AUGUST
2022

ISSUE
N.236

ELA MONTHLY

LETTER FROM THE EDITOR

THE ELA NEWSLETTER IS PROUD TO ANNOUNCE LESLIE DUTHIE AS OUR NEW EDITOR-IN-CHIEF! LESLIE HAS BEEN IN THE ELA COMMUNITY FOR A FEW YEARS AND IS A CURRENT BOARD MEMBER. SHE IS A CAREER HORTICULTURIST AND IS EXCITED TO HELP STEER THIS PUBLICATION. READ MORE IN THE MONTH'S LETTER FROM THE EDITOR!

MEMBER HIGHLIGHT

THIS MONTH WE ARE INTRODUCING A NEW COLUMN TO SHINE A LIGHT ON THE WORK OF ELA MEMBERS. ELA DIRECTOR, MADS MCELGUNN, SAT DOWN WITH ELA PRESIDENT, RIE MACCHIAROLO, TO TALK ABOUT THEIR HISTORY WITH ELA, WHAT THEIR FAVORITES ELA EVENTS HAVE BEEN, AND HOW THEIR FRONT YARD HAS COME TO REPRESENT ALL OF THE GOOD THEY'VE EXPERIENCED IN THE ALLIANCE.

NORCROSS PITCH PINE RESTORATION

WE ASKED ELA BOARD MEMBER, DAN JAFFE WILDER TO GIVE US SOME INSIGHT INTO WHAT NORCROSS WILDLIFE FOUNDATION HAS BEEN DOING. PLEASE READ HIS ARTICLE ON RESTORING A PITCH-PINE OAK UPLAND FOREST AT NORCROSS WILDLIFE SANCTUARY.

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LETTER FROM THE EDITOR

Written by: ELA Newsletter Editor-in-chief, Leslie Duthie

Image: Leslie Duthie

The Ecological Landscape Alliance is growing, just like the field of ecological landscaping. Last month we introduced you to our new management team and over the next months we will introduce you to members of the board as well. We are all working together to keep this organization vibrant, active and on the cutting edge of new technology and solutions for today's landscape challenges. As the new chair of the publications committee I will help to steer our newsletter for the coming year. Today, I am inviting all of you to share your thoughts and ideas with us. Do you have a great project that has just finished? Or one that you had some problems with? Share your experiences with the Committee and we can share some with our readership.

We expect to bring you the provocative articles that you have become used to. New techniques, new ideas, new challenges that face all of us in landscaping will still be the focus of our newsletter. As our byline says – 'Because Land Doesn't Come with a Manual' – our newsletter is designed to offer food for thought as well as topics for discussion.

"our newsletter is designed to offer food for thought as well as topics for discussion"

We are looking forward to working with our new management team and expanding our reach across the country, across the world, and across different cultures. Urban landscapes present different challenges than rural ones. Community gardens are a great place to make friends and exchange ideas. Regional landscapes vary across the country and around the world. But we all share a love of putting our hands in the soil and encouraging our plants and our landscapes to thrive. We hope that this newsletter can continue to inspire you to try new things and see our landscape from a new perspective.

We have some great conferences coming up! It has been a challenging two years but we are moving forward, reaching out and trying to share ideas. The Season's End Summit is first on our calendar. This conference will be held as a hybrid event on Thursday October 27, 2022. We welcome people to join us at New England Botanic Garden at Tower Hill for our in-person event. This location offers the ability to get together and share ideas. The theme for this conference is 'Are we Getting it Right?' We have several design professionals talking about their projects as well as speakers from the field sharing their ideas on plants and pollinators. If you can't join us in person, sign up for the online event and still have access to all the information we hope to share.

Next will be Regenerative Solutions for the Resilient Landscapes which will be our in-person mid-Atlantic Conference to be held on Thursday November 10, 2022 at Longwood Gardens in Pennsylvania. Thanks go out to Longwood who is partnering with ELA to allow us to bring back our in-person programming. Watch for more details about this conference and on our website.

Finally the Ecological Plant Conference will be held on Friday December 2, 2022 which will wrap up our conferences for this year. We look forward to having more information on this conference soon.

MEMBER HIGHLIGHT

Written by: ELA Director, Mads McELgunn, MA

This month, ELA is proud to announce a new newsletter segment focusing on our wonderful members and community. Our goal with this segment is to catalog individual experiences and insights across the ELA community, so that we can better understand the value that ELA provides members, and the impact ELA has on our work in this incredibly diverse field. We will interview members and/or leaders each month – if you are interested in sharing your experience and perspective, please contact mads@ecolandscaping.org.

For this issue, ELA director, Mads McElgunn, interviewed ELA President, Rie Macchiarolo. A big "Thank You" to Rie, for sharing their time with us to have this conversation, and their willingness to be our first contributor to this member-focused segment.

The conversation below has been lightly edited for clarity.

Image: Rie Macchiarolo

How long have you been in the ELA community including the time before you became a member?

I first learned about ELA in my time in grad school, and I simultaneously became a member of the alliance as I was introduced. I learned about ELA in the Conway School. There was a Conway alum, Theresa Sprague, who was serving as board president [of ELA]. She was influential in my time during grad school. My class met her on our orientation field trip, and she also sat as a guest critic during some of our presentations, and was just really friendly. So, she introduced me to ELA, and I just immediately started gobbling up as many webinars as I could in my free time. That was in 2013, and I have been part of the community since.

Was it the ELA community that made you join?

It was clear that ELA had a specific educational niche that I was looking for at the Conway School. The program itself was really short, it was only 10 months, and it mostly focused on design thinking, understanding systems, and being able to communicate complicated ideas through graphics. And all of that was steeped in ecology. There wasn't a lot about specific plant information. I left grad school like, "okay, I've got this graduate degree now. That feels on one hand, super useful, and on the other hand, I don't know any plants."

All of the people that I talked to just told me to pick a couple, learn those, and [develop] a base to go off of and learn from. So when I discovered ELA, the thing I was so excited about was all of these resources online, in the newsletter, and their webinars are specifically about plants – about what plants I should use, or why this particular plant is interesting. I think that was the thing I was initially most excited about. I felt like ELA offered a specific niche of education that I was particularly looking for at that time.

When I moved to Boston, I worked with a volunteer organization called COGDesign that did Pro Bono design work, and I volunteered to be a designer for one of their projects. This was when I was teamed up with Trevor Smith who became ELA president two years later. He and I were working together on designing a community garden. We just hit it off and had a great time working together. I think in one of our first meetings he asked if I knew ELA, and I told him how interested I was in the webinars. He said "I feel like you'd be great on the board," and I said "sure we should talk about what that means," but I was definitely at a time of professional development.

I was excited to do basically anything that enabled me to have more information and more connections. I initially had a "this would be great on my resume" attitude, but it quickly developed into being connected with the ELA community and creating relationships with these big names of New England. I just really liked the people that showed up to ELA events because we are all very curious, nerdy plant people who are nature enthusiasts and appreciators.

I will always be a member of ELA because I just really believe in the mission of the work. Supporting an organization like this feels fundamentally good to me, but I've stayed in a volunteer role because it feels like the kind of activism that I've been able to *sustain*.

I know this is an impossible question, but do you have a single favorite ELA experience?

I mean, that's hard to pick just one, but the conferences have definitely been the highlights of my experiences with ELA. I think a couple of years ago at the Ecological Plant Conference there was just a really well stacked conference lineup. One of the speakers was Roy Diblick who wrote this book called The Know Maintenance Perennial Garden, which I freaking love puns and he had me at "know maintenance."

Not only is his book and his work really useful, but I just loved the way that he talked about plants. He was the first person that I heard talk about the responsibility we have when we are putting a plant in the ground. And he was just like “when you plant something, you are putting it in the place where it is likely going to grow for the rest of its life.” He said some things like, “You have to put plants with their friends,” or “know who they’re gonna share a room with.” And he said something like, “when the crowns collide, that’s where the magic happens.” And I just loved the way he talked about the relationships of plants and their environments. I hadn’t tuned into Robin Wall Kimmerer yet at that point, but he emphasized a similar point in understanding how plants relate to each other and their own individuality. By the end of his talk, I was just a puddle of goo. I was just thinking how this was everything I needed, and hearing him speak was probably one of the best ELA moments.

Image: Rie Macchiarolo

Along the lines of great speakers, if you had an unlimited budget for a speaker, who would you want to speak at an ELA conference?

I mean, probably Robin Wall Kimmerer or Suzanne Simard. I just love the way that Robin talks about plants and humans and how we're all a part of the same system. Of course, part of this comes from her Indigenous culture and framework she's from, and I think a lot of that just resonates with me. I feel like that is a big piece we, in the Colonial Western World, are really missing and lacking – this larger sense of community and responsibility, not just to each other as humans, but to everything around us.

Every time I read something of her's or listen to something, it has touched a similar spot for me that I feel like is a place that I'm sort of exploring within myself, and sort of longing to feel more connected. I feel like I'm just always on a quest to feel more connected to the people around me, the world around me, and the plants around me, and she always manages to sort of touch that spot for me. I just feel like I could listen to her talk about anything.

With Suzanne, she has a slightly different angle and framework, but the message feels similar of just understanding how trees are communicating with each other, and how there's so much happening in the natural world that we can barely begin to understand. I feel like it just really highlights the awe that I feel with everything around us being awe-inspiring.

"I feel like I'm just always on a quest to feel more connected to the people around me, the world around me, and the plants around me"

Image: Rie Macchiarolo

"I feel like my front yard is a collection of conversations and moments from ELA, which feels really nice."

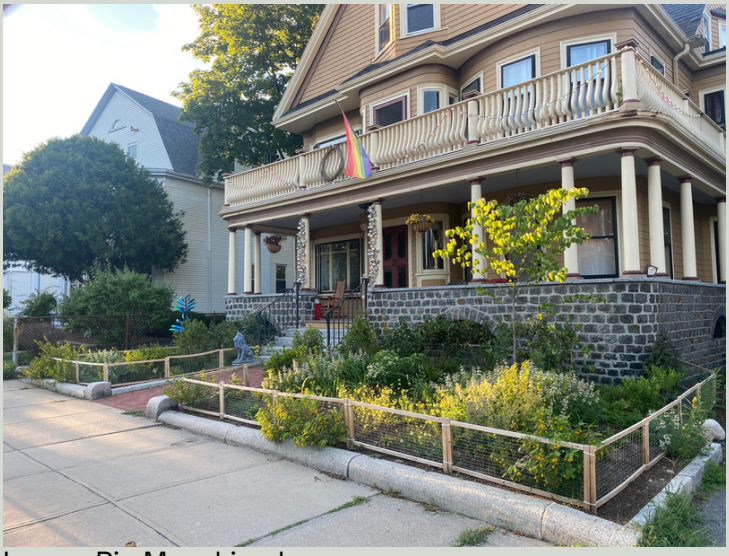
Image: Rie Macchiarolo

Last, but not least, have you had a favorite passion project that you've worked on that has been connected to ELA in some way either through partners or from the education provided by the organization?

I think I'd say that my front yard transformation has been like what I've been training for for years. I'm finally in a place where I have a front yard that I can really do something with, and no one's going to take it away from me or demand that I change it. Almost all of the plants that are in the front yard have some meaningful connection to me, ELA, and the people in ELA. I've just learned so many of my favorite plants through learning about what other people ELA plant and what they like. It's been through all of the conversations that have happened through webinars, or just through our presentations and conversations that I've been having with people. I feel like my front yard is a collection of conversations and moments from ELA, which feels really nice.

One more hearty "Thank You" to Rie for their time, and well-wishes for a front yard that feels like a microcosm of ELA's incredibly diverse, creative, and deeply rooted community (if you'll please excuse the puns...).

Finally, some additional resources, links, and opportunities for continued learning stemming out of this conversation are included below:

- For more information about the Conway School, check out their About Page
- For information about upcoming ELA webinars → https://www.ecolandscaping.org/events/category/webinars/
- To learn about the work that COGDesign does in the Boston area, Click Here
- You can check out one of Robin Wall Kimmerer's more recent papers, Teaching Biology in the Field: Importance, Challenges, and Solutions here
- For an interesting article about the "Wood Wide Web," and how trees and other plants use mycelium to "communicate" with one another, follow This Link
- To check out Suzanne Simard's Mother Tree Project, Click Here

THANK YOU TO OUR SPONSOR

RESTORING A PITCH PINE-OAK UPLAND FOREST AT NORCROSS WILDLIFE SANCTUARY

Written by: Dan Wilder, Director of Wildlife Ecology, Norcross Wildlife Foundation

Norcross Wildlife Foundation is located in south-central Massachusetts and north-central Connecticut and stewards 8000+ acres of land in an effort to protect, enhance and expand habitat for wildlife. 8000 acres seems like a lot of land at first (it is) but from a wildlife habitat point of view it is also a small section of a much larger region. As stewards of the land, we are constantly asking ourselves what can we really do to support our mission in the most effective way? Should our focus be invasive species management, lawn conversions, habitat enhancements... The answer is rarely straightforward and always involves prioritization of goals and resources.

One of the lenses we use to prioritize our work is to examine where the rare species of our region make their homes. It was surprising when we first learned that about half of the terrestrial species on the Massachusetts endangered species list make their homes in fire-influenced habitats. Numerous rare plant species thrive in these landscapes where they support various rare lepidoptera, birds, amphibians and mammals. Habitat loss is the main driver of biodiversity loss and many of these fire-influenced habitats have already been lost due to development. Add a long history of fire suppression in the region and it's no surprise that so many fire-influenced species show up on endangered, rare, and threatened lists.

Image: Lupinus Perennis, Dan Jaffe Wilder

"When we asked ourselves what we could do to have substantial positive effects on wildlife conservation in our region, restoring these ecosystems was an obvious priority."

This thought process came to a head when we discovered a series of cryptic pine barrens on Norcross lands. A cryptic pine barren is a pine barren that is being overtaken by mesophytic (medium moisture) species due to a lack of disturbance (i.e. fire). What we saw on these sites were pitch pines and oaks being overshadowed by species such as red maple and white pine. When fire is allowed to occur in such a place it will kill off (or at least reset) species that are not adapted to fire. If the forest burns, pitch pine, oak, and a variety of understory shrubs and forbs will flourish. However, when fire is suppressed those fire-adapted species are quickly overrun by the faster growing mesophytic species. Though red maple and white pine are valuable plants, they are common and widespread, while the pine barren species are not. In a thriving pine barren, rare or threatened species such as sundial lupine (Lupinus perennis), eastern whip-poor-will (Antrostomus vociferus), and eastern box turtles (Terrapene carolina) can thrive. When we asked ourselves what we could do to have substantial positive effects on wildlife conservation in our region, restoring these ecosystems was an obvious priority.

Image: Dan Jaffe Wilder

So how does one restore a fire-influenced pitch pine-oak upland forest? As exciting as lighting a fire and walking away may sound it is not the recommended method. In an area that has not burned in a long time the fuel load needs to be managed. Too high of a fuel load means that a fire burns too hot leading to the loss of all species. When fires are allowed to burn on a regular basis the fuel loads stay low, and the resulting fires are cooler allowing fire-adapted species to proliferate. As this site had not burned in recent years, we have a lot of work in front of us before we set any fires. Our first step was to reach out to folks who know fire ecology well. MassWildlife's Natural Heritage and Endangered Species folks were happy to get involved and have been weighing in on the process since day one. Our first major step was some substantial forestry work. We reached out to a consulting forester who specializes in habitat forestry, and they helped us to find a logger who would be willing to work with our goals. Our logging goals were to remove just about every tree that wasn't either a pitch pine or an oak. Additionally, we wanted whole-tree harvests and we encouraged some amount of soil disturbance.

Image: Dan Jaffe Wilder

The purpose of the whole tree harvest was to remove as much of the material from the site as possible, this is unlike most of my previous work (where slash and tops are left to decompose) but was an important part of this process. Barrens ecosystems are not rich in nutrients and the species we were trying to encourage were well-adapted to low-nutrient sites while the mesophytic species that we were hoping to remove thrived in high-nutrient sites. The removal of all of those excess nutrients in the form of whole trees was one step in the restoration process and helped to offer a competitive edge to the barrens species.

Another amazing trait of these ecosystems, in particular the plant species that thrive in them, is that their seeds often remain viable in the soil for many (sometimes 100+) years waiting for the next fire. The soils disturbance was accomplished by dragging out the whole trees, thus exposing the seed bank buried under the duff layer. There was a known population of sundial lupine on site in the past but it has not been seen for 15+ years. For lupine, 15 years is nothing and we are hopeful that the seeds will germinate for us as the process continues. The logging work flipped the ecosystem from one with a dense overstory and very little understory to a much more open canopy which will allow the development of a dense and unique understory with species such as hillside blueberry (Vaccinium pallidum), New Jersey tea (Ceanothus americanus), and wood lily (Lilium philadelphicum) to proliferate. We found our first wood lily earlier this year and our first New Jersey tea appeared between the first and last drafts of this article!

Image: Lilium philadelphicum, Dan Jaffe Wilder

Invasive species management has been an important part of the process. On site are many of the common invasive species of the region and our work has set the stage for seed germination. The invasive species management will help to ensure that we see lupine emerging and not bittersweet. Invasive species management has been ongoing for the past year and we expect at least three more years of regular invasive species management before we can shift from the removal stage to the upkeep and management stage.

Biological surveys have begun and will continue indefinitely. Knowing what is emerging on site will give us the information we need to determine whether we should be introducing additional species or if we can simply allow nature to run its course. Additionally, we want to keep track of the rare species on site and will be working with Natural Heritage to ensure those species thrive.

This site is a work in progress and though we've made some amazing strides, we still have a long way to go. There are a series of old semi-managed pastures on site that will be the focus of the next stage of the project. Our goal is to convert these pastures into dry grasslands dominated by little bluestem (Schizachyrium scoparium) but other than some invasive species management that work has not yet begun. We expect to introduce fire to the ecosystem in 2024. Keep an eye out for a Norcross Wildlife Foundation/ Ecological Landscape Alliance Ecotour of the site at some future point (not yet planned).

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CURRENT CLIMATE

First Step to Maintain Biodiversity? Acknowledge Indigenous Knowledge as Science

Written by: ELA Director, Mads McELgunn, MA

Since reading Robin Wall Kimmerer's 2013 book, *Braiding Sweetgrass*, I've been patiently waiting for mainstream publications to acknowledge a simple truth: Indigenous knowledge is science.
In the most recent IPCC report published in April, the international body acknowledged past and on-going patterns of inequity such as colonialism and governance as a cause of climate change, but did not go into great detail beyond this statement. It does not take someone deeply involved with the IPCC to recognize that centuries of expansion has had a significant toll on the environment. Interestingly, though, these scientists have yet to call on Indigenous communities for positive change based on eons of knowledge in conservation.

Currently, 80% of the planet's biodiversity is on Indigenous lands. This means less than 5% of the human population protects most of our biodiversity. We often hear the refrain "America was natural, untouched beauty before we arrived," but we now know this sentiment to be false. It took generations of careful, intentional land stewardship to cultivate the land we know as North America.

As we face an increasingly severe lack of biodiversity in our landscapes, now is the time for cross-cultural collaboration. However, the opportunity to do so is being threatened by the loss of Indigenous languages.

There are more than 7000 known Indigenous languages, with 40% at risk of becoming extinct. Nowhere is language more at risk than as it impacts plant knowledge. In North America alone, 86% of Indigenous plant knowledge comes from endangered languages. We must work to keep these languages alive through greater understanding of the ecology of the land in an effort to continue to support some of the world's oldest and greatest knowledge of biodiversity. ELA is especially equipped in this regard as our mission demands we make change.

On average, around 3% of Indigenous plant knowledge and use is lost annually in adults. Linguist Ana Vilacy Galucia said, “Indigenous languages encompass entire knowledge systems about biodiversity, social organization, and the management of the environment.” Without access to these centuries long lessons, immeasurable loss in environments may occur.

One of the most heavily studied populations of Indigenous communities, the Ticuna people of the Amazon, has had less than 5% of their plant knowledge documented. It is important to note, however, translating endangered languages does not translate the knowledge systems of these groups. It is only through direct and intentional interactions can Indigenous knowledge be shared. Uldarico Matapí Yucana, the Shaman of the Matapí in the Colombian Amazon Rainforest, said “When you destroy a territory, you destroy nature, knowledge, our practices, and our life.” This destruction has been documented across several continents. In the map below from the Decolonial Atlas, it is clear to see that the destruction of native lands has had a direct, negative impact on healthy ecosystems.

“Indigenous languages encompass entire knowledge systems about biodiversity, social organization, and the management of the environment.”

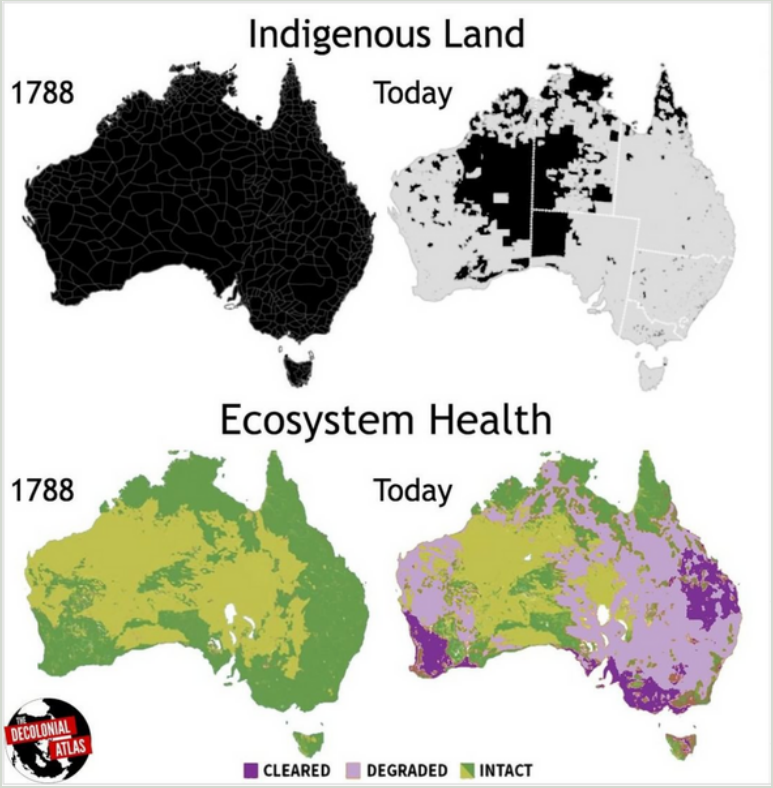

Image: Decolonial Atlas

As ELA continues to grow and expand to other regions, it is important to keep in mind our responsibility as land stewards. The community of ELA is one that is diverse, curious, and collaborative. It is through these interactions and relationships that we can begin to repair the damage on the lands we tend.

The Ecological Landscape Alliance educates, inspires, and empowers people to value biodiverse landscapes and employ ecological practices. It is this mission statement that powers all of ELA's activity, and it is this mission that speaks to the need to diversify our education and hold a place for Indigenous communities to be a part of this organization and community.

MYAWAKI FOREST IN CAMBRIDGE, MASS.

Written by: Leslie Duthie

It is a beautiful 50' circle of green in the dry park. Despite the severe drought, the trees look good and seem to have flourished in the space, albiet with irrigation. There is a tremendous amount of diversity from shrubs like native roses (Rosa sp.), chokeberry (Aronia sp.), sumac (Rhus typhina), and elderberry (Sambucus nigra); to fast growing tree species such as birch (Betula sp.) and poplar (Populus sp.), and even maturing canopy trees such as oak (Quercus alba and Quercus montana). This amazing forest experiment is thriving amid dying red maples and seems to be a tremendous bright spot in this city park. The park is expansive and offers many opportunities for the residents from grilling sites to sports fields to miles of walking trails. The Myawaki Forest experiment is another way of connecting people to the land. Planted by city park employees and residents of Cambridge this forest will offer lessons in nature and planting for many years to come.

All images courtesy of Leslie Duthie

THANK YOU TO OUR SPONSOR

TIPS, TRICKS, AND TECHNIQUES

Written by: ELA Staff Zach McElgunn and Amy Nyman, Horticulture Outreach Manager, New England Botanic Garden at Tower Hill

This month, ELA takes some quick tips, tricks, and techniques from our Eco-Answers with an ELA Eco Pro, Q&A webinar series.

On August 3rd, ELA had the privilege to spend an hour of learning and discussion with Scott McPhee and Steven Vernon of **Harrison McPhee Inc.** (Millis, MA). With a combined roughly 47-years in the tree care industry, Scott and Steve's collective expertise were tapped by ELA members over the course of this free-flowing conversation. Below are some of Scott's and Steve's recommendations regarding heritage-tree preservation, long-term arbor planning, the protection of trees in urban and suburban environments, and other topics which came up throughout our time together.

Thank you, Scott and Steve for your generosity in sharing your perspective with ELA! And also for the work you do every day to create and preserve lived-in environments that nurture a love and appreciation of the outdoors.

Thank you as well to ELA board member, Willow Cheeley, for coordinating Scott and Steve's participation, moderating our discussion and keeping us on track throughout.

Soil Testing - ***ensuring an environment conducive to the long-term health and growth of trees:***

- Reach out to a local/regional university or agricultural college to see if they offer soil testing services (e.g. the UMass Amherst Center for Agriculture, Food, and the Environment **soil and plant nutrient testing laboratory**; **Penn State College of Agricultural Sciences soil testing services**; etc.)

- Consider more intensive (and potentially more useful) services as well, which examine the soil for criteria beyond pH level, nitrogen, etc., such as Cornell's **Comprehensive Assessment of Soil Health** (CASH) Framework
  - NOTE: This more intensive service will likely carry a higher cost, as the "mid-range" service described by Scott and Steve runs about $150 per report, but there are downloadable free pdfs on soil health concepts, soil health assessment, soil health management, and other topics available online.

- Keep a longitudinal approach in mind when testing soil, as a single point in time can only provide so much actionable information → Soil testing should ultimately help generate a "narrative" of the soil's health and development over a period of several years.

Communication & Land Stewardship - ***improving arboriculture knowledge in your community, and awareness of tree services outside of tree removal:***

- Remain attentive safety concerns (i.e. about trees damaging property) while correcting any misinformed underlying beliefs by those who are considering tree removal either on their own property, or on public land in your community

- Suggest that the individual or entity considering tree removal undertake a **formal hazard assessment** by a certified arborist

- Discuss opportunities to engage in soil care, invigorating a tree's root system and providing physiological benefit to the tree

- Consider structural pruning or cabling to improve stability

Removing Invasive Herbaceous Plants (**e.g. english ivy, liriope, Japanese stiltgrass**) - ***are recommendations to throw 6-8 inches of mulch down to smother invasive species doing more harm than good?***

- It's definitely true that too much mulch can smother a root system, but what is "too much" is dependent on the strength, age, and health of the tree, among other factors.
- Potentially add cardboard or newspaper to the mulch to block out light invasive species receive
- Consider using an organic concentrated vinegar or fatty acid to remove foliage from invasive plants, and after foliage has been removed cover the plant with newspaper or cardboard
- NOTE: While 6 inches of mulch may seem like a lot, the potential damage to a tree depends on microorganisms within the mulch and soil, and how quickly the mulch breaks down

Composted Wood Chips - ***how much time, what type of wood, what is the impact?***

- Fresh wood chips might have a carbon-nitrogen balance that isn't appropriate for tree health, so maybe use wood chips that have been slightly aged.
  - The reason for this is that bacteria may take nitrogen from the soil in their efforts to break down the wood chips, thereby depriving the tree in question from accessing that nitrogen
- Some people add a granular organic fertilizer to fresh wood chips in order to accelerate the decomposition process.

Trees in Foot-Trafficked Areas - ***species considerations***

- Hearty trees like sycamores can stand up to compressed soil
- Honey locust can be quite durable as well (which is why they are one of the more common street trees in a downtown area)
- *Gymnocladus dioicus* (Kentucky coffeetree) & *Sephora japonica* (Japanese Pagoda Tree) are legume trees, which are durable as well
- Planting drought-tolerant shrubs around the base of trees could be an effective way to limit foot traffic while also increasing visual interest
- Planting other companion plants might bring beneficial insects to the tree, which could improve the amount and diversity of nutrients to which the tree has access.

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Providing Water During Drought - *large trees, old trees, frail trees*

- Use a lower sprinkler to reduce the speed of evaporation
- In principle, strive for as deep of a watering as possible, because surface roots (on grass for example) might absorb all of the water before it gets down in the tree's root system
- Dig a shallow hole at the tree's 12-o-clock, 3-o-clock, 6-o-clock, and 9-o-clock positions, and let a hose trickle in that spot for 45 minutes at a time.
  - This will reduce evaporation and give the water time to penetrate down into the root system
- Consider using something to act as a **surfactant** (dish washing soap for example) along with your water → add a few drops of dish soap into a gallon of water, shake it up, and use this to water around the roots
  - The surfactant will allow the water to penetrate the soil more quickly and get into the root system
- Don't fertilize trees during a drought using any fertilizer that contains nitrogen, phosphorous, potassium or anything with any sort of **salt index**

Planting Patterns - *Trees in groups? Solitary trees? Canopy trees? Understory trees?*

- Planting trees together provides mutual shade for root systems and mutual protection from wind
- There are also benefits from Mother Trees that nurture smaller trees when trees are planted in groups
- Stratification attracts different insects and animals, which can have the knock-on benefit of keeping invasive species down

Treating Anthracnose

- Consider using a growth regulator for mature trees
  - The chemical that blocks growth hormones – originally designed as a fungicide, used in orchards, nontoxic – has seen a decent success rate with treating anthracnose in mature trees
  - The growth regulator does not inhibit all growth, but rather forces growth down into the root system

Tips and Tricks for Autumn Planting from Amy Nyman:

1. Cooler temperatures and more consistent moisture (usually) make autumn a great time to plant trees and shrubs.
2. Perennials should be planted about a month before expected hard frosts.
3. Watering is still necessary for two years to establish trees and shrubs.
4. Gator bags make watering easier and more consistent.
5. Able to visually evaluate effect of autumn color in the design.
6. Fall-blooming plants are available - and blooming!

Amy's list of plants that have weathered the drought without hiccups

1. Achillea
2. Agastache 'Blue Fortune' ('Black Adder' not so much)
3. *Allium stellatum*
4. *Amsonia hubrichtii*
5. Calamagrostis Karl Forster (not a favorite, I know)
6. *Fragaria virginiana*
7. *Galllardia sp.*
8. *Hibiscus moschuetos*
9. *Perovskia atriplicifolia*
10. *Pycnanthemum muticum*
11. *Rhus copallinum*
12. *Scabiosa sp.*
13. *Scutellaria incana*
14. *Sedum*
15. *Vernonia*

Thank you, Amy for sharing your expertise and taking the time to compile these lists for ELA! If you have some helpful tips, tricks, or techniques you would like to share with our community for the upcoming season, please send them to aviva@ecolandscaping.org

GLEANINGS

Written by: Aviva Clayman

Migratory Monarch Butterfly Now Endangered- IUCN Red List-Press Release - IUCN

A report published late July shows that the migratory monarch butterfly- Danaus plexippus plexippus- has been feeling the effects of drastic changes in climate. According to this release, climate change and an increase in the occurrence of wildfires has drastically affected the world's natural supply of milkweed, the primary feeding source for monarch butterflies. IUCN recommends that those who are capable help out by reducing the use of pesticides and by planting native milkweed. On a community level, community research can assist in this, making a community of practice like ours at ELA all the more essential. Read more here.

You Don't Need a Microscope to See the Biggest Bacteria Ever Found - NYTimes

In a Mangrove Forest in the Caribbean, scientists have discovered the largest bacteria ever found. The bacteria was viewed as a filament shape approximately the size of a human eyelash, with an entire bacteria visible to the naked eye being one cell. The discovery of this bacteria indicates that scientists have underestimated the complexity and potential complexity of bacteria, as this giant single-celled organism (Thiomargarita magnifica) is more complex than any researcher ever thought possible. To learn more about this amazing new discovery, click here.

Agri-environment Measures Boost Wildlife Populations in Long-Term Farm Study - Science Daily

A 1,000-hectare farm in Buckinghamshire ran a decade-long closely monitored experiment on agri-environmental measures that could reduce biodiversity loss. The farm planted seed-bearing plants for birds, wildflowers to support pollinators, and tussocky grass margins to support a wide range of birds, insects, and small animals. The experiment monitored the effects on biodiversity on Hillesden farm, compared to farms without agri-environmental measures. The results were stunning. Without loss to the food yield, bird populations increased by a third, butterfly populations increased by nearly 40%, and some of the crop yields were even increased. To learn more about this study, read here.

Highest Coral Cover in Central, Northern Reef in 36 Years - Science Daily

Coral Reefs are one of the most important parts of an ocean ecosystem. They house hundreds of different species and are essential carbon sinks. The Australian Institute on Marine Science has just announced that after years of panic over mass coral bleaching in the Great Barrier Reef, the northern region is showing the highest cover since the institute began tracking it 36 years ago. Even though the reef has experienced its fourth mass bleaching event in 7 years, it has not matched the intensity of other recent events and is not expected to lead to mass coral death. This is a welcome bout of positive news in the climate change sphere, to learn more about this good news, read here.

Discovery of the Interactions Between Plants and Arbuscular Mycorrhizal Fungi - Phys.org

Researchers have spent some time looking into the mutualistic associations between plants and arbuscular mycorrhizal fungi. These associations are one of the most ancient observations of symbiosis, as well as one of the most broadly occurring. To find out more about how this fungus can help your garden, click here.

A rare, colorful 'rock star' bird is drawing feather fans to Raleigh to catch a glimpse - Phys.org

Biodiversity and Bird lovers unite! A painted bunting was spotted in North Carolina earlier this month, marked by its vibrant red, green, and blue coloring. The bird is often referred to as "the most beautiful bird in North America", and has incited a storm of tweets and travelers going to see the bird for themselves. What is the most beautiful bird you spotted this summer? For more details on this rare bird sighting, click here.

Senate Passes Historic Climate Bill- Here's What Comes Next - Scientific American

On August 7, the United States senate passed a sweeping bill with historic climate provisions. The Inflation Reduction Act holds 367 billion dollars in climate and energy spending. To earn bipartisan support, the bill is filled with provisions for gas and oil companies, and has no firm caps or restrictions on emissions. Find out what happens now in the Scientific American.

Spiders might be capable of dreaming - Washington Post

A new study has found that the Evarcha arcuata species of jumping spider enters REM sleep. This may have indications of the possibility of dreams for our eight-legged friends. Read more here.

Regenerative Tourism Invites Travelers to Get Their Hands Dirty - Smithsonian Magazine

Here's a news byte that will sound familiar to our eco-tour enthusiasts! Vacations planned around conservation activities seem to be growing in popularity, according to Melissa Hart in Smithsonian Magazine. Shortly after the pandemic began, six leisure travel organizations who had stopped planning vacations due to COVID united to form the Future of Tourism Coalition. The goal of this coalition is to mitigate the damages of traditional tourism, and to form a new kind of tourism that gives back to the earth and hosting communities. For more history on regenerative tourism and tips on planning your next trip, click here.

Inclusive Dialogues Advance Conservation Across the US-Canada Border - Large Landscapes

Being that the U.S.-Canada border is the longest international border in the world, there is much to learn from it and many political borders that intersect that divide. The border is the home of many indigenous territories, most of which being the only territories left after being pushed off of larger land swathes by colonizers. For this reason, the Center for Large Landscape Conservation began a series of strategic dialogue events with several hundred attendees. A small task force from the center formed to digest the key themes and recurring ideas from the dialogues. Their report can be found here.

UPCOMING EVENTS

It's time to wrap up another record-breaking summer with ELA! Earlier this month on August 3rd ELA hosted an EcoAnswers with an EcoPro session with Scott McPhee and Steve Vernon. This was a member-exclusive event, and it was fantastic to see the turnout! If you have any questions on tree health and longevity, find a friend who was in attendance and ask what they've learned.

If you missed the EcoAnswers event, don't be discouraged! There's still time to sign up for our next event in August: an EcoTour at the Flying Trillium Gardens and Preserves in New York. This is an in-person event taking place on Aug 20, 2022, and the tour will be led by Carolyn Summers.

Can't make it to New York? Our final event this month is on Aug 24, 2022. This event will be a webinar on Native Plant Gardens: Designing for Beauty. This event will be hosted by Amanda Sloan.

We also have an exciting lineup of events for September! ELA is hosting five events this september, two of which will be in-person. September 7th is our EcoAnswers session: "the Clandestine Orchid". September 9th is our EcoTour, Exploring the Demonstration Meadows at Helia Native Nursery. We will also be hosting a private garden EcoTour in Rye, New York on September 17th. September 24 will be an unofficial ELA-day with two webinars in one day. The morning of the 24th will be our webinar: "The Watershed Approach: Land Management Like the Earth Depends on it". In the afternoon is our EcoAnswers with an EcoPro session: "Living Shorelines". All of these events are currently open for registration through our website. A compressed list of events and times is available below.

Upcoming Events- August and September

- August 20, 2022 (10:00am-12:00pm)- EcoTour at Flying Trillium Gardens and Preserve (Register Here)
- August 24, 2022 (2:00-3:00pm)- Webinar: Native Plant Gardens: Designing for Beauty (Register Here)
- September 7, 2022 (12:00-1:00 pm)- Webinar: The Clandestine Orchid (Register Here)
- September 9, 2022 (10:00am-12:00pm)- EcoTour: Exploring the Demonstration Meadows at Helia Native Nursery (Register Here)
- September 17, 2022 (4:00-6:00 pm)- EcoTour: Private Garden in Rye, New York. (Register Here)
- September 21, 2022 (12:00-1:00pm)- Webinar: The Watershed Approach: Land Management like the Earth Depends on it. (Register Here)
- September 21, 2022 (6:30-7:30 pm)- Eco Answers with an ELA Eco-Pro: Living Shorelines (Register Here)

JOB OPPORTUNITIES

If you would like a job posted in the newsletter, please send job postings to aviva@ecolandscaping.org, so we can share with the ELA community.

Landscape Architectural Designer - Offshoots Productive Landscapes, Boston, MA

Offshoots Productive Landscapes is looking for an individual with 3-5 years experience for this position. Ideal candidates will be self-starters, with creative design sensibility, and strong interest in ecologically connected landscapes and planting design.

Marketing and Office Coordinator - Offshoots Productive Landscapes, Boston, MA

Candidates must be able to manage multiple assignments with competing priorities in a fast-paced environment and have excellent attention to detail; maintain a level of confidentiality and professional manner; support office of 20 staff by assisting with various tasks.

3D Modeling and Landscape Visualization Designer - Offshoots Productive Landscapes, Boston, MA

The team member will be working seamlessly with staff, clients and collaborating architects to explore forms in real time as design decisions are being made. Ideal candidates will have an architecture, landscape architecture or equivalent background and lots of excitement for productive landscape systems!

THANK YOU FOR READING