DENVER BOTANIC GARDENS

EcoQuest

September 2023

September EcoQuest – Fungi Friends: Searching for *Chlorophyllum*

For September we are introducing our first fungal friend to the EcoQuest—the genus *Chlorophyllum*! Even though mushrooms aren't plants, the term "botany" historically included all plant-like organisms, so terms like "botanical" or "flora" include fungi. At Denver Botanic Gardens we study fungi as well as plants.

Derived from Greek roots, the name *Chlorophyllum* means "green leaf," or in this case "green gill," as some species in the genus do have green spores. It was designated as a genus at a time when spore color was an important identifier for separating genera. Spore prints are a useful tool for identifying fungi. To make a spore print, place a mature mushroom cap gill-down on a piece of white paper overnight. Putting a container over it can help protect it from getting moved. In the morning, you'll find a pattern of spores, the color of which can help in identification.

Chlorophyllum sp. Alissa Iverson, some rights reserved, CC BY-NC.

Members of the *Chlorophyllum* genus are often found in grassy areas, lawns and woodlands in late summer to early autumn. Characteristics of this genus include a large cap that is often scaly and white, with a central stem and conspicuous ring toward the upper part of the stem. The stem is typically smooth and hollow with an enlarged base. The gills are especially distinctive in that they are "free," meaning that they do not attach directly to the stalk.

In the Denver metro area, you can expect to find *Chlorophyllum molybdites* (commonly called "green-spored parasol"), *C. rhacodes* and *C. brunneum*. The latter two species are commonly referred to as "shaggy parasol." *Chlorophyllum molybdites* is poisonous, but unfortunately tastes rather good and as the other similar-looking species are edible, it causes more poisonings than any other mushrooms in the area. To distinguish, *C. molybdites* has green spores while the other two have white spores. Additionally, the textures of the caps are different; *C. molybdites* is softer, less scaly and more granular. Telling these three species apart is challenging and especially discouraged for foraging, unless you are an expert.

If you stumble upon a *Chlorophyllum* mushroom in the Denver area, leave it as the genus *Chlorophyllum* on iNaturalist unless you are certain. Be sure to take a good picture of the ring—especially from the side, as this can help the fungal experts identify it to species level. If you can, make a spore print and upload a picture of it in your observation. Your contributions amplify our understanding of this captivating genus and urban ecology.

Help Denver Botanic Gardens document *Chlorophyllum* in the greater metro area by photographing as many as possible in the month of September. Post your findings on **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.

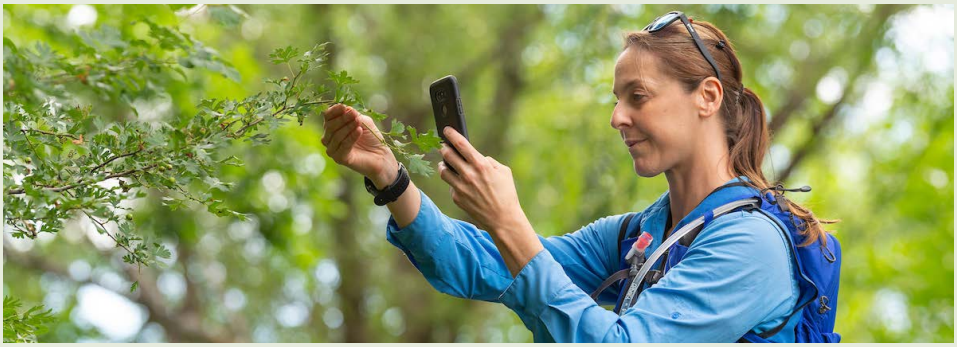

Photo by Scott Dressel-Martin

INSTITUTE of Museum and Library SERVICES

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If you would like to subscribe to our online EcoQuest e-newsletter, sign up **here**.