Canyon Country Discovery Center

Integrating the Native Plant Program at the CCDC with Education Programs, Stewardship Activities, & Citizen Science

Photo by Jasmine Anenberg

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Education & Stewardship Dealing with Native Plants:

- Educational resources (e.g., native plant interpretive trail & brochure, demonstration gardens) and programs emphasizing ecology and cultural significance of native plants of the Colorado Plateau.
- Programs and activities dealing with native plants and pollinators for visitors and K-12 students.
- Exhibits featuring native plants and pollinators
- Citizen science and stewardship opportunities such as pollinator monitoring and revegetation work, both on and off campus.

"Making America great through shared conservation stewardship."

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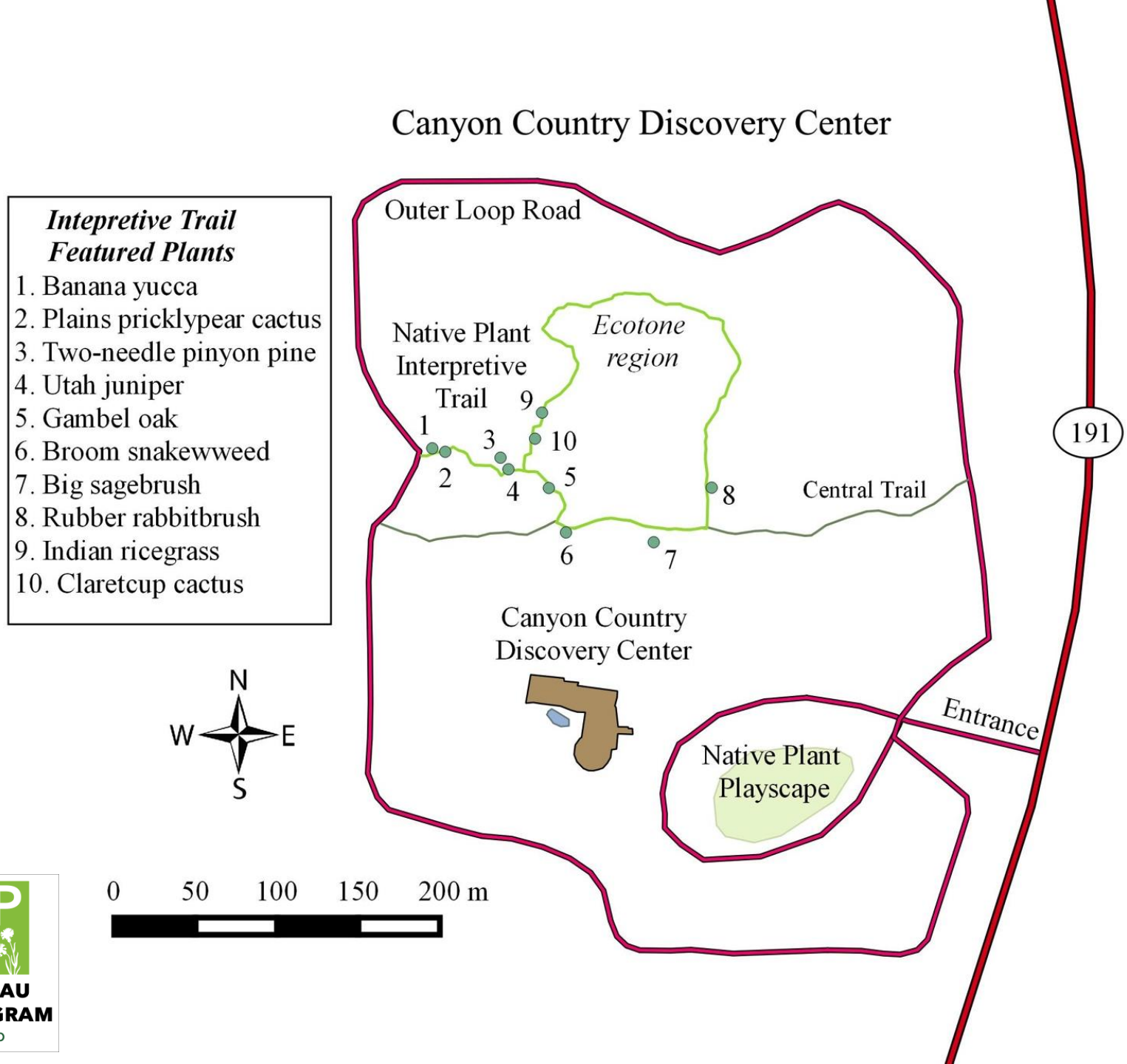

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Native Plant Trail Guide

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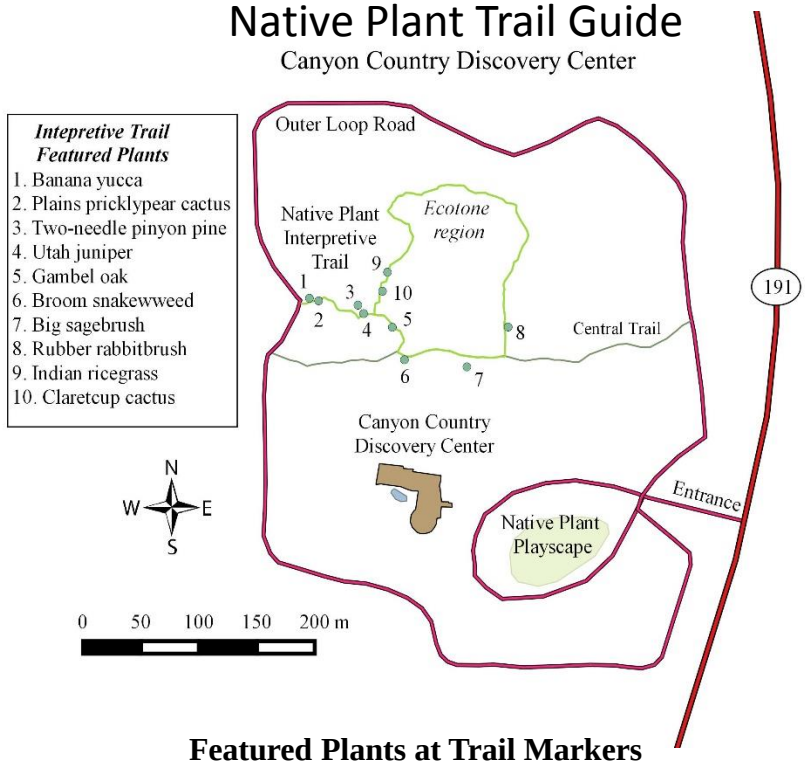


Featured Plants at Trail Markers

1. **Banana yucca** (*Yucca baccata*) is one of three yucca species native to the Four Corners Region of the Colorado Plateau. Banana yucca has very thick, stiff, and dagger-like leaf blades compared to the other two. It is sometimes called Spanish bayonet for that reason. Yuccas are beautiful members of the lily family that are adapted to arid environments and are popular for xeriscaping. They have showy white flowers borne on tall stalks, and form obligate mutualistic relationships with moth pollinators. The fruit of the banana yucca is a traditional food of the Navajo and Apache people. Yucca fruitcakes can be made by roasting the fruit, making flat pulp paddies, and allowing them to bake in the sun. The roots can be used to make soap. The leaf blades of yuccas can be woven into baskets or used to make brushes, although the thinner and more pliable blades of the other yuccas native to the region are better suited for these purposes than those of banana yuccas.

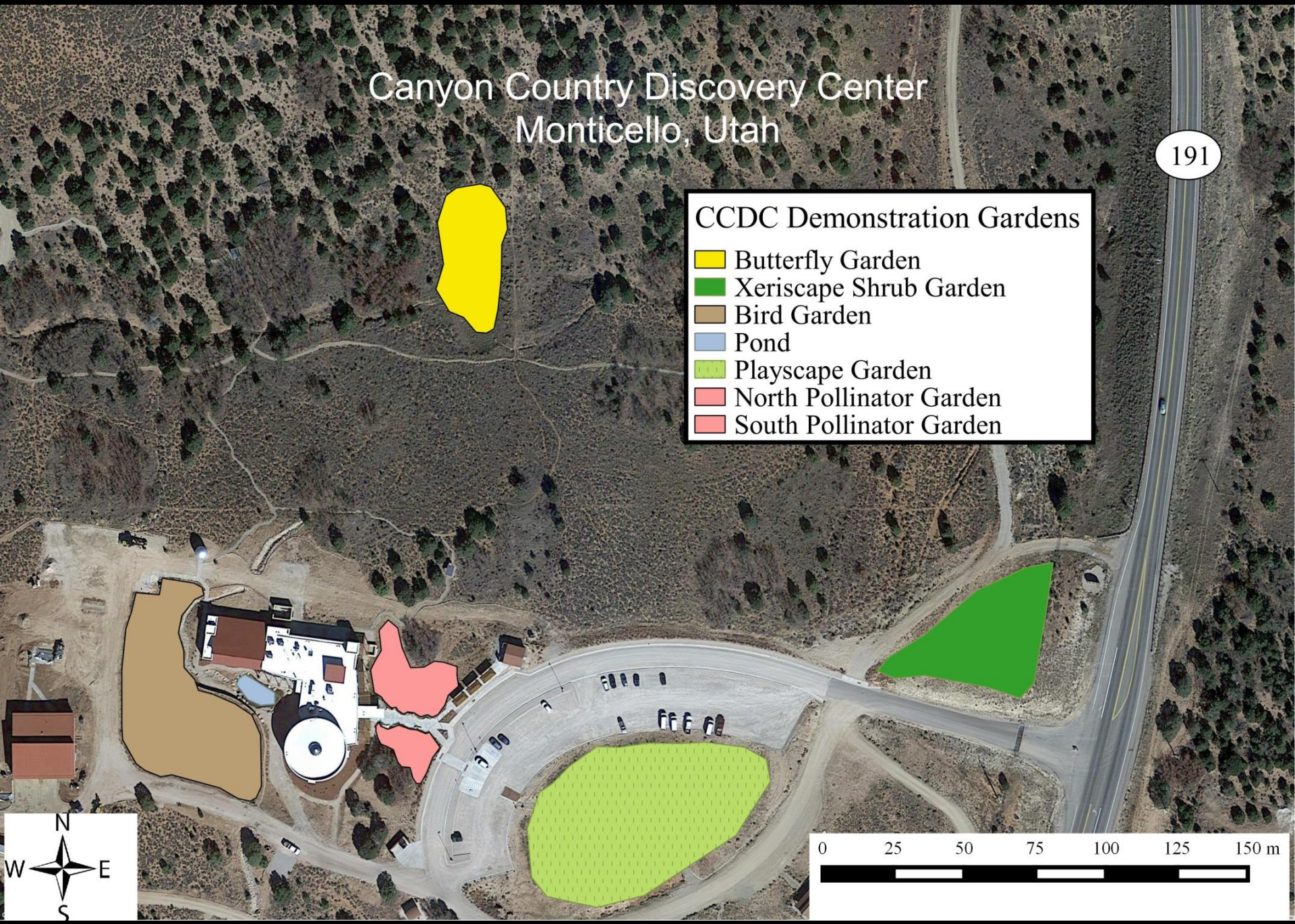
2. **Plains prickly pear cactus** (*Opuntia polyacantha*) is one of several species of prickly pear cactus native to the Colorado Plateau. Prickly pears are spiny, leafless plants that have flat, succulent, jointed stems adapted for water storage and photosynthesis. The plains prickly pear has very showy flowers that can range from yellow to magenta in color. It grows low to the ground, has stiff spines, and makes a fruit that has been used as food by a variety of Native American peoples. The pulp and juice are sometimes used to treat wounds and inflammation. When segments of the stem of a plains prickly pear break off, they can grow roots and form separate plants.

Canyon Country Discovery Center Demonstration Gardens

Public Benefit. *Gardens and educational programming on native plants and their traditional uses will increase public awareness of our natural and cultural heritage in the Four Corners Region and will contribute to the national BLM and DOI priorities benefiting tribal nations.*

Invasive plant removal and some planting and seeding took place in 2017. Gardens will emphasize distinct themes geared toward engaging visitors in the following activities:

- Identification of common native plants of the region
- Exploring and documenting plant-pollinator relationships
- Learning about traditional uses of local native plants
- Documenting abundances and foraging activities of seed eating birds
- Showcasing attractive native shrubs, cacti, yuccas, and perennial wildflowers (xeriscaping).


Canyon Country Discovery Center
Monticello, Utah
191
CCDC Demonstration Gardens
Butterfly Garden
Xeriscape Shrub Garden
Bird Garden
Pond
Playscape Garden
North Pollinator Garden
South Pollinator Garden
N
W
E
S
0
25
50
75
100
125
150 m

Sites include areas disturbed by construction during 2015-2016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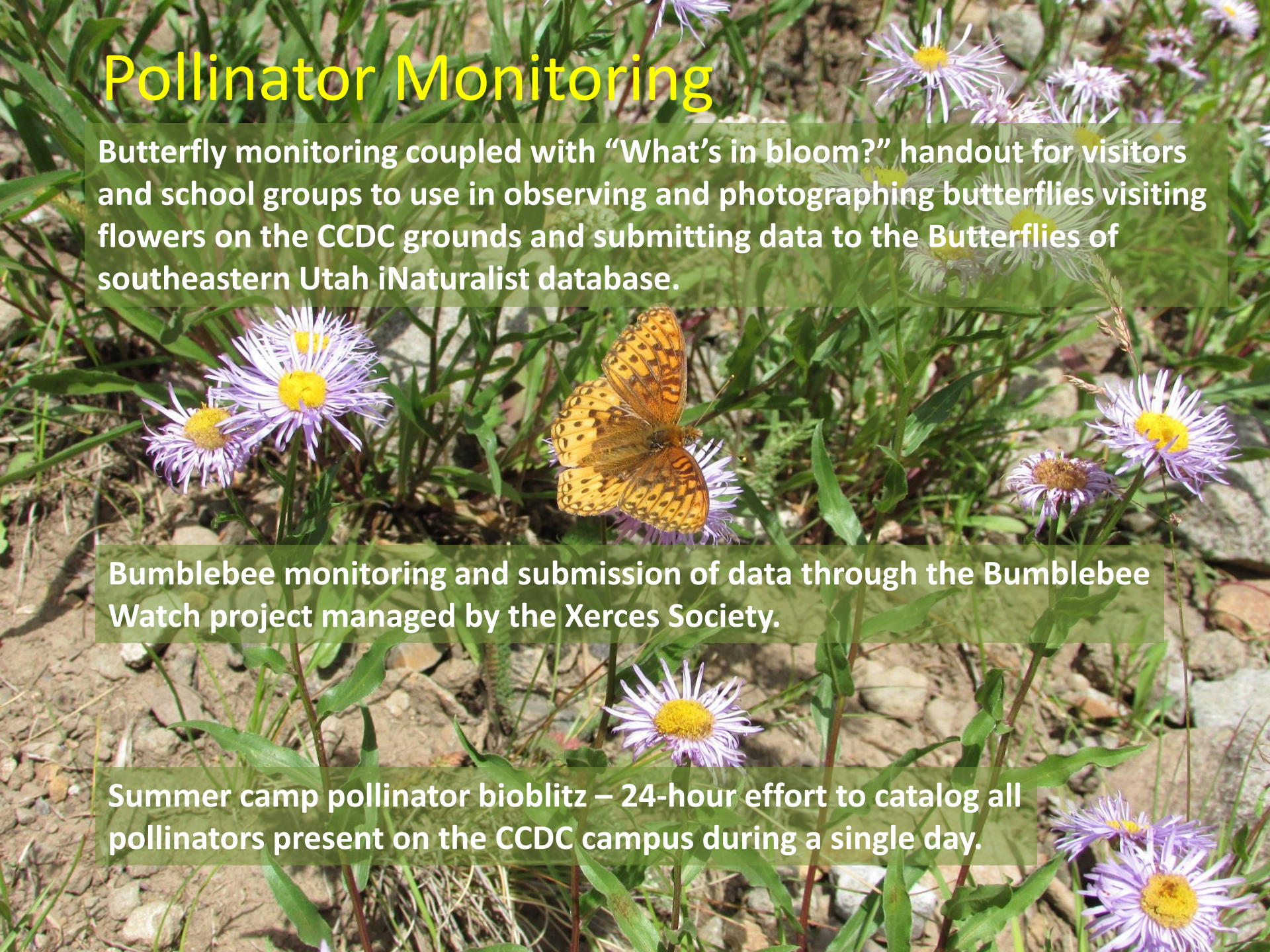
New Greenhouse & Plant Propagation Facilities

Facilities will be used to propagate butterfly and moth pollinated plants, such as milkweed and evening primrose, along with a few riparian trees and shrubs. Some of these plants will be used in stewardship activities along the San Juan River. Seed collection took place in 2017 and propagation efforts are beginning.

Pollinator Monitoring

Butterfly monitoring coupled with "What's in bloom?" handout for visitors and school groups to use in observing and photographing butterflies visiting flowers on the CCDC grounds and submitting data to the Butterflies of southeastern Utah iNaturalist database.



Bumblebee monitoring and submission of data through the Bumblebee Watch project managed by the Xerces Society.

Summer camp pollinator bioblitz – 24-hour effort to catalog all pollinators present on the CCDC campus during a single day.

Education Programs on Plant Ecology

The Mystery of Leaves – A classroom activity in which participants learn how leaf morphology is related to climate and then take several measurements of leaves collected in different environments to solve a long-standing mystery about a missing person who left clues behind in the form of leaves tucked away in her/his journal.

Vegetation Zones of the Colorado Plateau – An activity geared toward school groups in which participants use climate data from specific locations to make climate diagrams and predict what kinds of plants grow at these locations. Other components include matching animals to the vegetation zones in which they occur and describing adaptations of live plants (in displays in the CCDC Exhibits Hall) to their environments.

Engineering of Wind-dispersed Seeds – Exhibit-oriented activity in which participants are provided with a handout describing categories and adaptations of wind-dispersed seeds and then create model seeds out of paper and other materials for testing in a vertical wind tube.

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New Exhibits in 2018

Biomes of the Colorado Plateau

Flowers & Pollinators

Biological soil crusts

Primary Objectives for 2018

Make substantial progress on four **native plant gardens** and incorporate them into educational programs for the public (part of the weekly CCDC program offerings), as well as citizen science projects involving monitoring of pollinators and granivorous birds.

Native plant propagation work, emphasizing milkweed seed collection & propagation, and integrate it with citizen science & stewardship activities.

Create **two new exhibits** featuring native plants and pollinators.

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Questions?

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