

Supporting Sustainability at CWU through Wildcat Farm's Heritage Garden

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Introduction:

CWU's Wildcat Farm supports an increasingly sustainable campus by growing fresh produce for the campus, and by supporting projects around food and farming. Wildcat Farm is partnering with the Kittitas County Conservation District (KCCD) to create a heritage garden, which is for conserving and celebrating the native plants of Eastern Washington, and as a source of education sharing the historical and cultural ways these plants have been and still are utilized. This garden will also serve as a natural wind break to protect plants and provide a more comfortable environment for farm employees and volunteers to work in. This wind break doubles as a heritage garden with trees, shrubs, and wildflowers native to Eastern Washington's shrub steppe ecosystem, that acts as an opportunity to educate the community on the cultural and/or historical significance of these plants.



Figure 1: Google Earth image showing the location of the Heritage Garden at CWU's Wildcat Farm

What are Heritage Gardens?

Heritage gardens are community based growing areas that have a primary focus on using native plants that have cultural and historical significance to people and to the wildlife that use them to survive. Some heritage gardens mix native plants alongside pollinator friendly species as well (McNassar, 2023). The goals of these gardens are to: celebrate these plants, share information related to practices of an area's cultural and historical heritage, and practice more sustainable methods of gardening that do not require much water to maintain (KCCD, 2021). The Wildcat Farm's heritage garden incorporates flora found in Eastern Washington, and the trees are purposefully placed to protect the farm from the wind.

Heritage Garden Plant List	Approximate Number
Ponderosa Pine (<i>Pinus Ponderosa</i>)	5
Rocky Mountain Juniper (<i>Juniperus Scopulorum</i>)	10
Mock Orange (<i>Philadelphus Lewisii</i>)	10
Wax (Squaw) Currant (<i>Ribes Cereum</i>)	10
Wood (Prairie) Rose (<i>Rosa Woodsii</i>)	10
Golden Aster (<i>Heterotheca Villosa</i>)	15
Red Columbine (<i>Aquilegia Formosa</i>)	11
Brown Eyed Susan (<i>Gaillardia Aristata</i>)	15
Showy Milkweed (<i>Asclepias Speciosa</i>)	20

Table 1: List of plant species already planted in the Heritage Garden

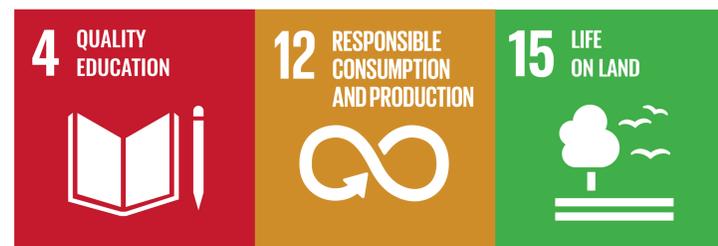
Prior Work Done to Start the Heritage Garden:

Previously the Wildcat Farm worked with the KCCD and planted the current trees and plants in the heritage garden (Figure 1). The desired species were purchased from Derby Canyon Natives (Table 1). Each of the plots was mulched with a circle of wood chips to maintain moisture and to keep weeds at bay. This heritage garden is still in its site preparation phase.

Contributions to the Heritage Garden :

- Placed recycled clear plastic and thick cardboard around the native plants to solarize the weeds.
- Assisted in measuring the site boundary with Kittitas County Conservation District's Wendy Mee and created a digital map of the site and the native plants/structures.
- Weeded around the native plants radius and removed invasive knapweed from the site.
- Gathered information on three of the plants already in the garden to be used in creating signs with the cultural and historical information of the plant. Plants chosen for the signs are the Rocky Mountain Juniper (Figure 2), Ponderosa Pine, and the Wax Currant.

This project supports the following UN Sustainable Development Goals:



Suggestions for future work:

- Future work on the heritage gardens should include:
- Removing the plastic/cardboard in the fall and composting the dead biomass.
 - Seeding new native plants in suitable areas and replacing any native plants that did not survive the summer
 - Obtaining necessary funds to build and place the signage, path materials, and other equipment that may be required.
 - Determining the most suitable route for a pathway within the heritage garden using the Kittitas County Conservation Districts digital map after the fall site preparation is finished.

The Rocky Mountain Juniper of the Eastern Cascades and Their Significance

Location Characteristics and Range

The Rocky Mountain Juniper is a large shrub species found across the western parts of the United States typically away from coastal areas, and into the southwestern portion of Canada (Scher, 2002) (Figure 1). This species of juniper has the largest range of the eleven types found in the United States that grow enough to be classified as tree height, this species preferring montane biomes (Ashley, 2014).

How it Benefits Wildlife

The cones of the juniper appear every second spring and are covered in a coating that must be removed by being eaten by animals and birds, so that the seeds within the cone can be freed by their stomach acid (Parish et al., 2018). The foliage is used as nesting sites, food, and even migratory corridors by a variety of birds such as sparrows, juncos, and robins (Scher, 2002). Only the female versions of this shrub produce fruit, and they do not produce them until they are 10-20 years old, yet if un eaten these fruits remain on the branches for 2-3 years and produce them annually (Ashley, 2014). Mammals such as mule (Figure 3) and white-tailed deer, rodents, and rabbits use it for shelter, fawning (for deer), and for fair winter forage (Scher, 2002).



Figure 1: Mature Rocky Mountain Juniper - Photo by Leslie McLachlan, Utah State University Forestry Extension (Scher, 2002)



Figure 2: Distribution of Rocky Mountain Juniper from USGS ("Atlas of United States Trees" by Elbert L. Little, Jr. (Bressette, 2014)



Figure 3: Mule deer use Rocky Mountain Juniper as browsing nutrition throughout the seasons - Photo by Helana Priestley (2023)



Figure 4: American Robins eating the female Rocky Mountain Juniper fruits that are available as winter forage - Photo by John Ashley (2014)

How Humans Have Used This Shrub

The berries of this juniper tree are edible to humans, yet also used medicinally for digestive issues when made into a tea (Parish et al., 2018). Both this variety and the common juniper have tough wood that is suitable for woodworking such as bows and utensils; other parts of the shrub such as the leaves and their boughs are used for medicine (Parish et al., 2018). This shrub has benefits such as drought tolerance, dense branches for wind breaking, cold resistance, and makes for effective soil erosion control (Scher, 2002).



Figure 2: Example of proposed signage to be placed within the Heritage Garden at CWU's Wildcat Farm

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