

THE DIRT



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Facebook: @vnlavt & @vermontflowershow



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Dear Fellow VNLA Members & Friends,

Happy Late Winter Everyone!

I hope this finds you all well and enjoying some down time these past snowy days. Maybe you're even getting out to play like kids. Hey, after all, that's what the snow can bring out, the playful kid in all of us, so to that I say HOORAY! On top of which, these days it seems more inviting and important than ever to get in touch with your inner kid, so PLAY ON!

Stay Playful. That's what I aim to do this 2021 and if you're like me, just being outside, watching and observing the natural world is the best kind of playful. Staying playful is what we do and how we can encourage others. Whether creating, growing, managing or constructing, we depend on each other for success. As you have proven with the "Grow Without the Show" campaign, we cannot succeed without collective support. The VNLA relies on member dues/contributions for our very existence, just as we rely on each other for our individual successes. Working toward a greater common good, the VNLA is here to help make that possible.

One way of expanding our possibilities, individually and collectively, is through our annual meetings. The VNLA has hosted a variety of renowned keynote speakers over the years, offered seminars and enjoyed presentations by our own members. I am reminded how very fortunate we are to be in attendance, to learn, become inspired and connected to the many impressive professionals in our industry. We have had the privilege of hearing from many acclaimed individuals sharing their experiences, teachings, and encouragement. We look forward to our future gatherings and learning together.

Much like plants that thrive in their communities, so too do we in OUR community. Learning from our mentors and peers is how we succeed. I am reminded again of the value of membership in this, our VNLA community. We are a part of a global network of practitioners, more connected at a time, frankly, when there couldn't be more of a need. We truly can make a difference. **Together, stronger than ever.**

Be Well, Enjoy & Play On!

Ashley



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THE BUZZ

the low down on what's up!

2020 Industry Award Winning Projects



The Industry Awards Program is in its 13th year. Despite the pandemic, we decided to move forward with it, if not just to keep a bit of normalcy in the programs the VNLA offers. We received just two submissions this year which is definitely not normal. We are grateful for the two entries we received and are happy to announce that both entries received awards.

A panel of professionals met in early January via Zoom to judge the entries. The process via Zoom went surprising well. As always, the judges' identities remain anonymous and we thank them for their time and expertise.

We are hopeful for a more normal upcoming season and year, especially as the year progresses and hope that many of our members will consider entering a project for the next round. The Industry Awards Program is truly a fantastic avenue to showcase the outstanding work our members accomplish each year. So please keep track of your projects in 2021 and consider making a submission later this year.

Please view the winning project photos on pages 5-6, as well

as full slide show on the VNLA/Green Works website which you can view [HERE](#). When we meet again for a summer or winter meeting, presentation boards of the winning projects will be on display as well as at our next Vermont Flower Show.

In addition, winners presented their projects at the Annual Winter Meeting & Trade Show held on February 11, 2021 via Zoom. The projects will also be highlighted in our *Seven Days* newspaper insert in late April.

Congratulations to the 2020 Industry Award Winners!!

HONOR AWARD

Distinctive Landscaping

Elizabeth Proutt and Christian D'Andrea

Charlotte, VT

Splashing Water

MERIT AWARD

diStefano Landscaping, Inc. – David Burton

Essex Junction, VT

Gathering Place in Georgia

Participate in the
2021 Industry Awards Program

Start planning NOW and scope
out your projects!



2020 INDUSTRY AWARD WINNER

Distinctive Landscaping - Elizabeth Proutt & Christian D'Andrea
Splashing Water
Honor Award



About this Project:

Settling down in Vermont, our clients' favorite pass-time is gardening. After several years of creating gardens throughout their property, they hired us to tie their landscaping together and build a more natural water feature. Their backyard consisted of a small patio, a stone fireplace, a few gardens, fences, and arbors and a small water feature that ran through an upright old foundation stone centered in a shallow basin of white pebbles.

The water feature was a priority for our clients as they desired to drown out the noise from the nearby

shooting range. We created a more naturalistic waterway with strong sounds of falling and splashing water. We repurposed the existing water feature stone (that originally came from their house foundation), to anchor the "ridge-top" we created to give height and depth to the waterway while also hiding views of their neighbors. We tied plantings together by cutting island beds in the lawn to give focus to walkways and grass paths leading to interesting spots on the property.

To the west of the waterway is a new patio buffered from the water with plantings. A large eight-foot stone slab stretches from the patio, cantilevering over the upper pool.

We call this the "diving board." It was important to use large, natural shaped stones in the patio to integrate the water feature into the hardscape. Creeping thyme and sedums are planted in the seams between the patio slabs. Irregular stone steps connect the porch, patio, and grass paths leading into the backyard, cutting through dense red cedars and sitting areas overlooking distant agricultural fields.

It was fun working so closely and collaboratively with hands-on gardeners. They are thrilled to work in their gardens and sit back to enjoy the sights and sounds of their splashing waterway.



2020 INDUSTRY AWARD WINNER

diStefano Landscaping, Inc. - David Burton
Gathering Place in Georgia
Merit Award



About this Project:

This client initially attempted to address their landscape with a “do-it-yourself” approach but in the end decided to bring in a professional.

The overall style they were hoping to achieve was “rustic elegance.” Entertaining outside was top of their list of goals especially centered around fire features. Because windy conditions on the lake side of the home makes fires unpleasant and sometimes dangerous, another firepit was planned for the protected front entry of the home. This was an area the client wanted to address as well because

when guests arrived at the house, they often ended up on the deck rather than at the main entry.

To direct guests to the front door, we designed a 10’ wide welcome landing at the driveway narrowing down to a 5’ wide walkway to the door. We selected inviting plant material to surround the entrance to the walkway, moved the existing shed to a new location and used the grade change to introduce a seat wall for a fire pit feature.

On the lake side, we integrated a series of stone steps and landings into the grade and boulder retaining wall. The unique shape of the upper deck and

corresponding support posts informed the shape of the new patio and seat walls.

The plantings were selected to provide a variety of foliage color and texture. The client loved ornamental grasses for a “beachy” feel. Overall, mostly native shrubs and perennials were used with the addition of items like daylilies, astilbe and hydrangea for bolder statements. The client’s favorite contribution was the Snow-in-Summer (*Cerastium tomentosum*) that softened the lines of the patio and the weight of the stone steps.



VNLA 2020 VT Green Industry Survey Results

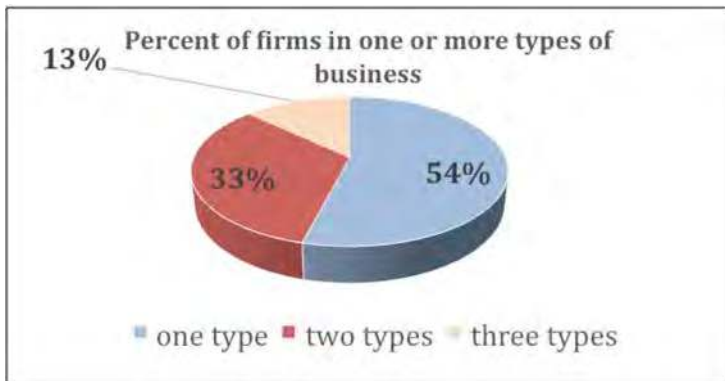
By: Dr. Leonard Perry

In February and March, 2020, the Vermont Nursery and Landscape Association, Green Works, surveyed the Vermont Green Industry with the assistance of Dr. Leonard Perry, UVM Horticulture Professor Emeritus. The goal was to determine various aspects of the economic status of this industry based on 2019 data.

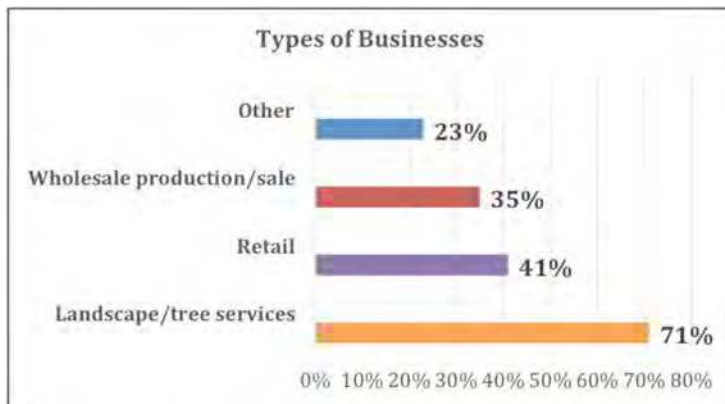
The last such survey had been conducted in 2008 (based on 2007 data), as part of a regional effort for New England Grows (<http://pss.uvm.edu/ppp/nesurvey/>). Industry information is critical for decision-making by state legislators, state departments of labor, guidance counselors, students, those seeking to enter the industry, and industry members seeking loans as well as looking toward the future.

After a master mail list was compiled, all firms were mailed a postcard (a second was mailed to non-respondents) with link to the online survey and which, at that point, represented **the most accurate number in this Vermont industry of 1069 firms**. The final number of **complete** responses, however, was only 69. This final number, unfortunately, only represents a 6.5% return, which is too low to make any extrapolations to the overall industry. The goal had been to get a minimum 10-15% return, or about twice that number of responses as was received. The summary of returns for each question, therefore, only can be applied to those responding and not to the industry at large.

Types of Business

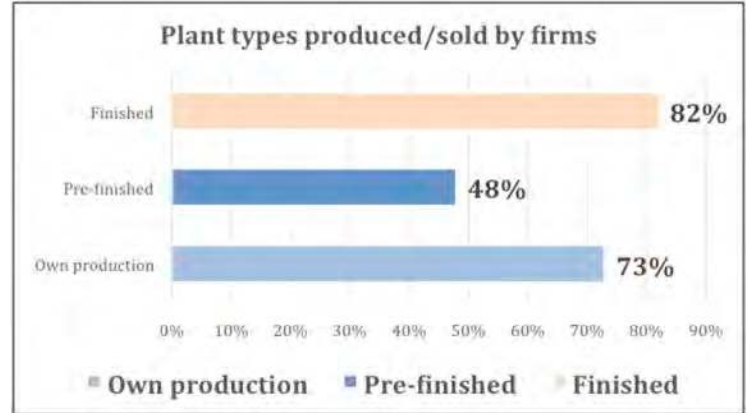


- ✓ Just over half (54%) were involved in only one type of business.



- ✓ A large percentage (over two-thirds) were involved in some aspect of landscape design or services, including tree care.

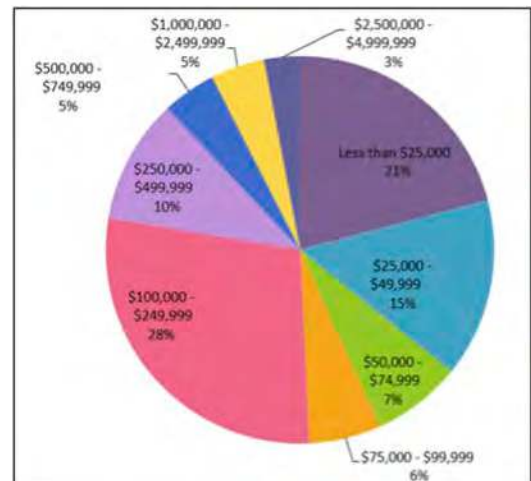
Plant Sales



- ✓ About half the respondents (48%) grew or sold their own plants. A majority of plant growers/sellers (73%) grew at least some of their own plants, with the majority selling at least some finished plants (82%), about half (48%) selling some pre-finished plants.

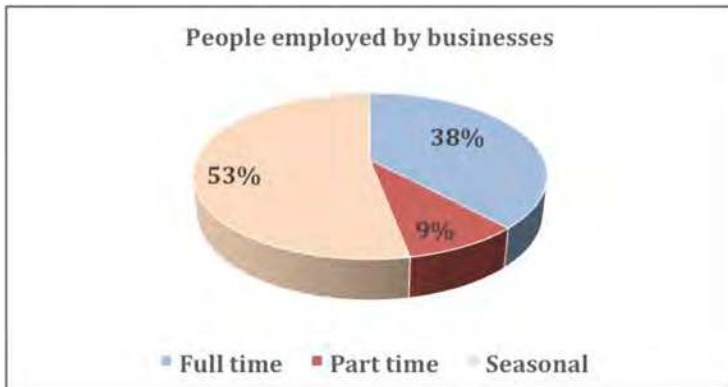
Gross Income of Respondents

- ✓ The average gross income of respondents was \$328,000. Half of respondents earned less than \$100,000, the other half earned that or more.
- ✓ Over the previous three years 2016-2019, income of a majority (74%) either increased or stayed the same.
- ✓ Of the over half of respondents who reported an increase in gross income, the average increase was 23%.
- ✓ About two-thirds of respondents with increased income reported an increase in gross income of 20% or less over those three years.



Employees

- ✓ Of the total employees listed by responding firms, 38% were full-time, 9% part-time, and 53% seasonal.
- ✓ Over half the responding firms (58%) had full-time employees, more had seasonal employees (64%), and only about one-quarter had part-time employees.
- ✓ There were many fewer part-time employees overall than seasonal or full-time ones.
- ✓ Of the overall respondents to this survey, 4 out of 10 indicated that they would have hired additional qualified workers had such been available.
- ✓ Over the past three years, number of employees in responding firms generally stayed the same.

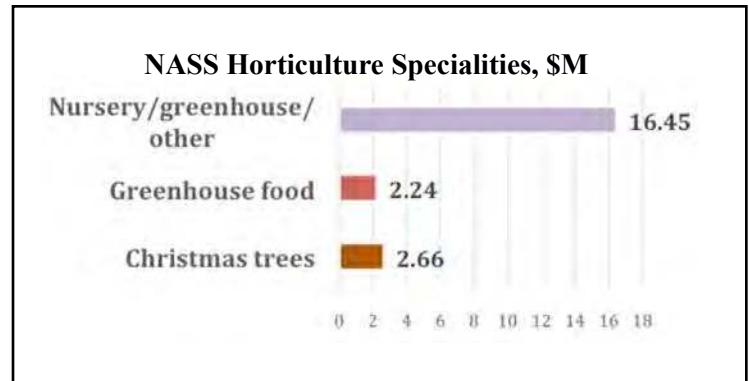


Other Survey Statistics

- ✓ Respondents average payroll was \$92,000, with payroll below \$100,000 for half, and over that for the remainder. Payroll increased over the past three years for about half of respondents. Of those responding firms who had an increase in payroll, the average increase between 2016 and 2019 was 23%.
- ✓ The average tax bill of respondents was \$14,000. Almost two-thirds had a tax bill under \$10,000. Between 2016 and 2019, the tax bill increased or stayed the same for the same number (40%) of firms. Of those who reported increases, two-thirds had a tax bill increase of 20% or less, the average tax bill increase being 24%
- ✓ The average land holding was 8.4 acres, ranging from one-quarter to 102 acres. The average use was 1.9

acres or about one-quarter (23%) of average total land per firm.

- ✓ Respondents top three issues they felt most impacted their business were (in order, and quite a bit ahead of other issues): 1) workforce/qualified employees, 2) health care costs, 3) business viability
- ✓ Over half (59%) of respondents were VNLA members.



The National Agriculture Statistics Service (NASS, www.nass.usda.gov) conducted a survey of **producers** early in 2020, based on 2019 data. The 2019 Census of Horticulture

Specialties was released in December 2020. This report lists for Vermont, 199 horticultural specialty operations, with sales of over \$21 million. In addition to producers in the Green or Environmental Horticulture industry, this report also includes other categories such as Christmas trees (53 growers, value \$2.66 million) and food crops grown under protection (34 growers, value \$2.24 million). If these are subtracted from the overall industry totals, there are from their figures 112 growers in the industry categories relevant to this survey, with a value of \$16.45 million.

In several specific and relevant categories to this survey, the NASS report lists for Vermont: 9 producers of woody ornamentals with value of \$1.5 million; 35 sellers of various types (bareroot, BB, other) of nursery stock, with value of \$2.0 million; 51 operations selling potted herbaceous perennials, with 459,000 units sold for a value of \$3.3million; and for all annual and bedding plants (flats, pots, baskets), 70 firms (19 wholesale, 61 retail), with a total value of \$6.0 million.

The VNLA would like to thank the businesses who took the time to respond to this 2020 survey and Dr. Leonard Perry. Understanding the impact of the ornamental horticulture industry in Vermont is vital information for us all to understand.



Welcome to our NEW VNLA Members!

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Install/Maintenance

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AND

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www.thegentlegardener.net
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Consultant, Landscape Designer,
Landscape Gardener

**We encourage you to reach out to our new members
and welcome them into the VNLA!**



COVID-19: Where We Are Now

by Kristina MacKulin



Here in Vermont we find ourselves holding steady with our COVID-19 cases, with daily reports of cases in the low hundreds and a total of 15,686 cases as of March 4, 2021. We are coming up on the year anniversary when Vermont's lockdown was first announced. Let's just say it has been quite a year!

Vaccinations are happening in Vermont, across the nation as well as globally. As of March 2, 110,661 Vermonters have received at least one dose of the vaccine. The parameters on who can get vaccinated in Vermont will be expanding and the Governor and Dr. Levine hold weekly news conferences to provide updates on any changes. The good news is that vaccine production is ramping up and everyone has their eyes set on herd immunity down the road. Fingers crossed that we all get on the other side of this pandemic as soon as we are able!

I have been hearing from retailers that have been open selling plants over the winter that it has been a record winter for sales. I have also been hearing from folks in the landscape industry sector that many are booked through the end of the season already! It looks like it will be another banner year for our industry. It is pretty fantastic to see so many people turning to their surroundings and the natural world to improve upon and spend time outdoors. Our members and associates are playing an integral role in all of this!

Here at the VNLA I/we continue to monitor all the COVID-19 reports as well as news releases from the Governor, Agencies of Agriculture and Commerce & Community Development, the VT Health Department and the CDC. We will continue to keep you informed and please don't hesitate to reach out to us if we can help in any way.

HEALTH AND SAFETY

As of February 26 the Smart, Stay Safe Order restricts people from gathering with anyone you do not live with. This includes all inside and outside social/entertainment gatherings in public or private. Visitors to VT are not allowed to gather with Vermonters or with people from another household. Some exceptions to these restrictions include:

- You may gather with one other household at a time if you have been fully vaccinated and it has been 14 days since your final dose.
- If you live alone you may gather with one other household.

- You can take in and shelter people from another household who may be living in a unhealthy or dangerous situation.
- You can do outdoor recreating and fitness activities with people who you do not live with.

COVID-19 Prevention Steps

- *Wear a face mask*
- *Keep at least 6 feet apart*
- *Wash your hands*
- *Stay home if you are sick*
- *Keep your social circle small*

Check out the VT COVID-19 Quick Guideline Reference on quarantining [HERE](#). To learn more about prevention, tips on getting together and coping with stress visit the VT Health Department's site [HERE](#).

BUSINESS INFORMATION

Both the VT Agency of Commerce and Community Development and the VT Agency of Agriculture continue to issue updated news, guidance, and business resources. There continue to be grant and financial opportunities through both agencies available for our industry. As the season fast approaches you can review **Work Safe Guidelines** [HERE](#).

You can sign up for weekly updates from both agencies and keep informed on new developments on opportunities and grants by visiting:

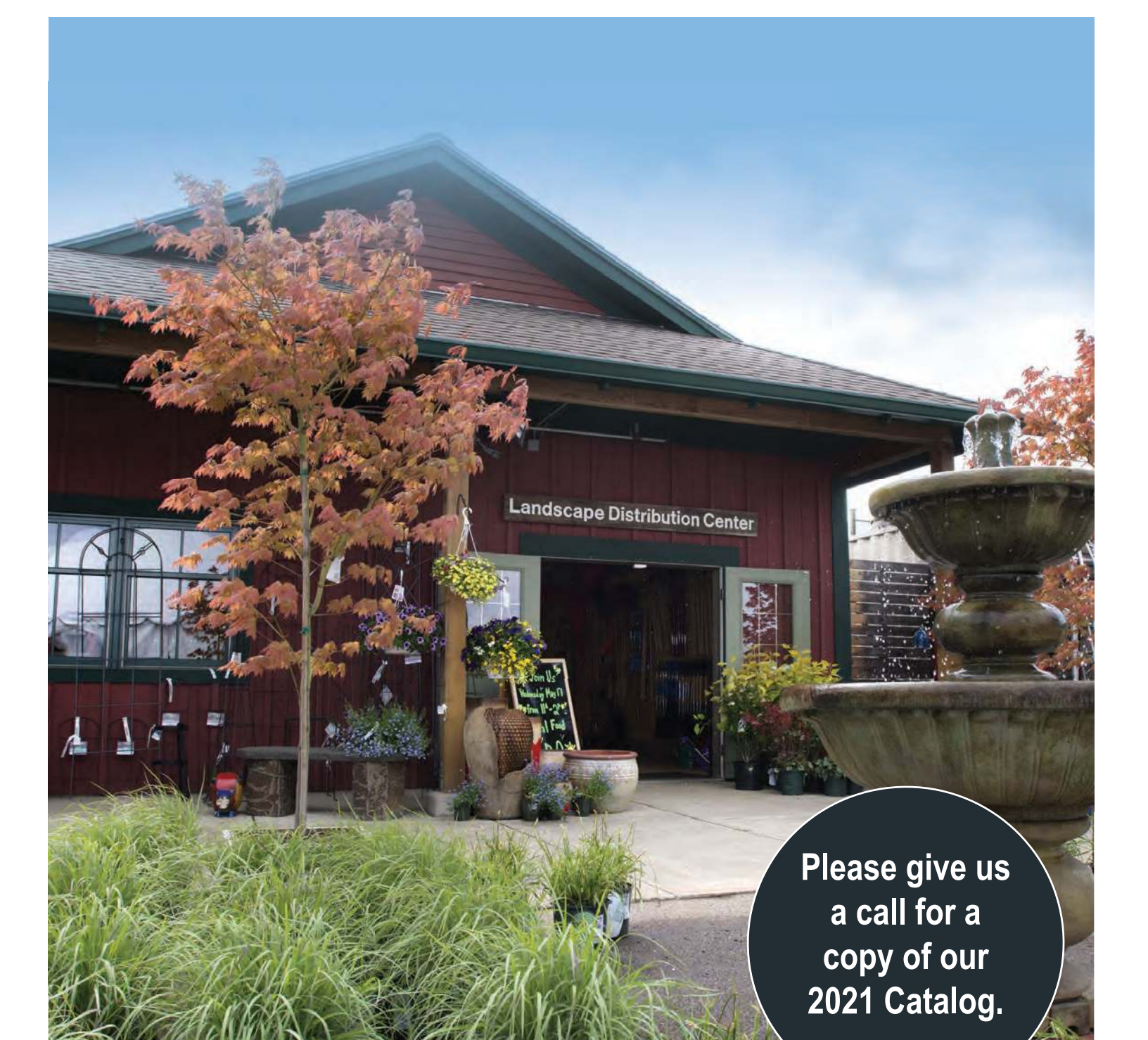
<https://accd.vermont.gov/covid-19/business>

<https://agriculture.vermont.gov/covid-19-information>

And a reminder that the **VT Small Business Development Center** is a wonderful resource for help and guidance for general business information as well as help with navigating applying for business loans and grants. Visit their website [HERE](#).

THANK YOU to our member businesses and associates who truly contributed to the health and well-being of our communities by providing all the plants and services to the many customers who sought solace in their own backyards this past year! With the start of the season weeks away here in Vermont, I know our members are looking forward to again bringing health, joy, and well-being to our communities. Do not hesitate to contact the VNLA office for any information we can provide to you and your business as we all continue to navigate through this pandemic.





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Greening Schools Program & VT Arbor Day

by Gwen Kozlowski

Each year, The Vermont Urban & Community Forestry Program (UCFP) partners with Horsford Gardens & Nursery on the “**Greening Schools Program**”. Horsford’s donates a tree to a local school. Urban Forestry coordinates the promotion, applications, and notifications to all of the schools. Participating schools agree to plant the tree on Vermont’s Arbor Day as part of a school-wide celebration and maintain it once it has been planted. VT Arbor Day is May 7, 2021.

Well over 100 trees have been planted with literally thousands of school age children participating, many participating each year. By the time they graduate, these children may see the first year’s tree become a 5” or 6” caliper tree and several in various stages of growth nearby! Planting these trees can shade a playground, line the school streets, or even become the start of a school orchard alongside school gardens. Trees could be popping up all over the state. **The UCFP now wants to expand this program across the state.**

Lessons for students include the usual Arbor Day messages – the tremendous benefits of trees to people, the



environment, and to wildlife. Arbor Day celebrations often include student participation in terms of songs, plays and demonstrations. And what student doesn’t remember fondly a Friday afternoon outdoors? Planting and maintaining the school’s trees.

Another lesson is that slow and steady plantings really work – a contrast to the notion that landscaping is a huge, sometimes unattainable, goal.

The town of Charlotte has celebrated Arbor day for 30 years. You should see the results! And, incredible as it may seem, there has never been a single act of tree vandalism in all of that time!

To build on this program, I would like to recruit garden centers, nurseries, and landscapers to cover every county in Vermont. Join me to transform what Chittenden and Addison Counties now do to a program with statewide reach. Sound interesting? Call me at 802-651-8343, Ext. 506 or email me at gwen.kozlowski@uvm.edu. and I will provide details on how your green business can give back to your community. You can read more about this program on our website [HERE](#).

Looking for a new job?

Check out the
Job Postings listed on the
VNLA Website!

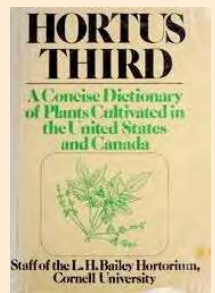
<https://vnlavt.org/news-events/job-postings/>

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Specializing in Vermont Grown Plants

A Claussen tradition since 1972



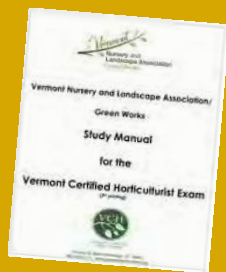
Claussen's Greenhouse offers an extensive selection of plants, including annuals, perennials, herbs, vegetables, chrysanthemums, poinsettias, spring bulbs, tropical houseplants and much more.

187 Main Street, Colchester, VT 05446 ~ (802) 878-2361 ~ WWW.CLAUSSENS.COM



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CALENDAR OF EVENTS

Massachusetts Nursery & Landscape Association
Green Industry Virtual Forum
Year Long Webinar Offerings
Next one: 3/18/21
Learn more [HERE](#).

March 18, 2021 4-5pm
Foundational Factors for Sustainable Turf - online
Coastal ME Botanical Garden
Green Spotlight Series w/MELNA
Learn more [HERE](#).

March 19-20, 2021
Ithaca Native Landscape Symposium - Virtual
Learn more [HERE](#).

March 24, 2021
April 7, 2021 & April 21, 2021
Soil Health and Community Resilience: Stories from the North - WEBINAR SERIES
Learn more [HERE](#).

March 29, 2021 - 12:00 - 2:30 pm
ELA Class
Expanding Your Business with Green Infrastructure
Learn more [HERE](#).

March 31, 2021 (& every Wednesday)
Walks in the Garden Free Webinar
ELA
Learn more [HERE](#).

April 2, 2021 - 4-5pm
Establishing Trees in the Urban Landscape (on-line)
w/ Nina Lauren Bassuk
Coastal ME Botanical Garden
Green Spotlight Series w/MELNA
Learn more [HERE](#).

May 7, 2021
Vermont Arbor Day
VT Urban & Community Forestry Program
Celebrate and learn more [HERE](#).

July 27-29, 2021
Perennial Plant Association Hybrid National Symposium
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LEONARD'S CLIPPINGS!

by Dr. Leonard Perry, UVM Horticulture Professor Emeritus

Winter 2021

Here's your biannual **snapshot of the PSS department** focus and student interest, as shown by courses being offered this Spring (and faculty or lecturers teaching them, with their current enrollments). With pandemic changes, there have been some shifts, like winter session now beginning the first of the year and going through January, and classes then beginning—a couple weeks later than usual. Lecturers hired for these courses (not full time faculty) include Izzo, White, Lewins, Sarazen, and myself.

Similar to last semester, several “modalities” of courses are in the mix. All courses are either remote or online, except the in-person courses being Commercial Plant Propagation, Soil Fertility (also At Home version), Agroterrorism, Diversified Farm Planning (also Remote version), Soil and Water Chemistry, Soil Ecology Lab, EcoFrontiers in Agroecology. Currently plans are to return to normal in-person classroom courses in the fall, subject of course to summer reassessment of health trends.

As of this writing, Spring 2021 courses include: Intro to Agroecology (Izzo, 151), A Bug's Life (Lewins, 150), Pollinators and Perennials (White, 25), Commercial Plant Propagation (Starrett, 20), Permaculture (White, 48), Soil Fertility and Conservation (Gorres, 12), Agroterrorism and Biopiracy (Bishop Von-Wettberg, 8), Pollinators and Perennials (White, 25), Bees and Beekeeping (Alger, 50), Diversified Farm Planning (Bradshaw, 21), Ecological Landscape Design (White, 16), Chemistry of Soil and Water

(Sarazen, 9), Soil Ecology (Neher, 22), Professional Development (Neher, 7), EcoFrontiers in Agroecology, (Chen, 5), Agricultural Policy and Ethics (Bradshaw, 7).

In addition, during Winter Session (January) were a course I turned over to Annie--Pollinators and Perennials (White, 27, same as spring offering), and my Home Hops Growing (27). One of my main projects in retirement is continued teaching of my online courses for PSS which include for this Spring: Home Vegetable Growing (72), Indoor Plants (25), Garden Flowers (27), Flowers and Foliage (25), Perennial Garden Design (25).

In PSS Department and Campus news:

- PSS Chair Ernesto Mendez received the highly competitive Office of the Vice President for Research (OVPR) Fellowship. This will provide Ernesto with the time and space to build his dream of an International Center for Agroecology and Food Systems at UVM.



- The Princeton Review ranks UVM one of the nation's best colleges for 2021, including #4 top green college, #18 for college city with high marks, #18 for health services, and #20 for students love for college.

- Fiscal year 2020 brought the largest ever total amount of research funding to the university: \$181.7 million, a 26 percent increase over the previous year.



You may have seen this past fall news of **UVM proposed cuts to programs** in the College of Arts and Sciences. This is likely indicative of what will be happening across campus, as the other colleges including CALS has been tasked with “addressing” programs with low enrollments (on average less than 25 over the last 3 years) and low graduation rates (less than 5 per year over the last 3 years). There are other guidelines for numbers of majors, minors, graduate and certificate programs.

Unfortunately, in PSS, Agroecology is borderline and Sustainable Landscape Horticulture (SLH) is below the minimums, so targeted for action. For the last three years, yearly enrollment in Agroecology has averaged 29, with 16 for SLH. Annual degrees awarded over the last three years averaged for Agroecology 12, and for SLH 5. PSS graduate programs have fared better with the last 3-year enrollment average being 10 for M.S. degree, and 14 yearly for a PhD degree.



What the future of SLH will be is being discussed, from elimination, to folding into Agroecology as a track, or other. Stay tuned. In addition, discussions on campus include the CALS strategic plan, and streamlining/consolidations within the university. All are coming about to address huge looming deficits.

New Book (courtesy Jennifer Duffield White, Green Talks e-newsletter): “In case you hadn’t heard, the new *Fourth Edition of the Ball Culture Guide* by Jim Nau is out, and it’s fatter and better than ever! This master work covers germination, scheduling and growing recommendations for almost 400 seed-grown crops, including bedding plants, potted flowering plants, foliage, cut flowers, perennials, herbs, vegetables and ornamental grasses.”



“Evidence links **green spaces with decreased health inequalities** between the rich and the poor. A study in England found that those living near to green spaces lived longer (e.g. 25% lower-all cause mortality in areas with high concentrations of green spaces compared to areas with low concentrations). This effect was much stronger in the most disadvantaged areas compared to richer areas.”

Perhaps the above is due to “People living closer to green spaces were more physically active, and less likely to be overweight or obese. These trends were independent of income levels or any other socio-demographic characteristic. People living furthest from public parks were 27% more likely to be

overweight or obese compared to those living closest.”
(from the keynote presentation by Dr. Charles Hall, at the 2019 America in Bloom Symposium, www.americainbloom.org)

Tying the **benefits of plants to human health** is a great way to market your plants. Here are two new studies to support your claims. Because who doesn’t want to help out kids?

1. A short walk (in the study, 30 minutes) in nature improves attention spans for children. (We already knew this about adults.) Meanwhile, the test group in the study that took 30-minute walks in an urban setting experienced a fatigued attention system.
2. In a similarly themed study in China, they found that greater levels of greenness around schools was significantly associated with lower odds of attention-deficit/hyperactivity disorder (ADHD). The study looked at 59,754 children in 94 schools. (courtesy Jennifer Duffield White, GreenTalks, Ball Publ., photo courtesy Bedrock Gardens—see below) (courtesy Ellen Wells, Ball’s buZZ e-newsletter).

The latest Axiom Marketing-sponsored research study, the **Axiom 2021 Gardening Insights Survey**, reveals some good stuff about the 1,200 homeowners they surveyed. You can register online to download the complete survey (www.axiomcom.com/2021-garden-survey).

- 86% of homeowners plan to continue gardening in 2021.
- Nearly 40% of those surveyed say they will plant about the same as last year.
- 47% say they will be planting more and expanding their garden spaces next season.
- Many homeowners surveyed said they were gardening in 2020 because it gave them something to do while stuck at home during the pandemic, provided a source

- of exercise and helped to cope with stress.
- More than 80% of those surveyed said they felt successful or very successful in their 2020 gardening tasks.
- Growing flowers is by far the most popular gardening activity, at nearly 73%, with shrubs and vegetables rounding out the top three.
- More than 32% rank container gardening high on their list.
- Houseplants are also important, with 46% saying indoor gardening is a meaningful activity.
- Overwhelmingly, most were gardening to add beauty in their lives—more than half of those surveyed said they just wanted a beautiful outdoor space.

The **2021 Garden Trends Report** from the Garden Media Group has more good news and tips for our industry. “Research shows we picked up 16 million new gardeners during COVID-19, many of whom are under 35.” It goes on to point out what these new gardeners care about, so what our industry needs to focus on to keep them:

- education, from simple plant lists to Facebook consultations
- growing food
- reducing lawns, often converting to functional wildlife habitats
- increasing health and wellness
- You can read more on this in the report (www.gardenmediagroup.com) or in Nursery Management (Dec. 2020)

Finally, **another good trend for our industry** from John Forti, director of Bedrock Gardens in Lee, NH (near Portsmouth and the seacoast area). “An estimated **121 Million people visited public gardens**—a little less than all (NFL, NBA, NHL, & MLB) professional sports combined (134 million). While their attendance is flat/declining, **garden visitation is going up!**” Perhaps this reflects public gardens serving as oases of hope and healing



to a weary public during stressful times.

If you're not familiar with this particular up-and-coming public garden, developed as a private garden by designer Jill Nooney and husband Bob Munger, check them out online. Their apt byline is "an oasis of art, horticulture, and inspiration." You can find a photo overview online of this past year, including new plants and buildings and sculptures (www.bedrockgardens.org/2020.html).



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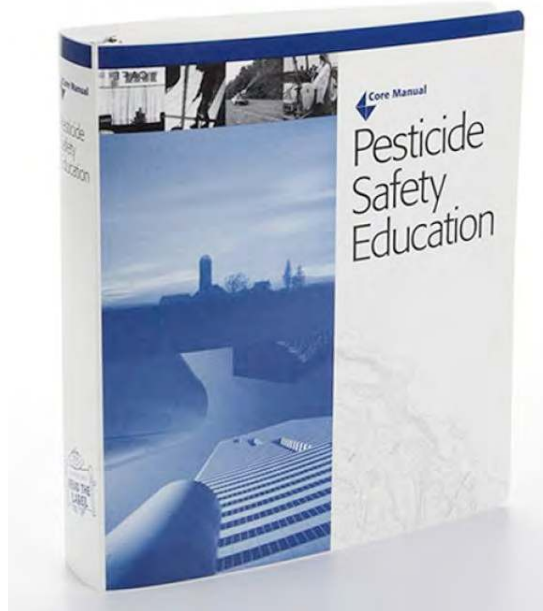
by Ann Hazelrigg, Ph.D.

As landscapers and arborists, if you apply **any** pesticide (organic or conventional) for hire, you need to have your Vermont Commercial Pesticide Applicator's License. This license is also required for application of lawn care products that include pesticides, such as Weed n' Feed or Grub control products.

To get your Commercial Pesticide Applicator's license you need to pass a CORE exam covering the basics of pesticides, IPM and safety issues. In addition to passing the CORE exam, you also need to pass at least one category exam based on the crop you are working with. The common category exams for members of the VNLA include Category 3A Ornamental and Shade Tree Pest Control, Category 3B Turf Pest Control, or possibly Category 2 Forest Pest Control.

The CORE and category manuals can be purchased online from the Cornell Bookstore for \$42.00/each at the links listed below (1). Be aware that our VT Category numbers (3A, B, 2) do not match Cornell's category names or numbers so it is a good idea to contact the Vermont Agency of Agriculture, Food and Markets (VAAFM) Certification and Training (C and T) coordinator, Annie Macmillan (802.828.3479 or anne.macmillan@vermont.gov) to decide which categories are the best fit for your work and which manuals to purchase. You will also need to download extra study materials for the CORE exam on specific Vermont regulations from the VAAFM at the link listed below (2).

All exams are given by the VAAFM and you must register for the exams in advance by calling the C and T number or contacting the email above. In the summer, the exams were given outdoors due to COVID-19, but winter exams are now given in limited numbers indoors at various locations in the state. For the locations and times of the exams see the link (3) below.



There is no charge for taking the closed book exams and you are encouraged to bring your own calculator and required to bring a current, state-issued picture ID to the exam. Although there is no fee for the exam, renewal of the license each year costs \$30.00/ category. The pesticide license is valid for 5 years and is automatically renewed if you receive 16 recertification credits through attending state-approved talks, twilight meetings or workshops within that 5 year time

frame. The annual VNLA meeting and twilight meetings in the summer offer these pesticide recertification credits. Trainings or workshops offered in the other New England states often qualify for recertification credits in Vermont. Additionally, UVM and VAAFM partner on a bi-annual newsletter, the *Pesticide Applicator Report* (4), where we include educational articles on pesticide safety with quizzes that can be taken and mailed to VAAFM to earn pesticide credits.

The UVM Extension Pesticide Safety Education Program (PSEP) has recently developed online study and training materials for the CORE exam (5). There is also an option for recertification credit courses based on the study materials. More online training courses




and study materials on the different category exams are being added yearly. For more information about any of the online courses or assistance in registering, contact Sarah Kingsley-Richards, UVM PSEP (802.656.0475 or Sarah.Kingsley@uvm.edu).

Even if you never anticipate applying pesticides in the course of your work, the training to get your pesticide license includes good information on pests, IPM, safety, handling, and many other aspects of pesticide safety with the target of protecting our Vermont environment, the health of its residents and the protection of non-target organisms. Plus, with the addition of the online study materials, it makes it easy to get your employees trained and ready for their exams!

The UVM Plant Diagnostic Lab remained open for business for commercial grower samples during COVID-19 and will do so again this growing season. I am happy to look at any photos first and then we can arrange if a sample needs to be examined. I am not in the lab every day so drop off without prior arrangement means that something may sit too long before I look at it. Contact me by email ann.hazelrigg@uvm.edu for the quickest response.

Unfortunately, at this point, I doubt our UVM Master Gardener Helpline volunteers will be in the lab this summer and we will likely not accept any home garden samples.

1. Link for Cornell Core and Category manuals <https://www.cornellstore.com/books/cornell-cooperative-ext-pmep-manuals>
2. Link for extra study materials on VT regulations: <https://agriculture.vermont.gov/public-health-agricultural-resource-management-division/pesticide-programs/applicator-types>.
3. Locations/Timing of Pesticide Certification Exams: <https://agriculture.vermont.gov/sites/agriculture/files/documents/FREQUENCY.pdf>
4. UVM Pesticide Safety Program, scroll to *Pesticide Applicator Reports* current and archived. <https://www.uvm.edu/extension/psep>
5. UVM Pesticide Education and Safety Program online CORE training and recertification materials <https://www.uvm.edu/extension/pseponline>

A collage of images for Northern Nurseries. The top image shows a large nursery with various plants and trucks. The middle image features the Northern Nurseries logo, which is an oval with the text "Northern Nurseries" in a stylized font and "A Division of The Robert Baker Companies" below it. The bottom left image shows stacks of materials, and the bottom right image shows a nursery truck. A banner at the bottom right of the collage reads "We Are Your One-Stop Horticultural Supplier".

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News from the VT Agency of Agriculture, Foods & Markets

By: Judy Rosovsky, VT State Entomologist

Emerald ash borer deregulation and what it means for nurseries and landscapers.

Pine shoot beetle deregulation and other pest and disease updates.

Happy Winter to one and all. I fervently hope all of the VNLA members and their families have made it through the COVID-19 epidemic relatively unscathed. May this new year/season bring us out from under the shadow of the pandemic.

News From the Regulatory World:

The US Department of Agriculture Animal Plant Health Inspection Service Plant Protection and Quarantine (USDA APHIS PPQ) will no longer regulate the invasive insect emerald ash borer, (EAB), *Agrilus planipennis*, as of January 14, 2021. Please note that the Vermont statute that prohibits the movement of pest species is still in effect, as are the state recommendations for slowing the spread, available at www.vtinvasives.org.

In 2018, after EAB was found in Orange County VT, the state decided not to establish an external quarantine on EAB in VT but to default to the Federal quarantine. Under Federal rules, ash logs could be freely moved anywhere within the Federal EAB quarantined area. Local Federal PPQ staff could issue compliance agreements for companies moving ash wood outside of the Federal quarantine area. Incoming ash wood products were regulated at international border crossings into VT. Now the only New England state that will require compliance agreements is Maine. Please contact me if you want to transport ash logs or other products to ME and need a compliance agreement.



Top: Releasing tiny stingless biocontrol wasps (*Tetrastichus*) in L.R. Jones State Forest: Note EAB galleries in foreground.

Bottom: Firewood log with EAB galleries, Orange, V. Photo courtesy of J. Rosovsky.

Ash nursery stock was formerly regulated under the Federal EAB quarantine. Those restrictions have been lifted but the transport of pest species is prohibited by VT law so be sure to inspect your incoming ash stock. Individual states may have rules prohibiting the movement of pests so be aware of the EAB status of the states to which you are sending ash nursery stock. Be sure to inspect any ash stock that you are receiving, particularly if it is arriving from an EAB infested state. It is an excellent practice to isolate and

inspect incoming stock, in general, because once its off the truck it is your headache, so check it before you unload it. We are seeing an increasing number of invasives arriving in the US and in VT, so please keep a sharp eye out. It's a good idea to pull a few plants out of their pots, too, so you can look for ants, grubs, root diseases and jumping worms.

The VT Agency of Natural Resources Department of Forests, Parks and Recreation determined that a non-regulatory approach to the wood industry would be more effective and worked with the wood products industry to create a set of recommendations. These include not moving ash products or nursery stock during the flight season of EAB, which in VT is June 1 – Oct 1.

Pests move with firewood and most New England states have restrictions on the movement of firewood. USDA PPQ used to issue kin certifications for firewood producers; that function will be taken over by VAAFM staff. Please contact me if you would like to have your kiln certified. If you are moving firewood to another state be sure to check their agricultural department websites for the rules concerning firewood movement. Some states may be revising their ash wood and nursery stock



regulations so it may be advisable to check with the agricultural officials in states where you do business on a regular basis, as some of these changes may take time to implement and publicize. USDA APHIS PPQ has recently deregulated the pine shoot beetle, (PSB), *Tomicus piniperda*. Former Forest Health Program Manager Barbara Schultz used her detective skills to determine that VT established an external quarantine for this insect in 2002. Soon after that it was determined to be widespread and not too problematic, and by 2006 the quarantine was rarely invoked. It is no longer a Federally quarantined pest as of November 2, 2020. VAAFM has a state PSB external quarantine and will begin the process of ending that rule.



The Hemlock woolly adelgid, HWA, *Adelges tsugae*, is still a state regulated pest species. The rule is in the process of being revised to eliminate logs from the quarantine restrictions and to add a treatment option for imported nursery stock. Some nursery operators are having difficulty finding clean sources of hemlock as the adelgid expands its range, so we would like to offer this alternative. I will let you know when this revised rule is final.



Nymph Stage



Adult Stage



Egg Masses

Top: Pine shoot beetle, *Tomicus piniperda*. Photo courtesy USDA APHIS.

Center: Elongate hemlock scale, *Fiorinia externa* in northern VT.

Photo courtesy Judy Rosovsky.

Bottom: Life stages of spotted lanternfly, *Lycorma delicatula*. Please note how hard it is to see the egg masses. Photo courtesy NJ Department of Agriculture.

Another hemlock pest, the elongate hemlock scale, EHS, *Fiorinia externa*, has been moving on nursery stock. There have been two infestations in northern VT, so please flip over a couple of hemlock branches and check for scale or

adelgids. Much of VT is protected from these insects by colder temperatures, but last winter was quite mild and winter kill was only 30%, instead of 70-95%. In other regulatory news, Canada is not pursuing eradication of the European cherry fruit fly. This has had a dampening effect on US eradication efforts in NY. NY has established a quarantine on movement of certain cherry species. Please see https://agriculture.ny.gov/system/files/documents/2019/11/expressterms_europeancherryfruitfly.pdf for more information about the NY quarantine.

No new information has emerged about the tomato brown rugose fruit virus. Propagative materials and other imports from the Dominican Republic, Canada, Mexico, France, Israel, the Netherlands and Spain may require documentation to be imported into the US. Please see the Federal TBRFV web page for some helpful FAQ's: <https://www.aphis.usda.gov/aphis/ourfocus/planthealth/import-information/federal-import-orders/tobrfv/tomato-brown-rugose-fruit-virus>.

This fall we had a significant trace forward for the spotted lanternfly, SLF, *Lycorma delicatula*. Many thanks to all of the nursery owners and landscapers who cooperated with VAAFM staff in our efforts to ensure that this pest does not become established in VT. We did not find any life stages of this insect from this trace forward, but we may visit more nurseries in the spring to set traps and to continue to check possible host plants. SLF hitchhike easily and have caught rides to NE states on a variety of products. Please keep your

eye out for this brightly colored insect.

Thank you and be sure to take care of your health and your plants health during this pandemic.



The Insidious Flower Bug:

Our Un-Bee-lievable Beneficials - Part 4

By: Cheryl Frank-Sullivan & Margaret Skinner,

UVM Entomology Research Lab

Over the past year, we focused on a series called “**Our Un-Bee-lievable Beneficials**”, where we have highlighted particular natural enemies you are likely to see around the landscape. We started this series after the 2018 Winter issue of “The Dirt”, in which we reported some of our results using ‘flowering habitat hedges’ to attract beneficials. These hedges were planted at numerous locations statewide to attract and encourage establishment of beneficials. They consist of a variety of annuals, including alyssum, coreopsis, blue cornflower, Indian blanket, cosmos, sunflowers and zinnias. They provide a diversity of floral shapes, colors, sizes and heights throughout the season. Some of the attracted beneficials are important native pollinators for crops and others are natural enemies that feed on pests like aphids and spider mites. Some are both, acting as pest-fighting pollinators. Nurturing these beneficials by providing enticing habitat contributes to combating pest populations, provides a beautiful landscape and minimizes or eliminates the need for chemical pesticides.

In the three previous issues, we focused on “**The Sedulous Syrphid Fly**”, “**Persistent Pest Parasites**” and “**The Insidious Flower Bug**”. In this final article, we focus on “**Lively Lady Beetles**”. Though they are often called ‘lady bugs’, in fact they are not “bugs”, but beetles (order Coleoptera). Now is a perfect time to talk about them because we are certain you may see one particular species invading your homes and out buildings en masse to overwinter. *Harmonia axyridis* (AKA multicolored Asian lady beetle) (Fig. 1.) was introduced as a biological control agent down South to combat pecan aphids. They cleared them up and started to move North. They are a voracious predator of numerous small arthropods such as aphids, thrips, mites,



Fig 1. An adult multicolored Asian lady beetle, *H. axyridis*.



Fig 2. Aggregate of adult convergent lady beetles, *H. convergens*.

scales and more. By the mid-1990s they became well established across the US. They have numerous color phases which can complicate identification during the summer, but they always have a big black “W” on their thorax, and there’s no mistaking them when they invade our homes to aggregate for the winter.

Aggregation is a natural behavior of many lady beetle species. It often occurs in rocky outcrops on mountain sides or under natural structures where they are protected (logs, stumps, etc.). Interestingly, *H. axyridis* is attracted to light-colored, man-made objects (unlike our native lady beetles) which explains why they are such a household nuisance.

The convergent lady beetle, *Hippodamia convergens* (Fig. 2) is an important native lady beetle that is wild-caught in their aggregating sites out West and then sold as a biocontrol agent. They are one of the few commercially-available natural enemies that tolerate lower temperatures and still provide an acceptable level pest management in greenhouses and high tunnels. They are particularly effective against aphids in high tunnel production of cool season

greens. These beetles require a large prey base to establish, but feed on pollen and nectar when prey is scarce. That is why it is worth growing a few flowering plants in your high tunnels in the fall.

Lady beetles have four life stages: egg, larvae, pupae and adult. Larvae are commonly judged by their reptilian appearance and assumed to be a pest or biting menace. Although species such as *H. axyridis* have been known to occasionally bite people (likely when they occur in high numbers in close association to humans). However, usually it’s the lady beetle’s primary prey, aphids and other soft-bodied insects, that should be in fear. It is reported that a



lady beetle can eat 50 aphids a day, and 5,000 over its entire life time. Both adults and larvae feed on nuisance pests. The pupal stage is non-mobile (Fig. 3). All life stages are typically found on vegetation where prey is abundant.

Over the past 20 years, native lady beetle populations in the Northeast have been in decline, probably due to habitat loss, exposure to pesticides or changes in our climate. The Asian lady beetle is also thought to be outcompeting our native species, leaving the natives no prey on which to feed. The VT Center for Ecostudies (VCE) has established the Vermont Atlas of Life.

Through this initiative they hope to establish records for the occurrence of our lady beetle biodiversity. They tracked down a lady beetle checklist prepared in 1976 by our colleague, Dr. Bruce L. Parker from the UVM Entomology Lab and Drs. Gordon Nielsen and Ross Bell. This publication provided insights into the changes in the species diversity of these valuable beneficials.

Fourteen of the 33 known native species listed in 1976 have yet to be reconfirmed in Vermont. If you would like to learn more about the VCE lady beetle studies, go to their website at: [About the Vermont Lady Beetle Atlas | Vermont Atlas of Life \(vtecostudies.org\)](http://www.vtecostudies.org)

You can contribute to the project by entering your observations on their database. Several first state records have been reported to them by people just like you! You can become an important citizen scientist, tracking the status of our ecosystem.

Plan ahead for this spring and designate a space for a habitat hedge and help protect our natural enemies and pollinators. As we wrap up this series we hope you establish your un-bee-lievable habitat plantings in the future and help spread the word to your customers about the important role they can play in the conservation of our beloved beneficials.



Fig 3. Lady beetle larvae eating an aphid (left) and pupa

About the Authors: Dr. Margaret Skinner is the UVM Extension Entomologist and Research Professor. Cheryl Frank Sullivan is an Entomologist & PhD Candidate.

Together, they provide extension outreach to growers and landscapers and conduct research on IPM focusing on biological control. Businesses interested in establishing a habitat hedge tailored to their commercial operation should contact Cheryl Frank Sullivan at

cfrank@uvm.edu 802-656-5434. More information about the Univ. of VT, Entomology Research Laboratory can be found at <https://www.uvm.edu/~entlab/>

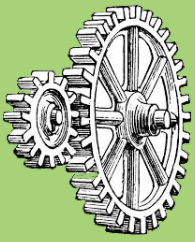
This work is supported with funds from the Vermont Nursery & Landscape Association, the USDA Crop Protection & Pest Management Program, National Institute of Food & Agriculture and Univ. of Vermont Extension. Photo credits: Fig. 1: Jon Yuschock (5430054) Bugwood.org; Fig. 2: Sally Rae Kimmel, <https://www.flickr.com/photos/sallyraekimmel/> Fig. 3: (pupa) Jack Kelly Clark, UC Statewide IPM Project.



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The Garden Media Group 2021 Trends Report

The Great Reset!

A note from Katie Dubow, Garden Media Group President:

Hello, friends. I'm writing to you from my home office.

I trust you made it through the spring and summer and safely to the other side, whatever that may be. While much has changed within our industry and out, we're still here reporting trends. This year, we had to scrap many trends we had identified and examine shifts in behavior during the quarantine. Then we set out predicting how these shifts would shape the future of gardening.

How the world will change post-COVID-19 remains to be seen. But one thing is certain: We are in the middle of A Great Reset.

We've seen the error box; the screen has gone blank. No one knows how our lives will look once the reboot is over. However, we have no doubt the garden industry has an opportunity to come out ahead.

A lot of positive energy was born from this disruption; what will you do with it?

In the first half of 2020, something ended. But something new is starting.

And without further ado, we present the 2021 Garden Trends Report, our 20th-anniversary report.

*Mucho, Mucho Amor,
Katherine Dubow*



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**A recent study shows the U.S. needs to double nursery production.
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A Very Cool Greenhouse

By: Judith Irlen, VCH; Photographs: Dick Conrad

When people mention a 'greenhouse' the image that often comes to mind is a vast hooped structure, 150' long or more, filled with growing plants, either to yield food or flowers during the coldest months, or alternatively to be sold at garden centers or planted in the fields once spring arrives.

But, for avid gardeners, a greenhouse—sometimes called a sun-room or conservatory—is a far more modest structure, typically attached to the house, where we can enjoy plants throughout the cold snowy months of a Vermont winter.

A Cool Greenhouse

My greenhouse is just 18' wide and 10' deep, built off the southern wall of our house and reached through the dining room. On sunny winter days this ideal orientation creates wonderful natural light and plenty of solar heating.

This beautiful structure was designed and built for us nearly 15 years ago by Dennis Bates, owner of Vermont Sun Structures (and husband of VNLA member and UVM Plant Pathologist, Ann Hazelrigg). Dennis tells me that, although he is not currently building greenhouses, he would be happy to answer questions about his designs.

One unique aspect of his designs was to install the ceiling windows on just the lower portion of the roof, as you can see in this picture. In the wintertime, when the sun hangs low in the sky, the midday sun is able to reach all the way to the back wall and maximize the solar heating. But, by contrast, during the summer, when the sun rides much higher in the sky, even at mid-day it will only reach the front third of the greenhouse, thus reducing the overall solar heating—perfect for the time of year when you need it less rather than more!

The side windows can be opened in the warmer months, providing needed cross ventilation. This ventilation is aided by a large ceiling fan and a thermostatically-controlled exhaust fan.



Top: Judith's greenhouse, built by Dennis Bates of Vermont Sun Structures .

Bottom: Judith with one of her favorite camellias.

Heavily insulated walls and thermo-pane windows help maintain the heat in the winter. And, since the floor is made of brick pavers set on compacted drainage stone (plus cut blue-board for added insulation) I can use the hose to water my plants directly onto the floor—a very nice feature.

We choose to set the thermostatically controlled baseboard heat a little above 50°, meaning it is technically classified as a 'cool greenhouse'. While this certainly places some limits on our choice of plants—most notably heat-lovers like orchids—it is perfect for growing plants that hail from places where the winters are cool but not cold.

Indeed, if you or your clients already have a south-facing sun-porch, by enclosing the space with thermo-pane glass and insulating the walls, maybe you could create a greenhouse similar to ours and enjoy some of these same plants.

So, to give you an idea about choosing plants for a 'cool greenhouse' in Vermont, let me tell you about some that I grow

all winter long, up here on the western slopes of the Green Mountains.

Winter Flowering Camellias—My Pride and Joy

Camellias are elegant evergreen shrubs, originating in Southeast Asia, that *flower in the winter months*. Traditionally the leaves of some varieties of camellias were dried for tea making. But, for many years now, plant hybridizers have been breeding camellias to achieve bigger and better flowers—resulting in a bewildering number of cultivars!

Today camellias are grown in gardens where the winters are cool but not cold and there is a decent amount of rainfall all year long, such as in the Southeast and in England.

So I asked myself whether camellias might also do well in our cool greenhouse. I started out by having a long chat with David, one of the owners of Camellia Forest Nursery in Chapel Hill, North Carolina, about ones he would recommend for growing under glass.

The plants I purchased from him are now between five and six feet high. Most are derived from *Camellia japonica* and they typically bloom from December to February when their stunning rose-formed flowers, each up to 4 inches across, are nothing short of amazing.

My particular favorites are 'Charlie Bettes' with rings of pure white petals framing a central cluster of yellow stamens, and 'C. M. Wilson' with deep pink outer petals surrounding a paler pink center.

Since camellias grow naturally in areas with acidic soil and reasonable rainfall, these are the conditions I try to replicate here. I use a peat-based potting soil formulated for azaleas and plant each shrub in an individual pot that is large enough to accommodate the roots without crowding.

In May, once the weather is reliably warm, I relocate them all outside to a partially shaded spot for the summer months.

Also, since the new flower buds for next winter's display actually begin forming in late summer, I am mindful to water the pots regularly and deeply when the weather is hot, and also to work some fertilizer designed for acid-loving plants into the top of the soil.

The only problems I have encountered with my camellias are occasional scale infestations, primarily on the leaves. When I spot any invaders I gently scrape them off using a rag soaked in rubbing alcohol, followed with some Neem oil



Top: The sunny southwest corner of Judith's greenhouse.
Center: *Echeveria* make wonderful greenhouse plants.
Bottom: *Rex Begonia* 'Escargot'

spray (appropriately diluted), paying special attention to the undersides of the leaves.

Smooth Succulents—The Perfect Greenhouse Plants

Succulents—found all across the world in arid areas where rainfall is both infrequent and unpredictable—seem like the quintessential opportunists of the plant kingdom. Indeed, over the millennia they have evolved a variety of interesting techniques that allow them to readily absorb water when it is available and then—in anticipation of dry days ahead—store it in specially adapted tissues.

When the word succulent is mentioned, most people think of cacti which store water in their swollen stems. Also, to help to fend off would-be predators, the leaves of most cacti have evolved into fiercely sharp needles—a very useful trait in the wild.

But, in the confines of a small space, these needles make cacti extremely unfriendly! So I choose not to welcome any into my own greenhouse! (Actually, for a similar reason, I decided to dump an elegant agave with vicious spines which I had unwittingly purchased.)

But many succulents do indeed make delightful greenhouse guests. In particular I have had great success with members of the *Crassulaceae* family (which includes the various Sedums we grow in our gardens). By contrast, these succulents store water in thick fleshy leaves.

Crassulaceae is actually a vast family found all across the globe. It includes a very large genus called *Echeveria*, delightful small plants characterized by thick leaves growing out from their stems to form beautiful rosettes, which originate in the semi-deserts of Texas, Mexico, and southward to Central and South America.

I have several varieties in my greenhouse including *Echeveria elegans* (also known as Hens and Chicks). All are low-growing spreaders that gradually multiply via stem offshoots.

I use a gritty potting soil (such as one formulated for cactus), water them intermittently and leave them in the greenhouse year round. Initially purchased as tiny plants, they are now large enough to warrant a three-foot wide shallow bowl, where their charming rosettes cover the entire soil surface.

I also grow three other gentle succulents (no spikes or spines allowed!), which, since they all have different habits, I grow solo in their own pots:

- An ancient *Aloe vera* that came from Dick's family, is an outward growing plant that always seems to be reaching to get outside its 12 inch pot.
- A Jade Plant (*Crassula ovata*), acquired as a cutting many years ago from a friend, is like a charming miniature tree.
- A Donkey's Tail plant, (*Sedum morganianum*) with long stems covered in tiny succulent leaves that grow gently down over the edge of its pot.

The occasional infestation of mealy bugs, which look a fuzz of white-cotton, is the only real pest problem I have encountered among my succulents. Typically found in hard-to-reach places like in the leaf axil, they can be difficult to eradicate completely, but with a little diligence can be kept under control. I start by gently rubbing the affected area either with a cotton-swab dipped in alcohol, or even just plain water to remove what I can. I then treat the whole plant with insecticidal soap, repeating this weekly.

The Best of the Rest

Our cool greenhouse is also home to other delightful plants, including two large woody herbs—rosemary and bay laurel—both of which I use in cooking and which spend the summer outdoors.

There are several begonias, including an enormous 'Surefire Pink' cultivar (by Proven Winners), a fragrant Star Jasmine (a gift many years ago from a friend in North Carolina), and a huge Clivia (brought from Germany over 100 years ago by Dick's immigrant grandparents).

And last, but certainly not least, there is a beautiful white azalea shrub, now about three foot across, that flowers, on and off, throughout the year. Recently I counted over forty blooms on it!! It arrived about five years ago as a miniature novelty—a Christmas gift from my daughter-in-law. Checking around I believe it is 'Bloom-a-thon' (also by Proven Winners) and definitely not hardy in Vermont. But in my greenhouse it makes a wonderful statement in all winter long, while also triggering happy memories.




Top: Dick's grandparents bought this ancient Clivia plant from Germany over 100 years ago; and it still blooms every spring.

Bottom: This white Bloom-a-thon azalea, as a Christmas novelty about five years ago. It has now grown into a small shrub which recently had over forty blooms.

About the Author & Photographer: Together **Judith Irven** and her husband, **Dick Conrad** nurture a large garden in Goshen, VT. Judith is a landscape designer and VT Certified Horticulturist. She also teaches Sustainable Home Landscaping for UVM Master Gardener Program. She also writes about her VT gardening life at www.northcountryreflections.com. You can reach Judith at judithirven@gmail.com.

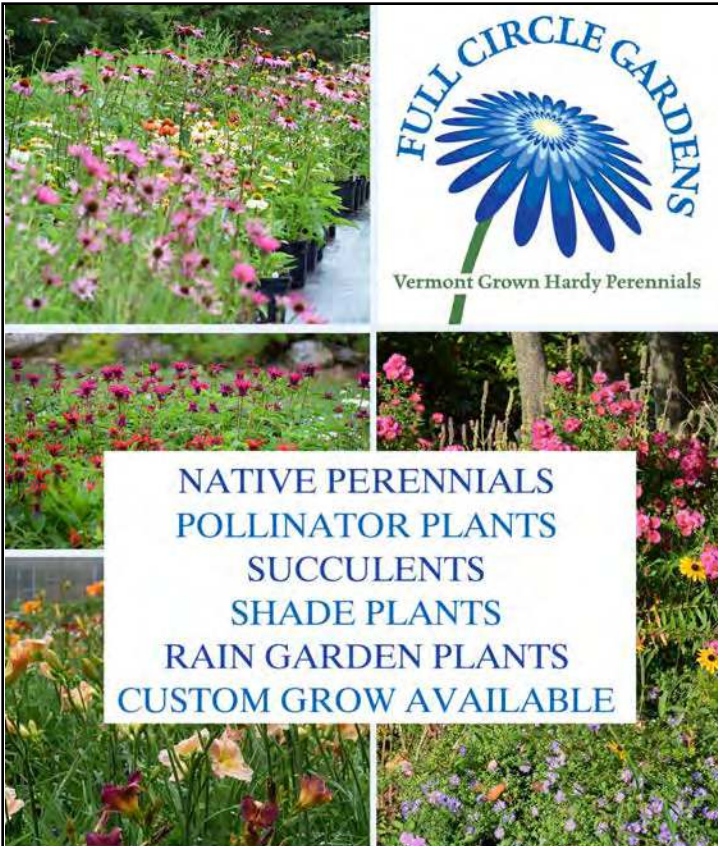




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The Silver Lining of 2020

by Jacki Hart

Welcome 2021! I think we're all hopeful that by the end of this year, Covid protocols will be fading into memory, and we will be picking up where we left off last March in all aspects of our lives.



When I think back to a year ago, many of my readers attended the Landscape Ontario Congress in Toronto – Canada's largest Green Profession Trade Show and Conference. Thousands of us networked, shook hands, attended packed info sessions, we laughed, we hugged, we socialized in busy bars and packed ball rooms. After which many hopped on a plane and hit a resort somewhere warm. Imagine that.

So here we are and to start off this New Year, I'd like to offer a retrospective glance backward, to what I see as a few of the surviving legacies of the pandemic year gone by:

1. A Refreshed Focus on Health and Safety:

Landscape Ontario President Dave Wright said last April "We must become safety companies who do landscaping". Dave was right. And together as a broad community of industry Professionals, we did.

Covid-19 pushed every company leadership team to look inward and take stock of the company pattern used to communicate and train health and safety policies and processes. Everyone engaged in conversations around 'why' and 'how' and 'when' PPE and various protocols were to be used. This provided a lens thru which to review how the team upholds and embraces other company policies (or not). The net effect was to place health and safety at the forefront of our team members minds, right where it belongs.

2. Being Resourceful in Finding Facts, Resources and Templates:

We all hunted for and found the appropriate conduits of information and facts. Leaning on our Association

membership services teams and trickling onto every business leaders' desktop, online became the gateway for 'how' to keep moving forward. Together with your business community, you opened channels of communication and mentorship with Peers to find the

fast track for sourcing PPE, Policies, Processes and Protocols to manage the COVID-19 risks to staff, customers and the community. We all learned to ignore the rumours and suss out the facts.

3. Communicating Like Never Before:

I think the most important legacy lesson of the pandemic year: Zoom. Second place runner up: WebinarJam. Without a doubt, if you'd never used Zoom before, or attended an online webinar, you've likely done so by now. Whatever online video platform you chose to use regularly, my guess is that it's transformed your comfort level with being 'on camera', and being live in a virtual room with others – either on camera or on the sidebar chat.

Who knew we'd be where we are now? None of us ever thought a year ago that we'd be unable to be go to conferences, weddings or parties in person. And we've adapted fairly well I think.

When I look back at 2019 and early 2020 – it was like pulling teeth without anesthetic trying to get landscapers to meet me online in a video call. Now – it's no sweat. I'm proud for the steep learning curve you've all jumped onto, and how well you've adapted. I can only guess at the ways in which these new-found communication platforms have opened up your efficiencies and effectiveness at communicating with your team, your clients and suppliers.

Communication was key throughout the pandemic – especially in the early days – the 'essential/non-essential'



days. Remember that? And the legacy is your new-found comfort online.

4. Pivoting and Moving Forward Purposefully:

Being nimble and maintaining forward momentum with hope, was the name of the pandemic game. Adapt, Adapt, Adapt. Tomorrow, adapt again. Those of you who embraced that, in all of it's weirdness, early on in the spring, are the ones who navigated the issues laid at your feet with the least amount of stress and few mistakes. Flexibility and creativity ruled the decision-making process.

We learned that pushing up against something we can't control is unhelpful, and wildly stressful. Moving quickly to Acceptance, Assessment and Action became a crucial path to success.

It's from these lessons, we take forward into 2021 the legacies of the 2020 pandemic year: Health and Safety, Resourcefulness, Communication, Flexibility, Creativity, Trust, Empathy and Hope.

This year will be quite different in how we can keep learning and stay connected. While we might not know what 2021 will bring, I know for sure that we are all much better equipped to adapt and respond to whatever comes our way. We are stronger together.

Bring it on 2021, we've got each other's backs.

About the Author: *Jacki Hart is president of Consulting by Hart in Ontario, Canada. She is an entrepreneur, advisor, business consultant, and workshop facilitator with a career in the Green Industry spanning 35 years. Jacki is one of Canada's first women to hold the North American Green Industry certificate for business management excellence. Jacki also manages the Prosperity Program and Peer to Peer Network for Landscape Ontario.*



Jacki writes for other trade magazines and will be a regular contributor to our business column. CBH is a consulting firm that "passionately believes that entrepreneurial success depends on sustained forward momentum - across all areas of business - both the visible and the invisible. To learn more about CBH visit www.consultingbyhart.com.

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Japanese Painted Ferns: *Athyrium niponicum* and hybrids

by Mark Dwyer, Landscape Prescriptions by MD

Japanese painted ferns play an important and significant role in our shaded and partly shaded gardens. By offering the combination of substantial texture along with the eye-catching and variable colors of silver and burgundy, these ferns should be on the radar for any gardener that can grow them successfully. The popularity of these painted ferns has helped mobilize not only more gardeners seeking them out at local nurseries and garden centers but breeding and selection work continues in earnest to develop and offer selections with differences both subtle and more pronounced. The intent of this article is to not only extol the merits of these ferns but to examine some of the best selections out on the market today based on personal experience, both formal and informal trialing and observations over many years.

Working as the Director of Horticulture for 21 years at Rotary Botanical Gardens (Janesville, WI), I was directly involved in the design and construction of a Fern & Moss Garden in 2005 that was intended to grow and display as many ferns as we could possibly accumulate and grow in this Midwest climate. At its peak, this garden (affiliate garden for the Hardy Fern Foundation) contained over 250 different types of ferns that were being trialed for hardiness and adaptability in our climate.

One of our focus collections were Japanese painted ferns. We started with the popular *Athyrium niponicum* var. *pictum* (z 4-8) which wasn't new for us and already had some notoriety, particularly after receiving the Perennial Plant of the Year award in 2004 from the Perennial Plant Association. At that point in time, there were a



Top: *Athyrium niponicum* var. *pictum*

Bottom: *Athyrium niponicum* 'Burgundy Lace'



couple of other varieties and we were seeing some of the earliest of the painted fern crosses with lady fern (*Athyrium filix-femina*). These hybrids tended to combine the best traits of both parents and new hybrid selections continue to appear. At one point, we amassed over 30 varieties of Japanese painted ferns and hybrids for side by side comparisons in a partly shaded garden with good soils, excellent drainage and a supplemental irrigation system (when needed). Having multiple specimens of all of these painted fern selections, we were able to do our own, "side-by-side" observations for the past 15 years. New selections on the market were aggressively sourced and became part of these ongoing trials as well.

It is important to mention that Richard Hawke, plant evaluation manager and associate scientist at the Chicago Botanical Garden (Glencoe, IL), did a trial of painted ferns and lady ferns from 2002-2014. This study included the evaluation of 11 selections of painted fern (*Athyrium niponicum*) as well as four of the painted fern hybrids. This



study is certainly worthy of review at https://www.chicagobotanic.org/downloads/planteval_notes/no39_ferns.pdf. Hawke's observations are fairly consistent with ours although our trial did go on to broaden the scope of the collection to absorb new acquisitions. Our pH was a neutral 7.0 as compared to the higher pH of 7.5 in the Chicago Botanical Garden trial and it's likely we applied more irrigation on a regular basis.

The foliar merits of these ferns are quite apparent and amazing in the garden. The frosty white to "steely-grey" fronds may have hints of maroon depending on the season and the variety. The coloration on painted ferns has not only variability between selections (very subtle at times) but there is transition of the coloring depending on the season. Japanese painted ferns upon emergence tend to have more burgundy and muted tones of silver and depending on the variety, certain colors become more prevalent as spring progresses in to summer. In our trials, we even noted that the best foliage coloration for most varieties typically became more pronounced and established after multiple years in the garden. The burgundy tinting can be quite variable but is more intense for certain varieties like 'Burgundy Lace', 'Pewter Lace' and 'Regal Red'. Additionally, the degree of "silvery" is also variable with some varieties like 'Silver Falls' being promoted specifically for a more intense silver. The feature of "crested", meaning fanned ends to the fern foliage (pinna), has appeared in at least three selections to date and while not unusual in some other species, does add an extra dimension of interest. 'Applecourt' was the first *Athyrium niponicum* to offer this feature and continues to be popular. 'Crested Surf' is an exciting new, crested selection and the hybrid painted fern, 'Ocean's

Fury' (hybrid) offers a taller form with plenty of cresting and a moderate amount of "silvery" on the foliage. An interesting novelty, the variegated selection, 'Lemon

'Cream' features creamy yellow variegation but very little observable silver or burgundy.

I'm quite excited about the future of the hybrid painted ferns with both lady fern (*Athyrium filix-femina*) and Japanese painted fern bloodlines. These crosses have resulted in taller ferns that offer their colorful contributions at the 24-36" range whereas the majority of *Athyrium niponicum* selections hover at the 15-18" height. Both 'Branford Beauty' and 'Branford Rambler' are early results of these crosses and are still sought out for their vigor and proven performance. The 'Ghost' fern, in my opinion, set the standard for the hybrids by offering a very silver fern that could reach 30" in height. The foliage upon emergence is a silvery green but with enough sunlight, a true silver materializes in summer. The crested form 'Ocean's Fury' is a nice selection (mentioned above) but I'm very excited about the relatively new 'Godzilla' hybrid which truly looks like a Japanese painted fern but twice the size.

There is a lot more burgundy in 'Godzilla' than 'Ghost' but both have limitless applications out in the partly shaded garden.

Painted ferns and their hybrids tend to have an arching habit and all exhibit some degree of the silvery mentioned previously. Colors may be more muted in deeper shade so some degree of sunlight helps with more intense coloration. Morning sun or dappled afternoon light seems to be sufficient for maximizing painted fern coloration. While I've seen painted ferns alive in the deepest of shade, they were not robust specimens and



Top: *Athyrium niponicum* 'Silver Falls'

Bottom: *Athyrium niponicum* 'Crested Surf'

didn't exhibit significant coloration. Keep in mind that these plants prefer consistent moisture and do prefer soils rich in organic matter. I don't view these as drought tolerant ferns for any great length of time during the heat of summer. While durable once established, drought conditions will adversely affect these painted ferns in a dramatic and quick fashion. Further south in their growing range, they should be provided more shading to maintain the integrity of the foliage and help conserve surrounding moisture and plant health. Providing supplemental moisture as needed is ideal as is having decent soils at the time of installation. As mentioned, soils rich in organic matter that are consistently moist but well-drained seem ideal for these selections.



Athyrium niponicum 'Ghost'

The growth rate of painted ferns is fairly moderate by roots as they will slowly colonize an area.

'Branford Rambler' seems to spread quicker than others which is a feature that is touted. They are easy to divide and move as you like although this process is ideal at the beginning or end of the growing season. With very few insect or disease issues, the ferns should look great throughout the season if given ample moisture. While deer resistant, rabbits have been known to take a nibble, particularly on the tender new growth in spring. Any fronds that turn brown during the season can simply be cut out.

Used as specimens, Japanese painted ferns offer that "pop" of foliage color with silver highlights not only offering "brightness" in our shadier gardens but at dusk, that coloration really shines. I've seen masses of painted ferns used along streams and ponds that really offer wonderful interest. Hawke describes painted ferns as both elegant and utilitarian and further describes their value as accents or in massed plantings. Using many specimens together creates a "collective groundcover" that is clearly defined and can be under-planted with the earliest of spring blooming bulbs or other companion plants. Sloped areas in shade can utilize masses of painted ferns to help serve as erosion control.

Neighbors for your painted ferns will be dictated by the conditions but if you have good soil and adequate moisture, consider companion plants such as false forget-me-nots

(*Brunnera*), *Ligularia*, *Hosta* (particularly blue!), *Helleborus*, toadlilies (*Tricyrtis*), coral bells (*Heuchera*) with maroon foliage and more! Painted ferns also look great combined with bleeding hearts like 'Gold Heart' (*Lamprocapnos spectabilis*), lungworts (*Pulmonaria*) and variegated Jacob's ladder (*Polemonium reptans* 'Stairway to Heaven'). Take advantage of the silver and burgundy highlights of the ferns and combine accordingly making sure all participants are happy in their combined setting. I've seen painted ferns and their hybrids also used successfully in containers for the season then planted out to permanent spots in fall. The silver fronds also have value in fresh flower arrangements.

Those that garden in any degree of shade do quickly appreciate the value of continued and substantial foliage interest from their

plantings. While flowers are still part of the equation for many perennials in shade, the tapestry and combination of textural and colorful foliage is what truly completes the scene. The contribution of immediate fine texture and hints of silver and burgundy from the gamut of painted fern selections offers extended illumination in our shadier respites. These plants will continue to be in high demand and new selections and hybrids will undoubtedly make future appearances. This article was also printed in the following:

<https://www.nurserymag.com/article/athyrium-niponicum-var-pictum-plant-prescriptions/>



About the Author:

MARK DWYER was the Director of Horticulture at Rotary Botanic Gardens in Janesville, WI for 21 years. He has degrees in landscape architecture and urban forestry and now operates a private consulting practice, Landscape Prescriptions, MD. Visit: www.landscapeprescriptionsmd.com.



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