

## Gravelly Mountains, Acid (M135A\_303)

### Ecoregion Classification

**Section:** Alaska Mountains (M135A)

**Subsection(s):** Alpine Flood Plains & Terraces & Fans (M135A.V1)

Alpine Mountains (M135A.M2)

Boreal Outer Range & Kantishna Hills (M135A.M1L)

Alpine Outer Range & Kantishna Hills (M135A.M1)

### Physiographic Features

**Elevation (meters):** *RV* *Range*  
 768                      301 to 1,554

**Slope Gradient (percent):**    26                      3 to 70

**Aspect (clockwise direction):** non-influencing

**Landform:** flood plains on alluvial fans; flood plains on alluvial fans on mountains; mountains

**Landform Positions:** backslopes; footslopes

	<i>Frequency</i>	<i>Duration</i>	<i>Beginning Month</i>	<i>Ending Month</i>
<b>Flooding:</b> None to occasional	Brief		May	Sep

**Ponding:**        None

### Climatic Features

**Annual Precipitation (millimeters):** *RV* *Range*  
 800                      358 to 2,466

**Annual Air Temperature (°C):**                      -4.3                      -10.7 to -2.4

**Frost Free Days:**    62                      50 to 80

### Soil Features

**Parent Materials:** sandy and silty alluvium over sandy and gravelly alluvium  
 sandy and silty alluvium over sandy and gravelly alluvium derived from diorite  
 silty eolian deposits over gravelly colluvium derived from schist  
 silty eolian deposits over gravelly colluvium derived from volcanic and sedimentary rock

**Rooting Depth (cm):** *RV:* 35    *Range:* 4 to 58

### Soil Layers and Properties within Representative Rooting Depth:

Layers are described from the surface downward. If more than one texture is listed, the predominant texture is listed first. AWC = available water capacity. CEC = cation exchange capacity.

<b>Thickness</b> (cm)	<b>Texture</b>	<b>Permeability</b>	<b>AWC</b> (cm/cm)	<b>pH</b>	<b>Effective CEC</b> (me/100g)	<b>CEC</b> (me/100g)
2 to 9	slightly decomposed plant material; moderately decomposed plant material	moderately rapid	.34	3.8 to 7.2	30	80
2 to 21	silt loam	moderate or moderately rapid	.14 to .26	3.8 to 7.8	6 to 15	20
5 to 25	very channery loam; extremely gravelly coarse sand	moderate to rapid	.03 to .20	4.8 to 8.3	5 to 6	2

**Restrictive Features:** bedrock (paralithic) at 84 to 150 cm or more  
 strongly contrasting textural stratification at 11 to 30 cm

**Water Table (May to September):** none

**Drainage Class:** excessively drained to well drained

## Vegetation Features

### Common Vegetation Types:

#### Vegetation Type

Green alder/red current/bluejoint scrub

#### Ecological Status

Climax plant community

### Ecological Status-Transition Description:

A single plant community with green alder/red current bluejoint scrub is identified on this site. No transitional pathways to other communities have been identified for this site.

### Vascular Plant Species Richness:

Vascular plant species richness is based on 1999-2002 field season data only. Data from 1997 and 1998 were not used in the calculations.

Vegetation Type	Per Stand			Number of Stands
	Total	Min.	Avg.	
Green alder/red current/bluejoint scrub	70	10	20	8

### Characteristics of Green alder/red current/bluejoint scrub

**Ecological Status:** Climax plant community

### Plant Species Cover, Constancy, and Importance:

Cover, constancy, and importance are based on 1997-2002 field season data. Number of stands sampled = 16. Only those vascular, lichen, and bryophyte species with average cover >=5% and constancy >=15% are listed.

Stratum	Symbol	Scientific Name	Percent Canopy Cover			Percent Constancy	Importance Value
			Min.	Avg.	Max.		
SM-ST	ALVIC	Alnus viridis ssp. crispa	60.0	82	95	88	85
SL-SM	RITR	Ribes triste	0.1	10	40	75	27
SL-SM	SPST3	Spiraea stevenii	0.1	5	10	88	21
SD-SL	VAUL	Vaccinium uliginosum	0.1	16	35	31	22
GM-GT	CACA4	Calamagrostis canadensis	0.1	36	80	100	60
FD-FT	ARTI	Artemisia tilesii	0.1	5	15	25	11
FD-FM	RUAR	Rubus arcticus	0.1	7	35	44	18
FD	LYAN2	Lycopodium annotinum	0.1	8	30	44	19
FD	COCA13	Cornus canadensis	0.1	6	40	56	18
L	LICHEN	total lichens	0.0	1	5	100	10
M	MOSS	total bryophytes-mosses and liverworts	0.0	22	90	100	47
M1	PLSC70	Pleurozium schreberi	5.0	33	90	19	25
M1	ZZMOSS	unknown-mosses	2.0	14	35	38	23
M1	HYSP70	Hylocomium splendens	5.0	9	15	31	17
B	LITTER	litter-herbaceous, mulch, and woody debris <2.5 cm	5.0	69	95	100	83
B	LITTER2	litter-woody debris >2.5 cm	0.0	5	15	100	22
B	SOIL	mineral-bare soil	0.0	0	5	100	0
B	ROCK	mineral-surface rock fragments	0.0	0	5	100	0
B	WATER	water	0.0	0	0	100	0

### Stratum Height:

Stratum height is based on 1997-2002 field season data. All plant species and ground layer records from all stands are included in the calculations.

Stratum Name	Included Strata	Height			Units	Number of Records
		Min.	Avg.	Max.		
Trees	TT, TM, TS	4.0	9.6	20.0	m	9
Tree regeneration	TR	1.0	1.0	1.0	m	1
Tall shrubs	ST	3.0	3.8	5.5	m	11
Medium shrubs	SM	1.0	2.2	3.0	m	11
Low shrubs	SL	30.0	62.7	100.0	cm	15
Dwarf shrubs	SD	1.0	7.9	10.0	cm	11
Tall and medium grasses and grass-like	GT, GM	100.0	125.0	150.0	cm	4
Tall and medium forbs	FT, FM	20.0	24.7	50.0	cm	19
Dwarf herbs, lichens, and bryophytes	GD, FD, L, M	1.0	7.0	10.0	cm	20

### Site Tree Measurements:

Only dominant, codominant, and open grown trees were measured. Height of Measurements = height above ground at which age and diameter was measured. G = ground level, B = breast height (ca 1.5 m).

Tree Species	Age (years)	Diameter (cm)	Height (m)		Number of Trees	Height of Measurements
Picea glauca	102	33.0	12.8	Min.	1	B
	102	33.0	12.8	Avg		
	102	33.0	12.8	Max.		

### Mapunit Components

#### Common Name (Soils Name):

Subalpine-riparian scrub gravelly diorite flood plains (Typic Cryorthents, sandy-skeletal)

Subalpine-riparian scrub gravelly fan terraces (Typic Cryorthents, sandy-skeletal)

Subalpine-scrub gravelly colluvial slopes (Typic Dystrocryepts, loamy-skeletal)

Subalpine-scrub gravelly schist colluvial slopes (Typic Dystrocryepts, loamy-skeletal)

### Soil Map Units

Only those map units in which the landtype is a major component are listed. The landtype also may occur as a minor component in other map units.

#### Symbol: Common Name (Soils Name):

5MS21	Boreal and Subalpine Schist Mountains with Discontinuous Permafrost (Humic Cryaquepts, loamy-skeletal-Typic Dystrocryepts, loamy-skeletal-Typic Historthels, loamy-skeletal Association, 10 to 50 percent slopes)
7AF2	Alpine and Boreal Alluvial Fans (Typic Haplogelods, sandy-skeletal-Typic Cryorthents, sandy-skeletal Association, 10 to 25 percent slopes)
7SA31	Subalpine Mountains (Typic Dystrocryepts, loamy-skeletal-Oxyaquic Eutrocryepts, coarse-loamy-Typic Haplogelods, loamy-skeletal Association, 8 to 70 percent slopes)
7V1B	Alpine and Subalpine Diorite Fans and Flood Plains with Discontinuous Permafrost (Typic Haplogelods, sandy-skeletal-Typic Historthels, coarse-loamy over sandy-skeletal-Typic Cryorthents, sandy-skeletal Association, 3 to 15 percent slopes)
8LMV	Alpine and Subalpine Schist Mountain Valleys (Typic Dystrocryepts, loamy-skeletal Association, 8 to 60 percent slopes)

### Geographically Associated Landtypes

#### M135A\_310—Gravelly Mountains, High Elevation:

This site occurs on ridges and higher slopes. The climax plant community is "White mountain avens-mixed ericaceous shrub dwarf alpine scrub."

#### M135A\_355—Gravelly Mountains, Warm:

This site occurs on slightly lower slopes. The climax plant community is "White spruce/green alder forest."

#### M135A\_405—Swales:

This site occurs on seasonally wet soils in swales. The climax plant community is "Green alder scrub mosaic."

### Similar Landtypes

#### M135A\_405—Swales:

This site occurs in upland swales and is not flooded. The climax plant community is "Green alder scrub mosaic."