

Transcript

- Intro music-** GuestList by Podington Bear, [CC by NC 3.0](#). Upbeat instrumental electronic music plays for about 8 seconds.
- Elizabeth -** Welcome to the first episode of Bud Buds, the podcast that takes you into the unfolding realm of invasive plants and their seasonal changes, and what you might be witnessing out your window or in the woods in Vermont.
- Elizabeth -** I'm Elizabeth, a scientist for the Department of Forests, Parks & Recreation since 2014, and I'm joined by my co-host and bud, Lina....
- Lina -**Hi! I'm Lina, I also work for the Department of Forests, Parks, and Recreation, where I've been a natural resource steward since 2018. How are you today Elizabeth? Ready to talk plants?
- Elizabeth -**I'm doing great, and I'm always ready to talk plants.
- Eliz/Lina -** ***Banter about how we're feeling, the weather, etc.***
- Elizabeth-** So today I'd like to share with everyone that we are starting a new project, focused on tracking the seasonal changes of invasive plants in Vermont, which is information we don't currently have. This effort will serve the greater purpose of informing how to care for the land that any of us steward, with science-based data. Our plan is to use this podcast series to introduce you to the project and provide real-time, seasonal updates of what we and our volunteers (and maybe you?) are seeing unfold on the landscape – like when certain plants are going to leaf out or flower or go to seed, and what to look for....
- Lina -**and we may also interview other land stewards, to find out and share other perspectives on invasive plant management. We want this to be a podcast for anyone that is concerned about the impacts of invasive plants, or people looking to learn something new about the natural world. But before we get too far in...
- Lina -** Elizabeth, I think it might be helpful if we talk for a minute about what it means to call a plant Invasive...
- Elizabeth -** That's a great idea Lina, so distinguishing why we might call an exotic plant invasive?
- Lina -** Yes, and so that all of us are on the same page when we're using this term.
- Elizabeth -** Perfect! Let's talk about it...
- Lina-** Personally, I find talking about natives vs invasives can get a little sticky – especially since I did not grow up here in Vermont, or even the East Coast -- so I like to focus on evolution and harm. For me, an invasive plant can be defined as a plant that did not evolve in the eco-community where it's now causing harm. Ecosystems – plants included – evolve in a balanced system that includes predators and parasites and disease and ensures that no one organism has a dramatic advantage over another. Plants that evolve elsewhere don't have the same checks on their growth, which means they have a distinct advantage over species that evolved locally...
- Elizabeth -** ...Like how honeysuckle shrubs tend to leaf out before any of the local shrubs, giving those plants a longer season to grow and bear fruit...
- Lina -** Yes, just like that. And it's worth noting that not all aggressive or annoying plant species are invasive, because some of them evolved within the ecosystems we are trying to protect...

- Elizabeth -** ...Whooooooowee, like the Virginia creeper that's all over my fence...
- Lina -** ...Yep, and not all plants that evolved elsewhere are invasive, because many of them do not take over or harm the ecosystem where they're now found...
- Elizabeth -** ...like how apple trees like those that were once in orchards or fields and we sometimes find in the woods aren't invasive, even though commercial apple species didn't evolve here....
- Lina -** ...just like that. And since part of the definition of "invasive" is relative -- it evolved in a different ecosystem than the one where it now thrives -- species from anywhere can be invasive anywhere else. For example, goldenrod, a plant that evolved in ecosystems in Vermont, is invasive in Europe. Ultimately, as much harm as invasive species can cause, it's also helpful to recall that these are all just plants, growing and being plants, and they got to where they are because they were transported often by humans – they are not inherently evil or bad, but are a lasting reminder of humankind's ability to make mistakes...
- Elizabeth -** ...And we are all just people, doing our best. We're all learning and growing and working to protect the things we value today, like the biodiversity that evolved in Vermont...
- Lina -** ...100%
- Elizabeth -** Speaking of definitions and getting on the same page, let's talk about a word that keeps coming up when we're discussing seasonal changes of plants: Phenology
- Lina -** Great! I've always thought of phenology as "when plants do what they do," or basically paying attention to what stage of life plants are in. Are they leafing out? Flowering? Fruiting? Noticing and tracking that is phenology, and it's important because it indicates trends within ecosystems – everything from demonstrating climate change to influencing when invasive plant treatment should occur.
- Elizabeth -** It's nature's calendar – when we notice birds returning to our yards, or flying south in the fall, or the leaf buds swelling on the shrubs in our yard, or cherry and apple blossoms opening, that is all phenology. We can use phenology to better understand our animal and plant neighbors, to help us know when to plant and tend our gardens, and in the case of our project, when to time management activities for invasive plants in Vermont. We care about invasive plant phenology, because best practices include timing efforts based on the phenology of the species of concern. Maybe its roadside mowing, and the town wants to reduce the spread of invasive plants, they will need to account for invasive plant phenology.
- Lina -** Like mowing before a plant like wild parsnip or wild chervil sets seed
- Elizabeth -** Yep, and it may be that you're part of an organization with public trails or parks and you have public safety concerns, like alerting hikers to when toxic plants like wild parsnip are flowering (and at peak toxicity)
- Lina -** Or maybe, like us Bud Buds, you just really like plants. Whatever your reason for being here,
- Lina -** Thanks again for listening to the Bud Buds podcast. Check out VTinvasives.org for more information and consider signing up to be a volunteer community scientist for our Phenology Project. Our volunteers help us collect these data to answer questions like
1. When are invasive plant species greening up or flowering?

2. Are there differences in the seasonal changes of these plants to the south or the north of the state? Or differences when a plant is growing in VT's valleys or mountains?
3. Can we document these plant species responding quicker than local species to changes in seasonal temperature swings?

Elizabeth - By becoming an observer, you are adding to the dataset for the phenology of invasive plants across Vermont and helping to encourage science-based stewardship efforts. Your involvement will lead to lasting solutions, making a true difference for the forests of Vermont.

Elizabeth - We'd like to acknowledge the financial and technical support provided by the USDA Forest Service, Northeastern Area State and Private Forestry that enables us to run projects and provide outreach such as this, and to our major project partner, the National Phenology Network, bringing together community members, scientists, managers, and educators, to advance the science of phenology.

Eliz/Lina - And stay tuned for more episodes from the Bud Buds podcast, and continue to "Learn. Get Involved. And Make a Difference."

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