, with freezing weather and snowy landscapes, brings with it thoughts of celebrating the season with arrangements outside (at the front door, on a balcony), or indoors (in the hallway, on the dining room table). Winter materials are available in farmers markets, a few garden centres, florists, and even supermarkets, as early as mid-November. When leaves have fallen and little is growing, it is also a suitable time to study the beauty of evergreens. Bare branches, berries, and parts of nature we may overlook in the active growing seasons, such as bark, pinecones, and lichen can now be more fully appreciated. Your own garden or a

few fallen branches or pinecones in the forest can be sources of material for arrangements, and simply going outside and noticing the beauty of nature in winter is rewarding in and of itself.

Materials for winter arrangements

Many gardeners have a ready supply of winter materials including a variety of evergreen branches. In my garden, I have a huge Balsam fir (*Abies balsamea*), as well as my neighbour's White spruce (*Picea glauca*) partially growing over to my side of the fence. Bundles of various evergreen branches can also be purchased at this time of year at florists and supermarkets.

Native red osier dogwood (*Cornus sericea*) branches are also extremely popular due to their vivid colour and suitability for being heavily pruned back each year. Many people have either this native dogwood or a cultivar of dogwood growing in their gardens. I have two cultivars in my garden – 'Midwinter Fire' (brilliant orange/red stems) and 'Cardinal' (bright red stems) which I regularly cut and use for arrangements or give away to friends.

Holly (*Ilex*) is associated especially with Christmas. I have always loved the intensity of the red berries. Holly is a dioecious genus of shrubs, meaning that both a male and female plant are required for berry production. Berries are produced on the female plant. Hollies are less common in gardens than evergreens or dogwoods. Winterberry (*Ilex verticillata*) is a deciduous holly with red berries which also happens to be native to Ontario. This is my favourite material for winter arrangements. There is also a lovely yellow winterberry available from florists. In a previous garden, I had a huge winterberry shrub with many berries on the branches. In my current garden I am still trying to get my winterberry planted two years ago to fruit. Having lived my early years

in Ireland, I also love evergreen holly for the season though it is not native to Canada. This year, I planted two evergreen hollies (both combined male/female plants).



Indoor arrangement with white amaryllis, magnolia leaves, winterberry, other evergreens
Claire McCaughey

Some of the materials for winter arrangements are only available to buy at the florist, though increasingly some supermarkets have a broad selection of flower stems. The flower often grown indoors by gardeners in the winter is Amaryllis (*Hippeastrum*). I have two pots of this bulb in my kitchen, though the flower bud has not yet made an appearance on either of the plants. Florists and supermarkets sell individual stems or a bundle or two or three Amaryllis, usually white or red-flowered. The only drawback with these flowers is that they are expensive (\$6 or \$7 per stem!). There are quite a number of white flowers that are less expensive and work very well in winter arrangements. These include Baby's

breath (*Gypsophila*), Chrysanthemum, and Peruvian lily (*Alstroemeria*). White flowers, especially Baby's breath, are suggestive of a snowy landscape and therefore suited to winter arrangements. One of the leafy florist materials I particularly like is magnolia branches. These are usually the evergreen Southern magnolia (*Magnolia grandiflora*). The leaves are a beautiful shiny green on one side and a striking rust colour on the other side of the leaves. These small branches work equally well indoors or out.



Outdoor arrangement with birch poles, winterberry, evergreens, and fasciated willow
Claire McCaughey

Making winter arrangements

Outside arrangements can be made in a winter-proof container filled with soil (containers with packed soil from previous plantings work well as the

materials easily stay in place). Ceramic containers are not suitable as they tend to break with freezing and thawing. A wooden barrel or a metal container works well or even a simple colourful or plain plastic container (e.g. plain black). A mix of materials should be used for interest. Birch poles provide a background structure and colour contrast for evergreens and winterberries. A small magnolia branch gives fullness in the arrangement. Branches to provide other lines in the arrangement can include fasciated or fantail willow (*Salix udensis*) or curly willow (*Salix matsudana*). Both are available only from florists. These arrangements will not last all winter, but ideally will last through the holiday season.

For indoor arrangements, some of the same materials can be used as for outdoor arrangements. Indoor arrangements, however, are in water and include fresh flowers. I like to include white flowers especially if using winterberry branches and evergreen branches. Simple glass or ceramic vases work well, and if the vases have a narrow opening

only a few stems are needed for an arrangement that stands up well.

Other possibilities for winter arrangements

For longer lasting winter arrangements indoors, you can also make a mixed planting of small flowering and leafy plants. Quite often florists have winter-green (*Gaultheria procumbens*) and Cyclamen plants at this time of year. These can be replanted in potting soil along with leafy green houseplants you may already be growing and a stem or two of dogwood and some moss.

One shrub with berries that I intend to plant next year for its beauty in the garden and potential in seasonal arrangements is Common Snowberry (*Symphoricarpos albus*). A bonus is that this shrub is native to Ontario.

Winter arrangements are a wonderful way to celebrate the season. Take some time to go outside and get inspired by nature to make a table or front door arrangement. 🌿

In the Alcove Garden: Wild Clematis—*Clematis virginiana*

Amanda Carrigan



Wild clematis
Amanda Carrigan

Botanical name: *Clematis virginiana*

Zones: 4-9

Growing conditions: sun to part shade, moist to average soil.

Native to: Eastern North America

Who doesn't love a beautiful clematis? While they may not be as showy as the garden cultivars, the native species do have charm. There are two species native to our area, but the one usually seen is white-flowered *Clematis virginiana*, or Virgin's Bower, also known as Old Man's Beard and Devil's Darning Needles (because of the seedheads). The translation of the plant's botanical name is much

less interesting than the common names, as *Clematis* is simply a Greek word for a climbing plant, and *virginiana*, or Virginian, references its native location.



Clematis in the Alcove Garden

Amanda Carrigan

Virgin's Bower is native to eastern North America, ranging from Nova Scotia west to southern Manitoba, and south to Iowa, Texas, and Florida. Although it is said to like sites with moist soil, such as stream banks and moist fields, it will grow happily in average conditions. In fact, slightly drier conditions might be better in a garden, as it will help to slow down its growth of this vigorous plant, which often attains heights of 5-6 m tall will happily cover any plants in its path. The key here is to allow it a given space, and remove or redirect any stems or shoots that exceed the boundary. It can be cut back to a few nodes above the ground in late fall or early spring, and pruned as needed during the growing season. If given a trellis or wire fence to climb, the

plant will do so readily. In the absence of a trellis, it will climb any available plant stems or sprawl along the ground.

Starting mid to late summer, and continuing into autumn, Virgin's Bower blooms with a profusion of small, creamy-white flowers which have a light almond scent like some spireas. Male and female flowers are both showy, but occur on separate plants. The spent flowers on female plants turn into attractive, swirly-haired seedheads, similar to those of other clematis species. The tangle of stems can provide shelter for wildlife, and pollinators - butterflies, bees and hummingbirds – will visit the flowers.

In general, the plants are healthy, and *Clematis virginiana* does seem less prone to the mildews that can make the leaves of the garden clematis so ugly in late summer. However, mildew, rust, clematis wilt, and leaf spots are still a possibility. Insect pests can include slugs and snails, aphids, vine weevils, scale and earwigs.

Although clematis are supposed to be a little tricky to propagate by cuttings or seed, Virgin's Bower does self-seed, with plants suddenly appearing in unplanned locations. If you have one you want to propagate, stem cuttings should be taken in mid to late spring. The seeds can be collected when the seed heads are fluffy, and sown fresh where they can undergo three months of cold, moist conditions. Note that allowing the seeds to dry out may lengthen the time required for germination after planting.

A word of caution: *Clematis terniflora*, sweet autumn clematis, looks very similar to Virgin's Bower, but is actually an invasive species. If you are considering collecting seed, or purchasing a plant, make sure you have the native species. *C. terniflora* is a fall bloomer, and has smooth, entire leaf edges, where *C. virginiana* has toothed ones.

Historically, Virgin's Bower was once used in liniments for skin eruptions and itching, and was made into a weak tea to treat insomnia and headaches, among other things. The Iroquois and the Cherokee used a root infusion for venereal disease and

kidney trouble, stomach issues, and nerves. An extract was used by the Iroquois to induce strange dreams. More recently the plant has been found to be toxic, irritating to skin and mucous membranes, and with the potential for ingestion to cause vomiting, diarrhea, and convulsions.

While this may not be the clematis for every garden, do give Virgin's Bower a try if you have a spot where it can climb, and not get into too many other plants. And if you don't have an appropriate spot, go have a look at this clematis flowering somewhere (like The Alcove Garden). I promise, you'll be charmed. 🌿

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Clinics

Ask a Master Gardener, face to face gardening questions.

Will be resumed next season

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Talks and Events

Lessons from my Big Fat Garden Reno

Rebecca Last

Thursday, January 9, 7:00 pm via zoom

[Kingston Horticultural Society](#)

What do MGs do?

Rebecca Last

Monday, January 13 2025, 7:00 pm via zoom

[Petawawa Horticultural Society](#)