

Building plant phenology trails: Lessons learned from the field

Kerissa K. Fuccillo, Portland State University

1) **Before you launch**, Make sure that you have:

- The time to build a trail, train your participants multiple times a season, stay in constant email contact and host/organize gatherings intermittently.
- A well-defined budget for materials (can be very cost effective to build a phenology trail - no need for major grant money- i.e., large sign < \$200, Smaller herbarium signs ~ \$10-\$20 per sign, Small tags and flagging: \$10-\$20 for 60+). Some of these items will need to be replenished every season.
- Mark out and tag your species/individuals the season before you launch (difficult to ID in winter).

2) **Choosing species to monitor**. If possible, begin by choosing species that:

- Have historical datasets for temporal comparisons.
- Are known to be phenologically sensitive
- Are on The National Phenology Network's (NPN) list of priority species or general list of species.

*Choose less species overall, but tag more individual plants to capture individual variation. Because each plant has different challenges in accurate phenophase identification, it's best to limit your species so that you can help your participants know what each phenophase looks like for each species. Taking photos of each phenophase for each species and posting to your website (which NPN can host) will really help.

3) **Placing tags and signs: Ideally, you would have the following components:**

- A large, attractive permanent sign at the beginning of your trail explaining the project and who to contact for more information.
- Smaller arboretum style signs with the name of your species for every tagged individual to help participants locate the plants along the trail. Make sure that these signs can be firmly (semi-permanently) established in the ground, especially in situations where they are likely to be vandalized or removed. Be prepared to buy more signs when they do get removed (or run over by a bike, or a tree falls on them etc.).
- Small tags or labels directly on the plant depicting its code and individual ID. Make sure you affix the tag to a place that is obvious to participants and will not get trimmed back by trail maintenance staff.
- Flags to make the plants more visible – in the heavy growth stage other plants will obscure your plants. If you are flagging in the early Spring – be really aware of how much growth will take place around your tagged plants. Flag to make it obvious, but not be too obnoxious to other trail users.

4) **Training:**

- Host a training with an introductory presentation to your project, to NPN, to plants you will be monitoring etc. (powerpoint, visual tools).
- Head to the site and share a meal or snacks together.
- Actually collect the data at the site. Practice more than you think is necessary.
- Follow up through email within a few days and check in regularly
- Host another training in a few weeks and again in another 6 weeks or so
- Have a potluck or gathering around a favorite plant phenophase or something of that nature to retain excitement levels about the subject and continue to build community.

5) **Leadership:** It is difficult to run a project of this nature without someone who can visit the site consistently, collect the same data that participants are gathering and host/organize events. There will be specific questions about individual plants and phenophases and a leader must be able to talk from experience. Ideally, identify and “groom” participants that are consistent in their monitoring for leadership. If you are an academic, it may be difficult to stay connected to a long-term project of this nature. An empowered participant who feels ownership of the project can be a champion for the project and monitor the day-to-day stuff that may be difficult to keep up with.

Most importantly... **ENJOY YOUR PROJECT!!!**