



GLOBE Tools for Community Science and Resilience

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GLOBE is already a tool for community science! International Virtual Science Symposium 2024

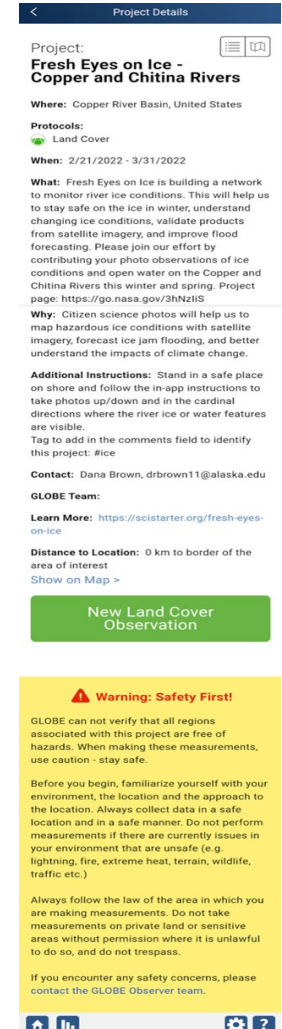
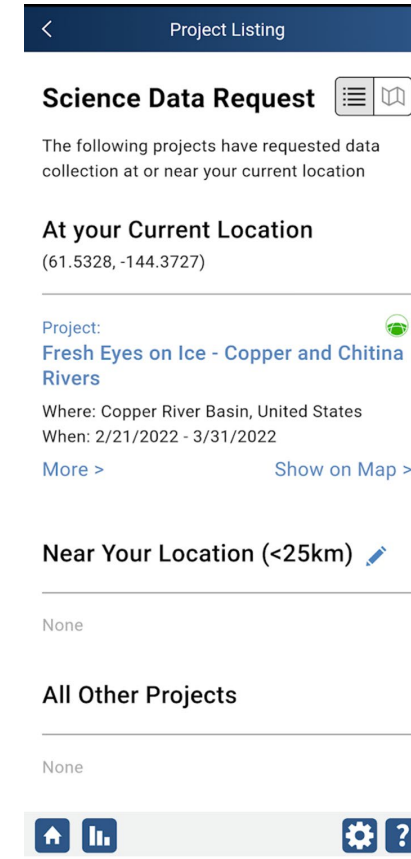
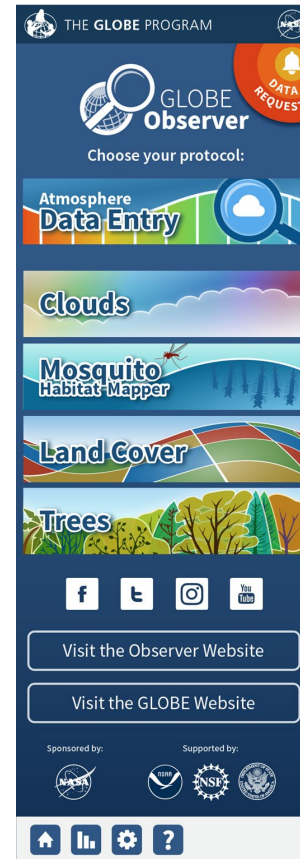
- Air pollution in Madagascar, a major challenge for health and environment
- Heat islands and their impact on the natural environment and global technologies
- Chemical signatures of environmental change
- Evaluating urban heat island and climate parameters
- Spatial variability of CO₂, carbon monoxide, air temperature and relative humidity in Akure City, Nigeria
- Effects of salinity, temperature, acidity, alkalinity and DO in the growth of crabs in Trang
- A comprehensive investigation on Carbon Storage in the vegetation of our schoolyard and determining the Carbon Footprint of the school through the measurement of carbon using GLOBE's Carbon Cycle Protocols.





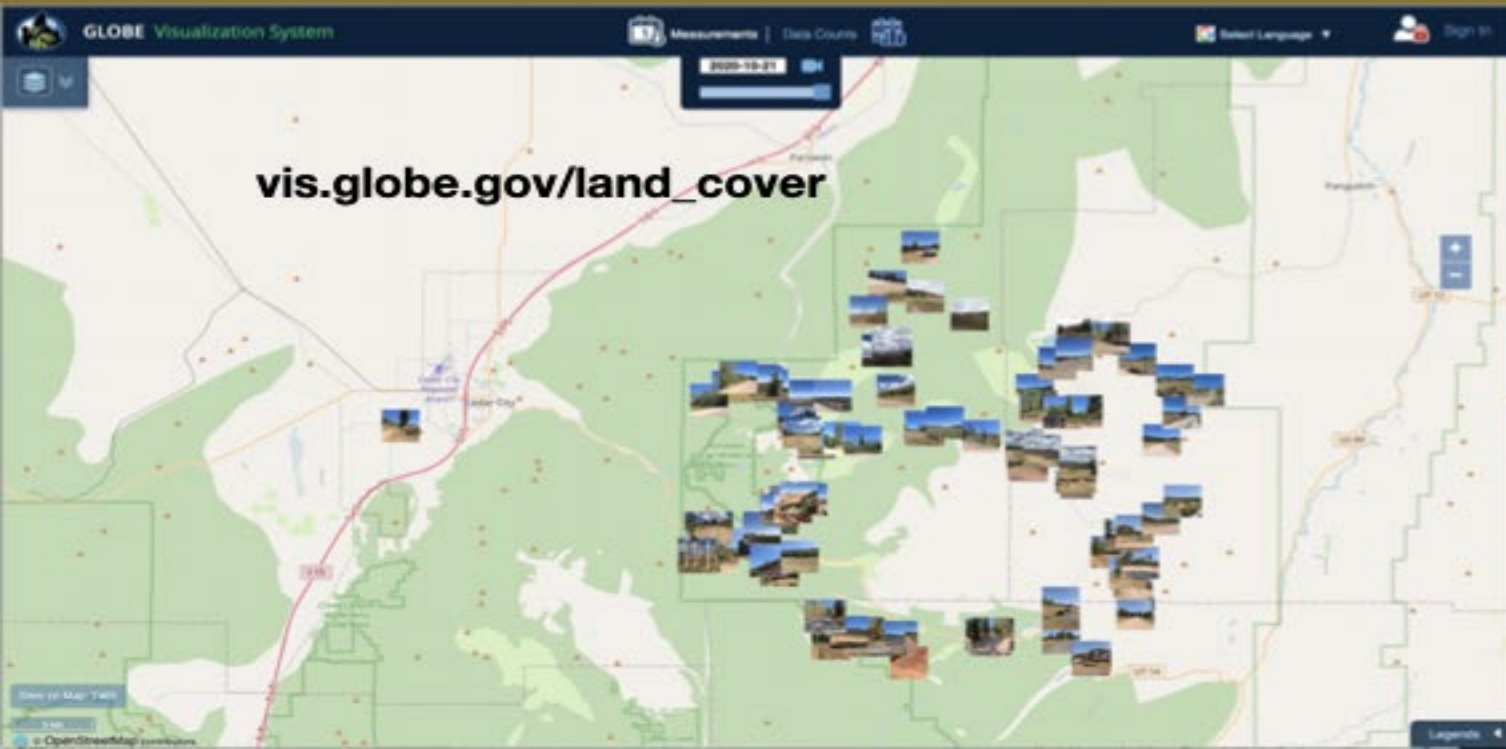
GLOBE Observer Community Data Request

- Anyone in the United States (during the pilot) can request GLOBE Observer data collection at a specified time and location.
- Every request is reviewed, and if approved will be visible in the area of the request.





Dixie National Forest Repeat Photography





NASA Moon Trees - Douglas-fir



The Apollo 14 Mission's Douglas-fir Moon Trees are currently found in the following U.S. states: Arizona, northern California, Colorado, Idaho, Montana, New Mexico, Nevada, Oregon, South Dakota, Utah, Washington, and Wyoming. See the map above showing where the majority of Douglas-fir trees are located in the United States. Please note that Douglas-fir trees are commonly used in landscaping and may be found in parks, arboreta, yards, and other locations well-outside their native range.

Douglas-fir (*Pseudotsuga menziesii*), also called red-fir, Oregon-pine, Douglas-spruce, and piño Oregon (Spanish), is one of the world's most important and valuable timber trees. It has been a major component of the forests of western North America since the mid-Pleistocene (30). Although the fossil record indicates that the native range of Douglas-fir has never extended beyond western North America, the species has been successfully introduced in the last 100 years into many regions of the temperate forest zone (31). Two varieties of the

species are recognized: *P. menziesii* (Mirb.) Franco var. *menziesii*, called coast Douglas-fir, and *P. menziesii* var. *glauca* (Beissn.) Franco, called Rocky Mountain or blue Douglas-fir. (Source: [USDA Forest Service](#))

How to identify Douglas-fir trees:

Douglas-fir trees are evergreen pine trees with a narrow, pyramid-shaped crown. The needles grow singly (as opposed to clusters) and are about an inch long. Douglas-fir trees produce thin, 3-4 inch long cones with rounded scales. To learn more and see additional photos, see:

[Douglas-fir | Forestry | Extension | USU](#)

[Douglas-fir | Virginia Tech Dendrology](#)

Several free apps will help you identify tree species, including [LeafSnap](#), [iNaturalist](#), or [PI@ntNet](#).

Example Images of Douglas Fir Trees:



Left image: Douglas-fir tree (Credit: USDA Forest Service); upper right: Douglas-fir bark (Credit: Utah State University Forestry Extension); lower right: Douglas-fir cones and needles (Credit: Utah State University Forestry Extension).

How to participate in the quest for Douglas-fir trees:

1. Identify Douglas-fir trees and measure their height (and circumference if you have a tape measure) with the Trees tool in the GLOBE Observer app. Make sure you clearly see the top and bottom of the tree and that you can walk to the base of the tree from an origin point of 25-75 feet away from the tree. Before submitting your observation, please type "#MoonTree" in the comment box.
2. The app will notify you if you are within a certain distance from from an existing Apollo 14 Douglas-fir Moon Tree. If you are able to find a specific Apollo 14 Douglas-fir Moon Tree, please take a tree height observation (and optional tree circumference). Please type "#MoonTree" in the comment box.

Note: Our information regarding the location and status of the existing Apollo 14 Moon Trees is based on the [NASA Moon Trees Archive](#). Some information may have changed since the latest update in the archive or the

information may lack precision. Also, there may be Moon Trees for which we don't have a confirmed location. Some are included in the Moon Trees Archive, but there may be more. Please send us updates, including information about Moon Trees not on our list, through our contact form. Thank you!

Accessible Apollo 14 Douglas-fir Moon Trees:

(Click on the links below to learn more about each of the Apollo 14 Moon Trees from the NASA Moon Trees Archive)

New Mexico

[Santa Fe, New Mexico. State Capitol Building](#). Latitude: 35.682, Longitude: -105.9397. 490 Old Santa Fe Trail,

Oregon

[Corvallis, Oregon. Peavy Hall Oregon State University](#). Latitude: 44.5642, Longitude: -123.285. Peavy Hall, 31 Corvallis, OR 97333

[Eugene, Oregon. Erb Memorial Union University of Oregon](#). Latitude: 44.0423, Longitude: -123.0599. 1615 Fair 97403

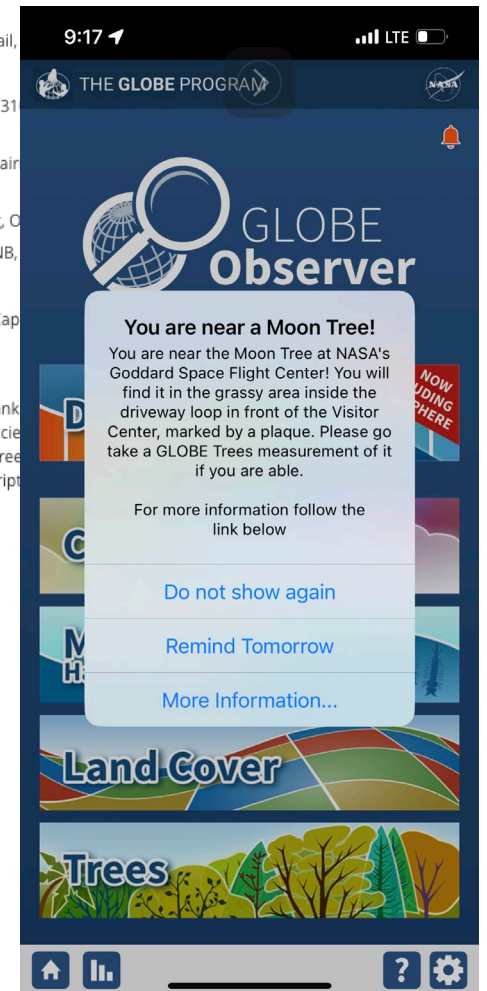
[Rosebud, Oregon. U.S. Veteran's Hospital](#). Latitude: 43.2322, Longitude: -123.3694. Centennial Dr, Roseburg, O

[Salem, Oregon. State Capitol Building](#). Latitude: 44.9392, Longitude: -123.0316. Capitol Building at State St NB,

Washington

[Olympia, Washington. State Capitol Building](#). Latitude: 47.037, Longitude: -122.9013. Tivoli Fountain, State Cap Way, Olympia, WA 98501

To see the locations of all known Moon Trees, visit the [NASA Moon Trees Archive](#). We extend a special thank Acting Head, NASA Space Science Data Coordinated Archive, NASA Goddard Space Flight Center Planetary Science System Management Office, and Curator of the NASA Moon Trees Archive, without which the NASA Moon Trees possible. The NASA Moon Trees Archive includes more about the history of the Apollo 14 Moon Trees, descriptions of the Moon Trees, and associated resources.





Check out the GLOBE Annual Meeting Community Project for Fredonia!



Requesting Data Collection in the GLOBE Observer App

The GLOBE Observer app includes a mechanism (a geofence) that alerts volunteers when they open the app that clouds, mosquito habitat, land cover, trees, or eclipse data are needed at or near their location. Each data request provides specific instructions for data collection as well as information about the research or community project the data will support.



Volunteers see an alert on the GLOBE Observer home screen if there is a data request at or near their location. Clicking on the data request icon leads to a list or map of requests. (The map is only available if the device is online.)

Applying for a Data Request

Scientists, educators, or community leaders who have GLOBE accounts (GLOBE Observer or GLOBE member accounts) may [submit an application through the GLOBE Observer website](#) to create a data request. Each data request or geofence proposal must include a point of contact available to answer volunteer questions, justification for why the data collection is needed, and what the project aims to accomplish. Requests may include special instructions or links to additional training for volunteers. We recommend that each data request is linked to a [GLOBE Team](#) to give the project leader a way to track data submitted and to communicate with volunteers working on their project. Data requests should cover a time period no longer than three months but may be renewed if a longer period is needed.

Submit your Data Request to GLOBE

Scientists, community leaders, and informal educators can ask volunteers to collect data to support their projects such as research or community initiatives. Use this form to propose a regional or local data request to be posted in the GLOBE Observer app. Proposals will go through scientific and programmatic review before approval. Please allow at least 2-3 weeks for review and revisions before project launch.

* Required Fields

Your Contact Information

Name *

Phone *

Please enter numbers only. Dashes or Parenthesis are not accepted.

Email *

Organization for which you are submitting the request *

Submitted by *holli.kohl@nasa.gov*

Project Information for Volunteers

Information entered in these sections will be visible in the GLOBE Observer app. Please keep each entry succinct and use simple, clear language without acronyms or jargon.

Project Name *

Project Description (what) *

Please enter a short description of your project for the volunteers. This is the description of your project that will be visible in the GLOBE Observer app. (250 words max)

Sample Requests

Example 1: A scientist asks volunteers to routinely submit observations of mosquito habitats in Oklahoma City and Norman, Oklahoma, through the months of June, July, and August to determine when mosquitoes are breeding (when the most larvae are present) and if harmful invasive species are moving into the metro region. Several habitat sites are identified throughout the two cities and volunteers are asked to report on mosquito activity at the sites throughout the summer. The outcome of this project is anticipated to be a scientific publication that could support a mosquito control plan.

Example 2: A Girl Scout Council in Portland, Oregon is participating in the Girl Scout Tree Promise, which aims to plant, protect, and honor five million trees by 2026. They ask volunteers to support Girl Scout troops by measuring every tree in the city and the land cover around it using GLOBE Observer during the months of October and April. Their primary objective is to create awareness and provide data to Girl Scouts to support their educational experience.

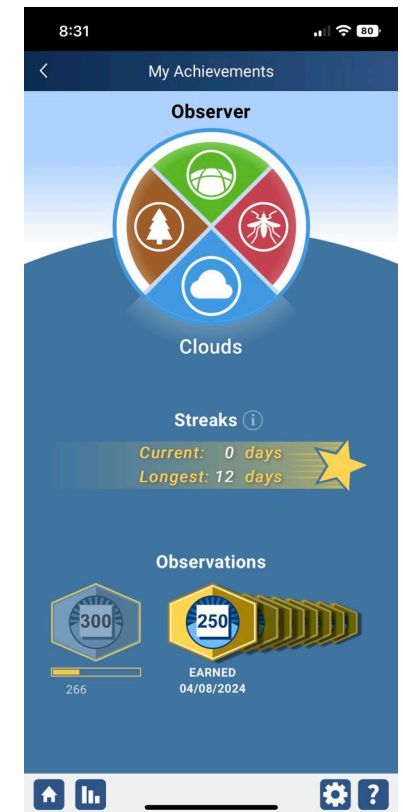
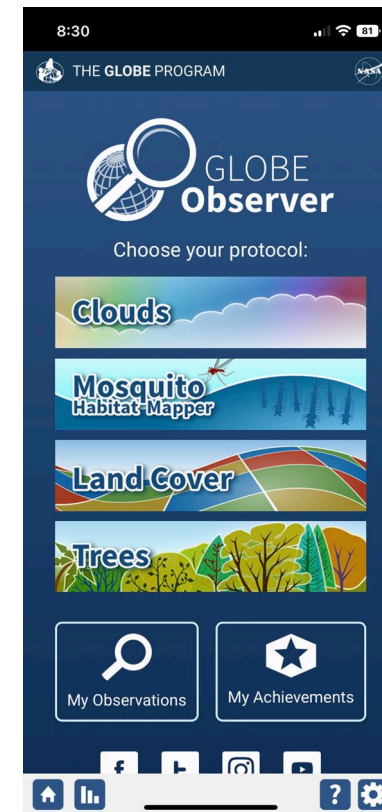
Draft Review Process





Badges as a tool for engagement

- Looking at developing “ad hoc” badges – one-time badges for specific things such as submitting quality data or being complete in the protocol (including all fields), etc.
- Could you use these special badges to motivate community science?
- Working on developing a process for applying for and creating these badges now. Input is most welcome!





The **GLOBE** Program

#GLOBEMeeting2024

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Available at the share-a-thon to hear
feedback and get your ideas about
community projects and badges!

For more information visit www.globe.gov

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