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President’s Message - Quietly Stepping Aside with Dignity

David Olszyk

Hello members. Welcome to my final message to you as ACS President. I wish to take a moment to thank you for your unwavering support of the Society through some uniquely difficult times. We’ve successfully weathered the storm that was the COVID-19 pandemic and are now quickly moving toward full activity within our organization. I’m excited about all of the initiatives that have recently been put into action and anticipate many more going forward.

I cannot repeat enough that the key to success with an organization such as ours is to have a solid and vibrant base of volunteers who are willing to step up and do the honest, sometimes difficult, but always challenging and fun work of managing things. I wish nothing but success to whomever will take the reins.

It doesn’t stop there. During the 20-plus years I’ve been a member of the ACS, it’s been more-or-less the same core of individuals who have run events and led the Society. The best way to thank them is to help out or offer to replace them. If you or somebody you know is a leader or a logistician, please reach out to us. In the meantime, may your lives be blessed with copious sunshine, adequate rain, and air resplendent with the intoxicating essence of pine resin.

A scene from the Chicago Botanic Garden. Photo by Chester Hundrieser.
The Pinetum at Devizes in the UK once belonged to Humphrey Welch, its creator. He wrote an authoritative book on dwarf conifers. In this picture, taken at the pinetum, is a most interesting specimen. Just above the golden Lawson cypress to the left is a *Picea abies* ‘Humilis’ (Humilis Norway spruce) with three different kinds of foliage: an exceptionally dense ball at the peak of the Lawson, another slightly less dense ball to its left, and, more typically, ‘Humilis’ foliage just above it. These are all growth sports or reversions on the same plant. New cultivars might result from these sports.

*Picea pungens* ‘St. Mary’ (St. Mary Colorado spruce) is a most attractive, low-mounding form of Colorado spruce that originated as a witch’s broom. *Pinus strobus* ‘Horsford’ (Horsford eastern white pine) is a dense bun discovered as a seedling growing in Vermont. At the same time, *Pinus strobus* ‘Sea Urchin’ (Sea Urchin eastern white pine) is a dense, bluish bun grown from a witch’s broom seedling. *Picea glauca* ‘Blue Teardrop’ (Blue Teardrop white spruce) developed as a fast-growing branch on *Picea glauca* ‘Echiniformis’ (Echiniformis white spruce).
Closeup view of *Picea abies* ‘Humilis’ above.

Obviously, all known cultivars had to originate in some manner. The ones listed in this article are a few examples used to explain the various origins of these plants. All the plants are cultivars.

Cultivars are selected variants of the typical species with garden merit. They can be propagated asexually to produce duplicates of themselves. A cultivar cannot be grown from seed and can be traced back to a single mother plant. The name is written inside single quotes, and Latin forms have not been recognized since 1958.

Several plants are incorrectly named cultivars. Let me mention two groups. The first group would be most plants that are called simply ‘Pendula’. For example, the very first *Picea abies* ‘Pendula’ (weeping Norway spruce) may exist somewhere, but no one can be certain. Since seedlings are commonly produced from weeping forms of *Picea abies*, they have been propagated, grown, and sold under this name. The same is also true for *Pinus strobus* ‘Pendula’ (weeping eastern white pine). It comes true from seed as well, and the “mother cultivar” cannot be proven to exist. They need to be given a designation of forma pendula (f. *pendula*) since that is how they grow. *Picea abies* f. *pendula* (pendulous form Norway spruce) and *Pinus strobus* f. *pendula* (pendulous form eastern white pine) would be their correct names.

The second group would be plants that are artificially induced to grow in the desired manner by propagating selected material. They are considered cultivar variants, a term coined by Humphrey Welch. An excellent example of a cultivar variant is *Abies procera* ‘Glauc Prostrata’ (blue prostrate Noble fir), described as a flat-growing plant that invariably produces an upright leader and eventually becomes a large, conical tree. The grafting of a side branch of *Abies* (fir) will generally make a cultivar exhibiting this kind of behavior.

The mechanisms that produce cultivars are not very well understood. Still, there are some excellent observations and exciting theories about the various processes at work. Cultivars tend to remain stable, and propagations grow like the parent plant. However, reversions back to species normal do sometimes occur and serve to confuse the issue. I described *Picea glauca* ‘Blue Teardrop’ (Blue Teardrop white spruce) as originating from a fast-growing
branch on *Picea glauca* ‘Echiniformis’, itself a slow-growing cultivar. This type of activity is quite common in many species. Mutations occur in nature and are often induced by the background radiation present all around us.

When cell divisions are taking place in growing tissues, they are most susceptible to this radiation damage. If such damage occurs at the right time and place, a mutation may result. Since a typical plant of *Picea glauca* ‘Echiniformis’ has many growing tips, it is not very surprising that such mutations occur quite often in this cultivar. In plants with a more open growth habit (fewer growing tips), such sporting is more uncommon but does occur. Sometimes the sporting affects the color of a plant instead of its shape or growth rate.

*Pinus strobus* ‘Horsford’ (Horsford eastern white pine) and *Pinus strobus* ‘Sea Urchin’ (Sea Urchin eastern white pine) both originated from seed. ‘Horsford’ was found growing in the wilds of Vermont by William Horsford. In contrast, ‘Sea Urchin’ was grown in a controlled experiment by Sidney Waxman at the University of Connecticut. Both plants are obviously the products of mutations, but just when the mutation of each occurred is not obvious. ‘Horsford’ may have resulted from a mutation during the sexual activity that created the seed, from which it germinated. However, the change may have occurred at an earlier time, as evidenced by Waxman’s work.

For over twenty years, Waxman collected seed cones from congested masses of growth, called witch’s brooms, and grew seedlings from them. These seedlings had a high percentage of compact and dwarf forms among them. Several exhibited enough merit and individuality to warrant cultivar designation and naming.

Witch’s broom seedlings indicate genetic aberrations since such a high percentage of dwarfs is produced. That percentage could easily be much higher, except that almost 100% of witch’s brooms have only female flowers. The fertilizing pollen must come from male flowers on standard parts of the tree. Other dwarf plants from seed collected in the wild and grown commercially at seedling nurseries and those found in the wild like ‘Horsford’ may often be produced from an unnoticed witch’s broom in the region of the seed’s origin. If not, the seed was created by a genetically damaged sperm, egg cell, or zygote.

Cultivars originating from seed tend to behave stably and are relatively dependable. Those produced from cuttings taken from a witch’s broom are often another story altogether. Take, for example, one plant not yet mentioned, *Pinus sylvestris* ‘Riverside Gem’ (Riverside Gem Scots pine). This progeny of a witch’s broom develops into a dense, upright plant with a pleasingly conical habit. Interestingly, ‘Riverside Gem’ plants will consistently die after about twenty years,

![Picea abies ‘Gold Drift’ at Coenosium Gardens when the author lived near Eatonville, WA.](image)
a trait observed in several cultivars propagated from witch's brooms (with varying life spans). The 'Riverside Gem' witch's broom was shaped like a broad cushion and appeared dense enough for a person to sleep upon. Plants propagated from this broom appear entirely different. They are thick, narrowly conical trees that reach about eight feet and die when they reach twenty years.

The cultivar, *Picea pungens* 'St. Mary', is a much better-behaved plant than 'Riverside Gem'. It maintains the dense, low habit of its originating broom and is a most desirable plant. It develops into a full cushion about three feet across and 18 inches high, when it is twenty years old.

Several theories attempt to explain the origin of witch's brooms. Most brooms are thought to be viral in origin. A virus upsets the hormonal balance in an elongating bud, causing it to grow little but produce many lateral branches. Such growth continues until the broom chokes itself or is shaded to death, provided that the
hormonal irregularities themselves are not fatal. If this type of broom is propagated, the progeny will fail immediately or within just a few years. One clue that a discovered broom is of this type would be observing several brooms within a small area, indicating that the virus spread through the site like a disease.

Brooms that do propagate successfully are attributed to other causes. These “other causes” have never really been defined, but some interesting facts or clues are known. Cytokinins are found at a higher-than-normal level in witch’s brooms. Cytokinins are hormones that do not move very freely around the plant. Their presence stimulates cell divisions. Another hormone named gibberellin is present at reduced levels. It encourages shoot elongation. This sort of combination would tend to promote the formation of many shoots while keeping them short.

These unknown agents upset the hormonal balances in a bud. How they can persist into the resulting brooms is a question that still needs explanation. Since these agents apparently have a genetic relationship to the broom, the problems are even more complicated than they at first appear. Grafting a small piece of a “non-viral” witch’s broom onto a seedling will generally create a plant with the original broom’s characteristics. The hormonal imbalance apparently remains, even though a new stem and root system with a standard balance have been added. Of course, the broom itself was on a species-normal trunk and root system while attached to the parent tree. Either a causative agent was in the piece of the broom that was grafted, or the genetic structure of its cells was imprinted with a new hormonal code equal to that of the whole broom.

Almost all witch’s brooms that have been observed to flower have been female. *Pinus sylvestris* ‘Longmore’ (Longmore Scots pine) is a male broom. If the egg cells are fertilized in the strobili of a broom, the resulting seeds produce a high percentage of dwarf plants. Those dwarfs result from the normal sperm cell from the tree’s male flowers fertilizing the genetically dwarf eggs (zygotes) of the abnormal witch’s broom. Either the eggs have an altered genetic structure, or the causative agent is somehow encapsulated within the seed. The variation of growth rates exhibited by the seedlings, however, indicates genetic changes. A causative agent would be expected to produce a relatively uniform population of typical species and witch’s broom duplicates, with little or nothing in between.

Some seedlings from witch’s brooms will die at a young age, develop into weak, sickly plants, or consistently exhibit dead areas. Other seedlings from the same source will be standard in all observable ways. Still others will develop into compact or dense plants, and a few will become very dwarf. Such variation within a population is thought to be due to genetic factors.

Many cultivars originate as abnormal seedlings from apparently normal parent plants or as branch mutations on otherwise typical trees. For example, *Pinus strobus* ‘Fastigiata’ (fastigate eastern white pine) gets exceptionally large, and the branches widen as it ages. In Vermont, a fastigate *Pinus strobus* was found that maintains its spire-like growth habit. Heavy winter and spring snows have had little effect upon its shape. Several similar plants are growing together, but the specimen with the best growth habit was selected and named *Pinus strobus* ‘Stowe Pillar’ (Stowe Pillar eastern white pine).

Any seedling population will show variations in growth habit, rate of growth, and coloration. This variation is normal but seldom produces anything that varies very much from the species norm.

*Picea glauca* ‘Echiniformis’ at Coenosium Gardens.
Color mutations can occur in seedlings or on the branch of an otherwise average tree, such as a yellow branch mutation I found on *Picea abies* ‘Reflexa’ (reflexed Norway spruce). This branch was the sport that produced a cultivar named *Picea abies* ‘Gold Drift’ (Gold Drift Norway spruce).

*Pinus strobus* ‘Hillside Winter Gold’ (Hillside Winter Gold eastern white pine) was discovered growing on a slope next to an interstate highway by Layne Ziegenfuss. There was a large group of yellow trees in the area. They were unnoticeable in the summer because they were green at that time of the year. He selected the one with the best color for propagation. He almost threw the grafts away when they turned green in the propagation house. The trees on the slope were gone the following year. Someone had removed the original grove. Layne searched for the seed source, expecting to find a yellow branch somewhere, but never located a seed source. Many similar variants have been found in other species since Layne’s discovery.

Genetics appear to be a crucial factor affecting the origins of new cultivars. The agents affecting the needed changes in a typical tree’s genetics to produce aberrant growth or seed are not entirely understood. However, Nature works to create these mutations, and the process has produced a treasure trove of attractive plants for the modern homeowner.
Conifers and Daylilies

Text and Photography Bruce and Chick Buehrig

By mid-fall, November in USDA Zone 6, where our garden is, most of the leaves that will fall, have already done so. Some trees, however, hold onto their foliage, like Japanese maples (Acer palmatum), pin oaks (Quercus palustris), and witch hazels (Hamamelis virginiana), bringing even more raking come spring. However, with the leaves off the deciduous trees and the perennials asleep, the garden is transformed, once more, by the singular beauty of conifers.

Winter provides a perfect opportunity to view conifers. Seeing conifers at this time brings to mind the old adage, “conifers are the bones of the garden.” Beyond providing aesthetic appeal with shapes, colors, and sizes, conifers afford a habitat for birds, an overwintering shelter for insects, and a refuge for other wildlife. Then spring arrives. Conifers explode with new needle color, beautiful cones, candles, and overall growth. The perennials return also. Everything puts on its best show.

The garden in winter, blanketed in snow.

After early spring, conifers act as planting backdrops, centerpieces, individual specimens, or as mass plantings in the garden landscape. They are complemented by plants such as daylilies (Hemerocallis) that come in a large variety of shapes and colors.

According to the American Daylily Society, daylily flower forms include single, double, spider, and unusual. Generally, a daylily patch will bloom for approximately three weeks. With the proper selection of early, mid-season (peak bloom), late bloom, and rebloom varieties, the array can last throughout the summer and even into fall. Water at least one inch per week and provide bright sunlight for at least four hours per day are important factors in achieving maximum daylily bloom. Too much sunlight can fade the petals of deep reds, dark purples, and whites. Ranging in height from one foot to over seven feet, with blooms measuring two inches to more than 12 inches, daylilies can be the perfect companion plant to conifers.

The genus name for daylily, *Hemerocallis*, means “beauty for a day” in Greek. Therefore, it is necessary to select varieties with good bud count and branching. After that, it is time to let your conifers shine.

Weeping hemlocks (*Tsuga canadensis* f. *pendula*) are particularly nice backdrops to colorful flowers. Their dark color adds great contrast to daylilies. A few good hemlock choices, other than the pendulous form, might be ‘Kelsey’s Weeping’, or ‘Jeddoh’. Almost any *Picea orientalis* (Caucasian spruce) would also be an excellent candidate for a floral display involving daylilies. Consider ‘Skylands’, ‘Gowdy’, or ‘Shadow’s Broom’.

An advantage of certain conifers is their open, upright, and narrow habit, which allows for planting sun-loving perennials next to them. Good types to consider are *Cedrus libani* ‘Beacon Hill’ (Beacon Hill cedar of Lebanon); *Cedrus libani* subsp. *stenocoma*; or *Cedrus brevifolia* (Cypriot cedar). Other excellent conifers include *Cedrus atlantica* ‘Glauc’ (blue Atlas cedar) or ‘Horstmann’s Silberspitz’ (Horstmann’s silvertip Atlas cedar), two wonderful cultivars of this

(l - r) *Picea pungens* ‘Montgomery’, *Pinus sylvestris* ‘Gold Coin’.


Virtually any conifer is worthy of sharing space with perennials in a garden. The choice is entirely a personal one. We have explored daylilies at our home, but there are unlimited opportunities for using flowering perennials with conifers.

As summer fades, and perennials retreat into dormancy, the magnificence of conifers once again takes center stage. Perennials come back in spring, and the cycle begins anew, as does the marriage of conifers and companion plants.

*Editor’s Note: Bruce and Chick have about 800 daylilies in their garden beds, too many to list in this article. They have provided a sampling of the four types of daylilies. What perennials have you paired with conifers? Send 300dpi sized photos and brief descriptions to ConQuartEditor@gmail.com. Thank you.


species, among many. Columnar varieties of *Taxus* (yew) are great in groupings or as standalone plants. Gardeners should consider *Taxus baccata* ‘Beanpole’ or ‘Maureen’, as well as *Taxus × media* ‘Flushing’.

Daylilies and hostas against a backdrop of conifers.

A natural stream bed leading through the garden with conifers on both sides.
Samples of the four main types of daylilies in the garden.

‘Signature Truffle’, a double blossom.

‘Regal Finale’, a single blossom.

‘Monkey Hips’, a spider blossom.

‘Spider Miracle’, an unusual form.
Conifers (l - r): *Picea omorika* ‘Nana’, *Thuja occidentalis* ‘Smaragd’, and *Picea glauca* ‘Mac Gold’.
Woody peonies (l - r): *Paeonia* ‘Demetra’ (gold) and ‘Wisteria Reflections’ (pink lavender).

‘Nathalie’.
(l - r) *Picea omorika* ‘Aurea’ (not very yellow), *Thuja occidentalis* ‘DeGroot’s Spire’, *Thuja occidentalis* ‘Jantar’; in the next, *Picea abies* ‘Nidiformis’, *Picea glauca* ‘Pendula’, and another *Thuja occidentalis* ‘DeGroot’s Spire’ that wasn’t shaped to be really skinny.

Peonies in bloom: *Paeonia ostii* (white), *Paeonia rockii* (pink). (This is a seedling I am planning to register as ‘Seneca Hill Pink’ as soon as there are enough grafted specimens to be marketed), and *Paeonia* ‘Peter Barr’ (red).

These are all taken with a macro lens that distorts the distances; there is really a whole driveway between the two peonies (‘Wisteria Reflections’ and ‘Demetra’) and the background conifers! Left to right in background: *Picea omorika* ‘Pimoko’, *Pinus uncinata* ‘La Cabinase’, *Abies koreana* ‘Blauer Pfiff’ (there is a front branch sticking out that almost looks like another small fir but it is all part of the *A. koreana* ‘Bauer Pfiff’), *Abies lasiocarpa* var. *arizonica* ‘Compacta’, and a tiny bit of *Picea pungens* ‘St. Mary’ showing.

The Iowa Arboretum and Gardens Becomes the Newest ACS Reference Garden

Text Lois Girton Photography Tyler Johnson

During the Iowa Rendezvous, held June 12-13 in eastern Iowa, the Iowa Arboretum and Gardens (IAG), located southwest of Ames, was granted ACS Reference Garden status. Sponsors of the Reference Garden are current Iowa Arboretum and Gardens Board member Paula Flynn and former Board member Lois Girton. The Iowa Arboretum was established in 1968 by the Iowa State Horticultural Society to celebrate its centennial. The choice of a very rural location was heavily influenced by committee member Dr. Leon Snyder of the Minnesota Landscape Arboretum, who had seen the encroachment of residential development on Minnesota Nursery and Landscape Association facilities.

Collections of specific categories of trees such as shade, wetland, nut, ornamental, and conifers were planted throughout the initial 40-acre site. Although several specimens date back to 1970, the Large Conifer and Dwarf Conifer Collections were not formally designated until 1982. The Dwarf Conifer Collection has seen the most change, starting with the Jones Memorial Gazebo, which became a focal point in that area in 1991. Both conifer collections achieved more prominence in 2000, when the Hughes Educational Center was constructed just south of the large conifers and east of the dwarfs. These areas are now the most visited at the Arboretum. In 2005, the Dwarf Conifer Collection was renamed the Jacobson Conifer Collection, in memory of ACS...
member Craig Jacobson, a conifer nurseryman and IAG board member. In addition to honoring Craig, the removal of the “dwarf” designation recognizes the reality of the sizes of trees in this Collection, something every ACS member will appreciate.

In 2014, this area received a significant upgrade with the establishment of an alpine garden, featuring berms with large boulders and troughs of miniature conifers and alpine plants. Volunteers and ACS members Pam Maurer of Evergreen Gardens (Ames, IA) and Ed Rinderspacher of Rindy Tree and Turf Care, Inc. (Solon, IA) designed and installed this Collection. The Alpine Garden provides a visually exciting entrance to the Jacobson Conifer Collection and allows the growing of choice, small specimens that would be lost in the larger landscape.

The Iowa Arboretum and Gardens itself has seen significant growth in recent years, including the acquisition of 80 acres of woodlands and prairie from the 4-H Foundation in 2018, bringing the total acreage owned by IAG to 160. A master plan was created under the superb guidance of Executive Director Mark Schneider to develop the new land and re-purpose some existing areas. The IAG was also granted Level III Accredited Arboretum status by ArbNet in 2016, one of only two in the State of Iowa.

Excitement for the direction of IAG was building. Tyler Johnson hired on in May 2020 in a new position as Curator of Collections and Grounds. Then, on August 10th, 2020, the gardens were devastated by a derecho. In total, 350 trees were destroyed or sustained significant damage, and the entire roof of the grand
pavilion required replacement. Much of the volunteer and staff time since that date has involved cleanup, rebuilding, and replanting. Stately trees had been reduced to piles of wood chips, enough to provide mulch for the next century.

Among conifers, those in the windbreak along the north edge of the property and several white pines shading the hosta collections were destroyed. Fortunately for coniferites, the main conifer collections and the Alpine Garden were largely spared. Significant losses, in my mind, include what was once my favorite tree, an Abies concolor 'Compacta', dating from 1982 in the Jacobson Conifer Collection, and a mature Olga Bay larch, Larix gmelinii var. olsensis, planted in 1983 in the Large Conifer Collection. Tyler collected seeds from the larch, and we hope a new tree can be started.

So, despite these setbacks, there is still much to interest conifer folks. As the oldest arboretum in the State of Iowa, we are pleased also to be recognized as an ACS Conifer Reference Garden. We welcome you to visit in person at 1875 Peach Avenue, Madrid, IA 50156, or virtually, by viewing our website, www.iowaarboretum.org. See you soon!
Sawfly - Unwelcome, Annual Visitors

Text and Photography Bruce Appeldoorn

No, I’m not talking about an undesirable inlaw (they usually come for the holidays) or the pack of eight-year-olds with BB guns that come each summer when school’s out. I’m referring to those nasty red-headed pine sawfly larvae (Neodiprion lecontei) that strike each year at this time, chewing their way through your prized mugo pines (Pinus mugo). And they’ll be back again next year, guaranteed, right on time, exactly on schedule.

These caterpillar-like creatures hunt in packs, decimating any two-, two/three-, or three-needled pines they can find. They’re creatures of the forest, native vermin that feast on pines in the natural landscape but also find garden specimens indescrnably delectable. In their adult form, they are barely noticeable as an innocuous fly (Tenthredo mesoneda), but, as larvae, they are insatiable, ravenous beasts that are well-camouflaged and often are noticed only by the damage they leave behind. In the forest, they are a minor pest that prunes a bit of annual growth, but, for choice, smaller, ornamental garden conifers, sawfly larvae can be disfiguring and destructive. Fortunately, they feed only on pines.

Red-headed pine sawfly larvae appear each year from late June through August, but their precise arrival date will vary by elevation, USDA Zone, and weather. Higher elevations may have larvae appearing up to two weeks earlier. Each individual is a small, one-inch caterpillar that is straw colored or yellowish, with tiny black spots arranged in lateral lines on the body and a distinct, red head.

A group of these larvae will attack a single shoot of foliage, usually at the top of the plant, strip it clean of needles, and then move on to the next shoot. The damage can be remarkable, particularly on young or dwarf plants. Some reference books state that their damage is confined to second-year needles, but I find that they may devour any needle younger than two years old, probably only because older needles are tougher to chew.

While the classic garden species of choice is mugo pine, I have seen other species included in their diet. Lobolly pine dwarfs (Pinus taeda) are obviously high on their list of favorites, and they seem to go after some plants year after year. Pinus sylvestris (Scots pine) is apparently also delicious. As long as we’re making a list, we’d best include specimens of Pinus uncinata (Swiss mountain pine), P. heldreichii (Bosnian pine), P. nigra (Austrian pine), P. thunbergii (Japanese black pine), P. banksiana (jack pine), and a few others of minor importance.

The best defense is timely and persistent scouting—actively searching for these critters before and during their expected hatch-out date. Due to their camouflage, they can be hard to see initially, as they do look a bit like a growing pine bud—their red head being the bud itself. They will almost always be present in a group. A giveaway behavioral trait is that they will rear up on their hind legs and raise their heads when approached, trying to be their fiercest self in response to your nearby finger. Don’t worry, they don’t have stingers or biting mouthparts, only tiny mandibles just right for chewing pine needles. Like many insects, these guys are specialists.

In a few weeks, the gorged caterpillars will metamorphose into adult flies. These will breed, and females will lay eggs in slits in pine needles, where they will await the timely hatch-out in the following year. These slits will be visible under a magnifying glass for those so inclined to look. However, as this is a forest pest, new larvae will appear each year, almost guaranteed and on schedule. It is normal that some years will have heavier infestations than others.

Pine sawfly larvae can be controlled by physical or chemical means. “Physical” means getting down and dirty with them—a simple sideways motion between thumb and forefingers will crush the blighters, and you can get many of them in a single motion once you get the hang of it. There is something about this action that satisfies the need for garden revenge, and, after a few minutes, the problem is solved, and one feels
much better. A gloved hand is recommended for the more squeamish among us.

Chemicals do not provide the same level of immediate gratification but are effective. Sevin™ dust will work but is not ornamental, unless you think of it as powdered sugar; Orthene™ (Acephate) is a systemic that can be applied as a spray before the caterpillars arrive and will kill the creatures as they feed (great for absentee or lazier gardeners). Neem oil or pyrethrins will satisfy those of us who insist on more “natural” methods. But for me, nothing is more natural than the search-and-destroy physical squish.

Of course, none of these control methods will work with the in-law problem. For that control, you’re on your own! Should vocal means fail, try to remember the old time-tested rule: “Always first try physical, then try chemical!”

*Editor’s Note. At my home in Adrian, MI (Zone 6), sawfly larvae enjoy most my Pinus resinosa ‘Morel’ (Morel red pine). What pests do you battle in your garden? I’d like to know.

This article appeared in the September 2020 Southeastern Conifer Quarterly, pp. 4–5. Bruce resides in Bostic, NC.
Cedar of Lebanon

Text Ron Elardo

The New York Times has reported on the effects of environmental changes on the Cedar of Lebanon (Cedrus libani) forests in the Middle East in 1970, 2018, and 2019.

As reported, Cedrus libani requires around 110 days of rain and three to four months of snow cover every year, in order to stay healthy and proliferate. Climate change has been causing the cedars to retreat to higher, cooler elevations so as to find the best environment for survival. In some areas of Lebanon, suppressed immunity from environmental stress has left the trees subject to infestation by webspinning sawfly (Acantholyda hieroglyphica), which have been seen there only since 1998.

The insects hibernate in the ground and lay their eggs in the needles of the cedars. Ever warming weather has allowed the larvae to hatch in April, earlier than usual, and just in time to devour the needles of young cedars. In tracts of mature trees, sawfly have also turned whole forests brown by defoliation. The weakening of the cedars’ immune systems has then allowed further infestations by other insects. It’s like a one-two punch.

Researchers have most recently discovered that the fungus Beauveria bassiana kills 100% of the sawfly’s eggs. This deterrent has reversed the proliferation of the webspinning sawfly populations and has begun to save the cedars of Lebanon in the Middle East.

If one googles how many sawfly species there are in the world, 800 genera and over 8,000 species come up, with new species being continually discovered!

What predators have attacked your conifers, and what remedies have you found? Send your findings to Ron Elardo, CQ Editor, with photos 300 dpi or greater in size.

This is the large Cedrus libani in The Harper Collection, Hidden Lake Gardens, Tipton, MI. Photo by Jon Genereaux.
Robert Lawson Lovett (1937 – 2021)
Text Tom Cox

In April 2021, the ACS lost one of its long-time members and staunch supporters. Sadly, after a long fight, Bob Lovett lost his battle with prostate cancer. He was a valued friend of mine.

Bob grew up in Scottsbluff, NE. That’s where he received the foundation for his good sense. He attended college and medical school at the University of Iowa, with a residency in pathology at the University of Kansas Medical Center in Kansas City, KS. Later, Bob was a pathologist at Cox Medical Center, Springfield, MO, for 25 years.

As he relates his association with the ACS, Bob’s most significant accomplishment was the foundation of Lovett Pinetum (an arboretum of pine trees for scientific and ornamental purposes). The Lovett Pinetum consists of two sites – one in Strafford, MO, and one near Lufkin, TX. Both contain major collections of conifers and are reminders of one man’s passion.

The first location is near Strafford, MO. It is situated on 108 acres and includes two natural springs. In 1970, Bob began planting pine trees on the original 14 acres and then established the Lovett Pinetum as a non-profit organization. Presently, there are 3,439 specimens in the documented collection. This includes specimens from 165 different species and 219 cultivars. Among the unusual ones are Pinus peuce (Macedonian pine), Picea asperata (Chinese spruce), and Picea retroflexa (green dragon spruce).

The second location in Angelina is near Lufkin, TX. It contains 1,116 specimens – this includes 116 species and 162 cultivars. The property was purchased in 1998 and now encompasses 43 acres.

The first time I recall meeting Bob was at an ACS National Conference. Back then, attendees were invited to bring slides of their collections. The preceding winter in East Texas was especially difficult for conifers. There had been an extensive ice storm in the area. Bob was showing tree after tree that had been destroyed or laid flat. There was something about his demeanor that impressed me, and, somehow, I knew we would become friends. He had this indomitable pioneer spirit about him that made it clear that no matter what, he would rebuild ... and rebuild, he did.

Over the years, we would frequently call each other, and, several times, we exchanged overnight visits. He always seemed child-like in his wonderment and enthusiasm for conifers. Because of his medical background, he was a great researcher. During our visits, we would talk plants until the wee hours of the morning, and then Bob would stay up and research things we had discussed. I have never met anyone with more zeal and tenacity. While healthy, he never missed a National Conference or an international tour. You could always count on Bob to be the last one on the bus, as it was his nature to try and take it all in.

Bob is survived by his wife Priya. I think it is accurate to say that, while she did not fully share his passion, she was supportive of his love of conifers. The two were always together, and a lot of that meant traveling to off-the-wall locations in search of plants.

We are gradually losing many of the “old guard” in our Society. To me, Bob Lovett was one of the stalwarts. He was deeply involved in the pinetums, right up until the end.

In conclusion, I am reminded of a saying I once read. I paraphrase:

*Few things of lasting beauty ever arrive on earth, except as a result of someone’s obsession.*

Currently, anyone wishing to visit either pinetum location should contact their General Manager, Nick Baker, at nbaker@lovettpinetum.org.
Barking Up the Right Trees
Text and Photography Tom Cox

Over the past few years, I have begun to appreciate the beauty of a garden in winter. This is particularly true when I visit woodland gardens where there tends to be a lot of variety in the landscape. Our arboretum was never intended to be a formal garden where all the boxwoods are neatly trimmed and the layout is symmetrical. Quite frankly, I find repetition boring.

With that said, gardens almost always tend to reflect the taste of the originator, and that is certainly the case with The Cox Arboretum.

While walking around last fall, I began to notice the myriad forms of bark, and the idea came to me to share a few photos of some of the more beautiful forms. As I walked from tree to tree, I began to wonder why nature created such diversity. Perhaps one reason is that nature intended for us to enjoy trees during all seasons. When I do tree walks with visitors, I like to reinforce the notion that winter is a time to get out and enjoy nature. There is no grass to mow, not many weeds to pull, no spraying, no hoses to drag around, no high temperatures or humidity to deal with, and lots of time to take a stroll.

Back when my daughter was younger, one of my favorite times was around Christmas when she and I would take a flashlight and walk the arboretum at night. On rare occasions, there would be a bit of snow to enhance our walk, but the real treat for me was to point out to her all the cool forms of trees and shrubs that call this place home. I was never quite certain that she enjoyed it or was just humoring me. Now that she has her own family in California, the occasions seem to occur less frequently. Like our trees, we humans also have our seasons.

This article is not intended to be long on my words. So, let’s now let the trees share their beauty. Please enjoy.

* Cunninghamia lanceolata (China fir):* I like the rugged character of this venerable old Chinese tree. At one time, it was obviously a popular tree in the southeastern US, but for whatever reason, it fell out of favor. Perhaps it grew too large for modern landscapes, and, admittedly, it can be messy. I grew up with one in the front yard of my grandparents’ home in Margaret, AL. Everyone referred to it as a “Monkey Tree”, no doubt mistaking it for the true monkey puzzle tree (*Araucaria araucana*), which is native to Chile and Argentina. In doing research for my book, *Landscaping with Conifers and Ginkgo for the Southeast,* I learned that the tree in my grandparent’s front yard was an Alabama Champion Tree.
The tree has several unique characteristics. It is prized for its timber and is also used by the wealthy for the construction of caskets. It frequently develops multiple trunks and is the only conifer in our collection that we allow to do so. The tree can also be coppiced well. It is long-lived and seems impervious to disease or pests.

We have Cunninghamia scattered about the arboretum with our favorite being ‘Chason’s Gift’ (Chason’s Gift China fir), which was discovered in North Carolina. The one pictured here is ‘Glaucu’ (blue China fir), which retains a respectable blue color, even in winter. The rich brown bark on mature trees exfoliates in strips to reveal reddish-brown inner bark. Our specimen is limbed up approximately 15 feet, in order to showcase the bark. Underneath, we recently added a raised bed where we feature spreading forms of Taxus (yew) and Cephalotaxus (plum-yew), as well as miniature forms of Chamaecyparis (false-cypress) and Thuja occidentalis (eastern arborvitae).

*Glyptostrobus pensilis* (Chinese swamp cypress): One rarely encounters this tree, even in botanical gardens or arboreta, and, when found, they usually have a ragged appearance. Native to southeastern China and also locally in northern Vietnam and Laos, this is one of only five deciduous conifer species found on earth. This is the only species in the genus *Glyptostrobus*.

Unfortunately, the species is likely not reliably hardy in climates below USDA Zone 6. In the wild, the species is listed as Critically Endangered, mainly due to habitat loss, and excessive harvesting of its decay-resistant wood. Wild populations may, in fact, no longer exist.

For us, our trees are tardily deciduous, and, in mild years, they never completely lose their needles, instead turning a pleasing russet color. One of our trees is a cultivar named ‘Woolly Mammoth’ and hails from the former Yadkin Valley Nursery in North Carolina. It does have a better form.

If the species has any chance of performing well, it must be grown near water. Our trees are prospering several feet from a stream.

Visitors marvel at this grove of rare prehistoric trees along the creek bank. Their buttressed trunks and brown-gray bark, which peels into long, irregular strips, accentuates the scene.

*Juniperus virginiana* (eastern red-cedar): Common trees don’t have to be boring. That said, the one pictured here is a chance seedling that, were it not for its bark, likely would have been cut down. I tell visitors all the time to learn to be a four-seasons gardener. Take the time, especially in winter to observe bark characteristics and plant form. One day, I was walking past this tree, and the stringy, silver-gray bark just caught my eye as it glistened in the winter sun. Instead of cutting it down, we limbed it up. This allowed more light to reach the surrounding dwarf conifers, as well as to accentuate the bark.

As a footnote, we grow several nice cultivars of eastern red-cedar with our favorite being ‘Royo’.
Pinus bungeana (lacebark pine): My first encounter with this species was in the Asian Garden at the National Arboretum and then later in Beijing, China. Both times, it was a breathtaking experience. I don’t know if it is the climate or their age, but the ones in China all have whiter bark than those seen in the United States. The one exception is a selection named ‘Silver Ghost’ (Silver Ghost lacebark pine), growing at the Dawes Arboretum in Newark, OH.

The lacebark pine’s primary ornamental feature is its exfoliating bark that peels somewhat like that of an American sycamore (Platanus occidentalis), showcasing a patchwork of white, olive, light purple, and silver undertones. We have several trees of the straight species plus a selection named ‘Rowe Arboretum’, and the one from the Dawes, named ‘Silver Ghost’. Our most recent addition happens to be the best form I have ever seen. It’s the one found at the former Shadow Nursery in Winchester, TN. Don Shadow aptly named it ‘Great Wall’. Unfortunately, the new owners cut the tree down, either not realizing or not caring that they were destroying perhaps the finest specimen of lacebark pine in the US. Although it will take more years than I probably have left to display its potential, we feel fortunate to have it in the collection.

The tree pictured is our first and, as the literature states, is slow growing. Our tree is approximately 20 years old and has only recently begun to show much exfoliation. Seen at its best, it is grown as a multi-trunked tree and in full sun, where the light can shine on the bark. It is a sure guarantee to brighten any winter day.
Pinus glabra (spruce pine): In all my visits to gardens around the world, I probably have not seen this pine more than six times. Adding to its scarcity in collections is the fact that there are no known witch’s brooms in the trade. On a recent visit to Woodlanders Nursery in Aiken, SC, owner Bob McCartney pointed out several large spruce pines at his nursery.

I am assuming that, as members of the American Conifer Society, you are interested in learning about unusual conifers, even if they might be too large for your garden space. Spruce pine derives its name from the appearance of its bark, which more resembles trees of the genus Picea than that of Pinus. I have taken visitors to our tree and asked that they only look at the bark and tell me the genus. Most cannot. The species is also somewhat unique in its tolerance of shade and soils with constant moisture content. I recall my encounter with the species in Torreya State Park, FL. ACS member Scott Antrim and I were searching for the critically endangered Torreya taxifolia (Florida nutmeg-yew) and found many spruce pines prospering in the understory along a shady bluff.

Our lone specimen grows only a few feet from our pond and is around 25 feet tall. Its year-round color is a pleasing light green, which is further complemented by its light gray-brown bark, a perfect contrast with water.

Pinus thunbergii ‘Nishiki tsukasa’ (Nishiki tsukasa Japanese black pine): While not my favorite species for the South, we have had this selection for over 15 years, and it has never missed a beat. Knowing its potential, we elected to place it at the entrance to the arboratum. Being so unique in character, this is intended to make a statement to garden visitors that are about to enter a garden comprised of unusual plants. ‘Nishiki tsukasa’ certainly fills the bill.
From a distance, one notices its windswept character; somewhat reminiscent of the Monterey cypress (Cupressus macrocarpa), growing along the coast around Carmel, CA. Upon closer inspection, one notices the deeply fissured bark that develops at a young age. Another desirable characteristic is its size. Our specimen is approximately four feet tall, with an equal spread. On those dark days of winter, this lone pine is a standout and most worthy of its prime location. The only downside is that you aren’t likely to readily find this selection in the trade.

**Acer griseum** (paperbark maple): While not a conifer, maples are often used along with conifers in mixed plantings. Although the majority of maples are grown for their spring and fall interest, *Acer griseum* is at its best in winter. I frequently take mental note of the plants that visitors migrate to, and this one is always a magnet. There is nothing in the garden more magical than to walk out on a clear winter’s day and view the smooth cinnamon-brown bark. As the tree ages, the bark exfoliates in patches that glisten as the winter sun shines through it. It always reminds me of another favorite tree that unfortunately we can’t successfully grow here: *Prunus serrula* (paperbark cherry).

The best specimens of *Acer griseum* are located at the Harvard’s Arnold Arboretum. These venerable trees are over 100 years old and most have multiple trunks. Standing beside them, I felt an urge to bow in reverence. The only other time I felt this way was when I first observed the bristlecone pines (*Pinus longaeva*) in the White Mountains of California. Some of those trees are close to 5,000 years old.

We have two paperbark maples in our collection, with the oldest being planted in 1996. Each year, they color-up late in autumn; in some years, we see respectable, red fall color. From what I’ve seen, ours is one of the largest in the Southeast. It was featured in the introduction of one of the PBS Garden Smart shows, filmed here.

There is one interesting hybrid, *Acer × (Cinnamon Flake)*, which combines the parentage of *A. griseum × maximowiczianum* (Nikko maple) and which has performed well for us. This is a collector’s tree that will likely always remain so.

If I were starting anew, I would choose a front-row location and plant *Pinus bungeana* and *Acer griseum* together. Side-by-side, one could then be rewarded with seeing two of the best-barked trees for winter interest.

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ACS Merit Awards Nomination Time

Text Jeff Harvey

I would like to announce that I will be chairing the ACS Merit Awards Committee. Dennis Groh has been chair for the past several years. I hope to live up to the great standards of such previous chairmen as Don Howse, Kathleen Potratz, and Dennis Groh. Thank you all for doing a wonderful job.

We missed a year due to COVID, so it should be easy for us to come up with a deserving candidate for each of the awards. Please send your nominations to me at Southeastconifers@gmail.com by October 15, 2021. Help me continue this great tradition of recognizing those who have contributed so much to our Society.

Thank you.

In the next month or so, please take time to nominate someone who has helped you enjoy our great love of growing conifers. If you do not know that much about the person you would like to nominate, don’t worry, someone will. Let’s get those names submitted, and we will find people to help fill in the blanks. If you think they are deserving, there is someone else out there that does too! I will help find them.

The ACS website https://conifersociety.org/join/merit-awards/history-of-the-merit-awards has the list of the two awards, for which we are searching for nominations: the Justin C. “Chub” Harper Award of Merit for Development in the Field of Conifers and the Marvin & Emilie Snyder Award for Dedicated Support of the American Conifer Society. Here you will also find the recipients of each of the awards, starting in 1995.
In response to the editor’s call, I’m writing to report that I have grown and killed a number of Japanese umbrella pines in my suburban Philadelphia clay. At this point, I seem to have three established; two in part shade and one in full sun (‘Picola’) until late afternoon. Deer browse has been a problem on the new growth of ‘Weston Weeper #2’. I spray deer repellent in the summer and cage it all winter. The golden one (exact cultivar unknown) was in part shade and exposed to wind which nearly killed it. I moved it to part shade (under a Cedrus atlantica), right next to my house, and it has been happy there for two years now. Deer pulled it out of the ground the first winter. I had to stake it in. I despise deer. It was much more golden when I bought it from Susanna Farms Nursery in MD, where it was in full sun. Of course, everything looks better at the nursery.

The ‘Jeddeloh’ on page 30 of the Spring CQ is quite a bit smaller than mine. Mine has the much more characteristic growth habit of an older specimen. I think it’s just a lovely tree, and it’s very happy in shade/part-shade under a mature silver maple (Acer saccharinum).

Tell us about any conifers you have growing in untypical locations. Your write-ups and photos (300 dpi minimum) are appreciated.
Sciadopitys verticillata ‘Picola’.

Sciadopitys verticillata ‘Picola’, showing more fresh yellow growth.

Sciadopitys verticillata ‘Weston Weeper #2’.

Tsuga canadensis ‘Jeddeloh’.
My Favorite Conifers

Text and Photography Sue Rippy

1. *Picea pungens* ‘The Blues’ (The Blues Colorado spruce), ACS Collectors’ Conifer of the Year 2008. ‘The Blues’ lives up to its name, remaining a true sky-blue, not only in spring, but throughout the year. In my Timberville, VA, (USDA Zone 6b) garden, *Picea pungens* cultivars often suffer from heat and humidity. This plant, however, maintains its vitality and color exceptionally well.

2. I added *Pinus densiflora* ‘Low Glow’ (Low Glow Japanese red pine) to my collection in 2006. The perky, light-green color of the plant and its wide, flat growth pattern add a bold, dramatic look to its surroundings. The rust-red peeling bark is also quite striking.

3. *Pinus resinosa* ‘Don Smith’ (Don Smith red pine), added to my garden in 2005, remains a favorite because it behaves itself by maintaining its globose form with little help from me. It’s a strong plant, and the beautiful red, peeling bark is a stand-out feature as well.

Editor’s Note: Thank you for responding to my call for your favorite conifers. Please keep them coming, along with your write-ups. Photos must be 300 dpi or larger for the CQ.
My favorite conifer is *Juniperus chinensis* ‘Shimpaku’.

I acquired it in 2006 from the Gardens of Rice Creek in Minneapolis. I had been in search of interesting and unusual dwarf conifers.

‘Shimpaku’ is a Chinese juniper that is native to Japan. I like it because it reminds me of a Japanese garden, even though it is not pruned or shaped in the traditional Japanese manner. The lower trunks are somewhat bare, creating the illusion of age, and the bark is flaking or peeling, with an interesting texture. The green needles are fascinating.

Unlike many coniferites, I am fortunate to have the space to let my dwarf conifers grow and mature naturally with minimal pruning or shaping. They essentially naturalize on my farm in Brantwood, WI, USDA Zone 3b. ‘Shimpaku’ also grows well in USDA Zone 7b.
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