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| Ecological Site Description ID: | R236XY104AK—Western Alaska Maritime Dwarf Scrub Loamy Slopes, High Elevation |
| Ecological Dynamics of the Site: | |
| <p>This western Alaska maritime ecological site is on upland mountain summits and shoulders. This site is typically 118 to 3,258 feet above sea level with slopes of 1 to 50 percent. Slope aspect does not appear to influence the plant community dynamics of this site because it occurs on all aspects.</p> <p>This ecological site is correlated to soil component D36-Western maritime dwarf scrub residual slopes. Soil characteristics that are likely to influence plant community dynamics include the cryic soil temperature regime, the udic moisture regime with slow permeability to a depth of 40 inches, and a moderately acidic or slightly acidic (pH 4.4 to 5.8) first mineral horizon. Lithic bedrock commonly is at a depth 25 to 67 inches. The soils are well drained and have a high runoff potential. The annual precipitation is 23 to 70 inches, and the annual frost-free period is 80 to 135 days. The parent material is herbaceous organic material over gravelly cryoturbate over residuum derived from igneous, metamorphic, and sedimentary rock.</p> <p>The reference community phase is typified by scrubland consisting of dwarf shrubs with some dense lichens. Because of the wind exposure in these convex, high areas, this ecological site supports only low-lying vegetation. Three other ecological sites are on western Alaska upland mountains, but they are in different positions on the mountains. R236XY102AK (Western Alaska Maritime Dwarf Scrub Gravelly Slopes) is in depressions, and R236XY105AK (Western Alaska Maritime Mosaic Loamy Slopes) and R236XY106AK (Western Alaska Maritime Dwarf Scrub Loamy Slopes, Dry) are on backslopes and footslopes. The reference community phase of these ecological sites is visually distinct from that of this ecological site. This could be due to a variety of factors, including an absence of a lithic contact, less organic material in the surface layer, higher soil permeability rate, and exposure to extreme climatic elements on the summits and shoulders. The reference community phase of site R236XY102AK is similar to that of this ecological site; however, this site is in exposed areas on mountains, where plants tend to be stunted and surface rock fragments are evident. The vegetation on site R236XY102AK commonly forms dense shrub hummocks, which are not present on this site.</p> <p>No known major disturbance regime is associated with this ecological site; thus, only a reference community phase is described. Erosion due to wind exposure is common in these exposed areas, but this results in a patchy community rather than an early erosional community phase. Variations in plant richness and cover can occur in similar landform positions of this ecological site. The overall plant species assemblage, however, is similar in all areas of the site.</p> <p>No alternative states for this ecological site have been observed.</p> <p>This report provides baseline vegetation inventory data for this site. Future data collection is needed to provide further information about existing plant communities and the disturbance regimes that would result in transitions from one community to another.</p> | |

State and Transition Diagram:

Western Alaska Maritime Dwarf Scrub Loamy Slopes, High Elevation

R236XY104AK

1. Reference State

1.1.
Black crowberry–bog blueberry–marsh Labrador tea–
alpine azalea–lingonberry–arctic willow/lichen scrubland



LEGEND
1.1a = Wind erosion

Ecological Site Description for Bristol Bay-Northern Alaska Peninsula, North and Bordering Areas, Alaska

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| Phase 1.1 |  | | |
| Community Phase Number: | 1.1 | Community Phase Name: | Black crowberry-bog blueberry-marsh Labrador tea-alpine azalea-lingonberry-arctic willow/lichen scrubland |
| Community Phase Narrative: | | | |
| <p>The reference community phase for this ecological site is characterized by scrubland consisting of low-lying shrubs interspersed with patches of lichen. Annual plant production on these summits and shoulders is visually estimated to be low and occurs primarily among shrubs. A typical area of this community consists of various low and dwarf shrubs, including black crowberry (<i>Empetrum nigrum</i>), dwarf birch (<i>Betula nana</i>), bog blueberry (<i>Vaccinium uliginosum</i>), alpine azalea (<i>Loiseleuria procumbens</i>), alpine bearberry (<i>Arctostaphylos alpina</i>), and arctic willow (<i>Salix arctica</i>). Hardy graminoids such as Bering Sea sedge (<i>Carex microchaeta</i> ssp. <i>nesophila</i>) may also be present. Interspersed between shrubs are areas of lichens (total mean cover ~46 percent), commonly snow lichen (<i>Stereocaulon</i> spp.) and reindeer lichen (<i>Cladonia</i> spp.). Other cover generally includes mosses (~10 percent cover), herbaceous litter (~26 percent), and woody litter (~2 percent). Wind-scoured areas of surface rock fragments (mean ~14 percent cover, maximum ~60 percent) and bare soil (~2 percent) typically are also present.</p> | | | |

Community Phase Canopy Cover

(Vegetation data in the table are provided as constancy (percent) and average canopy cover (percent) of the most dominant and ecologically relevant species for this community phase.)

| Plant group | Common name | Scientific name | USDA plant code | Constancy (percent) | Average canopy cover (percent) |
|-------------|----------------------|---|-----------------|---------------------|--------------------------------|
| S | Bog blueberry | <i>Vaccinium uliginosum</i> | VAUL | 100.0 | 10.9 |
| S | Black crowberry | <i>Empetrum nigrum</i> | EMNI | 94.7 | 24.9 |
| S | Alpine azalea | <i>Loiseleuria procumbens</i> | LOPR | 94.7 | 6.9 |
| S | Lingonberry | <i>Vaccinium vitis-idaea</i> | VAVI | 94.7 | 4.6 |
| S | Dwarf birch | <i>Betula nana</i> | BENA | 89.5 | 6.5 |
| S | Marsh Labrador tea | <i>Ledum palustre ssp. decumbens</i> | LEPAD | 89.5 | 7.9 |
| S | Alpine bearberry | <i>Arctostaphylos alpina</i> | ARAL2 | 79.0 | 4.4 |
| S | Arctic willow | <i>Salix arctica</i> | SAAR27 | 57.9 | 4.1 |
| G | Bering Sea sedge | <i>Carex microchaeta ssp. nesophila</i> | CAMIN | 52.6 | 6.5 |
| L | Lichens [^] | Various species | 2LICHN | 100.0 | 45.9 |

[^] Lichens are grouped together; they are not sorted by species.

Community Pathways

| Pathway Number | Pathway Name & Description |
|----------------|---|
| 1.1a | <p>Wind erosion.</p> <p>Wind erosion occurs in these exposed areas, but it results in community patchiness rather than an early erosional community phase. Wind events may remove patches of lichens and individual shrubs, but enough shrubs, lichens, and surface rock fragments remain to still be described as the reference community phase. Community patchiness, seen as minor variations in plant assemblage richness or cover, generally occurs on similar landform positions within this ecological site. The overall plant species assemblage on the summits and shoulders, however, is similar for all areas of the site.</p> |

This report is interim and subject to change.