



NEXT EPOCH  
SEED LIBRARY

# CONVERSATIONS

with Wave Hill staff  
Winter 2017



## ISSUE 2

NESL with Charles Day,  
Horticultural Interpreter



NESL 2019, share & share alike  
<http://nextepochseedlibrary.com>

<http://nextepochseedlibrary.com/wavehill>

## Winter 2017 Seed Viability Testing at Wave Hill

(from seeds collected and stored in 2015, 2016, 2017)

Species, Common Name, Location Collected, germinated? (Y/N)

*Phytolacca Americana*, pokeweed, Bushwick (Y)  
*Phytolacca Americana*, pokeweed, Wave Hill (Y)  
*Ipomoea purpurea*, morning glory, Bushwick (Y)  
*Oenothera biennis*, evening primrose, Snake Hill, NJ (Y)  
*Cheiranthus album*, lambsquarters, Providence, RI (Y)  
*Sympphytum*, (heath?) aster, Snake Hill, NJ (Y)  
*Solanum lycopersicum*, (meadowlands) tomato, Snake Hill, NJ (Y)  
*Lepidium virginicum*, Virginia pepperweed, Crown Heights, Brooklyn, NY (Y)  
*Rumex crispus*, curly dock, Snake Hill, NJ (Y)  
*Rumex crispus*, curly dock, Hunters Point South, Queens, NY (Y)  
*Rumex crispus*, curly dock, Bushwick, Brooklyn, NY (N)  
*Datura stramonium*, jimson weed, Snake Hill, NJ (Y)  
*Solidago sempervirens*, seaside goldenrod, Snake Hill, NJ (Y)  
*Setaria viridis*, foxtail, William Paterson University, Wayne, NJ (Y)  
*Verbascum thapsis*, Common mullein, Snake Hill, NJ (Y)  
*Ageratina altissima*, white snakeroot, Snake Hill, NJ (N)  
*Plantago lanceolata*, buckhorn plantain, Bushwick, Brooklyn, NY (N)  
*Mentha arvensis*, wild mint, Snake Hill, NJ (Y)  
*Taraxacum officinale*, dandelion, Snake Hill, NJ (Y)  
*Rhus typhina*, staghorn sumac, Snake Hill, NJ (N)  
*Celastrus orbiculatus*, Asiatic bittersweet, Snake Hill, NJ (N)  
*Hypericum perforatum*, St John's Wort, Flushing Meadows, Queens, NY (Y)  
*Artemisia vulgaris*, common mugwort, Snake Hill, NJ (N)  
*Alliaria petiolata*, garlic mustard, Flushing Meadows, Queens, NY (N)  
*Daucus carota*, Queen Anne's Lace, Snake Hill, NJ (Y)  
*Allium vineale*, Wild garlic, Ingalls Ave, Troy, NY (N)  
*Saponaria officinalis*, Soapwort, Ingalls Ave, Troy, NY (N)  
*Asclepias incarnata*, Swamp milkweed, Bergen Arches, NJ (N)  
*Rhus glabra*, Smooth sumac, Ingalls Ave, Troy, NY (N)  
*Oenothera biennis*, evening primrose, Ingalls Ave, Troy, NY (Y)  
*Solidago canadensis*, Canada goldenrod, South Troy, NY (N)  
*Asclepias syriaca*, Common milkweed, South Troy, NY, (N)  
*Lepidium campestre*, Field pepperweed, South Troy, NY (Y)



## ISSUE 2

### NESL with Charles Day, Horticultural Interpreter

#### Contents:

What is the Next Epoch Seed Library (NESL)?.....	1
NESL at Wave Hill .....	1
Issue 2 Conversation.....	2
NESL's Winter 2017 Reading List.....	8
Garlic Mustard Pesto (Restoration/Remediation Sauce!) .....	9
Garlic Mustard illustration.....	10
Seed Viability Data .....	11



## THE NEXT EPOCH SEED LIBRARY (NESL)...

is an artist-run seed saving project focused on novel, spontaneous, and adaptable plants (aka weeds).

Rather than focusing exclusively on agricultural species, we gather, store, and share the seeds of plants that thrive in landscapes heavily impacted by human activity, from sidewalk cracks to superfund sites. These weedy species harbor ecological adaptability, nutritional attributes, and healing properties that have been overlooked, forgotten, and even demonized under pressure from monoculture cultivation. Reinvigorating reciprocal networks of plants and people in disturbed landscapes can contribute to a solid foundation for building ecologically just communities. Alongside our seed collection, we spearhead site-specific installations, walks and workshops, open-access curriculum materials, and deep time storage experiments. Based in Brooklyn and Jersey City, USA, we maintain a semi-permanent headquarters in Troy, NY at the Sanctuary for Independent Media's NATURELab. We've been featured at galleries and museums nationally and internationally.

**LET'S  
TALK ! SEEDS, PLANTS, HUMANS,**

**& OTHER  
PEOPLE!**

NESL was in residence at Wave Hill in Winter 2017. We used the time and space provided by the residency to set up our temporary Winter headquarters in the Glyndor Gallery Sunroom. While in residence we did seed viability testing on our collection, and organized a series of gatherings that included a reading group, garlic pesto making, and seed sorting and packaging. We also took advantage of the wealth of knowledge held in the staff at Wave Hill to do some casual, conversational interviews about plants, people, education, and conservation with folks who stopped by our winter headquarters. Thanks so much to those who participated! Portions of the interviews we carried out (edited for clarity) are reproduced in the 3 issues of this zine, along with our winter reading list and a garlic mustard pesto recipe. You can read all three interviews on our website, at [www.nextepochseedlibrary.com/wavehill](http://www.nextepochseedlibrary.com/wavehill).



## GARLIC MUSTARD

*Alliaria petiolata*



## **Garlic Mustard Pesto Recipe\* (*Alliaria petiolata*)**

(or Reciprocal Restoration Sauce, as suggested by Jonathan)

We made this recipe for studio visitors several times during our residency at Wave Hill. The garlic mustard was collected in January from Wave Hill grounds, particularly from the Abrons Woodland Trail.

### **Ingredients:**

- 1 cup loosely packed, freshly collected/de-stemmed young garlic mustard leaves, rinsed/dried\*\*
- 2 tbsp roasted pepitas (pumpkin seeds)
- 2 tbsp fresh grated parmesan (for a vegan version sub a little nutritional yeast)
- 2-3 tbsp extra virgin olive oil
- pinch of sea salt, to taste

### **Instructions:**

- Collect your greens! Young garlic mustard greens come up in late winter and early spring, and can be used through summer. Greens are said to be milder & tastier before the plant flowers.
- Rinse leaves, remove any remaining stems, pat dry.
- Combine all ingredients in a large mortar and pestle, and grind to desired consistency, adding more olive oil as necessary.
- Season with additional sea salt to taste.
- Scoop onto crackers or bread, or toss into pasta, and enjoy!

\*Thanks to artist and Coyote Walk founder Dillon de Give for introducing us to his version of Garlic Mustard Pesto, which we riff on here.

\*\*It's probably safest to forage far from roadways and maintained landscapes, where the other foliage nearby looks healthy, to avoid exposure to herbicides and toxins often present in urban soil. Take care that you're certain about what you're foraging! Garlic mustard is pretty distinctive (smells like garlic!), but do your due diligence and forage with an expert your first time out!

## **Charles Day, Horticultural Interpreter**

(in conversation with Ellie Irons + cameo w/ beekeeper Lindsay Velazco)

Charles Day has had a long career in horticulture. In the UK, over a period of twenty years, he ran commercial fruit orchards, worked at horticultural research centers and a large public garden. Since moving the US in December 2000, he has provided advice and training for owners and managers of gardens, private estates and other organizations, including the Museum of Jewish Heritage, where, since 2004, he has advised and helped with the maintenance of an Andy Goldsworthy installation, the Garden of Stones. For the past 16 years, he has worked in the Public Programs department at Wave Hill. As the Ruth Rea Howell Senior Horticultural Interpreter, his job is to explain the garden to the public. It involves plant labelling, running gardening programs, writing blogs and garden descriptions for the website and providing training for volunteer garden guides. He spoke with Ellie Irons at NESL's Winter Headquarters in February 2017.

E - We started [NESL] a couple years ago, positioning ourselves between Svalbard, which is kind of a doomsday scenario where they bury the seeds in the ground, keep them cold, hope not to have to take them out, and a community seed swap where people share heritage seeds. We're interested in the one thing that's not being included in those two scenarios, which are the plants that have evolved to live with humans in places that we've heavily impacted.

C - I wouldn't say that they've evolved, though, they've adapted but they haven't changed species.

E - Well that's a good question and something we're really interested in. Some of them are pre-adapted because they were growing out of limestone cliffs and others' basic environments require them to grow low so they're adapted to the cracks of a sidewalk. Or seaside goldenrod and how it can handle salt.

C - Yes, it hasn't gone through a process of evolution.

E - Because they still interbreed? That's what we're interested in- that potential. Do you think that will start happening, potentially?

C - I'm not a scientist. But a former colleague of mine attended a lecture some years ago about the Pine Barrens and how there's a theory held by someone that the pitch pine found there has serotinous cones that only open up to release the seed after being exposed to fire. Lots of plants have that. The point is that fire is not commonly experienced in the northeast naturally. When it's hot and humid, or during a thunderstorm it's wet. The

supposition is that maybe fire was caused by humans, and that would have been in the last 10,000 years. Can something have adapted that quickly? Most scientists I've spoken to said "Nope! Out of the question."

E - Interesting. So maybe most of these plants already had that flexibility in their genome. I found a plant that guidebooks say are sensitive to mowing, meaning that if it grows too high, it can't grow in places that are regularly mowed. But I found one of them that was growing in a mat, and flowering and going to seed, in a place where the city weedwhacks all the time.

C - Well I know for sure dandelions. The very same plant will produce a flower on a stalk, but if it is mowed it will learn to produce a shorter stalk.

E - Totally so maybe this is something the plant had the capability to do.

C - They have experience of being browsed by animals so it's not exactly evolution.

E - I'm thinking of asiatic dayflower [*Commelina communis*]. It's weedy but it doesn't grow in ballfields, but this one plant is doing that.

C - Pokeweeds [*Phytolacca Americana*] don't grow in ballfields either.

E - That's terrible for them, but I'm wondering if asiatic dayflower might be able to start doing that based on this one plant that I saw. If it had that possibility. Did it mutate? Was it already there? But I figure people will start doing more genetic testing eventually, since that's getting so cheap.

C - My guess would be that the sort of plants that are found naturally in short prairie or meadow which would have been grazed by animals, those would adapt to being mowed. Maybe the asiatic dayflower maybe it comes from a woodland setting.

E - I think the mountains of Japan originally.

C - OK fine. Nonetheless it mightn't have been nibbled that frequently.

E - So they would've come from a situation where there would've been grazing for a lot longer

C - Not necessarily human managed prairies. One of the things I remember from botany class was we don't think of neat categorizations of species but actually a species, a population and they've got a range, and that's where evolution comes from, because there are some outliers over here. And if any of those outliers happen to be in a situation where there's conditions that suit them best, they're the ones who are going to prosper, so they dump all the other genes that they don't need or they'll go latent.

E - And if a small founder population comes to the United States, then

## NESL Winter Reader

*A Selection of Writing on Weeds, Humans, and Possibilities for Living (Better) Together*

For discussion on January 29, 2017.

- Gary Snyder, *The Practice of the Wild: Essays by Gary Snyder*, 1990. Pages 8-15.
- Eileen Crist , “On the Poverty of Our Nomenclature”, *Environmental Humanities*, vol. 3, 2013.
- Peter del Tredici, “Flora of the Future”, *Places Journal*, April 2014.
- Frieda Knobloch, “The Bad Seed”, *Cabinet Magazine*, Issue 10, Spring 2003.
- Michel de Certeau, *The Practice of Everyday Life*, University of California Press, 1984. Chapter 3, Pages 34-39.

Other texts mentioned in the interviews:

- Robin Wall Kimmerer, *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants* (Milkweed Editions, 2015).



C - I think because of the massive swings from very warm to very cold. Yeah, they're not doing too well. I think we may have lost them.

E - You didn't have the whole colony collapse thing?

C - We've not experienced that. It doesn't seem to be too much of a problem in urban settings.

E - I'm sure you've got a tremendous amount of insects otherwise!

C - Yes, each summer we do a meet the bees program where we start off in the flower garden and look at some of the native pollinators of which there are plenty. We like the bees because we get honey. Hey, want to join our conversation? Lindsay is a fellow beekeeper.

L - Do you want to know what just happened? There was a mouse in the bottom of our hive!

E - Uh oh, that's probably bad news.

L - That's not good.

C - He'd eaten the honey?

L - Sort of. He didn't get all the way up. So we were able to save some. But when I saw that little critter, I was so mad at it. (laughs)

E - He's feasting! Or she!

L - He's probably so mad that we've just kicked him out. This is a great setup.

E - Amazing. Do you know what flowers they tend to visit? Can you watch them and figure out where they go? Do they hang out in the woodland?

L - It depends on the season. I know the Linden trees in the early season. I think the ivy too. In September, you'll see them all around the ivy, especially in front of the visitor's center.

C - I think they like the English ivy [*Hedera helix*].

E - Is that the thing that's green down there other than garlic mustard right now?

C - There might be some ivy down there.

L - I think they're calling it Boston ivy [*Parthenocissus tricuspidata*].

C - Which is not an ivy at all. It's in the grapevine family. It comes from China.

Ellie - (laughs) Of course! That's so clear.

they still might be able to interbreed with the other plants but they might experience isolation... That's cool. We got right to the meat of what I'm interested in right away, so maybe we can back up a second and you can just tell me your name and what you're doing here. (laughs)

C - I'm Charles Day, and my official title is the Ruth Rea Howell Horticultural Interpreter.

E - So that involves communication with people?

C - In a nutshell yes, I say it's like being a gardener except I talk about it rather than do it. One of my principal jobs is labeling plants, so the black labels with the annoying latin - that's me.

E - We appreciate those! Actually, one question before I forget. I don't know if you know what this plant is? Or if it has a label anywhere on Wave Hill?

C - Yeah, that's little blue stem, schizachyrium [*Schizachyrium scoparium*].

E - OK. Cool, so is that a bunch grass?

C - Yeah, it's one of the native grasses. Actually, native to this region. It grows on the hills. I live in Cold Spring, and it grows up on the hills there.

E - OK. Because we first encountered it in the Meadowlands in a place called Snake Hill, growing in this rubble.

C - Yeah, that's what it likes.

E - That's really helpful. Very nice. Anne will be happy about that, because she's been wondering. (laughs) So, I guess in that role, do you think of the whole garden as your specialty? Because you kind of have to know all of it?

C - Yes, in theory, I know everything, and in practice I remember about a tenth of it. When it comes to labeling, we don't want it to be a graveyard of labels. The woodier plants, trees, shrubs, those that are there all year round, we would label them and if they're somewhere visible to the public or particularly interesting. But everything else, we generally label only when it's actually blooming or doing something interesting. Consequently, I'm never quite catching up because in spring, things are just popping up all over the place. And, the gardeners have this annoying habit of planting new things. "What's that? That wasn't there last year" So, I try to go to the propagation house and ask them what's new.

E - I'm curious about that. So, where do the plants come from? Do you propagate them here?

C - A percentage. Quite a large percentage are propagated here from seeds, cuttings, but at the same time we buy a lot of plants in. Usually it's buying

seeds in and then raising them. Have you ever popped in to see the propagation house?

E - No! We didn't. We've looked in the windows of all the greenhouses and gone in the ones that we could go in. So we probably did see it.

C - If you were close to the visitor's center or the herb garden, then turn round 180 degrees and you'll see the #3 house, the prop house, and it's amazing what goes through that. It's a pretty small house, but Susanna, who's in charge of it....

E - You can do a lot in a small space...

C - She keeps pushing things through. Stuff gets germinated, potted, and then put outside in the frame yard....

E - So it can harden off and then get ready to go out. Cool. Yeah, we're sprouting stuff here.

C - I see, yes.

E - So this is our learning curve. It's actually been much more successful than we expected, but we've had some seeds in our collection for a couple years, so we're wondering....

C - If they're still viable...

E - Right, how well we stored them.

C - To come back to the rest of what I do, what makes a weed a weed? It comes back to reliable seed. For many centuries and certainly decades...

E - Do you find that the public is able to take in the totality of what's happening here? There are some people who are fixated on latin names and other people who have a different route into the garden.

C - I think a lot of people think that it's all nature and it just happens, right from the lawn to the trees, it's here.

E - Yeah, it's here, it's natural. It looks much more natural than Brooklyn where I just came from.

C - Right. That's what I've learned over the years. I have to explain that this is a managed landscape. It's not natural in the slightest.

E - And there's this whole history embedded in it from when it was more desirable to plant something that seemed exotic.

C - And we still do. We still plant interesting exotics. We have native areas...

E - Right, we talked to Shane [Wave Hill gardener] about that.

C - So that was kind of an eye opener to me. I realized some people really thought that this was just kind of preserved. No understanding that the grass needs to be cut.

E - And there's a house plunked in the middle of it and a few paths, but otherwise, it's just spring up. (laughs)

C - And the trees just happened, they weren't planted.

E - And if you look carefully at the trees, they're kept trimmed and healthy...

C - So I do labeling and presenting programs, walks, talks. Involved a bit with the plant records.

E - What does Wave Hill do in terms of that? Because it's not a formal botanical garden.

C - Exactly, good point. Excellent. A lot of people think oh, you've got more than two trees and you have some labels, you must be a botanical garden. No we're not. We don't have a publication. We don't have a scientific department. We don't have scientific collections. We are a pleasure garden, but we do like to know what we've got. So, yes, we do have a database, and it's a struggle to keep up to date, but we do have it. And for all their pretense, I'm sure any other large public garden would have the same trouble. Acquisitions are one thing. General accessions. But when things die or get moved, it's keeping track of that. That's the hard part.

E - I would imagine. So the stuff that's kept in that database would be when it was planted, or an age, if you know it. Where it is.

C - Source. An accession number that includes the date it was acquired. Quite a lot of things we've inherited in the 1960s because they were already here. I'm involved checking the nomenclature and how they're labeling. And if there's been a nomenclature change, which of course is quite a common thing. Trying to keep that up to date.

E - Right, because that's always evolving.

C - Right, as soon as you think you've got something nailed down, suddenly it's something else. What else do I do? I look after the bees.

E - Cool! They're down by the compost pile?

C - Yes, actually, they're not doing too well. It's been a bad winter for them.

E - Because of the temperatures?