

Data Collection Protocols -- NY-NJ Trail Conference Invasives Strike Force

CHECKLIST BEFORE YOU LEAVE: Ensure that you have all the necessary equipment.

- Copies of paper data sheets
- Clipboard, or surface to write on
- Pencils
- GPS unit with extra batteries or smartphone fully charged
- Paper trail map
- (optional) Camera, binoculars, knife or clippers
- Plant id guide(s)
- Data collection protocols (this doc)
- Your usual hiking gear such as water, snack & sunscreen/bug repellent

At the top of your datasheet, record the **Date**, **Trail Segment Name**, and your full **Name(s)**.

- I. TURN ON YOUR GPS and ensure it is communicating with satellites. Ensure that you are ready to start looking for invasives.
- II. FIND THE RIGHT TRAIL SEGMENT. Travel to one end of your assigned trail segment.
- III. SCAN FOR INVASIVES Begin slowly walking your section scanning for invasive trees, shrubs, vines, and herbs. Refer to the data sheet to remind yourself of what species you are looking for. Look close to the trail (within 15 ft on either side) and further out (15-50 ft) as visibility allows. There is no need to walk off the trail to look unless you wish to satisfy yourself of correct id by getting a closer look (try using your binoculars first). It's ok to miss small individuals and singles that are further away from the trail -- we don't expect you to see everything.
- IV. RECORD OBSERVATIONS. Observations can be the fact that you have NOT seen anything OR occurrences of target species.
 - ❖ For your first point, after you have walked approximately 50 feet, stop and take a GPS reading. Record the **GPS Point #** as the Waypoint # (from the Garmin GPS unit) or the Placemark Number (from the Avenza app).
 - ❖ This point is the center of your first data point. You will imagine a circle 50 feet around this center point. You'll record all the species you see here – one per line on the data sheet.
 - ❖ If you are recording waypoint numbers, write the number as it is shown on the GPS unit in the **GPS Point #** field (e.g., if it shows 002, write 002 not 2).
 - ❖ If you are using Avenza, write down the Placemark number. (e.g. if it shows Placemark 2, write 2 in the GPS Point # field on your sheet).
 - ❖ If you see **none** of our target species, write **0** in the **Species Code** column.
 - ❖ If you see one of our target species,
 1. Write the appropriate **Species Code** in the Species Code column. The codes are listed on the right-hand side of the data sheet.

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Anytime you are uncertain of your ID, make notes in the Notes column or datasheet margin. Take photos if appropriate using iNaturalist. Make sure to include leaf shape, branching pattern, flowers or fruit and an overall view of the plant.

2. Record the **Distance** the species is found from the trail or path you are walking. (This is *not* the distance you have traveled.)

Looking around you approximately 50 ft in each direction, does this species occur within 15 ft of the trail, is it visible 15 – 50ft off the path?

T = trailside only (0 – 15 ft from the path)

D = distant from trail only (15-50 ft from the path)

TD = both trailside and distant

3. Record the **Abundance** of this species looking approximately 50 ft around you.

Abundance is one single estimate for the entire population of this species that you can see within the 50 ft radius circle around you regardless of if they are trailside or distant.

F = Few – 1 to 3 individuals or total patch size 1' x 1' for smaller herbs; **Can also code in terms of coverage of entire survey area: <5% coverage**

S = Some – 4 -11 individuals or a few scattered patches. **Can also code in terms of coverage of entire survey area: 5-25% coverage**

M = Many – 11 – 100 individuals. For smaller herbs, thin bands all along trail but not elsewhere, or big patch but doesn't cover more than ½ of your 50 ft circle.

Can also code in terms of coverage of entire survey area: 25-50% coverage

X = Extensive – more than 100 individuals. Small herbs/vines – **covers more than ½ of your circle.** (or It's everywhere!) [We use X instead of E so it's not confused with the F's]

Use common sense with this category. If it "seems" like a *few* or it "seems" like *extensive*, go with that. If you are one category off, it's no big deal (e.g. it's ok if you put *few* when it should be *some*).

4. Record the **Habitat Code** for the kind of Habitat this species is primarily occurring in at this location. Sometimes more than one category will fit, use the one that *most* of the individuals occur in within your 50 ft radius circle.

1 = Forest – mostly trees. Looking up, about ½ or more of the sky is obscured.

2 = Scrub – this is an area that is mostly shrubs (woody plants) with possibly a few scattered trees.

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3 = Meadow – a field or meadow with mostly grasses and flowers, with possibly a few scattered shrubs or trees.

4 = Water – in the water or very close to the water's edge (within 1-2ft)

5 = Edge – this is the boundary between two of the above habitats.

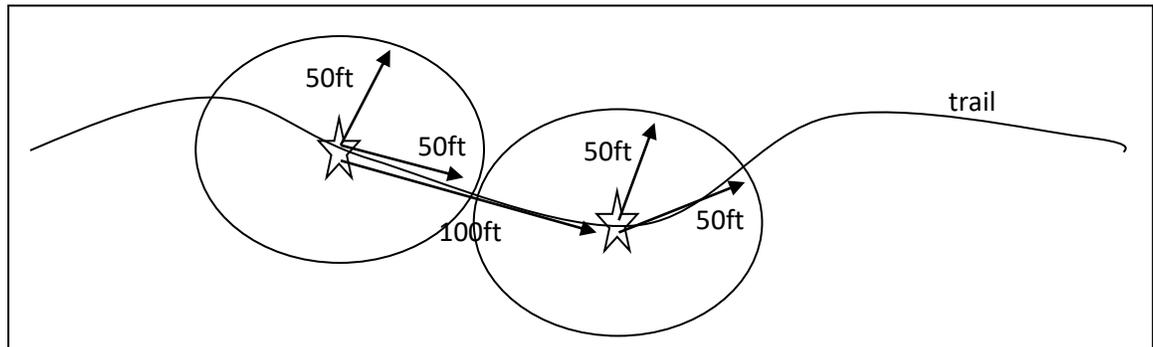
6 = Planted – you should rarely have to use this. Only put this selection if it is very clear that they were planted (like they're all in a row along a path or geometric or equally-spaced arrangements)



You must choose only one habitat. Do not write more than one.

If you are on a trail that has forest on one side and meadow or street on the other, record Forest (1) if most of the individuals are in the forest and distant from the trail, record Edge (5) if they are near the trail or road.

- Record additional observations for each additional target species you see at this same location. Use the same waypoint (GPS Point #, or coordinates) for each species at the same location.
- Resume walking your trail section. Walk at least 50 ft (to the edge of your imaginary circle) and begin looking for target species again. After you have gone another 50 ft (100 ft total from your previous GPS point)], stop and record another Observation with a new GPS point, imagine a new 50 ft circle and record the species as above.



- ❖ These 50 ft and 100 ft measurements do not need to be exact, just approximated. If you are in a highly invaded area where you are recording multiple species with Many or Extensive abundances every time you stop or you are consistently recording **0** observations with none of the target species, and you are getting this for more than 2 such points in a row, lengthen the distance between observations to 200 ft (you'll still be looking in a 50ft circle but stopping less often). Until your observations become different (less invaded or more invaded, respectively), then go back to 100 ft apart.

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Frequently Asked Questions

- What if I don't finish in one day?

That's ok. Finish up on another day. Write both Dates in the Date field at the top of the data sheet.

- Remember to record a species only once for a single point. Your abundance estimate should include both sides of the trail.
- You take a point at the middle of each observation circle – not at the edges.
- Feel free to update or correct your observations upon your return home, or if as you start to move off from your recorded GPS point, you notice additional individuals