

PROJECT BUDBURST

Launches Citizens Science Campaign!

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You and your family can join in to collect important climate change data based on the timing of leafing and flowering of trees and flowers in your area through Project BudBurst. Citizen-scientist volunteers will be able to help track trends in phenology (e.g., first leaf, first flower) on many different species and see how these relate to climate. Project BudBurst, operated by University Corporation for Atmospheric Research (UCAR) and a team of partners including the University of Arizona and the US Geological Survey USA National Phenology Network, allows U.S. students, gardeners, and other citizens to enter their observations into an online database that, over time, will give researchers a more detailed picture of global climate change.



Seasonal changes are all around us: flowers bloom, leaves turn color, butterflies emerge, birds and mammals migrate. By studying the timing of these periodic plant and animal cycles—a science known as “phenology”—scientists learn more about environmental trends across regions. Phenological data and models are important to agricultural planning, drought monitoring and wildfire risk assessment, as well as management of invasive and pest species and infectious diseases. Phenological research can contribute to a variety of areas as shown in the table below.

Examples of six areas that phenological research can contribute

<p>Scientific Research</p> <p>Effects of climate variability and change, ecological forecast models, ecological synchrony, carbon sequestration, ground truthing for remote sensing, ecohydrology</p>	<p>Human Health</p> <p>Timing and prediction of allergy (hay fever) and pulmonary (asthma) problems. Study of vector-borne diseases (lyme disease, avian influenza, West Nile virus)</p>
<p>Agriculture</p> <p>Timing of management activities (pest and disease control, planting, harvesting, and provision of pollinators), drought monitoring, range management</p>	<p>Natural Resources</p> <p>Prediction of forest pest and disease outbreaks, fire management, invasive species management, watershed management, selection of species and varieties to be used in “assisted migration” to conserve ecosystem services as climate changes</p>
<p>Tourism and Recreation</p> <p>Informing tourists when and where to go for seeing bird migrations, wildflower displays, and fall colors</p>	<p>Education</p> <p>School children and citizen scientist involvement in scientific observations; establish college curriculum in phenology that encourages local observations and educational use of the data products of the network</p>

Follow these 5 simple steps to complete your phenological investigation!

You will find all the information you need to participate in Project BudBurst at

www.budburst.org.

1) Select and identify one or more **plant for observation** using the plant list or by geographic area. (Note: If you do not have access to a plant that is on the Project BudBurst plant list, you can choose to observe any other plant species that is accessible.)

2) Describe the site where your plant is located. This includes finding the latitude and longitude of your site. You can enter your location in the UCAR Geocoder on the Project BudBurst website if you do not have access to a gps unit.

3) Determine the phenophase (phenological stage) you are looking for (i.e. Budburst/First Leaf, First Flower). For help, refer to the plant descriptions found in the plant list.

4) Now you are ready to begin monitoring your plant! Begin observations (before expected time of budding or flowering)!

5) When a phenophase has occurred, report your observations online.

http://www.windows.ucar.edu/citizen_science/budburst/ActivityGuide_PB.pdf