DENVER BOTANIC GARDENS

EcoQuest

May 2022

May EcoQuest – The Mysterious Starlily

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

Starlilies 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 aboveground portion of the plant withers away. The maturing fruit remains buried below-ground among the fleshy roots. Once the fruit is ripe, just how the seeds of starlily 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 food, and in the process replant them away from the parent plant. But, the seeds of starlily offer no reward of food for ants, so this scenario seems unlikely.

Adding to the mystery of the starlily is a lack of knowledge about what pollinates them for fruit to be produced. Some think they are pollinated by hawkmoths, which are attracted to the white flowers that are visible at dusk. The long floral tube of starlilies may offer a type of reward at the base for hawkmoths, too. Or perhaps starlilies 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 starlilies 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 **DenverEcoFlora Project**.

Leucocrinum montanum, photo by Jennifer Ackerfield

April EcoQuest Results – Pasque Flowers and City Nature Challenge

The City Nature Challenge resulted in 276 species of plants and 16 species of fungi observed in the Denver-Boulder metro area. A total of 327 observers and 200 identifiers resulted in 2,411 observations and 558 species overall.

What is an EcoQuest?

EcoQuests are part of the Denver EcoFlora Project. These monthly quests challenge citizens to become citizen scientists and observe, study and conserve the native plants of the Denver – Boulder metro area 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 okay if they are weeds! Avoid taking photos of cultivated plants in gardens or in your home.
3. If you are concerned about revealing the location of sensitive plants 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. Sign up to be a member of the **Denver EcoFlora Project** on iNaturalist to receive updates and additional information.

What is the Goal?

The Denver 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.

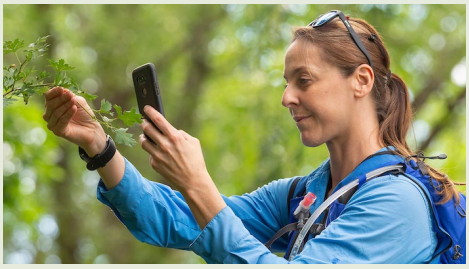

Photo by Scott Dressel-Martin

INSTITUTE of Museum and Library SERVICES

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