

**MOOSE BROWSE at VAIL PUBLIC LIBRARY**

Report date: 10 Oct 2023  
 Location: Vail Public Library (VPL), 292 W. Meadow Drive, Vail CO 81657  
 Date range of moose activity: circa 2012 to Oct 2022  
 Report for: Cultural Heritage Committee – Town of Vail  
 Report by: Lynn Albers, VPL Local History & Ethnobotany Specialist

**PURPOSE:**

This informal brief contains casual observations of moose browsing activity on the greenscape of Vail Public Library in Vail, Eagle County, Colorado.

**LOCALE:**

Vail Public Library (VPL) is located at the confluence of Middle Creek and Gore Creek near Lionshead Village within the community of Vail, Colorado. Gore Creek is a major tributary of the Eagle River, which in turn, is a major tributary of the Colorado River in western Colorado. Sitting squarely within the Rocky Mountain physiographic region, Vail is found in eastern Eagle County at approximately 8150 feet in elevation. The Gore Range rises to the east of Vail. Southwest of Vail, the northern Sawatch Range is home to Mount of the Holy Cross (approximately 14,005 feet), which is the highest point in Eagle County.

**VPL LOCAL FLORA:**

Nestled within the transitional ecotone between montane and subalpine vegetation life zones, Vail Public Library (VPL) greenscape includes a small, native plant riparian ecosystem. Nearby is a willow (*Salix* spp.) dominated .5 acre wetlands zoned as Town of Vail “Natural Area Preservation.” The dominant native tree at VPL is *Picea engelmannii* (Engelmann spruce); *Pinus contorta* (lodgepole pine) also occurs. Gregg Barrie, Senior Landscape Architect for the Town of Vail, has integrated naturally-occurring native plants (trees, shrubs and herbaceous) and native riparian species with nursery stock native cultivars (primarily shrubs and trees).

There are approximately 25 native shrub and herbaceous species (from 21 or more different plant families) on the VPL greenscape and adjacent Gore Creek Trail. Most of these plants have been documented as moose browse. These moose browse species are noted in the attached list, which was casually created during strolls around the library grounds. A couple of the species are identified to genus only. Despite conscientious mitigation efforts by Barrie and staff, invasive species periodically sneak into the area.

**SHIRAS MOOSE:**

Shiras moose (*Alces americanus shirasi* Nelson) are a smaller subspecies of the Alaskan moose, *Alces alces*. They inhabit the Rocky Mountains in southern Alberta, southeastern British Columbia,

Washington, Idaho, Montana, Wyoming, Utah and Colorado. Shiras moose often prefer *Populus tremuloides* (aspen) and conifer forests during summer and *Salix* spp. (willow) dominant riparian deciduous shrub communities during winter. In 1978, the Colorado Division of Wildlife (DOW; now Colorado Parks & Wildlife), released shiras moose into Colorado's North Park.

### **SHIRAS MOOSE in EAGLE COUNTY:**

According to Bill Heicher, retired Colorado DOW game warden for the Brush Creek area, moose ranged into Eagle County in the early 1980s. Moose were seen near Piney Lake and in the Piney River area north of Vail. Bill Andree, who was the longtime DOW game warden for the Gore Creek area, noted that the first documented moose sighting occurred in 1982 or 1983 in the Vail Village Parking structure. By the late 1990s, shiras moose were established (breeding and producing off-spring) in the Piney Lake area. By 2005, moose were established at both Piney Lake and the Brush Creek area south of Eagle.

Today, shiras moose is well established in Eagle County and the county's associated Colorado Parks & Wildlife Game Management Units.<sup>1</sup> Moose have adapted well to Colorado mountains and foothills and are now found throughout their waterways, wetlands and moose-loving plant communities.

### **VPL MOOSE BROWSE OBSERVATION:**

Moose visiting Vail Public Library (VPL) greenscape browse both naturally-occurring native shrub species and nursery stock native shrubs.

- Jo Norris, a VPL staff member, recalls moose at VPL prior to 2012. She noted that cows tended to browse on the west side of the building, while bulls preferred the Middle Creek area to the east.
- On 24 May 2019, Mary McDougall, VPL staff member, reported a cow moose with calf browsing on *Betula occidentalis* (water birch) outside her westside office window.
- On 20 Nov 2019, VPL staff members Jackie Clark and Lynn Albers, observed a young bull moose browsing on *Symphoricarpos rotundifolius* (mountain snowberry).
- On 26 July 2021, Norris noted a young bull moose browsing on *Cornus sericea* (red osier dogwood).
- On 21 Oct 2022, VPL staff members Norma Broten and Liz Sein, reported a cow moose browsing on *Ribes inerme* (mountain gooseberry), *Rosa woodsii* (wild rose), *Cornus sericea* (red osier dogwood) and *Acer negundo* (box elder aka Manitoba maple).

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<sup>1</sup> CO Parks & Wildlife Game Management Units (GMU) are organized along biological rationale and often do not align with political boundaries (BH email Oct 2023). Primary Eagle County GMUs include: GMU 25, GMU 35, GMU 36, GMU 44, GMU 45 and GMU 444. GMU 15, GMU 43 and GMU 47 also coincide with Eagle County.

# COLORADO NATIVE PLANTS at VAIL PUBLIC LIBRARY

\*These genera are documented moose (*Alces alces*) browse.

<u>Scientific name</u>	<u>Common name</u>	<u>Plant family</u>
* <i>Abies lasiocarpa</i> var. <i>bifolia</i>	silver fir	Pinaceae (pine family)
* <i>Acer negundo</i>	box elder	Sapindaceae (soapberry family)
* <i>Alnus incana</i> subsp. <i>tenuifolia</i>	thinleaf alder	Betulaceae (birch family)
* <i>Amelanchier alnifolia</i>	serviceberry	Rosaceae (rose family)
<i>Aquilegia coerulea</i>	RM blue columbine	Ranunculaceae (buttercup family)
* <i>Betula occidentalis</i>	water birch	Betulaceae (birch family)
<i>Cardamine cordifolia</i>	heartleaf bittercress	Brassicaceae (mustard family)
* <i>Chamerion angustifolia</i>	fireweed	Onagraceae (evening primrose family)
* <i>Cornus sericea</i>	red osier dogwood	Caprifoliaceae (honeysuckle family)
* <i>Epilobium</i> spp.	small willow herb	Onagraceae (evening primrose family)
* <i>Equisetum arvense</i>	field horsetail	Equisetaceae (horsetail family)
<i>Geranium richardsonii</i>	Richardson's geranium	Geraniaceae (geranium family)
* <i>Heracleum maximum</i>	cow parsnip	Apiaceae (carrot/parsley family)
* <i>Juniperus communis</i>	shrubby juniper	Cupressaceae (cypress family)
* <i>Lonicera involucrata</i>	twinberry	Caprifoliaceae (honeysuckle family)
* <i>Mahonia repens</i>	Oregon grape root	Berberidaceae (barberry family)
<i>Maianthemum stellatum</i>	wild lily-of-the-valley	Asparagaceae (asparagus family)
<i>Mertensia ciliata</i>	chiming bells	Boraginaceae (borage family)
<i>Oenothera elata</i>	western evening primrose	Onagraceae (evening primrose family)
* <i>Picea engelmannii</i>	Engelmann spruce	Pinaceae (pine family)
* <i>Pinus contorta</i>	lodgepole pine	Pinaceae (pine family)
* <i>Populus tremuloides</i>	aspen	Salicaceae (willow family)
* <i>Potentilla fruticosa</i>	shrubby cinquefoil	Rosaceae (rose family)
* <i>Prunus virginiana</i> var. <i>melanocarpa</i>	chokecherry	Rosaceae (rose family)
* <i>Ribes cereum</i>	wax currant	Grossulariaceae (gooseberry family)
* <i>Ribes inerme</i>	mountain gooseberry	Grossulariaceae (gooseberry family)
* <i>Rosa woodsii</i>	wild rose	Rosaceae (rose family)
<i>Sidalcea candida</i>	white checkermallow	Malvaceae (mallow family)
* <i>Salix</i> spp.	willow	Salicaceae (willow family)
* <i>Sambucus racemosa</i> var. <i>microbotrys</i>	red elderberry	Adoxaceae (moschatel family)
* <i>Senecio triangularis</i>	arrowleaf senecio	Asteraceae (sunflower family)
* <i>Symphoricarpos rotundifolia</i>	mountain snowberry	Caprifoliaceae (honeysuckle family)

**SELECT RESOURCES:**

2023 Colorado Big Game. Colorado Parks & Wildlife.

<https://cpw.state.co.us/documents/rulesregs/brochure/biggame/biggame.pdf>

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<https://coloradosun.com/2023/10/06/human-moose-conflicts-in-colorado/>

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