BUCKEYE YARD AND GARDEN LINE 2014-26
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This is the 26th 2014 edition of the Buckeye Yard and Garden Line (BYGL). BYGL is developed from a Tuesday morning conference call of Extension Educators, Specialists, and other contributors in Ohio.

****BYGL READER SURVEY NOTICE: Starting next Monday (September 29), we will be doing a short electronic survey to learn about the impact of the BYGL, how the BYGL is used, and how we can improve the BYGL for next season. If you receive a special e-mail message with a hotlink to the survey, please take a few minutes to complete the survey. The survey will close at 5:00 pm., Friday, October 10. Your participation will help us make the BYGL better for you and others next season.

In This Issue:

1. PLANTS OF THE WEEK: Annual (Ornamental Peppers); Perennial (Red Beauty Yarrow); Woody (Winterthur Viburnum); Vegetable (Pumpkins); and Weed (Common Pokeweed).
3. BUGBYTES: Fall Home Invaders and Twig Girdler.
4. DISEASE DIGEST: Palm Trees Called Tomatoes! and Tales of the Kingdom Fungi: Lichens.
5. TURF TIPS: A Dalliance Of Fescue?
6. INDUSTRY INSIGHTS: The 87th Ohio State University Green Industry Short Course.
7. WEATHERWATCH.
8. COMING ATTRACTIONS: Arboretum Feast, Part Deux: Maple Syrup Tasting is Added to the Mix!; Wood Destroying Insect Inspection Training - October 8; The 87th Ohio State University Green Industry Short Course (Formerly the Nursery Short. Course) December 9 - 11; and Tri-State Green Industry Conference.
9. BYGLOSOPHY.
APPENDIX - Additional Website Resources.

1. PLANTS OF THE WEEK.

*ANNUAL - ORNAMENTAL PEPPER (Capsicum annuum). Ornamental peppers are great plants for adding a burst of bright color in the garden during the fall. Fruits range in color from white, yellow, orange, red, to black. Peppers ripen at different stages therefore one plant can have multiple colors, thus having more visual impact from just one plant. Another interesting feature is that the fruit of this plant is borne upright and typically sits above the foliage. Due to recent breeding efforts there are many cultivars available. Some cultivars to try include, 'Sangria', a mounding plant with orange, yellow, and red fruit; 'Calico', a green, cream and purple variegated foliage variety; 'Purple Flash', a plant that has smoky purple-black leaves with shiny round fruits that ripen from black to fiery red; and 'Medusa', a compact plant that has twisted fruits with yellow, orange to red fruit. These plants can withstand most soil and need full sun.

Keep soil moist but not overly wet and plant in full sun. Fertilizer can be applied to ensure plants last longer into the fall season. A common question that people ask is if these peppers are for eating. While the peppers are edible please proceed with extreme caution because these peppers can be extremely hot and sometimes not as palatable as our edible peppers!

Author: Cindy Meyer

*PERENNIAL - RED BEAUTY YARROW (Achillea millefolium 'Red Beauty'). Fall is a great time to add to your perennial garden because it allows the plants to establish a root system before going into the winter and not to mention the great fall deals that can be found at your local plant stores! Red beauty yarrow is just one such plant that a fellow BYGL teammate found as a must have for the perennial garden.

Red beauty yarrow as the name suggests has wonderful red flowers. ‘Red Beauty’ is a rhizomatous, spreading, upright yarrow cultivar that is noted for its cerise-red flowers and ferny aromatic foliage. Flowers appear in dense, flattened clusters that persist much of the summer. Plants typically reach up to 18 - 24” tall. Foliage is deeply-dissected, fern-like, with silver green leaves. The leaves are said to have a strong, somewhat spicy aroma that may persist when used in dried arrangements.

Author: Cindy Meyer

*WOODY - WINTERTHUR VIBURNUM (Viburnum nudum 'Winterthur'). Now is the time of year to truly enjoy this viburnum. This cultivar of smooth, withered viburnum is truly spectacular in the Autumn garden and is about to increase its dazzle further. Clusters of soft pink fruits turn blueberry color as they mature, and the combined effect is wonderful, and is highlighted as the glossy green leaves turn scarlet and maroon as the season progresses. This viburnum is a medium-sized 5 - 8' shrub for full sun or partial shade and adapted to most soils. Design with mass plantings for major-league effect.

Author: Jim Chatfield
*VEGETABLE - PUMPKINS* (*Cucurbita pepo*). As it turns out, we here in the United States are enchanted with pumpkins. Whether we will carve jack-o-lanterns, hurl/chunk them from cannons, smash, decorate with or bake them into pies (yummo!); lovingly, over 1.24 billion pounds of pumpkins are grown in the U.S. each year. And guess which state is one of the top 5 pumpkin-proliferating states . . . yep, that is correct! The top 5 include Illinois, California, Ohio, Pennsylvania and New York.

Most parts of the pumpkin are edible, including the fleshy shell, the seeds, the leaves, and even the flowers. Pumpkins are a tender annual and the seeds will not germinate in cold soils. Wait to plant until soil temperatures reach at least 65 - 70F or more and for growing transplants, pumpkin seeds actually germinate best with soil temperatures at 95F! Due to their vining nature, fruit size and numbers may decrease with a lack of water or because of cooler temperatures, like below 65F, and the plants will not tolerate a frost. Happily, pumpkin plants are survivors and even if some leaves and sections of the vine are damaged; amazingly, the plant can re-grow secondary vines to replace what was damaged. Pumpkins produce both male and female flowers, so good pollination is critical for pumpkin proliferation. So if you are tired of looking at plain orange pumpkins, then check out some new rind colors from orange to red to blood-red (Halloween scary), from white to salmon to blue-grey and find your favorite color now!

Author: Erik Draper

*WEED - COMMON POKEWEED* (*Phytolacca americana*). This showy perennial is native to the eastern half of the U.S. Despite its size, this 3 - 10' tall weed often finds a way to escape detection in landscapes and nurseries. The plant is well branched and resembles a small tree. Stems and leaf petioles are green at first then turn a striking reddish-purple. The succulent green, oblong-shaped, 2 - 8” long leaves are simple with long leafstalks and alternate on the stem. Pokeweed flowers in mid-to-late summer. The small, pinkish-white flowers are borne on drooping racemes located at the ends of branches. The resulting grape-like clusters of round, juice-filled fruit are at first light green and then turn a deep blackish-purple. With its large succulent green leaves and reddish-purple stems festooned with dark fruit, this weed provides a beautiful late-season display.

Of course, beauty is in the eye of the beholder. All parts of common pokeweed are toxic to humans, pets and livestock. The pokeweed plant contains a poisonous substance similar to saponin (or frothing agent) and small amounts of the alkaloid phytolaccine. The roots are the most poisonous with the leaves and stems intermediate in toxicity, although toxicity increases with maturity. The berries are the least toxic and are commonly eaten by birds; however, children have been poisoned by eating both immature and mature fruit. Horses, sheep and cattle have been poisoned by eating fresh leaves or green fodder, and pigs have been poisoned by eating the roots.

Tony Joe White’s 1969 hit song “Polk Salad Annie” that was later legendarily performed by Elvis Presley belies the toxic nature of pokeweed. Indeed, boiled young shoots harvested in early spring have long been eaten as greens ("poke sallet") in Appalachian and southern cultures. Annual poke sallet festivals are held in a number of locations including Gainesboro, TN (Poke Sallet Fest held on Mother’s Day Weekend) and Harlan, KY (59th Annual Poke Sallet Festival held June 5 - 7, 2014). Proper preparation is obviously the key to these festivals not yet becoming "the last annual." Still, the Gainesboro event advertised "outhouse races."

Author: Joe Boggs
2. HORT SHORTS.

A. A WALK ON THE WILDSIDE: FALL MIGRATION UNDERWAY. As the weather cools, leaves change, and we pull our sweaters and jackets out of storage, the birds are starting their fall migrations south for the winter. Songbirds, such as warblers have been spotted moving through Ohio, sapsuckers may be spotted in the coming months, and hummingbirds will soon be leaving sugary feeders to start their 3000 mile journeys (remember: keeping your feeders up until hummingbirds leave will not deter their migrations).

Another bird making its migrational journey through Ohio is the DOUBLE-CRESTED CORMORANT (Phalacrocorax auritus). These prehistoric-looking fishing birds are being seen from the Lake Erie area down through Ohio, in bodies of water that provide temporary resting sites during their southerly flights. BYLG writer Marne Titchenell spotted four in a small golf course pond just last week. As mentioned, these are fishing birds, so are most often seen around large bodies of salt or freshwater. But as their migrations take them south, you may catch sight of these birds, with their long necks and wings stretched out to dry, perched on rocks and logs around permanent water sources.

In the past decade, efforts have been made to reduce nesting colonies of cormorants on several Lake Erie islands. Cormorant colonies can be large, and sometime destructive to the natural vegetation along the island shores, leaving less resources and space for other waterfowl species to breed and nest.

Despite their ability to become a nuisance in some areas, double-crested cormorants are quite interesting upon closer inspection. Both adults and juveniles have striking aquamarine eyes and bright bills. If a cormorant were to open wide, you’d see a bright blue mouth as if they just feasted on a blue raspberry candy or popsicle that stained their mouth a vibrant blue! Their namesake, ‘double-crested’ comes from two tufts, or crests, or feathers that appear only on adults during the breeding season.

Author: Marne Titchenell

B. A WALK ON THE WILDSIDE: PROTECTING TREES FROM DEER RUBS. September is here and Ohio’s WHITE-TAILED DEER (Odocoileus virginianus) population is gearing up for mating season. Bucks are completing their antler growth, which occurs roughly from April through August, and are ready to start polishing them up in order to attract a mate, or several mates, as is the case with deer. How do bucks polish their antlers? As the antlers grow, they are covered with a layer of soft, vascularized tissue, commonly referred to as velvet. Polishing requires the buck to rub the layer of velvet off in order to display their literal crowning glory, although sometimes the velvet will dry up and slough off without rubbing. Rubbing stations are often the trunks of saplings or small trees that fit in and around the antlers.

No reports came in on this week’s BYGL regarding damage to trees from deer rubs, but the time is right and the damage may start any day now. One of the most important strategies to remember when combating wildlife damage is to be proactive. Don’t wait for the damage to occur; if a tree was damaged last year by rubbing, protect it now before it happens again.

The white-tail deer breeding season ranges from October through December and is preceded by velvet removal, which typically begins in and continues through September. Saplings and
small trees can be protected from deer rubs by using tree guards, which are wrapped around the trunk of the tree, preventing access to the bark. A tree guard should be 4 - 5' high with several inches of space between the tree and the guard. There are many types of tree guards commercially available made of various materials. Tree guards made of hard plastic or chicken wire can sometimes cause just as much damage to the tree as a buck rubbing with no restrictions. When a buck rubs on a tree protected by chicken wire, for example, the wire rubbing up against the tree can cut up the bark. A guard made of a softer plastic may work better to prevent damage.

Nursery growers often face a significant challenge when it comes to protecting their trees from deer damage. A second strategy, equally important as being proactive, is remembering there is no silver bullet to combat wildlife damage of any kind, especially white-tailed deer damage. This means that using multiple management options, sometimes in conjunction with one another, is the best strategy to take. A combination of tree guards and repellents can be effective. In areas sustaining moderate to severe deer damage, the best management option is lethally reducing the population. Deer damage permits allow the removal of deer outside of the hunting season and are issued by the Ohio Division of Wildlife, 1-800-WILDLIFE.

Rubbing is often most intense during and shortly after velvet removal, but can continue throughout the breeding season, as bucks will rub their glandular foreheads over rubs to leave a scent behind. If tree guards are used, be sure to leave them up through the winter.

Author: Marne Titchenell

3. BUGBYTES.

A. FALL HOME INVADERS. Now that fall is officially in the air, a number of insects are poised to make their way into Ohio homes. Indeed, the recent spate of cool temperatures have caused some to already start practicing a little breaking-and-entering! Common fall home invaders include: HACKBERRY PSYLLIDS (Pachypsylla spp.); the BOXELDER BUG (Boisea trivittatus); the WESTERN CONIFER SEED LEAFFootED BUG (Leptoglassus occidentalis); the notorious MULTICOLORED ASIAN LADY BEETLE (Harmonia axyridis); and the becoming-more-notorious BROWN MARMORATED STINK BUG (Halyomorpha halys).

The goal of these "cold-blooded" home invaders is to find sheltered locations where cool temperatures will slow their metabolism so they will not "burn up" their stored fat reserves. This survival strategy keeps them alive since there is nothing for them to eat throughout the winter. These potential home intruders are attracted to the solar heat radiating from southern or western facing roofs and outside walls as well as the warmth radiating from within. Attics, outside wall voids, and spaces around door jams and window frames make perfect overwintering sites. Unfortunately for the insects and beleaguered homeowners, the insects may occasionally find their way into homes. Although the high inside temperatures doom the insects - they burn through their fat and starve to death - their movement into homes can make them significant nuisance pests.

The best way to deal with these fall home invaders is to prevent them from entering in the first place. Effective insect exclusion includes finding and sealing-off entry points such as cracks around windows, doors, or utility pipes. Poorly attached home siding and rips in window screens provide an open invitation. Check homes for unprotected vents, such as bathroom and kitchen vents, or unscreened attic vents. Also, while in the attic, look for openings around
soffits. The large opening created by a worn-out exterior door sweep may as well have a flashing neon "Enter Here" sign hanging above it. Leave the garage door up? Say hello to our little friends! An ounce of prevention is worth a pound of bugs.

Once inside the home, the best method to manage the offending invader is to "Hooverize'em." Swatting or otherwise smashing these insects can cause more damage than leaving them alone since fluids inside their bodies can leave permanent stains on furniture, carpets, and walls. Also, mashing multicolored Asian lady beetles and brown marmorated stink bugs can release a lingering eau de bug; lady beetles have stinky blood and stink bugs are called stink bugs for a reason! Thus, a vacuum cleaner is the preferred method for giving the invader the bums rush. However, make certain the vacuum cleaner is a "by-pass" type, meaning refuse is not passed through an impeller. Otherwise, you will create a horrifying bug-blender.

Author: Joe Boggs

B. TWIG GIRDLER. Cindy Meyer reported receiving a phone call from an Ohio woodlot owner who asked what could be chewing deep, trench-like grooves encircling large twigs of a black locust tree. The chewing damage extended through the bark and deep into the white wood causing the foliage on the affected stems to wilt and turn brown ("flag"). BYGLers discussed the possible culprits and concluded the damage was being produced by some type of twig girdler. The common names of "twig girdler" and "twig pruner" are sometimes used interchangeably; however, pruners are usually beetles that produce foliar flagging and stem dieback by boring into the stems while the damage observed by the woodlot owner is most accurately described as "girdling."

Twig girdlers are longhorned beetles (family Cerambycidae) and one of the most common species found in Ohio is Oncideres cingulate; the beetle has no accepted common name. This twig girdler may feed on a wide range of deciduous trees including: black locust; dogwood; elm; hackberry; hickory; honeylocust; linden; oak; pecan; persimmon; redbud; and ornamental fruit trees. The brownish-gray beetles are around 5/8" long and as with most longhorned beetles, they have exceptionally long antennae. The beetles emerge in late summer and females use their powerful mandibles to chew a V-shaped groove around the circumference of 1/4 - 1/2" diameter twigs. The females then lay eggs beneath the bark of the portion of the twig beyond the cut. The severed twig may remain attached by a small strand of xylem tissue for short time, but the tissue eventually breaks causing the twig to drop to the ground.

Once the eggs hatch, the cream-colored cylindrical larvae feed on the wood of the fallen twigs. They spend the winter in the twigs and resume feeding in the spring. The larvae eventually consume the entire inner portion of the twigs replacing the wood with frass that looks like fine wood shavings. The females normally focus their attention on lateral branches; however, they may occasionally attack the main stems of small trees. Although such damage is significant, given the random nature of the beetle's host selection, protective sprays are hardly justified. However, destroying fallen, infested twigs now or during the winter will reduce the overall localized population of this twig girdler.

Author: Joe Boggs

4. DISEASE DIGEST.
A. PALM TREES CALLED TOMATOES! Amy Stone, in Toledo, has watched the bottom leaves of tomato plants begin to turn yellow, then brown, to finally dry up and then die. She indicated that this pattern continued all the way to the top of the plant. Amy mentioned how simple and easy it was to pick ripe tomatoes because there was no foliage left to hunt through to find the ripe treasures! She indicated the reason for the apparent “palm tree” appearance of the tomatoes, it was the fungus, *Septoria lycopersici*, causing the disease called SEPTORIA LEAF SPOT on the leaves. Erik Draper, in Northeast Ohio, reported that in his area/region, there wasn’t much Septoria leaf spot to be found; however, the same palm tree appearance was the result of intense disease pressure caused by BACTERIAL SPOT OF TOMATOES. This disease is caused by multiple pathogens; namely, *Xanthomonas euvesicatoria* and *Xanthomonas perforans* = *Xanthomonas axonopodis* (syn. *campestris*) pv. *vesicatoria*, *Xanthomonas vesicatoria*, and *Xanthomonas gardneri*.

Both of these diseases are aggravated in areas where wet, humid weather persists for extended periods during the growing season. Septoria leaf spot usually starts on the lower leaves as circular lesions, 0.0625 - 0.25” in diameter, with dark-brown margins and beige to gray centers containing small black fruiting structures. Typically, there are numerous lesions/spots per tomato leaf. This fungal disease will spread up the plant, moving from oldest to youngest growth. Once leaves are infected and lesions become more numerous, infected leaves begin to turn slightly yellow, then brown, then wither and then remain attached to the plant. Fruits are rarely infected by the Septoria fungus, the greater fruit impact is caused by the sudden exposure of fruit to sunlight by the loss of leaves, resulting in sunburn.

With bacteria spot of tomatoes, bacteria attack the foliage, stems and fruit of tomatoes and lesions may also form on the peduncle, which holds the fruit. Symptoms begin as small, yellow-green lesions on young leaves appearing as dark, greasy, water soaked-like lesions on older foliage. Lesions develop rapidly and remain small, 0.1 - 0.2” wide and become tan to brownish-red but with the correct environmental conditions, lesions may being to coalesce. Bacterial lesions are often defined by tiny leaf veins, so the appearance is angular rather than round. Lesions will often be are more prevalent at the leaf tips and margins, where moisture, such as dew, collects and is retained.

Diseased leaves can develop a tattered appearance as the leaf margin and the centers of the lesions become necrotic, dry up and will fall out under dry conditions. Major crop losses result from aborting both blossoms and young, developing fruit. The remaining fruit may have raised lesions and may be damaged by sunscald, the result of sudden exposure to the sun. Because the diseased foliage often remains on tomato plants, affected plants have a scorched-like appearance. This browning and scorch will most often begin at the base or on the plant’s interior, where water is held and persists for extended periods of time.

*Author: Erik Draper*

B. TALES OF THE KINGDOM FUNGI: LICHENS. Lichens are not an example of a plant disease, but since one of the components of the lichen symbiosis is a fungus (the other is an alga or a cyanobacterium) and we often talk of certain disease-causing fungi we shall include it here in this section. Furthermore, many horticulturists think lichens are causing plant disease. However, remember, lichens do not damage plants! Now for the rest of the story.

*What Is A Lichen?*
Thoreau once penned: "I find myself inspecting little granules as it were on the bark of trees - little shields or apothecia springing from a thallus - such is the mood of my mind - and I call it studying..." He was talking about lichens, a few examples of which have such exotic names as rock pimples, earth wrinkles, angels hair, freckle pelts, fog fingers, dragons funnel, tar-jelly and old man's beard.

What are lichens? They are a mutualistic symbiosis, or in the words of Irwin Brodo, Sylvia and Stephen Sharnoff, in their wonderful "Lichens of North America," they are a "composite of a fungus and an organism capable of producing food by photosynthesis." The usual symbionts are a member of the Ascomycetes or "sac or cup fungi" in the Kingdom Fungi and a green alga in the Kingdom Protocista or a cyanobacterium (formerly blue green alga) in the Kingdom Protista. The "apothecia" of which Thoreau speaks are a type of cup-like fruiting body common in the Ascomycete fungi. The "thallus" of which he speaks is "the vegetative body consisting of both algal and fungal components" (glossary entry from "Lichens of North America").

The alga or the cyanobacterium (the photobionts) produce carbohydrates through photosynthesis which then serve as food for the fungus. The fungus in its turn provides a steady supply of moisture to the photobiont, provides a substrate helpful in providing the right amount of light to the photobiont, and protects this alga or cyanobacterium photobiont within the fungal tissues. There are many variations of this relationship, including the fact that sometimes club fungi rather than sac fungi and brown algae instead of green algae are involved. Bottom line, as the great lichenologist Trevor Goward once said: lichens are a case of "fungi that have discovered agriculture."

What Do Lichens Look Like?

The thallus body, which in structure is mostly composed of the fungal symbiont, is the most recognizable part of a lichen. There are three or four basic lichen body types. Lichens that produce leaf-like, two dimensional, flattened, lobed thalli with upper and lower surfaces that grow in layers are known as foliose lichens. Fruticose (shubby) lichens grow erect or pendulous in three dimensions and have no distinguishable upper and lower surfaces. Crustose lichens look somewhat like the name implies, they form a crust over their substrates, like rocks, trees, and sidewalks. The lower surface of crustose lichens attach firmly to many surfaces, and form brightly colored patches of a thick, rough naturalized texture. Squamulose lichens can be described as intermediate between foliose and crustose growth forms. Their shape is scale-like and they attach by the lower surface like tiny shingles. We should note, however, that there are other intermediate types that include one or more characteristics of the above mentioned growth forms.

Where Do Lichens Grow?

Lichens are located on every continent on planet Earth, including both the Arctic and Antarctic. They survive in all climates and altitudes. Specific lichens have their specific requirements, but in general they need three things - undisturbed surfaces, time, and clean air.

Lichens will make themselves at home on most any undisturbed surface commonly known as their substrate. Bark, wood, mosses, rock, soil, and peat are all natural substrates. Thalli will also establish itself on glass, metal, plastic, and cloth. Most lichens are restricted to certain types of substrate; lichens normally found on tree bark for instance is rarely found on rock, and vice versa.
Lichens established on stone in the landscape give the garden a mature look. Discovering a lichen growing on your tree is not a bad thing. In fact, it should be celebrated by giving you peace of mind knowing the environment in your neighborhood is clean enough to support this amazing dual organism.

**What Is The Ecological Role of Lichens?**

Lichens are important partners in nature's ecosystem and should be admired and studied when seen on landscape plants and hardscapes. They are an early colonizer that reestablishes life on rock and barren disturbed sites. They play an important role in soil formation over much of the earth. As lichens colonize rocks they trap dust, silt and water.

Because of their association with cyanobacteria, lichens can provide themselves with nitrogen compounds. Lichens contribute to the nitrogen cycle by converting the nitrogen in the air into nitrates that contribute to their growth and development. Their ability to "fix" atmospheric nitrogen is beneficial to other plant life as well. When it rains, nitrogen is leached from both living and dead lichens and is available to plant life in the immediate areas. When they die they contribute decayed organic matter to the area they inhabited which enables mosses and seeds from vascular plants to begin developing among the pockets of new soil.

Animals utilize lichens in many interdependent ways. It is well documented that numerous animals use lichens for either food or shelter. Some fifty species of birds are known to regularly use fruticose type lichen as their preferred nesting material. Small animals, commonly use lichens to hide from natural predators through camouflage and direct cover.

**What Are Economic Benefits of Lichens?**

Historically, lichens have had economic benefit. For many years, over different parts of the world, they have been a source of natural dyes for wool and fabric. These dyes were distinguished by the type of lichens used and the way the color was extracted. Lichen dyes are extracted by the boiling water method or the fermentation method. Today they are still used by local artisans as they demonstrate their crafts.

Some lichens have antibiotic properties that are valuable commercially. The genus *Usnea* is used in Europe in ointments and other commercial products and is said to aid healing in superficial wounds. Lichens have been used in preparations as deodorants, laxatives, expectorants, tonics, and healing pastes throughout the years. Research with lichens around the world is suggesting these organisms hold promise in the fight against certain cancers, and viral infections including HIV.

In the ornamental horticulture profession, lichens are preserved in glycerine, painted different colors and made available commercially to the floriculture industry for dried flower decorative arrangements. These same materials are utilized by model railroad enthusiasts, architects and others as miniature "plant" forms for their scale reproductions of new building concepts and old railroad towns.

**Do Lichens Damage Plants?**

We know that lichens occur when a sac fungus and a green or "blue-green" algae take a "lichen" to each other. One of the applied questions often asked is - but do lichens damage plants?
The short answer is no - lichens do not cause plant damage. The lichen symbiosis is not damaging bark in any direct ways. It does not rob bark of significant amounts of moisture. The fungal symbionts of the lichen do not parasitize living plant cells and lichens do not appear to be associated with providing entranceways for pathogens into plant tissue. So why do so many people, including many horticulturists, think lichens damage plants? Perhaps it is because when branch decline occurs due to other factors, lichen growth sometimes proliferates. This is due to increased sunlight that penetrates to the bark which favors the algae that are photosynthesizing, resulting in enhanced growth. The lichens did not cause the branch decline but rather one of the effects of the plant decline was an increase in lichen growth.

If we really want to stretch things, perhaps we could come up with a few indirect or unusual examples of lichens negatively impacting plants. For example, where lichens are especially abundant on bark their presence may obscure desirable ornamental features of certain plants, e.g. the beautiful bark features of crape myrtles in the south. Another unusual example of indirect lichen effects is reported in "Lichens of North America" (Brodo, Sharnoff & Sharnoff). In Canada, hemlock looper (Lambdina fiscellaria) is a serious forest pest. And guess what? This moth "lays its eggs almost exclusively on hair lichens such as Bryoria trichodes", and so is an important cog in this pest's life cycle.

Finally, in states more southerly than Ohio there is an unusual role of lichens in plant disease. There is an algal plant pathogen, Cephalouros virescens, which causes scurfy leaf spots and fissured twig cankers on many plants, including magnolias and azaleas. Jim Chatfield and Nancy Taylor have noted this disease occurring abundantly in North Carolina woodland and parkland areas. Well, guess what? In some cases, the Cephalouros virescens alga teams up with a Strigula spp. fungus to develop a lichen symbiosis, causing leaf spots and twig cankers due to the algal activity.

However, the bottom line is the few and far between exceptions rather than the almost universal rule that lichens most definitely do not damage plants.

Are Lichens Good Eating?

Well, caribou, and their European cousins, Rudolph and the rest of his reindeer friends, certainly think so. They have a rumen digestive system and the bacterial flora to properly digest the complex carbohydrates that lichens have in rich abundance. Overgrazing of lichens can even result in periods of starvation and population crashes for herds. In some cases over 90% of winter food for caribou is derived from lichens. Many species of deer, mountain goats, flying squirrels and voles also use lichens as an important food. In some cases, western North American wildlife managers fell trees to deliberately make arboreal lichens more accessible for winter food. Finally, there are many mites, springtails and other smaller fauna that consider lichens as food substrates.

As for humans, lichens have several disadvantages. It is tough for us to digest the complex carbohydrates and a few lichen species are even poisonous. So "extreme cuisine" aficionados need to follow the usual precautions familiarized by the old saying re "there are old mushroom hunters - and bold mushroom hunters - but no old, bold mushroom hunters." Lichens are not mushrooms, but we trust that you get the point. There are some reports of native cultures eating certain species of lichens in times of famine.
Sometimes lichens are made palatable by going to great extreme, from adding wild onions and saskatoon berries in barbecue pits to the ages-old trick of adding them to sugar, raisins and apples (just about everything tastes good with these additives). There is even the practice of arctic populations mixing partially predigested lichens from caribou stomachs with raw fish eggs to make what is called “stomach ice cream”. We will pass on that one. And yes, certain lichens have also been used on occasion as laxatives.

Finally, lichen history includes use for various value-enhanced beverages, from a bitter flavoring for beer in Siberian monasteries to fermented corn beverages in Mexico to a source of sugar for Swedish brandy distillers. All in all, though, lichens as a food source is pretty limited, except for animals and their role in the food web.

How Are Lichens Named?

The Chinese philosopher Krishtalka said that, “the beginning of wisdom is calling things by their right name.” One way to indicate the right name of an organism is to use the universal language for a species, namely the Latin binomial name, specified according to the International Code of Botanical Nomenclature. But, what about lichens? Lichens are dual organisms, composed of two species living together in a mutually beneficial symbiosis. One species in the lichen symbiosis is a fungus which provides a substrate and helps with mineral and water management, and the other species is an alga or a cyanobacterium (the photobiont) which uses water and carbon dioxide and the energy of sunlight to photosynthesize and produce food for the dual organism.

So what could the Latin binomial of a lichen be? Are the Latin binomials for lichens given as both the fungal and photobiont binomials? No. As it turns out, by convention of the Botanical Code of Nomenclature, lichen names are simply given as the Latin binomial of the fungal component of the dual lichen organism. This seems somewhat inelegant, but since the recognizable form of the lichen is the fungal component, the Latin name of the lichen is simply given as the Latin name of the fungus in the symbiosis. So, when the Cladonia cristatella sac fungus gets together with the green alga Trebouxia erici to form a lichen, the official Latin name of the lichen is simply Cladonia cristatella. So, now you know. Having gotten that little detail out of the way, let's face it - the real fun with lichens comes with their common names. Though common names can cause confusion because of local variations, there are some wonderfully evocative lichen names.

The can-of-worms lichens (Conotroma urceolatum) is the fungal and lichen Latin binomial, so named for the long segmented spores of the fungus. How about these: powder-tipped antler lichen; black-eye lichen; bloody heart lichen; cowpie lichen; elf-ear lichen; five-o-clock shadow lichen; hairball lichen; naked kidney lichen; tattered rag lichen; and blackened toadskin lichen. And after that motley crew, a number of lichens with foodie names, such as candy lichen, rock licorice lichen, and chocolate chip lichen. No mas.

Where Can I Learn More About Lichens?

Finding information on lichens is simple enough. Start by asking your children if you can see their science class book. It should be in there. Numerous informational tidbits can be found online. A few of the websites that caught our attention include: [http://www.lichen.com], [http://mgd.nacse.org], and [http://www.earthlife.net]. However, if you really want to touch bases with the big leagues of lichenology - check out:
"Lichens of North America", by Brodo, Sharnoff, and Sharnoff. It is a 795 masterpiece of truly magnificent photography and information, including both accessible general information and detail for the lichen aficionado.

"Sharing the stillness of the unimpassioned rock, they share also its endurance; and while the winds of departing spring scatter the white hawthorn blossoms like drifted snow, and summer dims on the parched meadow the dripping of its cowslip-gold - far above, among the mountains the silver lichen-spots rest, star-like, on the stone." - John Ruskin

Author: Jim Chatfield

5. TURF TIPS.

A. A DALLIANCE OF FESCUE? Julie Crook gave turfophiles in the BYGL group, a chance to "cross blades" with turfgrass identification. Someone sent to Julie, a photo of some wide-bladed, open-crowned grass in their lawn, which was disturbing their karma while gazing upon their greenness! They were wondering if the coarse-bladed invader of their green domain was really a southern incursion of Dallisgrass (Paspalum dilatatum). Upon seeing the photos, the excited turfophiles universal cry of "TALL FESCUE" was heard. Following the outcry, there then ensued the discussion of the curious nature of tall fescue (Festuca arundinacea) in turf and why it could not be dallisgrass.

Dallisgrass is more classically a southern species; specifically, it is a warm-season, perennial, with wide (0.25 - 0.6”), very coarse, leaf blades, which are a gray-green to yellowish-green in color. It is a low-growing, bunchgrass-type weed that readily invades desirable turfgrasses in the southeastern states. Contrastingly, tall fescue is a cool-season, perennial, drought-tolerant, bunchgrass, with more upright, deep-green blades. Everyone is familiar with the typical, wide-bladed 'K-31' type grass that tends to line the ditches and medians of most roadways, due to its tough, drought-tolerant nature. An intriguing nuance of the K-31 grass, is that when isolated, with no other tall fescue plants providing competition, it will flatten out and the leaf blades tend to become wider! If it has competition, then it will grow in a more upright fashion and the leaf blades will be narrower.

However, not all tall fescues are created equal and in fact, many new cultivars are very hard to distinguish visually from Kentucky bluegrass! These new cultivars and selections of tall fescue, which are specifically called "turf-type tall fescues", have narrower leaf blades. In accordance with its isolationist, wide leaf blade "fescue" nature, to keep the blades of turf-type tall fescue turfgrass narrow, plant populations per square foot need to be high!

Author: Erik Draper

6. INDUSTRY INSIGHTS.

A. THE 87TH OHIO STATE UNIVERSITY GREEN INDUSTRY SHORT COURSE. Recently, several ENLTTers visited this years’ site for the OSU Short Course at the Kalahari Resort in Sandusky, along with Brian Laurent and John Street of the Ohio Turfgrass Foundation. Although we had attended and enjoyed conferences there before, it was a revelation to see it in the light of preparing for this new joint effort of OTF and OSU. No parking issues or charge! Excellent rooms for the conference dates, starting at $99. Comfortable lounge chairs and eating
and libation venues right in the Convention Center. A Convention Center that will be fully focused on this joint conference, warm and relaxing.

Granted, the site is not in central Ohio, but it is such a convenient venue once there. Convention goers may want to get their rooms somewhat away from the central indoor water park area where there is a good deal of resort buzz, but on the other hand, the convention is well apart from this part of the resort, and in case you can swing a day or so with the family present, there are four tickets for the water park that go with every room each day, and though all hotels have pools, this one is rather large!

As indicated earlier, this year’s event will be held in conjunction with the 48th Annual Ohio Turfgrass Foundation Conference and Show on December 9 - 11, 2014 at the Kalahari Resort and Convention Center in Sandusky, Ohio. Remember that this broad-based OSU green industry program will be coupled with the great Ohio Turfgrass Foundation Conference program that covers all aspects of the world of turfgrass and their additional partnerships with the Ohio Landscape Association and the Ohio Lawncare Association. Naturally, the programs will cover a wide range of pesticide applicator and professional certification credits.

Updates will occur throughout the fall as we approach the Conference and Short Course, and the full program will soon be online. Look for information on the websites at [http://www.ohioturfgrass.org] and [http://www.osushortcourse.com] and here in the Buckeye Yard and Garden Line (BYGL).

7. WEATHERWATCH. The following weather information summarizes data collected at various Ohio Agricultural Research Development Center (OARDC) Weather Stations spanning the dates from September 1 - 24, 2014, with the exception of the soil temperatures which are readings from Wednesday, September 24, 2014 at 5:05 a.m.

BYGLers were reminiscing about this year’s weather. The number of 90 degree days were limited across the state, and Erik Draper had a hard-time recalling if his county in northeast Ohio even had one all season long. Erik also shared that turfgrass in Geauga County never went dormant in 2014 - a summer to remember. Amy Stone shared her concern that recent abundant rains in September may have people in the greater Toledo area forget about the lack of moisture recorded over the late spring and summer. This year's rainfall events in Lucas County were ones of extremes - none at all, to several inches at one time.

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<td>52.2</td>
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<td>59.32/60.13</td>
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<tr>
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<td>NW</td>
<td>75.9</td>
<td>52.1</td>
<td>3.92</td>
<td>2.3</td>
<td>54.09/58.53</td>
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<tr>
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<td>Central</td>
<td>77.4</td>
<td>55.5</td>
<td>0.42</td>
<td>2.3</td>
<td>64.55/65.50</td>
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<td>53.3</td>
<td>1.21</td>
<td>1.5</td>
<td>57.72/60.62</td>
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For a link to the OARDC Weather Stations, visit: [http://www.oardc.ohio-state.edu/centernet/weather.htm]

Author: Amy Stone
8. COMING ATTRACTIONS.

A. ARBORETUM FEAST, PART DEUX: MAPLE SYRUP TASTING IS ADDED TO THE MIX! The 2nd annual ArborEatum edible landscape feast and sharing will be held on Wednesday, October 8, 2014 at the OSU Secrest Arboretum at the Ohio Agricultural Research and Development Center in Wooster. More details to come, but start planning your menu items. Last year's hits were legion, from over 30 entries from Cleveland's Lois Rose (from bitter orange marmalade to medlar jelly) to ramps soup to controlling invasives one-bite-at-a-time Autumn olive pate de fruits. Lambsquarter omelettes anyone?

B. WOOD-DESTROYING INSECT INSPECTION TRAINING, October 8, 2014. Mandatory training is required for applicators becoming licensed in commercial Category 12. Recertification credit is available. The session will be held at the ODA in Reynoldsburg, Ohio. For more information about this event, check out the PestED website at [http://pested.osu.edu].

C. THE 87th OHIO STATE UNIVERSITY GREEN INDUSTRY SHORT COURSE. Mark your calendars! The 87th OSU Green Industry Short Course, formerly the OSU Nursery Short Course, will be held in conjunction with the 48th Annual Ohio Turfgrass Foundation Conference and Show on December 9 - 11, 2014 at the Kalahari Resort and Convention Center in Sandusky, Ohio. For more information, visit the Short Course website at: [http://www.osushortcourse.com].

D. TRI-STATE GREEN INDUSTRY CONFERENCE. Save the Date - 2015 Tri-State Green Industry Conference on February 5, 2015 at the Sharonville Convention Center, 11355 Chester Rd., Cincinnati, OH 45246. The Tri-State Green Industry Conference is a collaborative effort between Ohio State University Extension, Purdue Extension, Cincinnati State Technical and Community College, and the Cincinnati Zoo and Botanical Garden. It features a variety of high quality education and training for professionals in the areas of Annuals & Perennials, Garden Center & Greenhouse Innovation, Tree & Shrub Care, Turfgrass Management, Green Infrastructure and General Pest & Disease Management and also features a vendor trade show. Pesticide recertification credits for Ohio, Indiana and Kentucky will be given, OCNT training credit is available, ASLA CEUs are available and CEUs will be available for ISA Certified Arborists.

For more information visit: [http://hamilton.osu.edu/topics/horticulture/2015-Tri-State-Green-Industry-Conference].

8. BYGYLOSOPHY.
"But now in September the garden has cooled, and with it my possessiveness. The sun warms my back instead of beating on my head ... The harvest has dwindled, and I have grown apart from the intense midsummer relationship that brought it on." - Robert Finch

APPENDIX
ADDITIONAL WEBSITE RESOURCES:

Ask a Master Gardener Volunteer
http://mastergardener.osu.edu/ask
Buckeye Turf  
[http://buckeyeturf.osu.edu](http://buckeyeturf.osu.edu)

Emerald Ash Borer Information  
[http://ashalert.osu.edu](http://ashalert.osu.edu)

National Plant Diagnostic Network and First Detector Program  
[https://www.npdn.org/first_detector](https://www.npdn.org/first_detector)

Growing Degree Days and Phenology for Ohio  
[http://www.oardc.ohio-state.edu/gdd/](http://www.oardc.ohio-state.edu/gdd/)

Hungry Pests Website  

Ohio Pesticide Safety Education Program  
[http://pested.osu.edu/](http://pested.osu.edu/)

Ohio State University Department of Horticulture and Crop Science Plantfacts  
[http://plantfacts.osu.edu/web/](http://plantfacts.osu.edu/web/)

Ohio State University Extension Bee Lab  
[http://u.osu.edu/beelab/](http://u.osu.edu/beelab/)

Ohio State University Extension Master Gardener Volunteer Program  
[http://mastergardener.osu.edu](http://mastergardener.osu.edu)

Ohio Woodland Stewards Program  
[http://woodlandstewards.osu.edu](http://woodlandstewards.osu.edu)

The C. Wayne Ellett Plant and Pest Diagnostic Clinic (CWEPPDC)  
[http://ppdc.osu.edu/](http://ppdc.osu.edu/)

USDA APHIS Beetle Buster Website (Asian Longhorned Beetle)  
[http://www.beetlebusters.info/](http://www.beetlebusters.info/)

USDA APHIS Beetle Detective Website (Asian Longhorned Beetle and Emerald Ash Borer)  
[http://beetledetectives.com/](http://beetledetectives.com/)

Following are the participants in the September 23rd conference call: Joe Boggs (Hamilton); Jim Chatfield (Hort and Crop Science and Plant Pathology); Julie Crook (Hamilton); Erik Draper (Geauga); Cindy Meyer (Butler); Amy Stone (Lucas); Nancy Taylor (C. Wayne Ellet Plant and Pest Diagnostic Clinic); and Marne Titchenell (School of Environment and Natural Resources).

BYGL is available via email, contact Cheryl Fischnich [fischnich.1@osu.edu](mailto:fischnich.1@osu.edu) to subscribe. Additional fact sheet information on any of these articles may be found through the OSU FactSheet database [http://plantfacts.osu.edu/web](http://plantfacts.osu.edu/web).
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BYGL is a service of the OSU Extension Nursery, Landscape, and Turf Team (ENLTT). BYGL is available online at: [http://bygl.osu.edu], a website sponsored by the Ohio State University Department of Horticulture and Crop Sciences (HCS) as part of the "Horticulture in Virtual Perspective." The online version of BYGL has images associated with the articles and links to additional information.

Where trade names are used, no discrimination is intended and no endorsement by Ohio State University Extension is implied. Although every attempt is made to produce information that is complete, timely, and accurate, the pesticide user bears responsibility of consulting the pesticide label and adhering to those directions.

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Keith L. Smith, Associate Vice President for Agricultural Administration; Associate Dean, College of Food, Agricultural, and Environmental Sciences; Director, Ohio State University Extension; and Gist Chair in Extension Education and Leadership.