

## The Redbud Phenology Project: An Update<sup>1</sup>

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Observers across the country are beginning to see flowers (Figure 1) on eastern redbuds *Cercis canadensis* Linnaeus (Fabaceae).



Figure 1. Flowers of the eastern redbud, *Cercis canadensis*. Credit: Fredlyfish4 via Wikimedia Commons.

Your data, submitted as part of the The Redbud Phenology Project (<https://www.usanpn.org/nn/redbud>), will help us better understand the flowering and fruiting timing of these iconic spring trees. You can sign up to receive Redbud Phenology Project messages here, [https://lp.constantcontactpages.com/su/hruAXKC/redbuds?source\\_id=8f647917-9c74-4e4a-b3a2-1428c7dd2d41&source\\_type=em&c=](https://lp.constantcontactpages.com/su/hruAXKC/redbuds?source_id=8f647917-9c74-4e4a-b3a2-1428c7dd2d41&source_type=em&c=).

Thus far in 2022, observers are tracking eastern redbuds at 102 sites across the United States. The map below (Figure 2) shows the phenological state of redbuds across our the United States. In most sites, the trees are an an early stage of flowering. In author's JASB neighborhood, in York, Pennsylvania, all the trees are are the flower bud stage, not yet (or barely) showing their usually pink petals.

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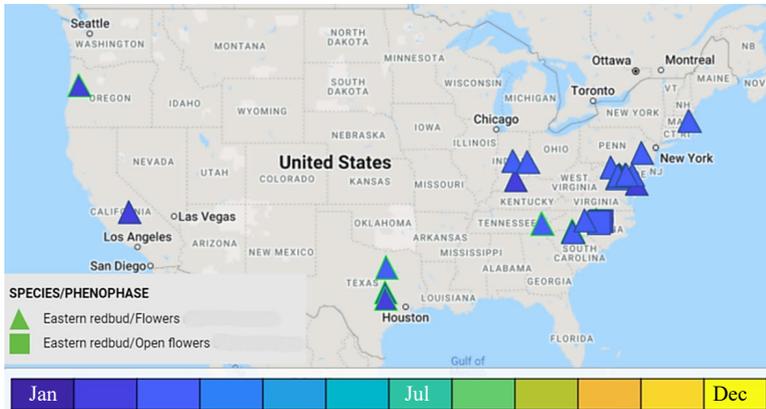


Figure 2. Observers at locations that have reported "yes" for either flower buds or flower (triangles), or open flowers (squares). Green outlines indicate locations that have reported "yes" for both phenophases. Image: USA National Phenology Network, [www.usanpn.org](http://www.usanpn.org)

The phenology calendar (Figure 3) gives a closer look at the observations of flowers or flower buds, open flowers, and breaking leaf buds. Note the expected phenophase progression for the species: flowers (brown, top panel), to open flowers (magenta, middle panel), to initial presence of leaf growth (green, bottom panel).

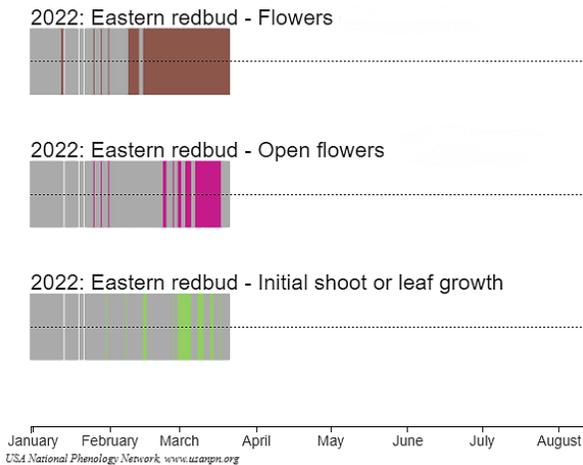
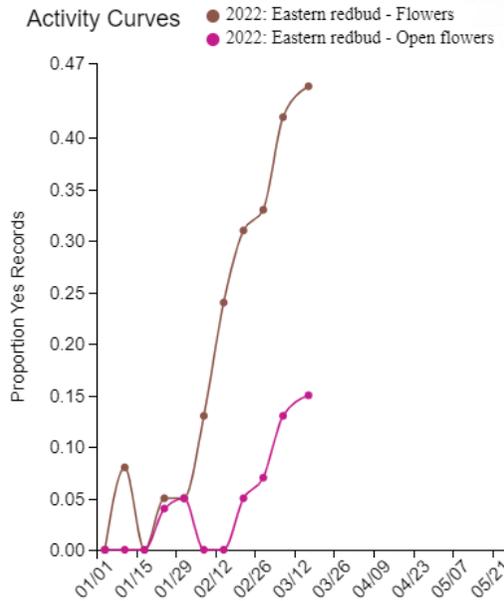


Figure 3. Phenology calendar for eastern redbud, *Cercis canadensis*, across the United States in 2022. Each colored bar indicates an observer that reported a “yes” on that date. The gray bars indicate that an observer reported a “no” observation. The “no” records are important to help determine when the first flowering activity actually began on your trees, because we have evidence that you looked but did not see that phenophase occurring.

While the phenology calendars are a great way to see the presence and absence of different phenophases through the year, they do not tell us much about how many people said “yes” on any one date or their proportion out of the total of observers. The activity curve (Figure 4) shows the proportion of "yes" reports in each week of the year, thus far.



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Figure 4. Activity curve for flowers (brown) and open flowers (magenta) of eastern redbud, *Cercis canadensis*, across the United States in 2022.

The "yes" reports for flowers or flowers buds have been climbing rapidly since approximately mid-late January 2022 while the “yes” reports for open flowers began climbing about a month later, in mid-late February 2022. In future messages we will look to see when the peak, or the highest proportion of "yes" reports, occurred for these and other phenophases.

### How to participate in The Redbud Phenology Project?

If you have not yet started observing, here are the steps to participate in The Redbud Phenology Project (<https://www.usanpn.org/nn/redbud>).

1. Create an account in Nature's Notebook and create a site for monitoring phenology. Need help getting started? Take the Observer Certification Course

at [learning.usanpn.org](http://learning.usanpn.org). When you register, you do not need to select anything from the list of Partner Groups. If you are part of an organization that wants to have multiple observers track the same trees, please email [Erin@usanpn.org](mailto:Erin@usanpn.org) for more information.

2. Select your trees. Identify one or more eastern redbud trees, *Cercis canadensis*, and add them to your site in Nature's Notebook. You will make observations on this plant or plants repeatedly through the season, so make sure it is conveniently located for you. If you are already a Nature's Notebook observer, you can either add an eastern redbud to your existing site, or create a new site for your redbud if it is in a different location than the other species you track.
3. Observe your plant(s). Periodically, report what you see (yes/no/not sure) on your plant following the instructions for redbud monitoring. We encourage you to observe your plant(s) 2-3 times a week. However, we welcome any observations you can contribute. Although we are primarily interested in the flowering and fruiting phenophases, but you are also welcome to report on leafing phenophases as well!
4. Report your observations. Periodically log into your Nature's Notebook account and transfer your observations from your paper data sheet into the online reporting system. Alternatively, you can enter your observations directly using our Android or iPhone mobile apps.

**Earn your Redbud Phenology Project badge!**

You can earn this badge by submitting observations of eastern redbud in six different weeks within the year. The badge will appear on your Observation Deck.

Thank you for your contributions to this important project!

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