DENVER BOTANIC GARDENS

EcoQuest

May 2025

# May EcoQuest: Mystery of the Star-lily

Common star-lily, (*Leucocrinum montanum*), Christian Nunes, some rights reserved, CC BY 4.0.

Spring is finally here! One of the showiest plants in the Denver-Boulder metro area in early spring are the star-lilies, *Leucocrinum montanum*. Star-lily is found throughout western North America in grasslands and shrublands and is the only member of the genus *Leucocrinum*. It is also often called sand-lily because these plants mostly grow in sandy soil. Despite its common name, star-lily is more closely related to asparagus than to the true lilies. The name star-lily comes from the resemblance of these flowers to lilies – both have six perianth parts, or tepals.

Star-lilies are rather unusual in that the fruit matures below ground. In fact, once the plant has finished flowering in late May or early June, the entire above ground portion of the plant withers away. The maturing fruit remains buried among the fleshy roots. Once the fruit is ripe, how the seeds of star-lily are dispersed is a mystery – some speculate that the seeds are pushed out of the soil by new growth the following year, but others have suggested that the seeds are released from the fruit when the sandy soil surrounding the plant is worn away. One additional hypothesis is that ants or other insects transport the buried seeds and, in the process, replant them away from the parent plant. But the seeds of star-lily offer no reward of food for ants, so this scenario seems unlikely.

Adding to the mystery of the star-lily is a lack of knowledge about what is pollinating these flowers. Some think hawkmoths may be attracted to the white flowers, which are also visible at dusk. The long floral tube of star-lilies could offer some kind of reward at the base for hawkmoths, too. Or perhaps star-lilies self-pollinate, relying only upon themselves to produce seeds for the next generation. This is definitely a plant that needs additional study!

See if you can locate some star-lilies and help Denver Botanic Gardens by photographing as many plants as possible in the month of May. See if you can spot any insects that could be pollinating the flowers and photograph those as well as part of your observations. Post your findings to iNaturalist so they will automatically be added to the **Denver EcoFlora Project**.

## 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

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