PARTNERSHIP FOR REGIONAL INVASIVE SPECIES MANAGEMENT
FINGER LAKES

FINGER LAKES PRISM TRAIL SURVEY TRAINING

August 2025

www.fingerlakesinvasives.org

ABOUT US

- **Laurel Williams:**
  - Invasive Species Education and Outreach Program Manager
- **Lydia Martin:**
  - Terrestrial Invasive Species Program Manager

- **Finger Lakes PRISM (Partnership for Regional Invasive Species Management)**
  - One of eight regional PRISMs in NY
- **Mission:**
  - To reduce the introduction, spread, and impact of invasive species within the Finger Lakes PRISM region through coordinated education, detection, prevention, and control measures.

What are Invasive Species?

An invasive species is one that is **non-native** to the ecosystem under consideration and whose introduction causes, or is likely to cause, **economic** or **environmental** harm or harm to human health.

- High reproductive rate
- Aggressive
- No natural predators
- Take advantage of human disturbance

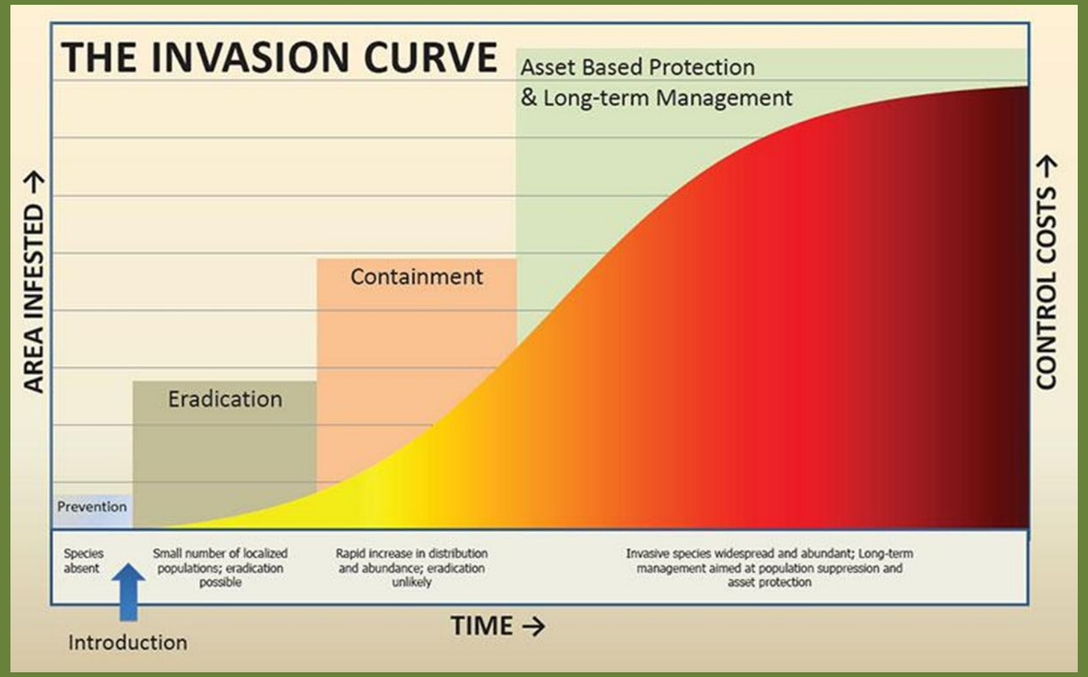
Ecological and Economic Costs

Invasive species cost the United States over $120 billion annually in damages and control efforts.

The Invasion Curve

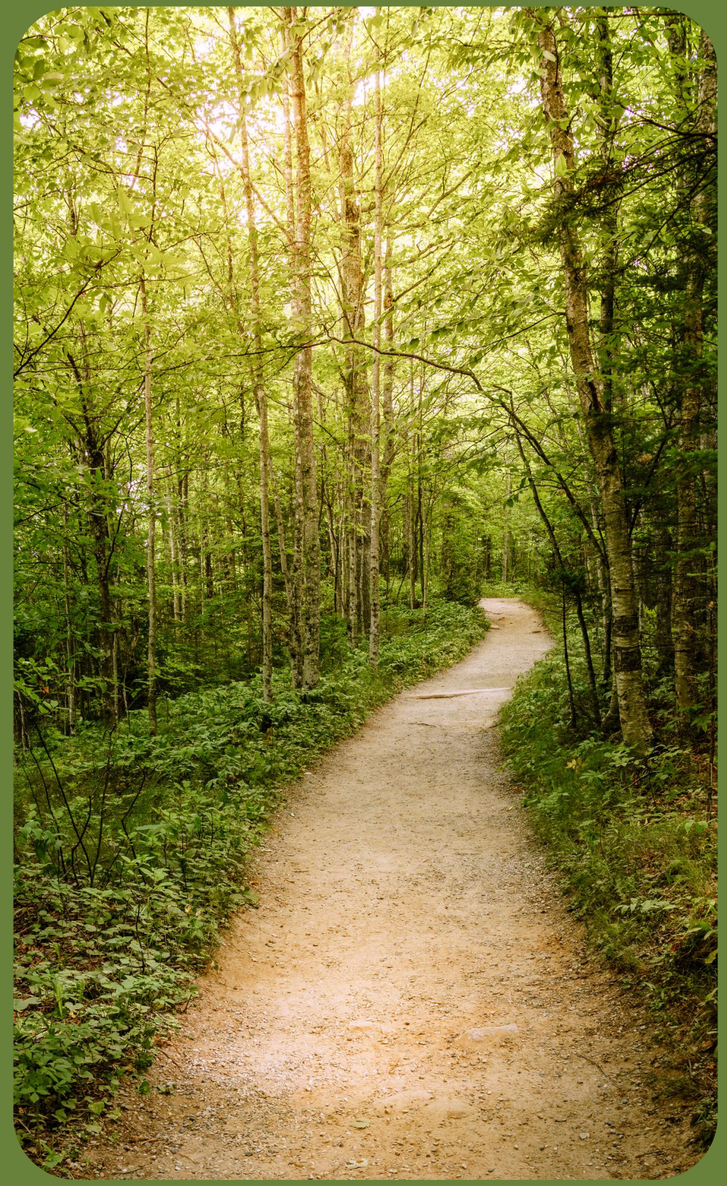
- Prevention
- Eradication (Early detection & Rapid Response)
- Containment
- Long-term Management

Early detection is when management is cheapest and most effective.



Why Survey Trails?

- Trails are areas that are frequently disturbed (human foot traffic, trail clearing)
- Edges of forests have different environmental conditions often suitable to common invasive species (warmer temp, lower moisture, etc.)
- Early detection is more likely; catching invasives early along a trail edge is easier to manage than when it spreads into interior forest
- Trail surveys generate spatial data on where invasives are spreading



How does the Trail Survey WORK?

- **Goal:** Identify, survey for, and report invasive species in the Finger Lakes region
- **Who can participate?**
  - Anyone with a smartphone or tablet
- **Where does it take place?**
  - A trail near you! Your choice.
- **How will we collect data?**
  - Volunteers are asked to survey for 12 species five times from the end of August through the end of October
  - Trail Tracker Certificate: Three surveys completed
  - Trail Master Certificate: Five surveys completed

JUST THREE STEPS!

Survey

- Find a trail near you
- Head down the trail and begin searching for species on the species list (discussed in a few more slides)
- There is NO NEED TO GO OFF TRAIL
- Take a point at the beginning and end of the trail regardless if you see any species. This helps us understand how much of your chosen trail you surveyed; we record non-detections so if you didn't see any of the invasives that is valuable data too!
- Take a point for each species you come across. If the species is very widespread along the trail (monoculture) take a point every 5 minutes from the beginning to end of the species distribution to document the species spread.

Species Distribution

We will be asking you to discern how many species are present in an area. Do your best to estimate based on these definitions and what you see!

- Trace (single plant/clumps)
  - A single plant or a very small clump of plants — only one individual or very few in the area.
- Sparse (scattered plants/clumps)
  - Scattered plants or clumps with lots of open space between them; plants are present but spread far apart.
- Dense
  - Many plants or clumps close together; minimal open space and plants dominate the area, but not necessarily forming a solid mat.
- Monoculture
  - A solid mass of one species covering the area completely, often forming one continuous patch with little to no other species present.
- Linearly Scattered (e.g. along trail or road)
  - Plants are scattered in a line shape, often following a feature such as a trail, roadside, stream bank, or fence line.

Let’s Learn Some Invasive Species!

Spotted Lanternfly
Lycorma delicatula






Early Detection Rapid Response!

- First introduced to PA in 2014 and made it to NY by 2020
- Host plants include tree of heaven, grapevine, hops, maple, walnut, fruit trees, etc.
- Feeding behavior weakens host plants by creating wounds and draining them of resources
- Major threat to agriculture, especially the grape industry

Identification:

- Nymph: Black with white spots, turning red before the adult stage
- Adult: forewings are gray with black spots, upper hindwings are dark with a white stripe, lower hindwings are red with black spots
- Egg masses are smooth with a brown waxy appearance

Tree-of-Heaven

Ailanthus altissma

Staghorn sumac

Black Walnut

Tree-of-Heaven

- **Preferred host for spotted lanternfly**
- Found in disturbed sites in urban and forested areas
- Reproduce prolifically by seed and root suckers
- Quickly outcompetes native plants and exudes allelopathic chemicals from roots to prohibit growth of other plants

Identification:

- Smooth, cantaloupe-like bark
- Compound leaves with opposite leaflets with characteristic small knob at the base
- Distinct, “rancid peanut butter” smell when leaves are crushed

Mile-a-Minute

Persicaria perfoliata

Early Detection Rapid Response!

- Only 2 known populations in the Finger Lakes Region
- Found in areas with high moisture and full sunlight such as forest edges and roadsides
- Grow up to 6 inches a day
- Crowd out and smother native vegetation

Identification:

- Triangular shaped bright green leaves
- Hooked barbs along stem
- Inconspicuous pale green flowers
- Fruit clusters turn from pale green to bright blue
- Round leaflike structures along stem called ocrea

Japanese Angelica Tree

Aralia elata

Early Detection Rapid Response!

- Found in full to partial sun, wooded edge habitats
- Reproduce quickly through seed and root suckers
- Outcompetes native plant species, reducing habitat and food sources for dependent species

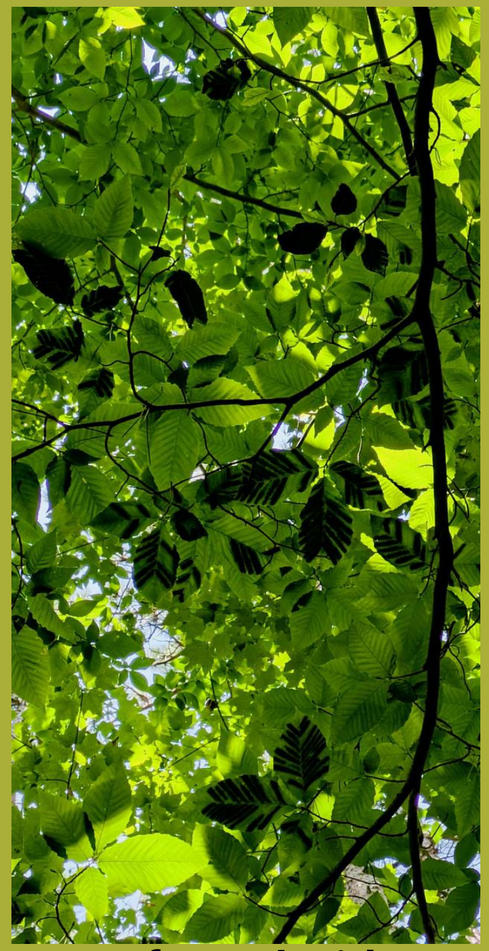
Identification:

- Decidious tree reaching heights between 20-40 ft
- Prickles along bark and leaves
- Alternately-growing compound leaves that are heavily serrated
- White cream colored 5 petaled flowers

Beech Leaf Disease Nematode

Litylenchus crenatae mccannii

Healthy



Infected with BLD

Harms both American and ornamental beech trees, which are already stressed from beech bark disease

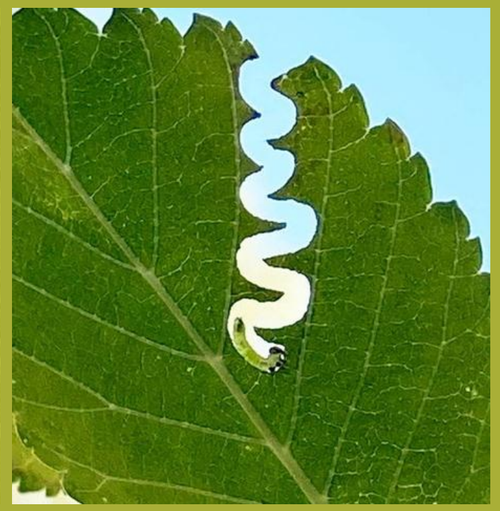
Caused by a ***microscopic nematode*** that induces malformations within leaves when infested

<u>Symptoms</u>: Dark striping and curling of leaves

Much is still unknown about the cause and spread

Elm Zigzag Sawfly
Aproceros leucopoda



- First detected in Quebec, Canada in 2020
- Feed on elm leaves in a characteristic zigzag pattern, causing defoliation on infected trees
- Will consume the entire leaf and leave the veins untouched
- Adults can fly up to 90 km in one day
- Only females are found in US and produce parthenogenetically

Identification:

- Zigzag leaf pattern
- Larvae: pale green with T-shaped markings on their legs and a black stripe on their head
- Adult: black with yellow legs

Golden Oyster Mushroom

Pleurotus citrinopileatus

- *Very limited knowledge about this species*
- Popular mushroom to cultivate through purchased grow kits
- Theorized to escape from cultivation into local habitats
- Outcompetes native fungi

<u>Identification:</u>

- Bright yellow to golden brown cap with white gills and a depressed center
- Stems are noticeably curved or bent

Look-alike: American Jack-o'-lantern mushroom

Japanese Knotweed

Reynoutria japonica

- Found along edges of waterways and roads
- Dense thickets exclude native vegetation, threating infrastructure due to its ability to grow through concrete, and increasing erosion
- Reproduce and spread through seeds, rhizomes, and stem fragments

<u>Identification:</u>

- Alternate leaves are broad (3-6” wide) with pointed tips & flat or heart-shaped bases
- Hollow bamboo like stem with reddish splotches
- Long white flowers

Japanese Stiltgrass
Microstegium vimineum

- Spread through seeds, single plant can produce 100-1,000 seeds and can remain viable for 10 years
- Found in moist soils of forest floors, floodplains, fields, and disturbed areas like roadsides
- Outcompetes and replaces native vegetation
- Expresses biochemical compounds that inhibit the growth of native plants & soil fungi

<u>Identification:</u>

- Grass that forms dense carpets
- Smooth alternate leaves with distinctive silvery stripe down the center

Slender false brome

Brachypodium sylvaticum

- Can be found in a wide range of habitats such as marshes, roadsides, open fields etc.
- Crowds out native plants, monopolizes soil nurtients, and increasing risk of fire due to high leaf litter
- Spread through seeds attached to feet and fur of animals, on shoes, and vehicles

Identification:

- 1 to 3 ft tall grass that grows upright with hairy nodes
- Branchless, hollow flowering stalks reaching 2–3 feet in length

Swallow-*wort*

Vincetoxicum spp.

- Found in wide range of habitats including roadsides, forest edges, wetlands etc
- Seeds distributed by wind dispersal
- Will outcompete native plant species, specifically milkweed
- Due to it’s toxicity will kill butterfly larvae

<u>Identification</u>:

- Herbaceous vine that grows upright or twines up to 6.5 feet
- Slender green stems with milky sap
- Leaves opposite or whorled, elliptic to ovate with pointed tips
- Small star-like flowers (maroon to purple, 5-petaled)

Giant Hogweed

Heracleum mantegazzianum

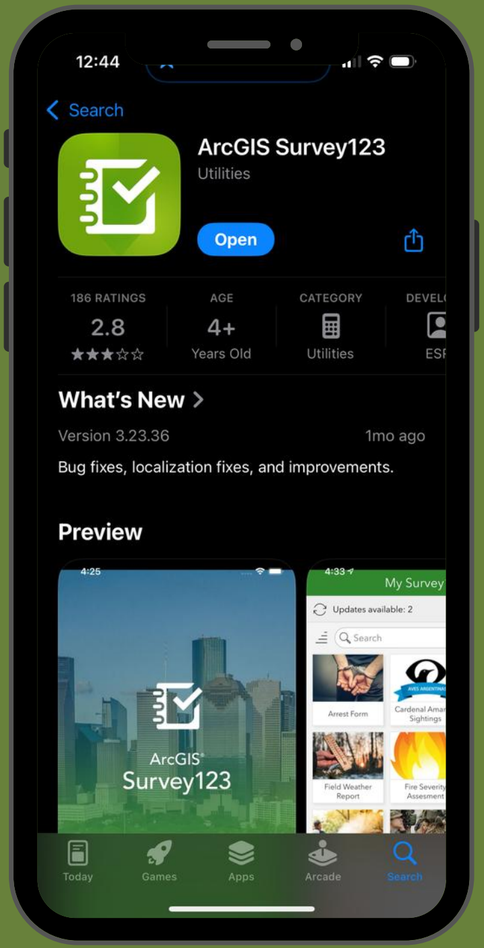
DO NOT TOUCH CAN CAUSE BURNS

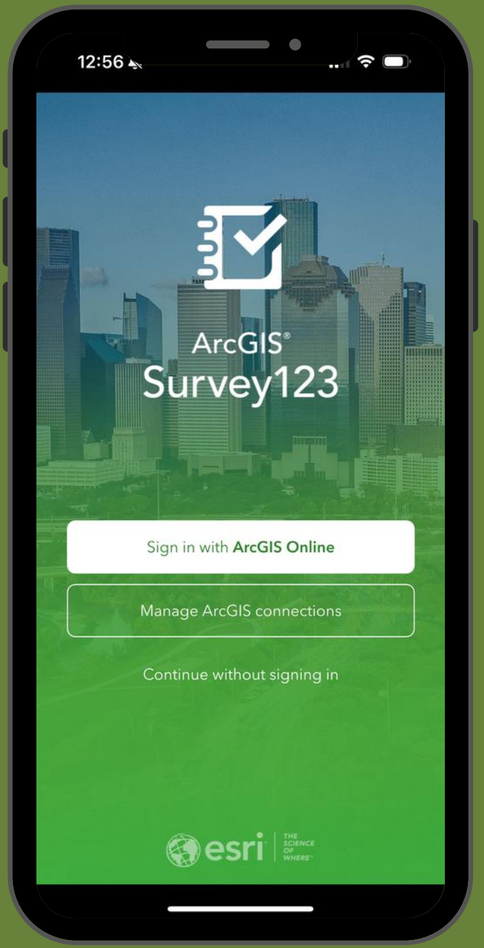
- Found in wide range of habitats including roadsides, edge habitats, openings etc.
- Seeds dispersed through water and human activity
- Emerges early in growing season and high seed production allows it to outcompete native plants

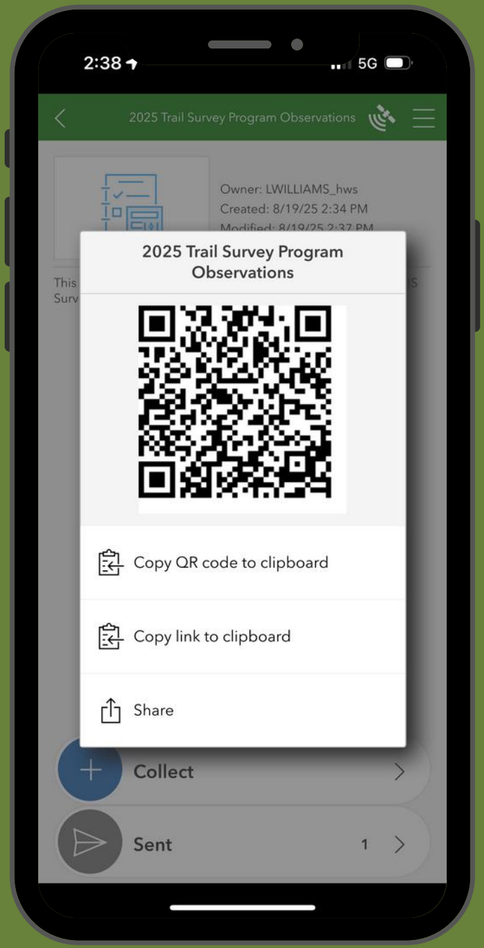
Identification:

- Large plant with a hairy hollow stem and red splotches
- Large alternate toothed leaves
- Small white flowers in a flat-topped compound umble

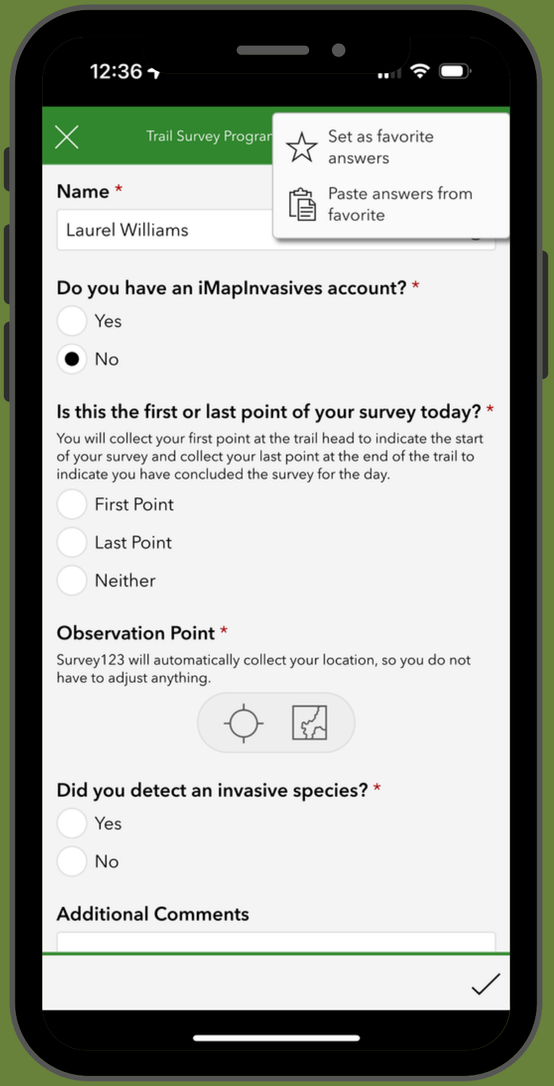
Accessing Survey 123 and TSP on Your Device

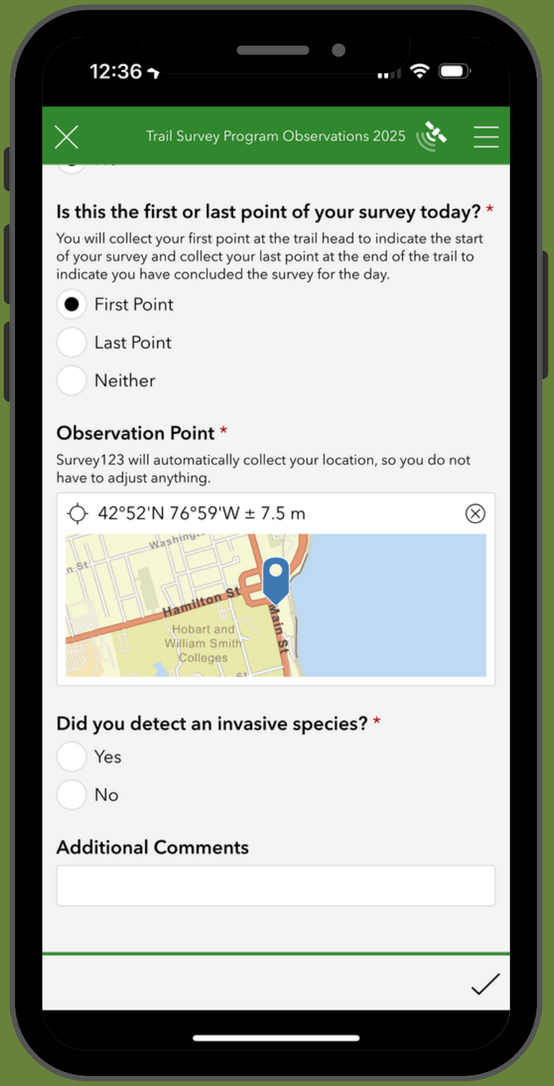


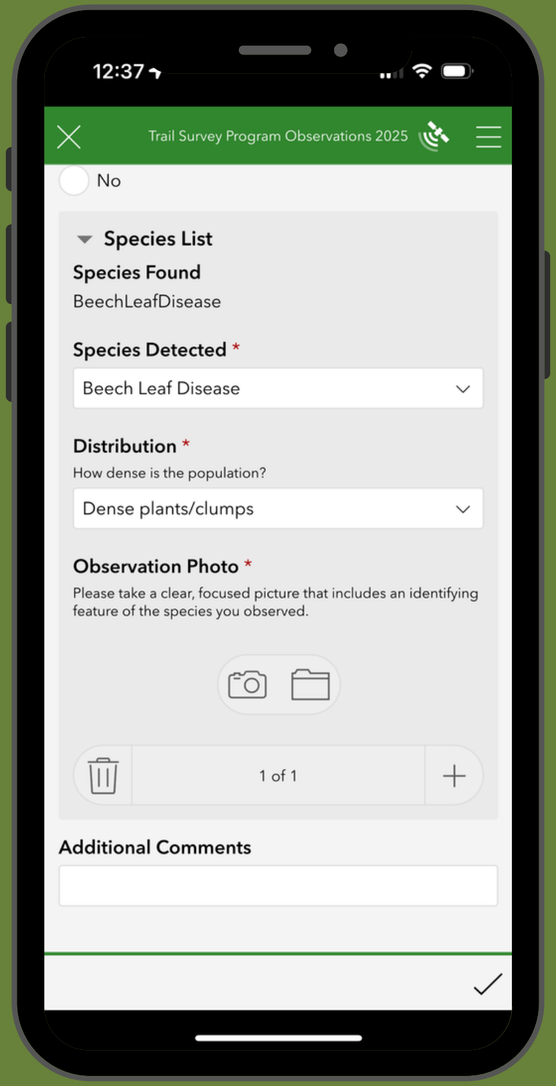




Filling Out the Trail Survey







What If I See an Invasive Species When I'm Not Doing the Survey?

- **Record your findings on iMapInvasives!**
- **iMapInvasives:** an online, GIS-based data management system used to assist community scientists and natural resource professionals working to protect natural resources from the threat of invasive species
- **To Register and Get More Information**
  - Go to imapinvasives.org
  - Scroll and click Intro to iMap Story Map to get an overview
  - To sign up or login, click the Login button at the top of the screen.

I Need Help With ID!

- We have put together digital and physical packets for you all to reference while you are out in the field identifying invasive species.
- If you have questions on ID or general invasive species/trail survey questions, you can email either of us (Laurel/Lydia)
- There are also online resources!
- **SEEK app**: helps user identify plants and animals using your smartphone camera
    - Free, doesn’t require an account, and helps with quick ID

THANK YOU

Questions?

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