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GARBENS

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FUNKY THISTLE IS FIRST NEW SPECIES OF 2022

Cirsium funkiae is the first formally described living organism of the year in the Rocky Mountain Region.



Jennifer Ackerfield, Ph.D., head curator of natural History collections at Denver Botanic Gardens, led an expedition to Mount Sherman, near Leadville, Colorado with Gardens colleagues, representatives of the U.S. Forest Service and a Colorado State University Master's student. The goal of the hike was different than that of the typical 14er enthusiast; it was to collect what is called a "type" or reference specimen for a new plant species that Ackerfield discovered as part of her Ph.D. research.

The species, *Cirsium funkiae* – named by Ackerfield in honor of her mentor Dr. Vicki Funk – is native to Colorado and is an important component of the alpine landscape. This describing is significant because effective conservation of a species relies on accurate taxonomy. We can't protect what we don't know is out there. We acknowledge that Indigenous communities of Lake County, Colorado, may have discovered this plant many years ago, but Ackerfield's work gives this species a formal scientific name using a combination of physical, geographic and genetic data.

"When we think about describing new species, we often picture exotic places like the crater of an extinct volcano, or the Amazon rainforest, not a mountain top visited by hundreds if not thousands of people each year" says Ackerfield. Yet, according to her, this is exactly where many species findings are made, in part because of advances in DNA sequencing technology. The Rocky Mountains harbor potentially many plant species, just waiting to be formally described by scientists as they unravel their genetic "code."

The thistle rose tall with yellow flowers against a landscape of tiny alpine plants. According to Ackerfield, "while other alpine plants have adapted to this extreme environment with their low stature to withstand the cold winds, the thistle has taken a different approach. Instead, these thistles adapted by producing dense, woolly hairs surrounding their flowers. These hairs help protect these flowers from the harsh, cold conditions of the alpine tundra." She also mentions that the hairs do more than just protect the plant's flowers, they also provide food for insect pollinators and pikas.

To ensure the plant was the first published new Rocky Mountain species in 2022, Ackerfield completed a scholar web search and checked new species journals.

The scientific study of biodiversity is the foundation of botanic gardens, allowing the Gardens' scientists to conserve diversity at home and around the world through greater documentation and understanding. The Gardens' research and conservation team investigates and explains biodiversity patterns and processes in pursuit of a vision of a biodiverse world.

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About Denver Botanic Gardens: Green inside and out, Denver Botanic Gardens was founded in 1951 and is considered one of the top botanical gardens in the United States and a pioneer in water conservation. Accredited by the American Alliance of Museums, the Gardens has a robust living plant collection, natural history collection and art collection along with temporary art exhibitions. The Gardens is a dynamic, 24-acre urban oasis in the heart of the city, offering unforgettable opportunities to flourish with unique garden experiences for the whole family – as well as world-class exhibitions, education and plant conservation research programs. Additional sites extend this experience throughout the Front Range: Denver Botanic Gardens Chatfield Farms is a 700-acre native plant refuge with an active farm in Jefferson County; Mount Goliath is a high-altitude trail and interpretive site on the Mount Evans Scenic Byway. The Gardens also manages programming at Plains Conservation Center in Aurora. For more information, visit us online at www.botanicgardens.org.