

December EcoQuest: Mistletoe



Lodgepole Pine Dwarf Mistletoe (*Arceuthobium americanum*), [joshuagsmith](#), some rights reserved, CC BY-NC



Lodgepole Pine Dwarf Mistletoe (*Arceuthobium americanum*), [papeverazzi](#), some rights reserved, CC BY-NC.

Most of us are probably familiar with the idea of hanging mistletoe around the holidays – but what is mistletoe? Intriguingly, mistletoe is a parasitic plant in the order Santalales, not to be confused with another popular Christmastime plant, holly, which is in the genus *Ilex*.

Here in Colorado, we have our own mistletoes, the genera *Arceuthobium* and *Phoradendron*. These leafless, yellowish green to olive-green, parasitic plants infect coniferous, evergreen trees in our forests. As parasitic plants, mistletoes need to attach to a host plant to extract nutrients and water for survival. They do this through the production of root-like structures that grow into the living tissue of their host tree. Dwarf mistletoe can have significantly harmful effects on their hosts – causing reduced seed development, increased susceptibility to insect or pathogen attack, a reduction in tree growth and even premature death.

Mistletoes are notoriously difficult to identify to species. Their flowers are tiny and inconspicuous. The

fruits have the best diagnostic characteristics but are dispersed in August and September. Interestingly, these fruits also make dwarf mistletoes one of the “fastest” plants on the planet – they produce sticky seeds that are explosively discharged from the fruit at nearly 60 miles per hour! The best way to determine a species of dwarf mistletoe in winter is to determine the identity of the host plant. Although each species can infest other hosts, they typically have a “favorite.” For instance, *Arceuthobium americanum* is primarily found on lodgepole pine, *A. cyanocarpum* on limber pine, *A. douglasii* on Douglas-fir, *A. vaginatum* on ponderosa pine and *Phoradendron juniperinum* on juniper.

See if you can locate mistletoe on evergreen trees or junipers in the surrounding forests. Photograph the entire tree as well as a close-up of the mistletoe for each [iNaturalist](#) observation. This can help scientists document its range as well as monitor overall tree health.

What is an EcoQuest?

EcoQuests, part of the Denver EcoFlora project, challenge citizens to become citizen scientists and observe, study and conserve the native plants of the City via iNaturalist, an easy-to-use mobile app.

How Do I Get Started?

1. Download the iNaturalist app or register online at [iNaturalist.org](#).
2. Take photos of the plants in bloom that you find on your daily neighborhood walk. It is ok if they are weeds! But avoid taking photos of cultivated plants in gardens or in your home.

3. If you are concerned about revealing the location of sensitive organisms or observations at your own house, you can hide the exact location from the public by changing the “geoprivacy” of the observation to “obscured.”
4. Post your findings on iNaturalist via the app.
5. Your observations will automatically be added to the [Denver EcoFlora Project](#).
6. You can add an identification to your photo when you post your findings on iNaturalist, or leave it blank for others to identify.

What is the Goal?

The EcoFlora project is designed to meaningfully connect citizens with biodiversity, and to assemble novel observations and data on the metro area’s flora to better inform policy decisions and conservation strategies.



Photo by Scott Dressel-Martin