

Ostrich Fern, Matteuccia struthiopteris

By Kirsten McCarthy, Halton Master Gardener

Matteuccia struthiopteris, also known as Ostrich Fern, is a perennial ground cover that produces bright bunches of 4-6 foot green fronds looking like ostrich feathers, the characteristic that gives it its name. In April, young ferns sprout from moist soil, appearing bright green against the decaying leaves. These are fiddleheads, so-called, because the very tops—furled tight when young—look like the tuning end of a fiddle. Similar in looks (and taste) to asparagus, fiddleheads are usually only available for a few weeks in the spring before the fern leaves unravel. Many Indigenous peoples from across Canada would traditionally harvest fiddleheads. These days they are harvested in the spring and sold in your local grocery store. Many people say the taste is a cross between asparagus, baby spinach, and artichoke with a grassy, springy, fresh flavour and a touch of nuttiness.

Fiddleheads are also packed with antioxidants, omega acids, iron, and fiber. When growing an Ostrich Fern you'll notice other, shorter fronds that emerge a few weeks after the initial fiddleheads. These are the fertile fronds that produce spores for reproduction. These fertile fronds are much shorter, only 12-20 inches (30.5 to 51 cm) long, and will remain standing long after the larger fronds have died back during dormancy in winter.

Continued on next page

Beauty and the Beasts: Burning Bush

Winter Protection for Healthy Native Trees

Question of the Month: Help! Something Is Swarming My Milkweed

Garden Inspiration: Living Under the Leaf Litter

What's Growing On



OSTRICH FERN, MATTEUCCIA STRUTHIOPTERIS (CONT'D)

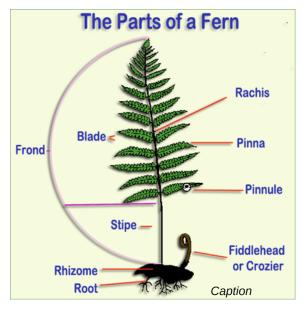
Ostrich Ferns grow best in woodland or understory conditions, preferring dappled or partial sunlight or full shade under a canopy of trees, shading them from direct sunlight. Although they can tolerate some direct sunlight, prolonged exposure to full sun can scorch the fronds and cause them to wilt or turn brown. Providing the fern with a shaded or woodland-like setting mimics its natural environment and promotes healthier growth, making it an ideal choice for shaded garden beds, woodland areas, or around the edges of water features such as a pond or a rain garden. They thrive in environments that are rich in organic matter, cool, and consistently moist, with welldraining soil. In nature, Ostrich Fern is commonly found in damp, wooded areas such as riverbanks, stream sides, and shaded forests.

Ostrich Ferns can be propagated through division or by spores, although division is the most common and effective method of propagation. People divide their Ostrich Ferns in early spring or fall when the fern is dormant or just starting to emerge. To divide the fern, gently dig up the plant, separate the rhizomes into smaller sections, and replant them in new locations. Alternatively, you can order plants from a native plant nursery or garden center. Ostrich Ferns should be planted in a shallow hole that has plenty of room for spreading roots. Make sure the crown sits just above soil level. Fill in around the roots and water well. Take care of Ostrich Ferns for the first year or so by watering regularly. Don't expect too much at first, and don't panic if the plant appears to stop growing. An Ostrich Fern's first priority is to establish a hardy root system. Sometimes the fronds begin to grow and then die back several times during the first season. Once established, the plant spreads easily through underground rhizomes and will soon fill in the space provided. Make sure to water frequently and well during drought.



Image: American Horticulture Society

Ostrich Fern is a popular choice for gardeners due to its graceful appearance and ease of care, but it can also be a little aggressive in a small garden, potentially crowding out other plants. It is a good idea to plant them in an area that can be contained, such as a defined bed, or in a container if taking over is a concern.



Home Landscape Plants

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OSTRICH FERN, MATTEUCCIA STRUTHIOPTERIS (CONT'D)

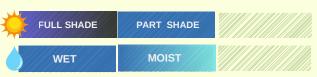


White Wood Aster makes a great companion plant for Ostrich Fern Image: <u>Gardentopia</u>



- In Our Nature <u>Top 12 Native Ferns for</u> Ontario
- Missouri Botanical Gardens
- <u>Illinois Wildflowers</u>
- North Carolina Extension Gardener Plant Toolbox Ostrich Fern

NAME OF PLANT - DETAILS AT A GLANCE



Plant Type, Family: Fern, Onocleaceae **Height/Width:** (H) 90-180 cm (3'-6') (W) 150-240 cm (5'-8')

Features: Three-season interest, requires thinning, distinctive showy fronds.

Faunal value: The Aphid *Amphorophora ampullata* feeds on Ostrich Fern. It is a protective cover for wildlife. Caterpillars of the Ostrich Fern Borer Moth (*Papaipema* sp.) bore through the stalks and/or root system.

Companion Plants: Marsh Marigold (*Caltha palustris*), Swamp Pink (*Helonias bullata*), Great Blue Lobelia, Blue Wood Aster, Foamflower, Anemone, Blue Flag Iris.

Landscape Uses: Woodlands, shade gardens, naturalized rain gardens.

Native Range: Ontario to Newfoundland













The 'Key' to Autum Maple ID!

Maple keys (samaras) are the fruit of maple trees. Each species has a distinctive samara. Fall is a great time to find and identify trees and try these fun activities:

- Maple key art
- Maple seed paper helicopters
- Maple key butterfly
- Maple tree ID
- Autumn leaf art ideas



| OCTOBER GARDEN 'TO DO' LIST | 💪 💪 Did you know your fall garden can 'grow' |
|--|--|
| By Claudette Sims, Halton Master Gardener | insects? Rake or blow leaves into garden beds |
| Fall Garden Management – Leave the leaves in your garden-they are literally called "leaves"! Store any excess leaves in bags or piles to use as mulch in spring. Leave plant stems and seed heads for native bees and birds. Clean up shed, garage, patio, paths, etc. Donate unused tools & repair, recycle or throw away broken items. Drain & store hoses & turn off the water supply. Clean & store/cover pots, watering cans, etc. to prevent cracking during freeze up. Cover ponds with netting before leaf fall or remove leaves in the pond with a bamboo rake. | |
| Perennials – <u>Divide or transplant</u> overcrowded or underperforming perennials as the weather cools. Make sure to water the new divisions well. For species specific instructions <u>consult</u> this edited list (note that invasive plants have been identified). | Gorgeous Luna moths and swallowtail butterflies disguise their cocoons and chrysalises as dried leaves, Photo: S. A. Echeverri Garlic – Plant from the end of October to mid-November up until the ground freezes. Complete |
| ☐ Trees – Mulch young trees with wood chips. To reduce rodent & rabbit damage, use tree guards or chicken wire & trim grass around the tree. Continue to water until freeze up. | details here! Houseplants – Move houseplants indoors or take cuttings and restart them. Decrease watering as the days become shorter. Check for pests weekly. |
| Feed the Soil – Cover bare soil with organic matter such as compost, leaves, straw, mulch or manure to replenish nutrients and prevent erosion and loss of moisture. Leave some soil bare for polyester bees! Tender bulb overwintering – (e.g., caladium, | Lawn and Weeds – Rake most leaves from the lawn and remove to garden beds to support foraging birds and <u>animals and insects</u> who overwinter in leaf litter. Keep on weeding as long as the soil is workable. When mowing is done for the season, clean the mower and sharpen the |
| calla lily, canna, dahlia, elephant ears, gladiolus). When the foliage dries or after the first frost, dig up plants, being careful not to damage the bulb. Clean off soil and dry bulbs for 1-3 days. Inspect for insects or disease. Store dried bulbs in a breathable container such | blades. Seeds – Continue to collect seed for next year's garden. Prepare containers for winter sowing of perennials. Grow your own butterflies by sowing seeds of their larval host plants. |
| as a cardboard box or leaf/paper bag. Arrange bulbs so they are not touching, adding 3-6 cm (2-3") of sand, vermiculite, sawdust, or wood shavings between layers. Label and store in a | Food for all! – Plan to add at least one of these 12 edible native plants to your garden to feed yourself and the life in your garden. |
| shavings between layers. Label and store in a dark location at 4-7° C. | Have a Happy and safe Hallowe'en! |

Beauty and the Beasts Burning Bush (Euonymus alatus)

Kirsten McCarthy, Halton Master Gardener

As the colours of trees and shrubs change to gorgeous hues of orange, yellow and red to mark the fall season, one ornamental bush seems to put on a more vibrant display than others. Commonly known as Burning Bush, Winged Euonymus (*Euonymus alatus*) gets its name for its fiery red foliage in the urban landscape. Originally native to East Asia, Winged Euonymus was introduced to North America in the 1860s. It gained popularity due to its vibrant fall color, hardiness, and ability to grow in a variety of soil and light conditions. However, these very qualities have also contributed to its invasive spread beyond cultivated areas. In Ontario it has escaped from local urban centers into natural ravines and forests, where it alters habitat, forming dense thickets and out-competing native shrubs and herbaceous plants. Winged Euonymus is a successful invader due to its ability to cast dense shade, produce seeds prolifically, and spread through its root system. It is also spread by seed when birds and wildlife consume the berries and deposit the seeds in their droppings over long distances. Each shrub can have hundreds of small seedlings growing underneath it.

Identification

Winged Euonymus is a rounded, deciduous shrub that can form multiple stems or a single stem that normally branches close to the ground. It typically ranges from 1.5 – 4m (5 – 13ft.) tall, but may reach up to 6m (19ft.) in height. The elliptical leaves are paired and grow opposite on the stem. The leaves are widest at or above the middle and narrowed at both the base and tips of the leaf. Leaves have finely toothed edges and are typically 2 - 7 cm long, and 1 - 4 cm wide.



Image: Ontario Invasive Plant Council

During fall in urban landscapes the leaves turn pink-vibrant red to a darker red-purple (crimson) in full sun, or a lighter pink in shadier areas. Where it has escaped into natural areas, the leaves often turn yellow in fall instead of red. During the spring, yellow-green flowers emerge surrounded loosely with four petals. The flowers are inconspicuous and lie flat against the leaves. Later in the growing season, the flowers create abundant fruit capsules that are dark red to purple and open in the fall to reveal a fleshy, bright orange to orange-red aril. Arils are fleshy coatings covering a seed and are often brightly coloured. Each aril contains up to four seeds.



Image: Ontario Invasive Plant Council



Image: <u>Crandall Park Trees</u> Berries of Burning Bush

Continued on next page

BEAUTY AND THE BEASTS -BURNING BUSH (EUONYMUS ALATUS) CONT'D

Removal

Since Winged Euonymus has a shallow root system, seedlings and small shrubs (up to 90 cm tall) can be easily hand-pulled from moist soils. To limit soil disturbance, pull steadily and slowly, and pat disturbed soil down after removal. Larger shrubs can be dug out with a spade or pulled using equipment such as an extractigator. Wear thick gloves and a long-sleeved shirt to protect your hands and arms from sharp branches.

It is important to remove the entire root system to prevent re-sprouting. This can be difficult with larger shrubs due to a deep and fibrous root system. Hand pulling or digging is most ideal in early spring or summer and best before the plant produces fruit (before July) to prevent seed spread. Dispose of the shrub in the garbage rather than yard waste. Never compost invasive species.

Native Alternative

A gorgeous and beneficial native alternative to Burning Bush is Canadian Serviceberry (*Amelanchier canadensis*). Canadian Serviceberry is a shrub or small tree prized for its ecological, aesthetic, and edible benefits. Its early spring white flowers support early pollinators, while summer berries provide food for birds and are also delicious for humans—rich in antioxidants and ideal for jams or baking. With stunning fall foliage and a graceful winter form, it offers four season interest and beauty while also being hardy and low maintenance. It thrives in various soils and light conditions and supports local biodiversity.



Image: <u>Serviceberry</u>

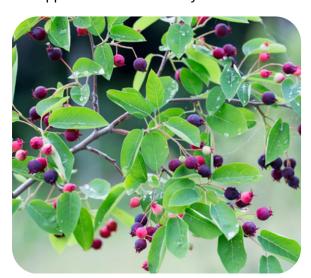


Image: Serviceberries

Additional Reading

- Ontario Invasive Plant Council
- Ontario Invading Species Awareness Program
- Toronto Master Gardeners Invasive Plant Fact Sheet Eunonymus
- <u>Canadian Coalition for Invasive Plant</u> <u>Regulation</u>



Burning Bush is also called **Winged Euonymus** because of the distinctive **corky wings** along the stems.

Photo: Mykola SwarnykCC BY-SA 3.0



Winter Protection for Healthy Native Trees

Janet Mackey, Halton Master Gardeners

Our native trees seem so resilient during harsh Canadian winters, but extended periods of severe weather can still take a toll—particularly on young trees. Broken branches, snapped twigs, browned evergreens, and gnawed bark, are just some of the challenges home gardeners may face. Last fall, I forgot to protect my young trees and they suffered a lot of damage. This year, I'm making sure to take precautions so the trees can recover and continue to grow strong and healthy in the years ahead. Here are some of the basics:

Winter Challenges

- Weather & Temperature Extremes
- Wildlife Pressures
- Mechanical Factors: snow, ice & wind

Weather & Temperature Extremes:

After this extremely dry summer, be sure to water your newly planted trees (planted in the last 2-3 years) once a week, right up until the ground is frozen (that may be December), unless of course there is adequate rainfall or snow.

Mulch the root zone of young trees and shrubs, especially those with shallow roots such as Maples (*Acer*) and Birches (*Betula*). Mulching helps insulate the soil and protects roots from sudden temperature drops following a period of warmth, reducing the risk of root damage.

Protect the bark, particularly of young trees, from intense sun exposure which can cause the bark

to split. This is sometimes referred to as *sunscald or southwest injury* as it often occurs on the southwest side of a young tree with thin bark during a sudden temperature drop. Even the sun being suddenly blocked by clouds on a cold winter day can cause this type of damage.



Image: Purdue University

You can use a white tree wrap guard or place a white-painted plank against the trunk to prevent sunscald and cracking. Be sure to remove these in spring as they can hold moisture against the bark or provide hiding places for insects, such as spongy moths, that may damage the tree.



Image: Janet Mackey

Wildlife Pressures: Deer, rabbits, and rodents



Image: Janet Mackey

are often searching for food sources in extreme weather. The best protection for young trees is a fine hardware cloth mesh wrapped loosely around the base of the tree. Make sure it is pushed into the soil, with one or two wooden stakes attached to the cylinder and hammered into the ground to anchor it.

Ensure the barrier is tall enough that rabbits, even standing on their hind legs on top of a snow layer, cannot reach over. Unfortunately damage and browsing by deer is difficult to control. Some may wish to exclude deer through fencing, but realize this must be at least 8' in height and even then some deer can clear 12' if they're running. If this type of 'exclusion fencing' is not feasible, look to protect the most vulnerable trees in your landscape with barriers using chicken wire or burlap.

Mechanical Factors:

Wind: If a tree is in a windy location, extremely tall for its size or planted in sandy soil - stake it the first year! Staking is a bit of a science.

Image: Staking & Guying
Trees - Univ. of Minnesota

Continued on next page

WINTER PROTECTION FOR HEALTHY NATIVE TREES CONT'D

Staking should only be used when absolutely necessary. It's been proven that <u>unstaked trees</u> <u>develop strong anchor roots</u> more quickly than staked trees. <u>Here's</u> a link to an article on proper staking.

Winter winds can sometimes cause desiccation of evergreens. If this is a concern, you can erect a burlap barrier to reduce the impact of cold winds. Do not use "tree bags" which are often made of a plastic mesh fabric, as these can create a microclimate that brings trees out of dormancy, leading to dead branches and, in some cases, the loss of the tree.

Snow & Ice: Take a broom and remove snow from conifers to prevent branches from becoming damaged. Allow ice to melt and do not attempt to remove the ice from trees.

to remove the ice from trees.

Consider moving young trees if they were planted where there is a constant drip from an old eavestrough causing ice buildup.

Salt: Use burlap screens or barriers to prevent salt spray from roads and sidewalks. Better yet, plant salt tolerant species such as Juniper in these locations. Rinse branches in early spring if they've been sprayed by salt.



Image: Greenland Gardening

Further Information:

- Building a Better Windscreen This Winter Michigan State Univ.
- Protecting Trees & Shrubs in Winter University of Minnesota Ext.
- How Do I Protect My Trees & Shrubs from Damage in Winter University of New Hampshire





Q&A

By Hariette Henry, Halton Master Gardener

Monarch Butterfly Caterpillars are the insects most often associated with Milkweed (*Asclepias* spp.). A close connection has occurred between these species because Milkweed is the exclusive food source for Monarch Caterpillars. This unique dietary dependency means that Monarch females will only lay eggs on Milkweed plants. There are however other insects that have also evolved to be able to feed on Milkweed, and like Monarchs have become milkweed specialists.

The <u>list of Milkweed predators</u> is relatively short as the sticky white sap and leaves that give Milkweed its common name contain toxic chemicals known as cardiac glycosides. These toxins are meant to deter mammals (deer and rabbits) and insects from feeding on the plant's foliage. Only insects that are able to take up, store and utilize the toxins to defend themselves can thrive on the plants and become specialists. The flowers and nectar of Milkweed plants do not contain these chemicals so nectarseeking bees, flies and butterflies can pollinate the plants without being adversely affected.

I believe the insects feeding on your plant are Oncopeltus fasciatus, commonly known as Large Milkweed Bugs. They are medium-sized Hemipterans (true bugs) of the family Lygaeidae. Adult Large Milkweed bugs are 3/4" long, bright orange to reddish-orange in colour, with two black triangles pointing forwards and backwards separated by a black band across the back. The smaller nymphs (also present in the photo) and adults will feed on Milkweed, particularly the seeds, and are commonly found clustering on Milkweed seed pods (as they are doing in the photo).

Relp! Something is swarming my Butterfly Milkweed plant



Images: Large milkweed bugs, Oncopeltus fasciatus. left: smaller nymphs; right: larger adults .

Other insects that can be found feeding on Milkweed include small Milkweed bugs, Lygaeus kalmia, Swamp Milkweed Leaf Beetle, Labidomera clivicollis, Red Milkweed Beetle, Tetraopes tetrophthalmus, Milkweed Tussock Moth caterpillar, Euchaetes egle, and Oleander Aphids, Aphis nerii. They usually have the same aposematic markings (warning coloration such as bright red or bright orange), as does the Large Milkweed Bug, that advertise their toxicity and deter predators.

Though the presence of these bugs may be a bit alarming, the numbers should eventually decline with no ill effects to the plant. The most concerning insect to feed on Milkweed is probably the Oleander Aphid as these insects are able to reproduce clones of themselves without mating (parthenogenesis), which means populations can grow very quickly, overwhelming the plant. They also produce honeydew which can lead to the development of sooty mold. If you have aphids, spray your plant with a strong stream of water from the hose to control insect numbers.





THESE SPECIES NEED YOU TO:

LEAVE THE LEAVES!



Yellow-faced Bumble Bee Queens survive the winter in leaf piles until mid-May. Leaves are integral to their survival.

Photo credit: Leslie Scopes Anderson



Eastern Red Bats found in all Canadian provinces will tuck their furry uropatagium, or tail membrane, over their bodies when torporing in the leaf layer during winter to help keep warm. Photo credit: Tom Arbour



Luna Moths are found attracted to nectar in broadleaf forests, especially Hickory, Hazelnut, Beech, Birch, Oak, Tulip, Willow and Walnut in Southern Ontario and Quebec. Their 4 stages of lifecycle are laid on leaves of preferred trees. Photo credit: Dean Morley

Mourning Cloak Butterflies can be found in all of Canada and as far north as the Yukon. They are the last Butterflies seen in the Fall and find refuge in leaf litter and sap from felled trees. Photo credit: Lydia Fravel





Ovenbirds are located in Saskatchewan, Southern Manitoba, Ontario and Quebec, New Brunswick, PEI and Nova Scotia, in Canada. They nest and forage year round in leaf litter for all of their food.



What's Growing On? By Trish Moraghan, Halton Master Gardener







What's Growing On?







About Our Newsletter

Cross Pollination is published monthly from February to December and is written and prepared by our dedicated volunteers. Halton Master Gardeners are experienced gardeners who have studied horticulture extensively and continue to upgrade their skills through technical training. We strive to provide science-based, sustainable gardening information to the general public. The information in our newsletter has been verified by our volunteers to the best of our abilities, but given the scope of horticulture and science some concepts may not reflect current knowledge. The content displayed in our newsletter is the intellectual property of Halton Region Master Gardeners and their authors. It can be shared in its entirety, but specific content should not be reused, republished or reprinted without the author's consent.

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