

Scrub birch—willow—kinnikinnick

Description: Shrub-carrs

There are two other shrub-carr types in BC that are described in other accounts

Grey-leaved willow — glow moss (Sc02)

Barclay willow—arrow-leaved groundsell— Valerian (Sc03)

Shrub-carrs were traditionally described as wetlands, but more recently classifiers have grouped them along with moist meadows as transitional associations. These are cold sites, usually adjacent to small streams and wetlands, which are important in providing a continuous sub-surface flow of water, thus maintaining riparian and surface moisture levels.

The scrub birch—willow—kinnikinnick plant community is dominated by shrubs < 2 m in height, usually as a mix of scrub birch, various short stature willow species, with kinnikinnick in the herb layer. Mat Muhly, slender wheatgrass, field sedge, Baltic rush, and strawberry are common in the understory. Adjacent wetlands and small streams are typically vegetated in tufted hairgrass, slimstem reedgrass, field sedge or beaked/water sedge. This is the driest of the shrub-carr community types.



A shrub-carr adjacent to a tufted hairgrass meadow in the west Chilcotin area.

Location: Common in cold, frost prone drainages in the west Cariboo, the Chilcotin and the northern boreal.

Representative Reference Area:

Christiansen West.

Adjacent to Morrison Meadow tufted hairgrass site.

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BEC Correlation Sc 01

<i>IDFdc</i>	<i>MSdc</i>	<i>BWBS</i>	<i>SBPSv</i>
<i>Sc o1</i>	<i>Sc 01</i>	<i>Sc 01</i>	<i>Sc 01</i>

Site Characteristics

Soil:

Cold, moist, seasonally saturated, fine textured brunisols and gleysols.

Elevation range:

Above 1100 m

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Seral Stages

PNC Climax and Late Seral



A mixed scrub birch—willow shrub-carr adjacent to a small sub-alpine stream in the South Potato Mountains.



A scrub birch—willow shrub-carr Christiansen West shrub range reference area. Mixed birch—willow.

Scrub birch—willow—kinnikinnick

Plant Community PNC	
Species	Canopy cover (%)
Scrub birch	30-70
Willow	30-70
Kinnikinnick	1-10
Mat Muhly	2
Slender wheatgrass	2
Field sedge	2
Baltic rush	2
Strawberry	1

Productivity

90 – 200 kg/ha not including the shrubs

Range Management consideration

These are cold sites with short growing seasons. The soils are subject to compaction and trampling damage if grazed when wet. Slender wheatgrass has a slow carbohydrate recovery compared to most other grasses and is therefore susceptible to overgrazing if grazed every year.

Properly Functioning condition

Sites rate as properly functioning.

Mid-Seral

In mid-seral conditions caused by grazing, there is a reduction in the height and cover of the shrub layer as browsing, trampling and soil compaction take their toll. Mat Muhly, because of its low growing points, is initially more resistant to grazing use than is slender wheatgrass and increases in cover. Slender wheatgrass drops out of the community. As the sites continues to dry, strawberry will increase, and encroachment by oat grass, bluegrasses, dandelions and yarrow may occur.

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A mixed scrub birch—willow community that has been heavily grazed and browsed. Shrubs are more widely spaced and shorter-statured than in the PNC.

Plant Community Mid-seral	
Species	Canopy cover (%) in comparison to PNC
Scrub birch	-
Willow	-
Kinnikinnick	+
Muhly	+
Field sedge	-
Strawberry	+
Baltic rush	+
Bluegrasses	+
Dandelions	+
Oatgrass	+
Pussytoes	+

Productivity

90-250 kg/ha depending on the amount of bluegrass.

Range Management consideration

These sites should be rested from grazing at least every second year to allow an improvement in vigour and incorporation of litter

Properly Functioning condition

These sites will rate as moderately at risk because of soil compaction and the development of a shallower rooted plant community and loss of vertebrate habitat.

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Early-Seral



This shrub-carr adjacent to a small stream has been dried and altered by grazing, soil compaction and stream incision. Shrubs are shorter and more sparse than at PNC. The space between shrubs is vegetated in bluegrasses and pussytoes.

Plant Community Early Seral	
Species	Canopy cover (%) in comparison to PNC
Scrub birch	-
Willow	-
Kinnikinnick	+
Muhly	-
Baltic rush	-
Strawberry	+
Bluegrasses	++
Dandelions	++
Oatgrass	+
Pussytoes	++
Yarrow	+
Bare soil	++

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Productivity

< 90 kg/ha

Range Management consideration

Consider resting these sites from grazing for 3 to 5 years to rebuild surface litter and restore vigour to plants.

Properly Functioning condition

Sites rate as high risk to non-functional because of soil compaction, bare soil and the potential for soil erosion with a high rainfall or runoff event.