

The Redbud, *Cercis canadensis* Linnaeus, 1753 and *Cercis occidentalis* (Fabaceae) Torrey ex A. Gray (1850), Phenology Project¹

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Your observations of eastern redbud, *Cercis canadensis* Linnaeus, 1753, and western redbud, *Cercis occidentalis* Torrey ex A. Gray (1850) both in the Fabaceae, will help researchers answer important questions about redbuds, such as: 1) When do these redbud trees flower and fruit across the species range? 2) How does the timing of these events vary across geography and elevation? 3) Has the timing of flowering and fruiting advanced in recent years?

How to participate?

Here are the steps to get started with The Redbud Phenology Project.

1. Create an account in Nature's Notebook and create a site for monitoring phenology.

Need help getting started? Take the Observer Certification Course located at <https://www.usanpn.org/nn/LPLCertification>.

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 Samantha Brewer for more information.

2. Select your trees.

Identify one or more eastern redbud, *Cercis canadensis*, or western redbud, *Cercis occidentalis*, trees 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.

If you are already a Nature's Notebook observer, you can either add a 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.

¹ Received and accepted on January 31, 2024. Last revisions received on January 28, 2024.

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3. Observe your plant(s).

Report what you see (yes/no/not sure) on your plant periodically 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. We are primarily interested in the flowering (Figure 1) and fruiting (Figure 2) phenophases, but you are also welcome to report on leafing phenophases.



Figure 1. Open flowers of *Cercis canadensis*. Credit: Fredlyfish4 in Wikimedia Commons, https://upload.wikimedia.org/wikipedia/commons/b/b4/Cercis_canadensis_flowers_Mississippi.jpg.



Figure 2. Ripe fruits of *Cercis canadensis*. Credit: David J. Stang in Wikimedia Commons, https://commons.wikimedia.org/wiki/File:Cercis_canadensis_16zz.jpg.

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.



Frequently Asked Questions

1. *How do I distinguish between western and eastern redbuds?*

There are several ways to identify if your tree is an eastern vs western redbud, one of which is the shape of the leaves! Western redbuds have more rounded leaves that can have an indent at the end, while eastern redbuds will have heart-shaped leaves with a pointed tip. The website, World of Garden Plants, <https://worldofgardenplants.com/western-redbud-vs-eastern-redbud/> has an excellent guide for identifying western vs eastern redbud trees.

2. *How do I find a redbud tree to observe in winter?*

It will be difficult to identify a redbud tree before the flowers appear in the first year you track redbuds. If you are uncertain whether a particular tree is a redbud, you can keep your observations on paper datasheets (available on your Observation Deck or on the eastern redbud profile page), then once you have seen the flowers and you know it is the correct species, enter your data online. Next year, you will be ahead of the game since you will already have your tree identified! The website AwkwardBotany.com has some tips on how to identify an eastern redbud tree in the winter, <https://awkwardbotany.com/2020/12/16/winter-trees-and-shrubs-eastern-redbud/>.

3. *If I visit my tree now and it has ripe fruits, should enter “yes” even if I have made no other previous observations?*

Yes! Even if it is your first visit to your tree, if you can identify that your tree has ripe fruits, with seeds inside the seed pods, then you should report “yes” for both ripe fruits and fruits (which is an overarching phenophase). Your data are even more valuable when you can report a “no” prior to the first “yes” (try to get that next year), but the “no” following your last “yes” is really important, too!

4. If a tree becomes diseased or dead, should I delete it from my site?

Yes, you should delete your plant by going to your Observation Deck and then Add or Edit Plants. Check the box for Dead and then you can indicate the reason for death if you know it. Everyone is encouraged to contact your local extension agent to get a possible identification of the cause(s) of death of the tree. The redbud will be removed from your Observation Deck and Nature's Notebook app, but your past data will remain in the database. You may add a new plant if you wish.

5. Is there a way to set up a site with multiple contributors?

Yes! Our Local Phenology Programs involve multiple observers collecting data in pursuit of a shared goal. Learn more about Local Phenology Programs and how to request one.

6. May I participate in the NPN if you are not a smart phone user? What about if you do not have service?

Yes! You can participate fully on the USA-NPN website, including adding a site, redbud, and entering data. Sign up for an account [here](#).

7. How may I find more information about redbuds worldwide, such as their scientific names, geographical distribution, photos, etc.

There are more ways to participate.

1. Seed dispersal in redbuds

One of us, Jorge Santiago-Blay, and some of his colleagues researching redbuds are also researching seed dispersal in redbuds. If you report "yes" for recent fruit or seed drop for your redbuds, you may include in your comments any notes about the distance most of the fruits are from the trunk of your tree. Also, you are welcome to note any animals that may be eating the fruits or seeds of redbuds. Photos or videos will be greatly appreciated.

If you would like more information about recording redbud seed dispersal, please contact Dr. Jorge Santiago-Blay.