Supplementary material to the paper Wells AF et al. Vegetation classification for northwestern Arctic Alaska using an EcoVeg approach: tussock tundra and low and tall willow groups and alliances. Vegetation Classification and Survey. DOI: 10.3897/VCS.65469

Supplementary material 5. Descriptions of preliminary (n = 4–9) and provisional (n ≥ 10) low/tall willow and tussock tundra plant associations from the Ecological Land Survey Legacy Database (ELD) Arctic Plant Association Classification, Alaska.

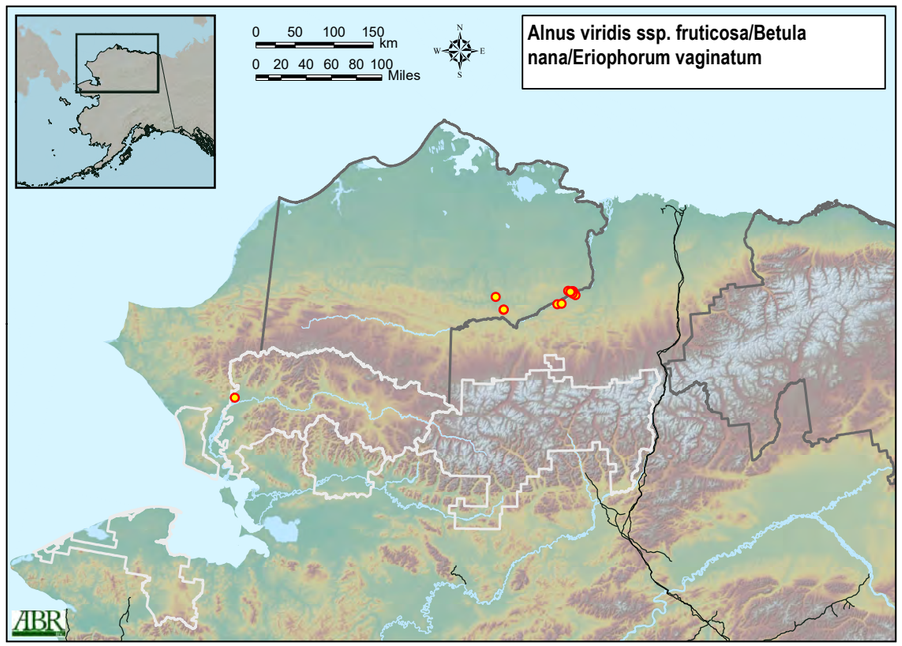
This supplementary material provides descriptions of the preliminary (n = 4−9) and provisional (n ≥ 10) low/tall willow and tussock tundra plant associations from the ELD Arctic Plant Association Classification, Alaska. *The plant associations are ordered alphabetically by code (e.g., ALNFRU/BETNAN/ERIVAG)*. The codes can be used to link the descriptions to the table of associations presented in supplementary material 6. Each description includes the following elements:

- Plant association code and title (separated by a colon),
- sample size (e.g., n = 14),
- the alliance that the plant association occurs in (top right on the first page each description),
- a narrative description,
- a map of the sample locations,
- representative photos,
- an environmental data summary table,
- a chart displaying the median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups, and
- a constancy/cover table.

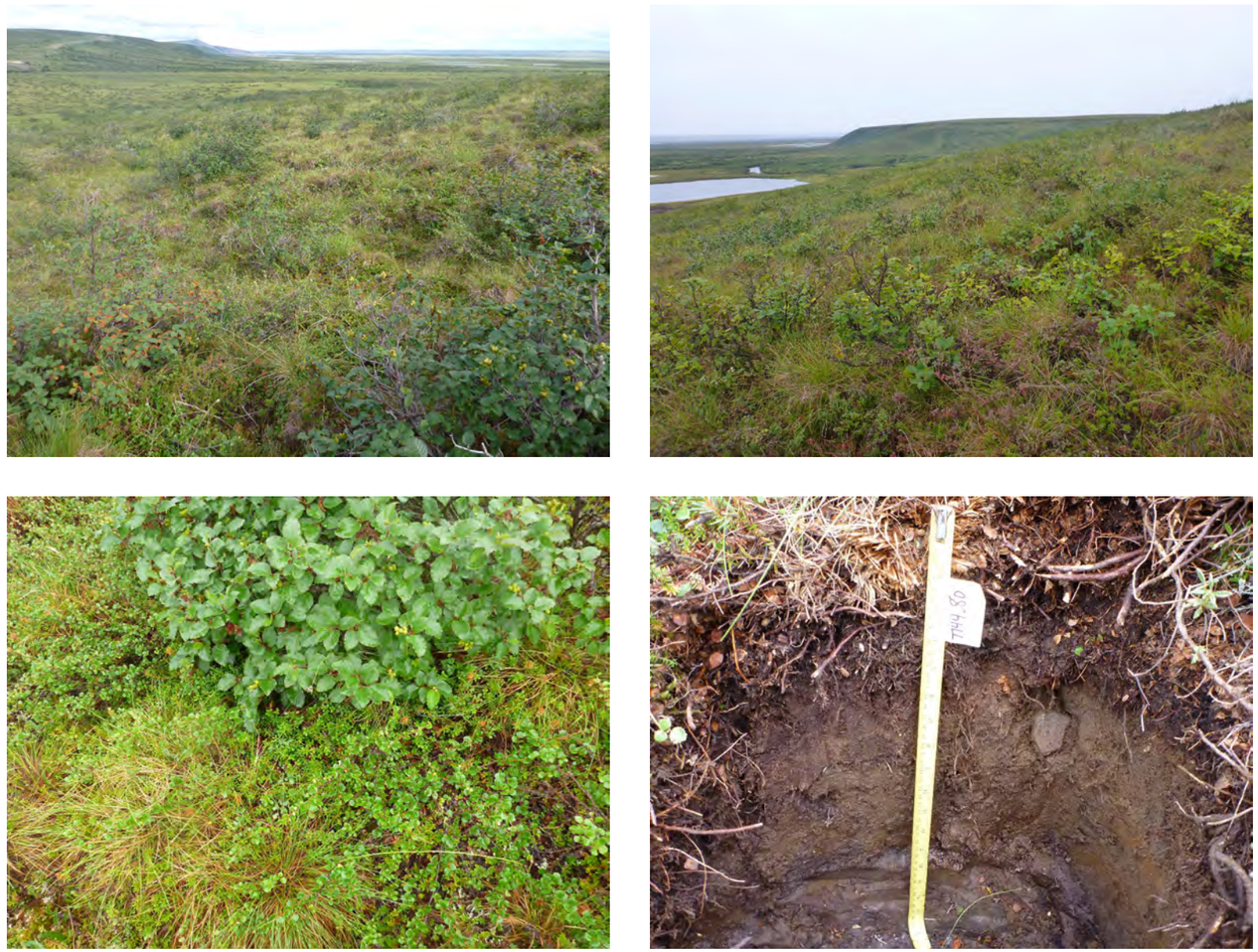
ALNFRU/BETNAN/ERIVAG: *Alnus viridis* ssp. *fruticosa*/*Betula nana*/*Eriophorum vaginatum* (*n* = 14)

A4344p: Arctic Acidic Shrub Tussock Tundra Alliance (proposed)

The plant association *Alnus viridis* ssp. *fruticosa*/*Betula nana*/*Eriophorum vaginatum* occurs in Upland physiography most commonly on the following geomorphic units: Hillside Colluvium; Solifluction Deposit; and Bogs. The average elevation in this plant association is 149 m (±35 m), and the slope gradient typically ranges between gently sloping and strongly sloping. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with Hummocks; Non-sorted Circles, boils and scars; and Peat mounds. Soils are poorly drained to somewhat poorly drained, surface organic thickness typically ranges from very thin to moderately thick, coarse fragments are rare, but when they do occur the average top depth is 24 cm (±0 cm), and permafrost was common with an average active layer thickness of 34 cm (±11 cm). Soil pH typically ranges from acidic to circumacidic, and the average electrical conductivity is 131 µS/cm (±128 µS/cm). The most common vegetation type is Open Mixed Low Shrub-Sedge Tussock Tundra. *Alnus viridis* ssp. *fruticosa* dominates the site, typically forming an open low shrub canopy, and *Eriophorum vaginatum* forms conspicuous tussocks with a cover of whole tussocks of at least 25%. *Betula nana* occurs between the tussocks at moderate to high cover, and often exhibits a dwarf shrub growth form. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Ledum palustre* ssp. *decumbens*, *Vaccinium vitis-idaea*, and *Vaccinium uliginosum*; the herbs *Pedicularis labradorica*, *Polygonum bistorta*, *Arctagrostis latifolia*, and *Carex bigelowii*; and the nonvasculars *Dicranum elongatum*, *Aulacomnium turgidum*, *Hylocomium splendens*, *Dactylina arctica*, and *Flavocetraria cucullata.* Throughout most of the Alaskan arctic, *A. viridis* ssp. *fruticosa* in this plant association exhibits a low shrub (0.2–1.5 m) growth form and a very open canopy, and the microtopography is commonly characterized by frost boils. However, in the southern arctic, *A. viridis* ssp. *fruticosa* sometimes exhibits a tall shrub (>1.5 m) growth form, canopies are generally more dense, and frost boils are less common.



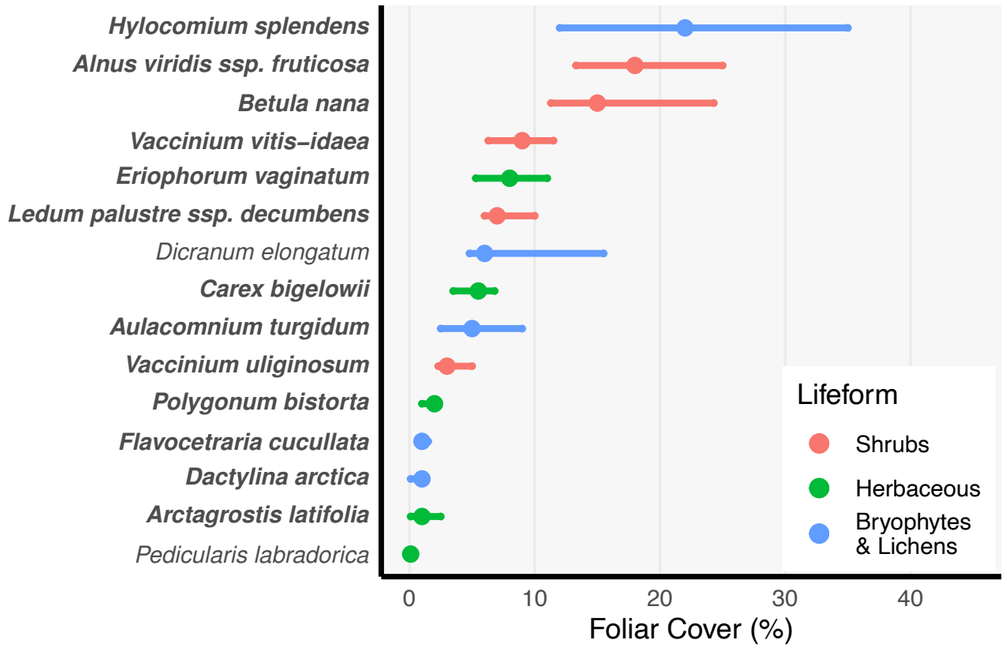
Distribution of *Alnus viridis* ssp. *fruticosa*/*Betula nana*/*Eriophorum vaginatum* in the study area.



Representative photos (if available) for *Alnus viridis* ssp. *fruticosa*/*Betula nana*/*Eriophorum vaginatum*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	149	35	105	157	187	14
Slope (degrees)	8	6	2	8	13	14
Surface Organic Thickness (cm)	13.1	11.4	3.0	9.5	28.0	14
Cumul. Org. Thickness (cm)	15.9	11.0	4.3	14.0	29.8	14
Depth to >15% Rock Fragments (cm)	24		24	24	24	1
Water Table Depth (cm)	-30	12	-42	-29	-20	4
Active Layer Thickness (cm)	34	11	24	33	40	14
Site pH	5.0	1.0	3.7	5.1	5.9	14
Electrical Conductivity (uS/cm)	131	128	40	80	318	14
Whole Tussock Cover (%)	22	16	8	20	34	14

Environmental data summaries for *Alnus viridis* ssp. *fruticosa*/*Betula nana*/*Eriophorum vaginatum*.



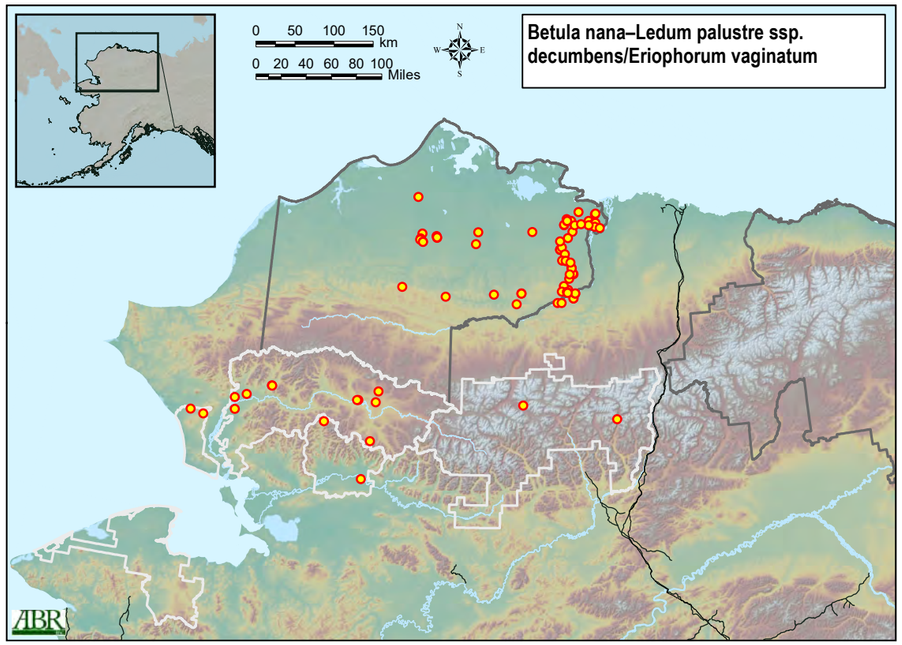
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Alnus viridis* ssp. *fruticosa*/*Betula nana*/*Eriophorum vaginatum*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

					Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	ALVIF	*Alnus viridis* ssp. *fruticosa*	100	21.1	10.8	12.0	18.0	36.4
Deciduous Shrubs	ARRU	*Arctostaphylos rubra*	50	5.9	5.3	1.8	3.0	11.2
Deciduous Shrubs	BENA	*Betula nana*	100	19.4	13.8	7.6	15.0	28.5
Deciduous Shrubs	SAPU15	*Salix pulchra*	93	5.9	7.6	1.2	3.0	8.6
Deciduous Shrubs	VAUL	*Vaccinium uliginosum*	100	4.6	4.8	1.3	3.0	6.0
Evergreen Shrubs	CATE11	*Cassiope tetragona*	86	2.4	1.8	0.1	2.0	4.0
Evergreen Shrubs	EMNI	*Empetrum nigrum*	79	7.3	6.2	3.0	5.0	15.0
Evergreen Shrubs	LEPAD	*Ledum palustre* ssp. *decumbens*	93	10.7	10.6	5.2	7.0	14.0
Evergreen Shrubs	VAVI	*Vaccinium vitis-idaea*	100	10.4	6.5	4.0	9.0	19.4
Forbs	POBIP2	*Polygonum bistorta* ssp. *plumosum*	79	1.3	0.9	0.1	2.0	2.0
Grasses	ARLA2	*Arctagrostis latifolia*	79	1.5	1.6	0.1	1.0	3.0
Sedges	CABI5	*Carex bigelowii*	71	5.2	2.9	1.8	5.5	8.2
Sedges	ERVA4	*Eriophorum vaginatum*	100	8.4	4.2	4.3	8.0	13.4
Mosses	AUTU70	*Aulacomnium turgidum*	79	8.7	10.3	1.0	5.0	20.0
Mosses	DIEL70	*Dicranum elongatum*	57	9.9	7.1	4.0	6.0	18.5
Mosses	HYSP70	*Hylocomium splendens*	93	24.9	15.7	10.4	22.0	48.0
Lichens	DAAR60	*Dactylina arctica*	86	1.0	0.6	0.1	1.0	1.0
Lichens	FLCU	*Flavocetraria cucullata*	79	1.2	1.0	0.1	1.0	3.0

Constancy and foliar cover data summaries for *Alnus viridis* ssp. *fruticosa*/*Betula nana*/*Eriophorum vaginatum*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

BETNAN–LEDDEC/ERIVAG: *Betula nana–Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum* (*n* = 77)

The plant association *Betula nana–Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum* occurs in Upland physiography most commonly on the following geomorphic units: Eolian Sand Sheet Upland; Frozen Upland Silt; and Upland Loess. The average elevation in this plant association is 126 m (±135 m), and the slope gradient typically ranges between flat and nearly level. This plant association was associated most commonly with the surface form High-centered, Low-relief Polygons, but is also regularly associated with Nonpatterned; Mixed pits and polygons; and High-centered, High-relief Polygons. Soils are poorly drained to somewhat poorly drained, surface organic thickness typically ranges from thin to moderately thick, coarse fragments are rare, but when they do occur the average top depth is 59 cm (±82 cm), dominant soil texture in the upper 40 cm is typically Organic-rich or Loamy, and permafrost was common with an average active layer thickness of 31 cm (±8 cm). Soil pH typically ranges from acidic to circumacidic, and the average electrical conductivity is 86 µS/cm (±75 µS/cm). The most common vegetation types include Open Mixed Low Shrub-Sedge Tussock Tundra and Tussock Tundra-Ericaceous. The vegetation is co-dominated by *Betula nana* and *Ledum palustre* ssp. *decumbens* which typically form an open low shrub canopy, and *Eriophorum vaginatum* forms conspicuous tussocks with a cover of whole tussocks of at least 25%. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix pulchra*, *Vaccinium vitis-idaea*, and *Cassiope tetragona*; the herbs *Arctagrostis latifolia*, *Carex bigelowii*, *Rubus chamaemorus*, and *Polygonum bistorta*; and the nonvasculars *Dicranum elongatum*, *Flavocetraria cucullata*, *Aulacomnium turgidum*, *Dactylina arctica*, and *Hylocomium splendens.*

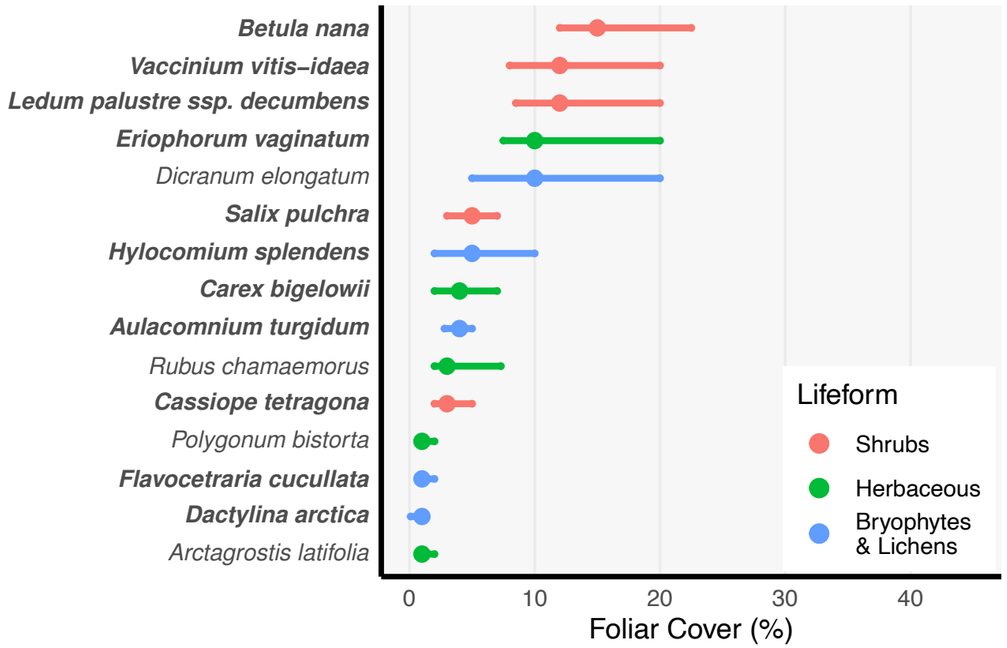


Distribution of *Betula nana–Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum* in the study area.

Representative photos (if available) for *Betula nana–Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	126	135	24	86	265	75
Slope (degrees)	1	2	0	1	4	76
Surface Organic Thickness (cm)	17.6	9.1	7.4	17.0	30.7	77
Cumul. Org. Thickness (cm)	20.5	8.6	10.6	20.7	30.0	76
Depth to >15% Rock Fragments (cm)	59	82	0	22	200	9
Water Table Depth (cm)	-27	9	-39	-30	-13	35
Active Layer Thickness (cm)	31	8	21	32	39	69
Site pH	5.3	0.7	4.3	5.4	6.2	75
Electrical Conductivity (uS/cm)	86	75	20	60	175	76
Whole Tussock Cover (%)	36	18	12	35	61	70

Environmental data summaries for *Betula nana–Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum*.



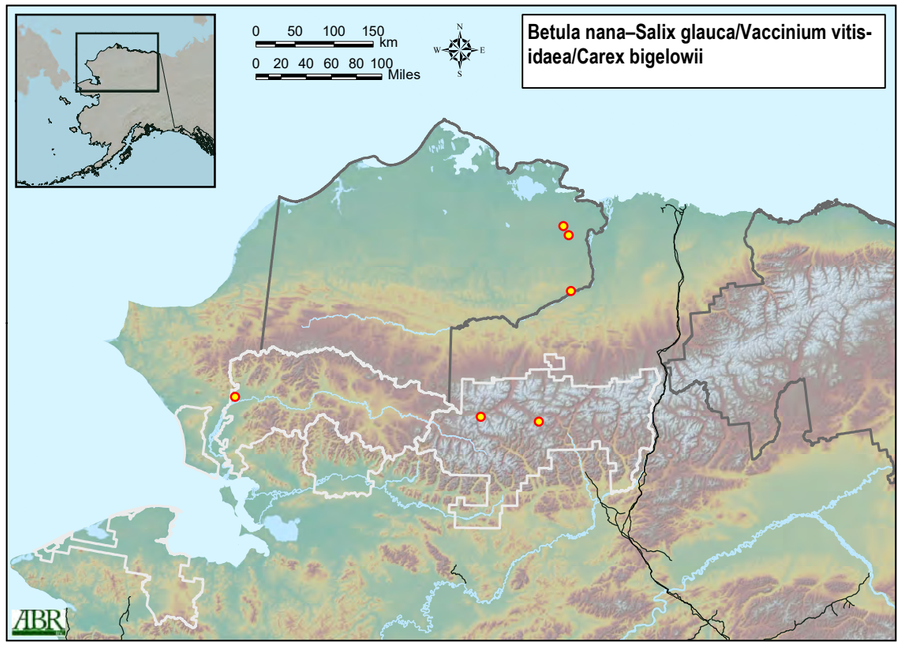
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Betula nana–Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	BENA	*Betula nana*	100	18.3	8.2	10.0	15.0	28.4
Deciduous Shrubs	SAPU15	*Salix pulchra*	93	5.7	3.3	2.0	5.0	10.0
Deciduous Shrubs	VAUL	*Vaccinium uliginosum*	53	4.2	5.1	1.0	2.0	8.2
Evergreen Shrubs	CATE11	*Cassiope tetragona*	80	3.3	2.1	1.0	3.0	5.0
Evergreen Shrubs	EMNI	*Empetrum nigrum*	67	3.2	2.6	1.0	2.0	5.1
Evergreen Shrubs	LEPAD	*Ledum palustre* ssp. *decumbens*	100	13.7	7.3	6.4	12.0	25.0
Evergreen Shrubs	VAVI	*Vaccinium vitis-idaea*	100	14.1	8.8	5.0	12.0	25.0
Forbs	RUCH	*Rubus chamaemorus*	64	5.0	4.7	1.0	3.0	10.0
Sedges	CABI5	*Carex bigelowii*	93	5.1	4.3	1.0	4.0	10.2
Sedges	ERVA4	*Eriophorum vaginatum*	100	14.1	9.4	5.0	10.0	25.0
Mosses	AUTU70	*Aulacomnium turgidum*	80	4.9	3.9	1.0	4.0	10.0
Mosses	DIEL70	*Dicranum elongatum*	55	14.6	14.0	3.0	10.0	35.0
Mosses	HYSP70	*Hylocomium splendens*	75	6.7	7.4	1.0	5.0	15.0
Lichens	DAAR60	*Dactylina arctica*	80	1.0	0.7	0.1	1.0	2.0
Lichens	FLCU	*Flavocetraria cucullata*	91	1.9	1.8	0.1	1.0	4.0

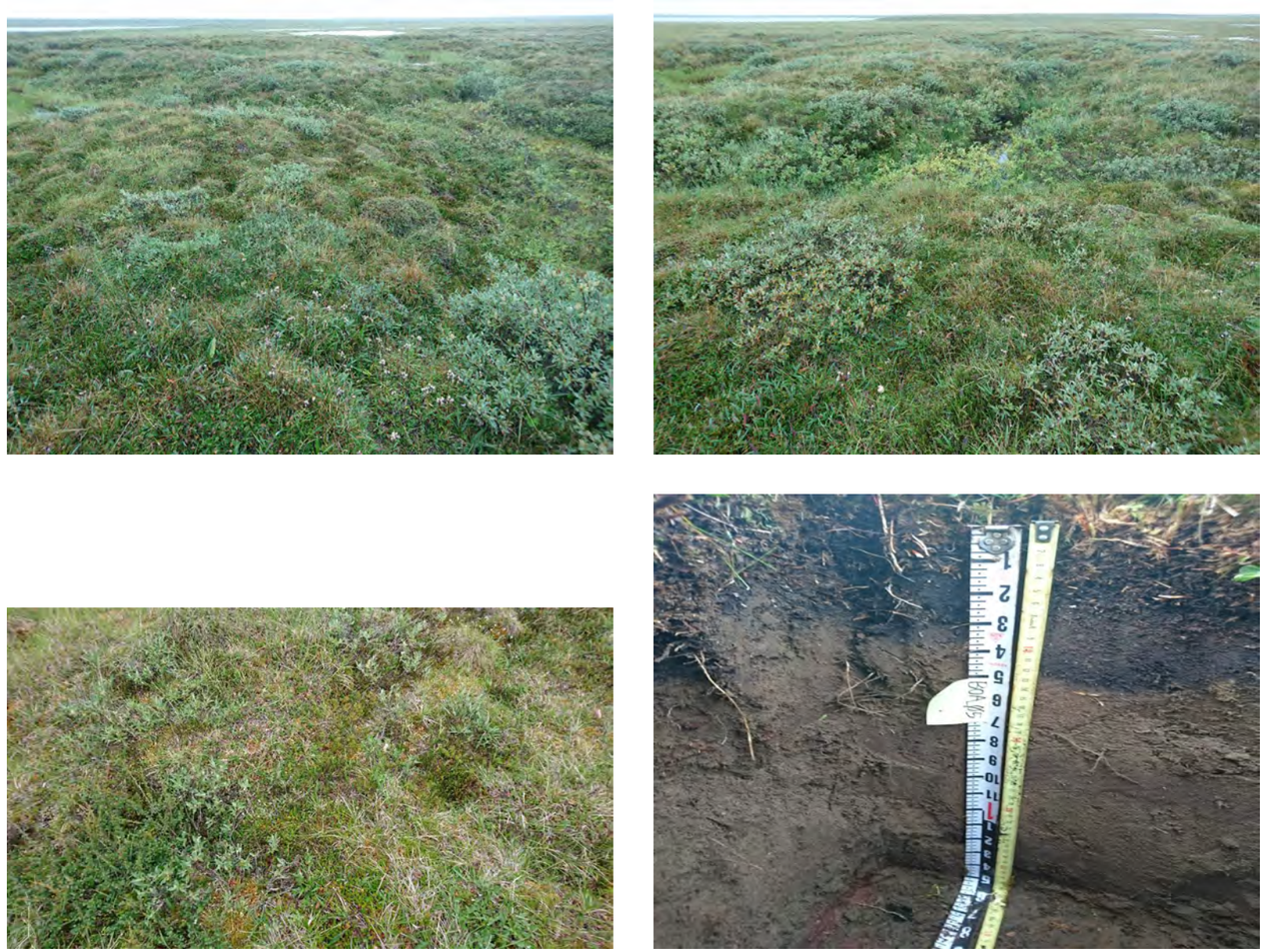
Constancy and foliar cover data summaries for *Betula nana–Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

BETNAN–SALGLA/VACVIT/CARBIG: *Betula nana–Salix glauca/Vaccinium vitis-idaea/Carex bigelowii* (*n* = 5)

The plant association *Betula nana–Salix glauca/Vaccinium vitis-idaea/Carex bigelowii* occurs in Upland physiography most commonly on the following geomorphic units: Hillside Colluvium; Drained Basin, ice-rich center; and Drained Lake Basin, pingo. The average elevation in this plant association is 407 m (±486 m), and the slope gradient typically ranges between gently sloping and strongly sloping. This plant association was associated most commonly with the surface form Non-sorted Circles, boils and scars, but is also regularly associated with High-centered, High-relief Polygons; High-centered, Low-relief Polygons; and Undifferentiated mounds. Soils are somewhat poorly drained to well drained, surface organic thickness is typically thin, coarse fragments are uncommon, but when they do occur the average top depth is 10 cm (±13 cm), dominant soil texture in the upper 40 cm is typically Clayey or Gravelly, and permafrost was common with an average active layer thickness of 46 cm (±18 cm). Soil pH typically ranges from acidic to circumalkaline, and the average electrical conductivity is 146 µS/cm (±111 µS/cm). The most common vegetation type is Open Low Shrub Birch-Willow. The vegetation is co-dominated by *Betula nana* and *Salix glauca* which typically form an open low shrub canopy, and *Vaccinium vitis-idaea* is always prevalent in the dwarf shrub layer. In the herbaceous layer, *Carex bigelowii* is consistently present at moderate cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix pulchra* and *Cassiope tetragona*; the herbs *Arctagrostis latifolia*, *Poa arctica*, *Polygonum bistorta*, and *Saussurea angustifolia*; and the nonvasculars *Rhytidium rugosum*, *Aulacomnium turgidum*, *Flavocetraria cucullata*, *Hylocomium splendens*, and *Peltigera aphthosa.*



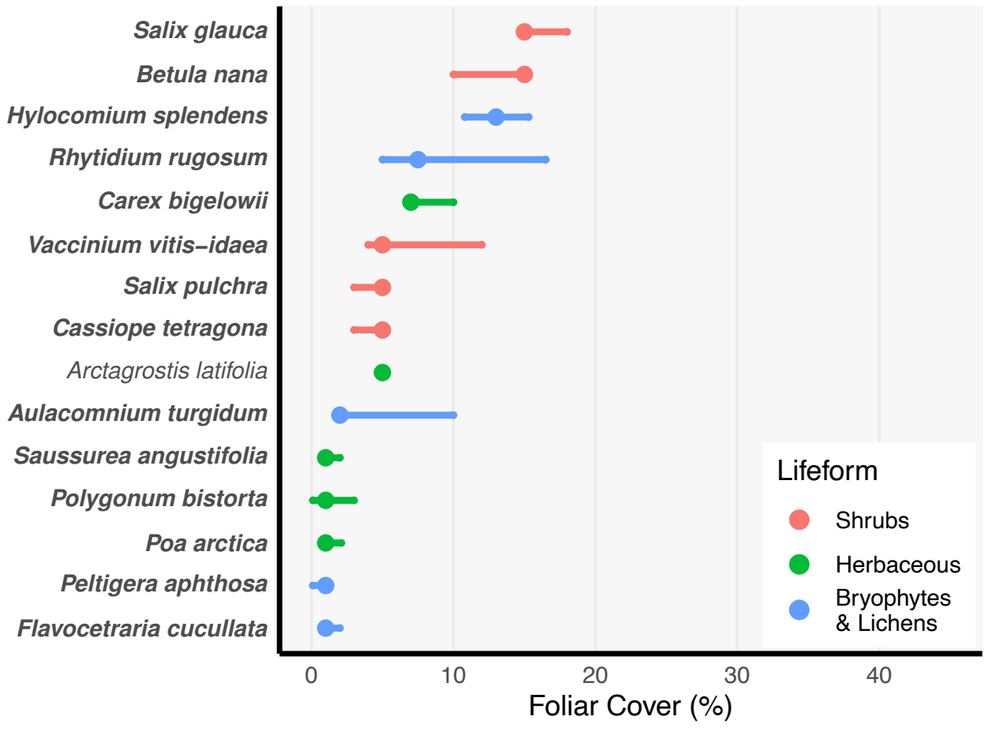
Distribution of *Betula nana–Salix glauca/Vaccinium vitis-idaea/Carex bigelowii* in the study area.



Representative photos (if available) for *Betula nana–Salix glauca/Vaccinium vitis-idaea/Carex bigelowii*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	407	486	30	98	938	5
Slope (degrees)	6	4	2	7	9	5
Surface Organic Thickness (cm)	8.6	4.2	4.2	8.9	12.6	5
Cumul. Org. Thickness (cm)	8.6	4.2	4.2	8.9	12.6	5
Depth to >15% Rock Fragments (cm)	10	13	2	10	17	2
Water Table Depth (cm)	-18		-18	-18	-18	1
Active Layer Thickness (cm)	46	18	33	44	61	3
Site pH	6.0	1.1	4.9	6.1	7.1	5
Electrical Conductivity (uS/cm)	146	111	44	140	262	5
Whole Tussock Cover (%)	2	2	0	2	3	4

Environmental data summaries for *Betula nana–Salix glauca/Vaccinium vitis-idaea/Carex bigelowii*.



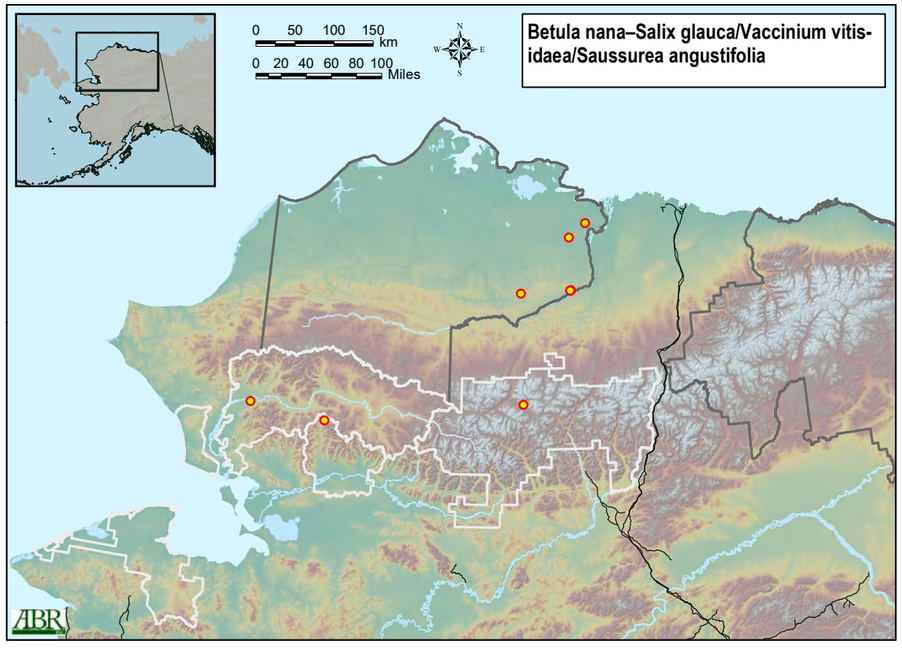
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Betula nana–Salix glauca/Vaccinium vitis-idaea/Carex bigelowii*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	ARAL13	*Arctous alpina*	40	6.0	1.4	5.2	6.0	6.8
Deciduous Shrubs	BENA	*Betula nana*	100	13.0	2.7	10.0	15.0	15.0
Deciduous Shrubs	SAGL	*Salix glauca*	100	16.6	5.5	12.0	15.0	22.2
Deciduous Shrubs	SAPH	*Salix phlebophylla*	60	2.3	1.2	1.4	3.0	3.0
Deciduous Shrubs	SAPU15	*Salix pulchra*	100	5.2	2.9	3.0	5.0	8.0
Deciduous Shrubs	SARE2	*Salix reticulata*	60	5.7	4.0	2.6	5.0	9.0
Deciduous Shrubs	VAUL	*Vaccinium uliginosum*	100	4.8	3.1	2.4	4.0	8.0
Evergreen Shrubs	CATE11	*Cassiope tetragona*	100	5.0	3.1	2.4	5.0	8.0
Evergreen Shrubs	DRIN4	*Dryas integrifolia*	60	6.7	1.5	5.4	7.0	7.8
Evergreen Shrubs	DROC	*Dryas octopetala*	40	6.5	4.9	3.7	6.5	9.3
Evergreen Shrubs	EMNI	*Empetrum nigrum*	80	3.8	1.5	2.3	4.0	5.0
Evergreen Shrubs	LEPAD	*Ledum palustre* ssp. *decumbens*	80	6.5	4.7	2.2	6.5	10.8
Evergreen Shrubs	VAVI	*Vaccinium vitis-idaea*	100	7.6	5.6	2.8	5.0	13.8
Forbs	PECA2	*Pedicularis capitata*	60	1.0	0.0	1.0	1.0	1.0
Forbs	PEFR5	*Petasites frigidus*	60	3.0	1.0	2.2	3.0	3.8
Forbs	POBIP2	*Polygonum bistorta* ssp. *plumosum*	100	1.4	1.5	0.1	1.0	3.0
Forbs	POVI3	*Polygonum viviparum*	60	0.1	0.5	0.1	0.1	1.0
Forbs	PYAS	*Pyrola asarifolia*	60	1.4	1.5	0.1	1.0	2.6
Forbs	PYGR	*Pyrola grandiflora*	40	4.1	5.6	1.0	4.1	7.2
Forbs	SAAN3	*Saussurea angustifolia*	100	1.4	0.5	1.0	1.0	2.0
Forbs	STLO2	*Stellaria longipes*	60	1.0	0.5	0.1	1.0	1.0
Grasses	ANMOA3	*Anthoxanthum monticola* ssp. *alpinum*	60	1.7	1.2	1.0	1.0	2.6
Grasses	ARLA2	*Arctagrostis latifolia*	60	5.0	0.0	5.0	5.0	5.0
Grasses	ARLAL6	*Arctagrostis latifolia* ssp. *latifolia*	40	3.0	2.8	1.4	3.0	4.6
Grasses	POAR2	*Poa arctica*	100	1.4	1.1	0.1	1.0	2.6
Sedges	CABI5	*Carex bigelowii*	100	7.8	2.2	5.8	7.0	10.0
Mosses	AUTU70	*Aulacomnium turgidum*	100	5.8	5.8	1.4	2.0	12.4
Mosses	DIEL70	*Dicranum elongatum*	60	7.3	4.6	3.6	10.0	10.0
Mosses	HYSP70	*Hylocomium splendens*	80	13.0	2.9	10.3	13.0	15.7
Mosses	POJU70	*Polytrichum juniperinum*	40	3.0	2.8	1.4	3.0	4.6
Mosses	RHRU70	*Rhytidium rugosum*	80	14.0	14.9	5.0	7.5	28.2
Mosses	SPFI4	*Sphagnum fimbriatum*	40	3.5	2.1	2.3	3.5	4.7
Mosses	SPWA70	*Sphagnum warnstorfii*	40	5.0	2.8	3.4	5.0	6.6
Mosses	TONI70	*Tomentypnum nitens*	40	16.0	5.7	12.8	16.0	19.2
Lichens	CLRA60	*Cladina rangiferina*	60	1.7	1.5	0.1	2.0	2.8
Lichens	FLCU	*Flavocetraria cucullata*	100	1.6	0.9	1.0	1.0	2.6
Lichens	FLNI	*Flavocetraria nivalis*	60	1.0	1.0	0.1	1.0	1.8
Lichens	PEAP60	*Peltigera aphthosa*	80	1.0	0.9	0.1	1.0	1.7

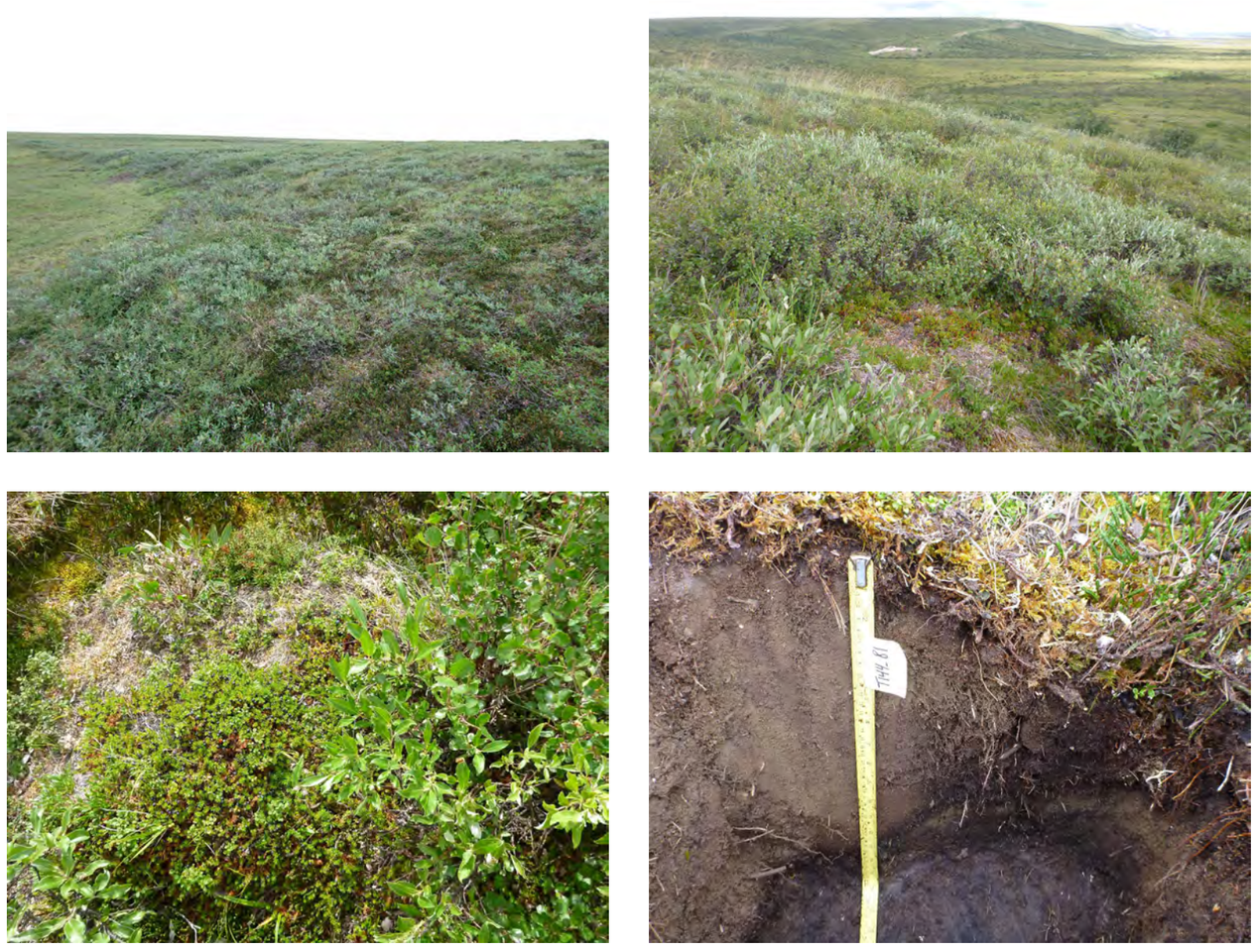
Constancy and foliar cover data summaries for *Betula nana–Salix glauca/Vaccinium vitis-idaea/Carex bigelowii*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

BETNAN–SALGLA/VACVIT/SAUANG: *Betula nana–Salix glauca/Vaccinium vitis-idaea/Saussurea angustifolia* (*n* = 7)

The plant association *Betula nana–Salix glauca/Vaccinium vitis-idaea/Saussurea angustifolia* occurs in Upland physiography most commonly on the following geomorphic units: Hillside Colluvium; Alluvial-Marine Deposit; and Moraine, older. The average elevation in this plant association is 231 m (±292 m), and the slope gradient typically ranges between strongly sloping and steep. This plant association was associated most commonly with the surface form Hummocks, but is also regularly associated with Rocky Mounds/Outcrops and Undifferentiated mounds. Soils are moderately well drained to well drained, surface organic thickness typically ranges from very thin to thin, coarse fragments are uncommon, but when they do occur the average top depth is 18 cm (±9 cm), dominant soil texture in the upper 40 cm is typically Loamy or Blocky, and permafrost was common with an average active layer thickness of 39 cm (±10 cm). Soil pH is typically circumacidic, and the average electrical conductivity is 144 µS/cm (±116 µS/cm). The most common vegetation types include Open Low Shrub Birch-Willow and Open Low Mesic Shrub Birch-Ericaceous Shrub. The vegetation is co-dominated by *Betula nana* and *Salix glauca* which typically form an open low shrub canopy, and *Vaccinium vitis-idaea* is always prevalent in the dwarf shrub layer. In the herbaceous layer, *Saussurea angustifolia* is consistently present at low cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix reticulata* and *Empetrum nigrum*; the herbs *Carex bigelowii*, *Poa arctica*, *Polygonum bistorta*, and *Arctagrostis latifolia*; and the nonvasculars *Aulacomnium turgidum*, *Hylocomium splendens*, *Flavocetraria cucullata*, *Rhytidium rugosum*, and *Thamnolia vermicularis.*



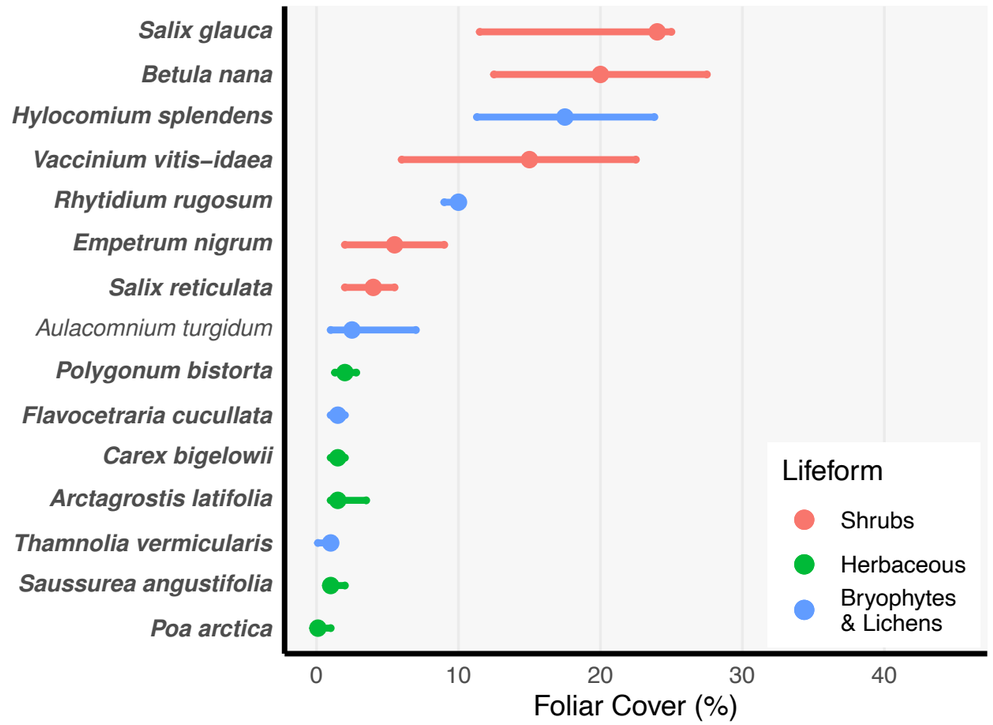
Distribution of *Betula nana–Salix glauca/Vaccinium vitis-idaea/Saussurea angustifolia* in the study area.



Representative photos (if available) for *Betula nana–Salix glauca/Vaccinium vitis-idaea/Saussurea angustifolia*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	231	292	29	169	476	7
Slope (degrees)	13	5	7	15	17	7
Surface Organic Thickness (cm)	8.6	5.1	3.8	9.0	14.0	7
Cumul. Org. Thickness (cm)	11.6	5.6	7.4	10.0	16.4	7
Depth to >15% Rock Fragments (cm)	18	9	10	21	24	4
Water Table Depth (cm)						7
Active Layer Thickness (cm)	39	10	31	42	47	3
Site pH	5.9	0.2	5.7	5.8	6.1	7
Electrical Conductivity (uS/cm)	144	116	52	100	280	7
Whole Tussock Cover (%)	0	0	0	0	0	7

Environmental data summaries for *Betula nana–Salix glauca/Vaccinium vitis-idaea/Saussurea angustifolia*.



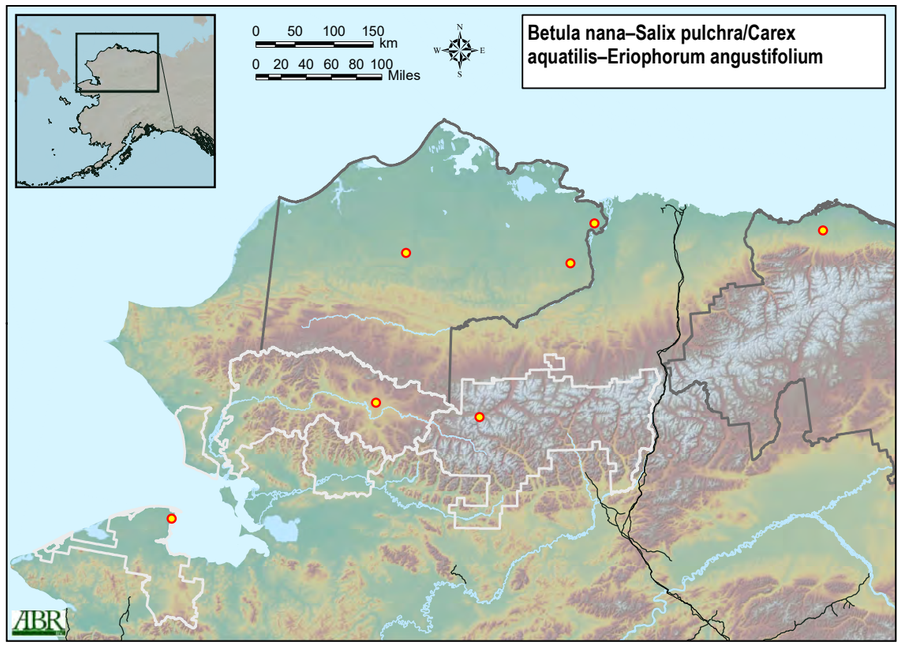
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Betula nana–Salix glauca/Vaccinium vitis-idaea/Saussurea angustifolia*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

					Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	ARAL13	*Arctous alpina*	86	6.5	7.1	1.1	4.5	14.0
Deciduous Shrubs	BENA	*Betula nana*	100	22.0	12.9	10.0	20.0	38.6
Deciduous Shrubs	SAGL	*Salix glauca*	100	19.6	10.7	6.8	24.0	29.0
Deciduous Shrubs	SAPH	*Salix phlebophylla*	43	3.7	3.8	1.2	2.0	6.8
Deciduous Shrubs	SAPU15	*Salix pulchra*	43	5.3	4.5	1.8	5.0	9.0
Deciduous Shrubs	SARE2	*Salix reticulata*	100	4.9	4.9	1.0	4.0	9.6
Deciduous Shrubs	VAUL	*Vaccinium uliginosum*	71	8.8	4.5	4.8	7.0	13.8
Evergreen Shrubs	CATE11	*Cassiope tetragona*	71	13.8	14.8	5.4	8.0	28.0
Evergreen Shrubs	DRIN4	*Dryas integrifolia*	57	9.5	7.0	3.3	9.5	15.7
Evergreen Shrubs	EMNI	*Empetrum nigrum*	86	5.5	4.0	1.0	5.5	10.0
Evergreen Shrubs	LEPAD	*Ledum palustre* ssp. *decumbens*	71	4.8	2.4	2.4	5.0	7.2
Evergreen Shrubs	VAVI	*Vaccinium vitis-idaea*	100	15.3	10.1	5.0	15.0	27.0
Forbs	LUAR2	*Lupinus arcticus*	57	3.8	1.5	2.3	4.0	5.0
Forbs	POBIP2	*Polygonum bistorta* ssp. *plumosum*	86	2.2	1.7	1.0	2.0	4.0
Forbs	SAAN3	*Saussurea angustifolia*	100	1.4	1.0	1.0	1.0	2.4
Grasses	ARLA2	*Arctagrostis latifolia*	86	2.2	1.9	1.0	1.5	4.5
Grasses	POAR2	*Poa arctica*	100	0.1	0.4	0.1	0.1	1.0
Sedges	CABI5	*Carex bigelowii*	86	1.5	1.0	1.0	1.5	2.5
Mosses	AUTU70	*Aulacomnium turgidum*	57	5.5	7.1	1.0	2.5	12.4
Mosses	DIEL70	*Dicranum elongatum*	43	5.0	2.6	2.8	6.0	6.8
Mosses	HYSP70	*Hylocomium splendens*	86	17.3	7.1	9.5	17.5	25.0
Mosses	RHRU70	*Rhytidium rugosum*	71	13.4	9.3	8.4	10.0	22.0
Lichens	FLCU	*Flavocetraria cucullata*	86	2.5	2.7	1.0	1.5	5.0
Lichens	THVE60	*Thamnolia vermicularis*	71	1.0	0.8	0.1	1.0	1.6

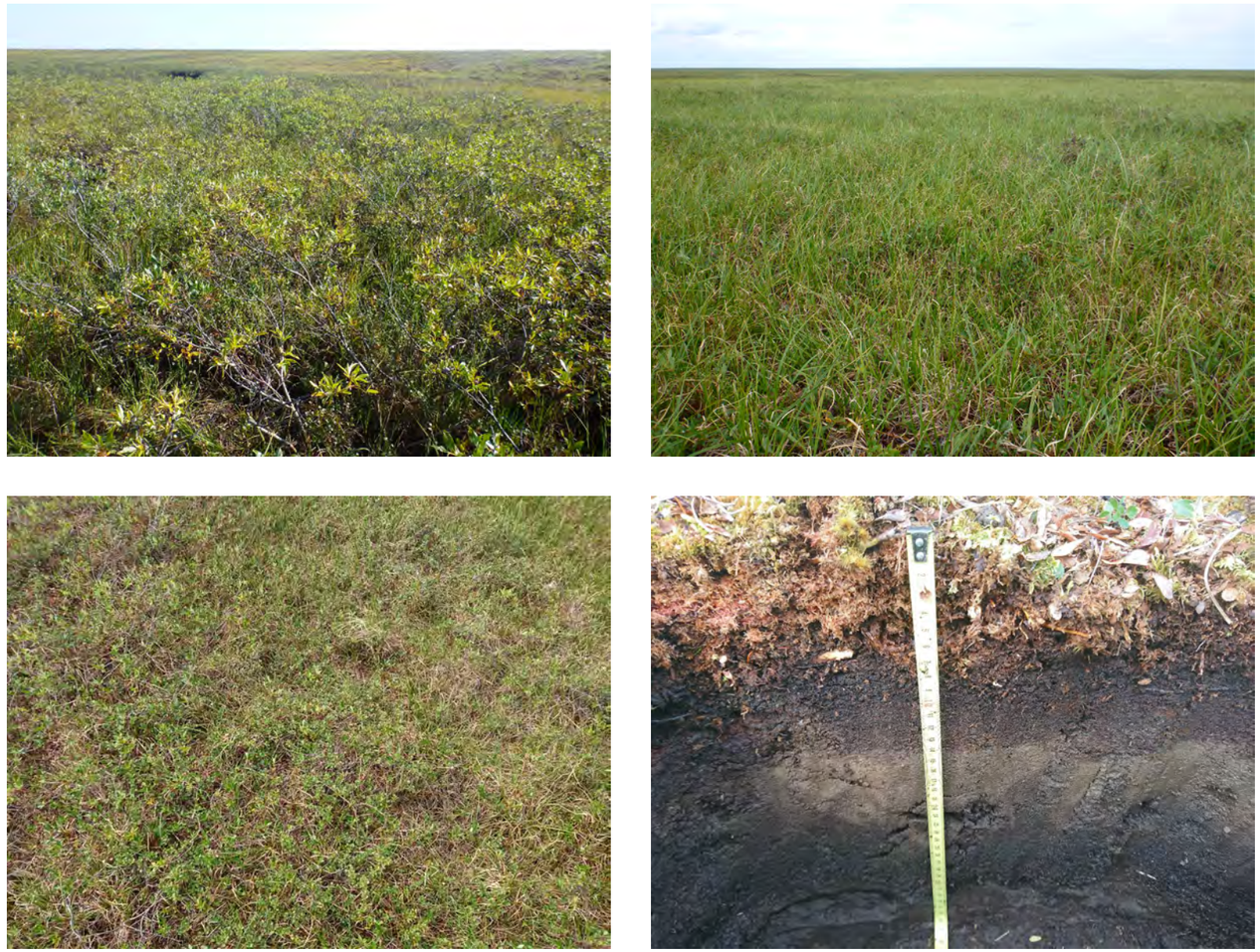
Constancy and foliar cover data summaries for *Betula nana–Salix glauca/Vaccinium vitis-idaea/Saussurea angustifolia*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

BETNAN–SALPUL1/CARAQU1–ERIANG1: *Betula nana–Salix pulchra/Carex aquatilis–Eriophorum angustifolium* (*n* = 7)

The plant association *Betula nana–Salix pulchra/Carex aquatilis–Eriophorum angustifolium* occurs in Lowland physiography most commonly on the following geomorphic units: Lowland Loess; Lowland Headwater Floodplain; and Moraine, older. The average elevation in this plant association is 229 m (±318 m), and the slope gradient typically ranges between flat and nearly level. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with High-centered, Low-relief Polygons; Low-centered, Low-relief, High-density Polygons; and Undifferentiated mounds. Soils are very poorly drained to poorly drained, surface organic thickness is typically moderately thick, coarse fragments are uncommon, but when they do occur the average top depth is 114 cm (±122 cm), and permafrost was common with an average active layer thickness of 34 cm (±10 cm). Water pH typically ranges from acidic to circumacidic, and the average electrical conductivity is 107 µS/cm (±74 µS/cm). The most common vegetation type is Open Low Shrub Birch-Willow. The vegetation is co-dominated by *Betula nana* and *Salix pulchra*, which typically form an open low shrub canopy. In the understory, *Carex aquatilis* and *Eriophorum angustifolium* are codominant. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Vaccinium uliginosum*, *Ledum palustre* ssp. *decumbens*, and *Vaccinium vitis-idaea*; the herbs *Eriophorum vaginatum*, *Pyrola grandiflora*, and *Carex bigelowii*; and the nonvasculars *Aulacomnium palustre*, *Aulacomnium turgidum*, *Sphagnum* sp., *Hylocomium splendens*, and *Tomentypnum nitens.* The soils in this plant association range from wet to flooded, and dwarf shrubs are generally limited to moist micro-highs.



Distribution of *Betula nana–Salix pulchra/Carex aquatilis–Eriophorum angustifolium* in the study area.



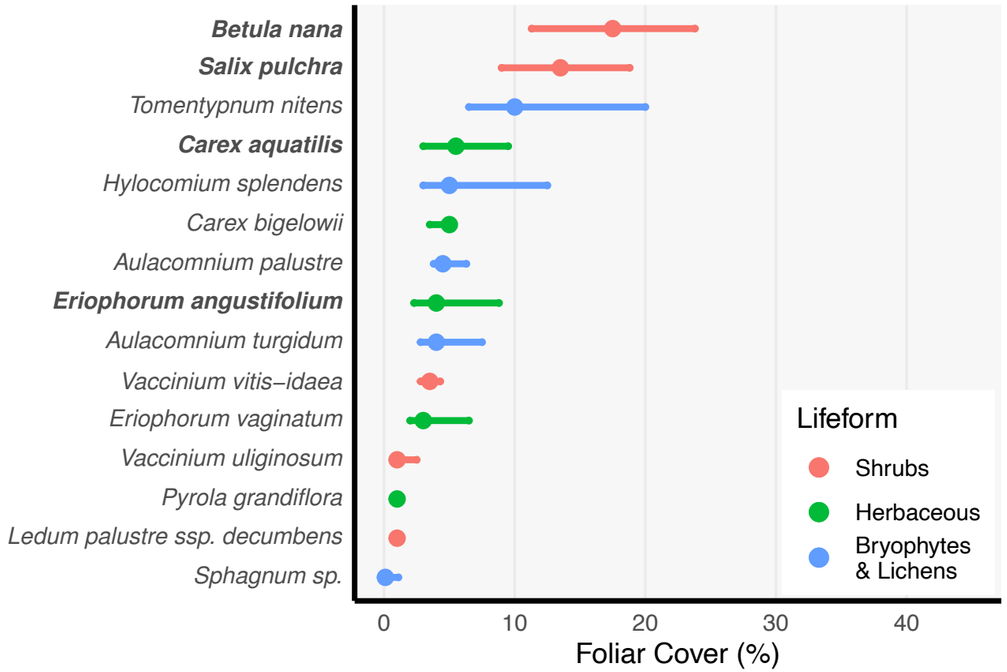
Representative photos (if available) for *Betula nana–Salix pulchra/Carex aquatilis–Eriophorum angustifolium*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	229	318	19	80	605	7
Slope (degrees)	1	1	0	0	1	7
Surface Organic Thickness (cm)	23.6	8.3	16.4	21.0	32.2	7
Cumul. Org. Thickness (cm)	25.1	7.2	19.8	24.0	32.2	7
Depth to >15% Rock Fragments (cm)	114	122	45	114	183	2
Water Table Depth (cm)	-14	12	-27	-8	-5	5
Active Layer Thickness (cm)	34	10	27	32	44	6
Site pH	5.7	0.5	5.2	5.6	6.3	7
Electrical Conductivity (uS/cm)	107	74	40	90	200	7
Whole Tussock Cover (%)	2	3	0	2	5	7

Environmental data summaries for *Betula nana–Salix pulchra/Carex aquatilis–Eriophorum angustifolium*.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	BENA	*Betula nana*	100	22.5	17.0	10.0	17.5	40.0
Deciduous Shrubs	SAPU15	*Salix pulchra*	100	14.5	8.1	6.5	13.5	23.5
Evergreen Shrubs	LEPAD	*Ledum palustre* ssp. *decumbens*	67	1.0	0.8	0.1	1.0	1.7
Sedges	CAAQ	*Carex aquatilis*	100	6.8	5.1	2.5	5.5	12.5
Sedges	CABI5	*Carex bigelowii*	50	4.0	1.7	2.6	5.0	5.0
Sedges	ERAN6	*Eriophorum angustifolium*	100	7.0	7.0	2.0	4.0	15.0
Sedges	ERVA4	*Eriophorum vaginatum*	50	4.7	4.7	1.4	3.0	8.6
Mosses	AUPA70	*Aulacomnium palustre*	67	5.5	3.1	3.3	4.5	8.5
Mosses	AUTU70	*Aulacomnium turgidum*	67	6.3	6.0	2.3	4.0	12.0
Mosses	HYSP70	*Hylocomium splendens*	50	8.7	10.0	1.8	5.0	17.0
Mosses	TONI70	*Tomentypnum nitens*	50	14.3	14.0	4.4	10.0	26.0

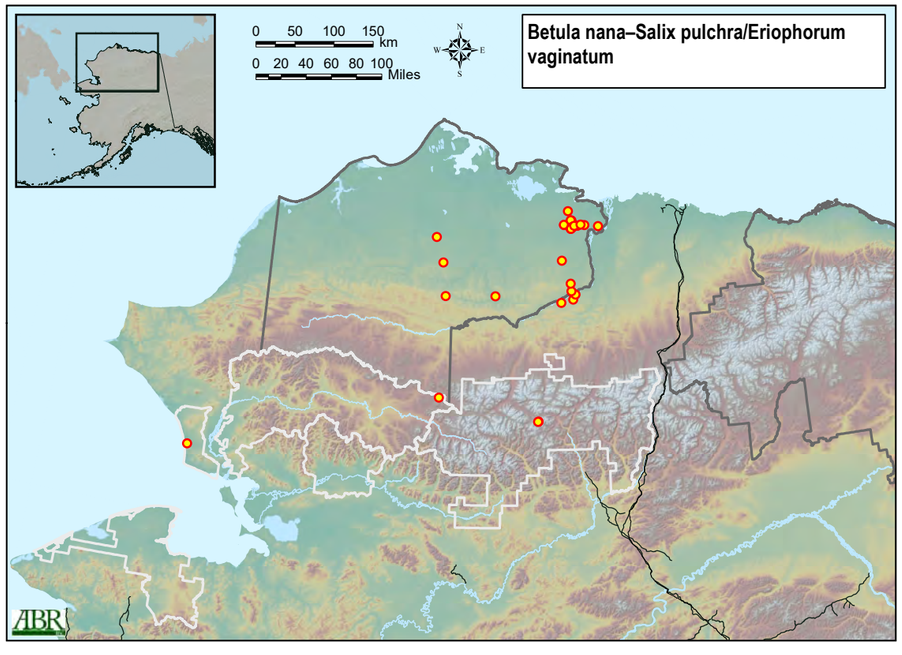
Constancy and foliar cover data summaries for *Betula nana–Salix pulchra/Carex aquatilis–Eriophorum angustifolium*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.



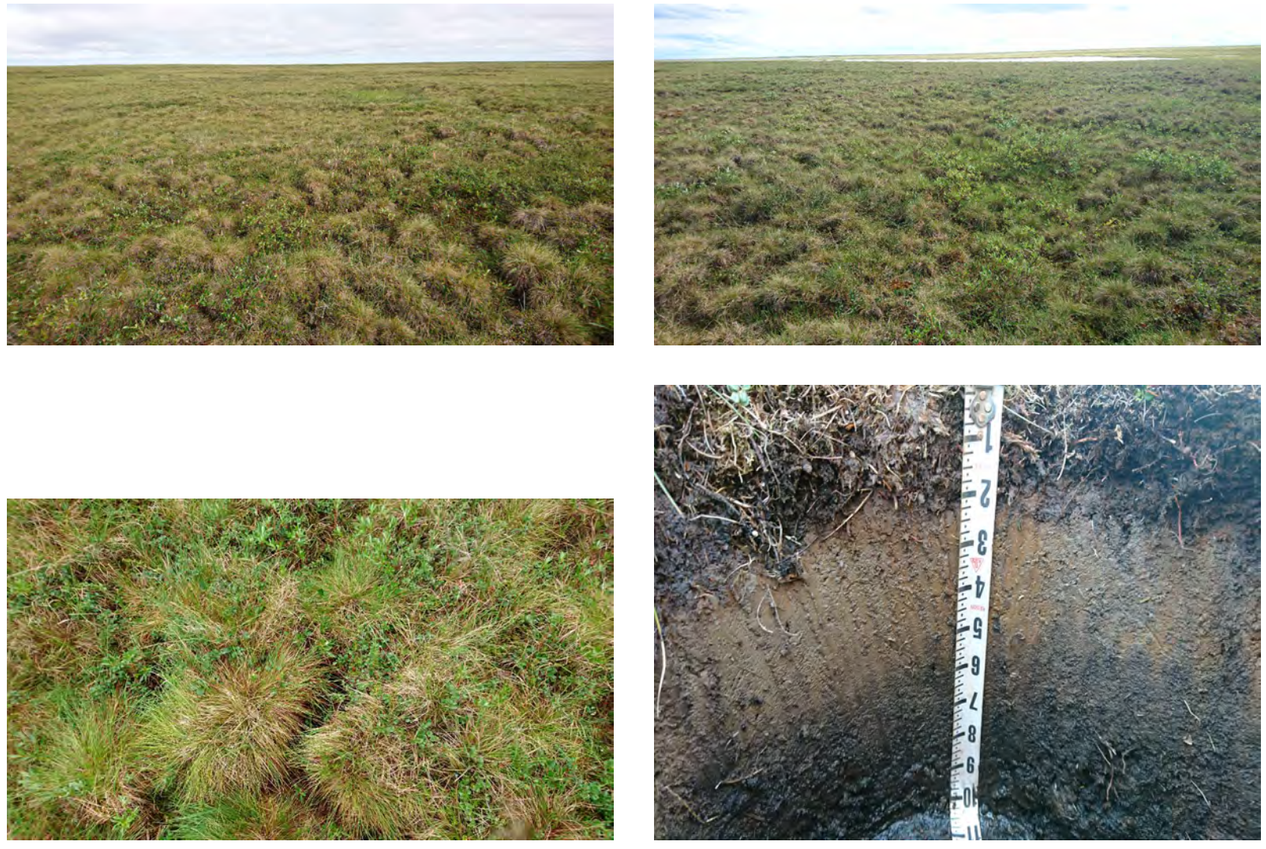
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Betula nana–Salix pulchra/Carex aquatilis–Eriophorum angustifolium*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

BETNAN–SALPUL1/ERIVAG: *Betula nana–Salix pulchra/Eriophorum vaginatum* (*n* = 31)

The plant association *Betula nana–Salix pulchra/Eriophorum vaginatum* occurs in Upland physiography most commonly on the following geomorphic units: Alluvial-Marine Deposit; Frozen Upland Silt; and Hillside Colluvium. The average elevation in this plant association is 134 m (±246 m), and the slope gradient typically ranges between flat and nearly level. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with High-centered, Low-relief Polygons; Mixed pits and polygons; and High-centered, High-relief Polygons. Soils are poorly drained to somewhat poorly drained, surface organic thickness typically ranges from thin to moderately thick, coarse fragments are rare, but when they do occur the average top depth is 54 cm (±98 cm), dominant soil texture in the upper 40 cm is typically Organic-rich or Loamy, and permafrost was common with an average active layer thickness of 29 cm (±7 cm). Soil pH is typically circumacidic, and the average electrical conductivity is 101 µS/cm (±73 µS/cm). The most common vegetation type is Open Mixed Low Shrub-Sedge Tussock Tundra. The vegetation is co-dominated by *Betula nana* and *Salix pulchra* which typically form an open low shrub canopy, and *Eriophorum vaginatum* forms conspicuous tussocks with a cover of whole tussocks of at least 25%. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Vaccinium vitis-idaea*, *Ledum palustre* ssp. *decumbens*, and *Cassiope tetragona*; the herbs *Carex bigelowii*, *Arctagrostis latifolia*, *Polygonum bistorta*, and *Saussurea angustifolia*; and the nonvasculars *Dactylina arctica*, *Aulacomnium turgidum*, *Flavocetraria cucullata*, *Hylocomium splendens*, and *Peltigera aphthosa.*



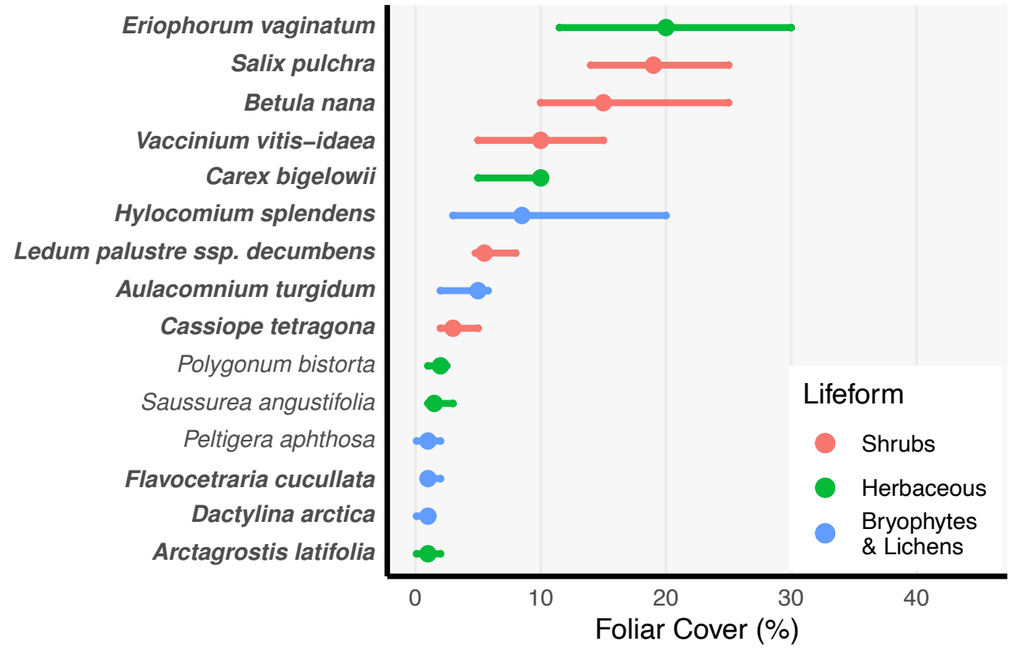
Distribution of *Betula nana–Salix pulchra/Eriophorum vaginatum* in the study area.



Representative photos (if available) for *Betula nana–Salix pulchra/Eriophorum vaginatum*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	134	246	22	28	191	31
Slope (degrees)	2	3	0	1	5	30
Surface Organic Thickness (cm)	13.0	6.8	5.0	11.4	22.0	31
Cumul. Org. Thickness (cm)	16.1	6.6	6.4	16.5	24.1	31
Depth to >15% Rock Fragments (cm)	54	98	0	8	145	4
Water Table Depth (cm)	-23	9	-31	-23	-16	17
Active Layer Thickness (cm)	29	7	23	28	38	31
Site pH	5.9	0.4	5.5	5.8	6.4	30
Electrical Conductivity (uS/cm)	101	73	40	80	176	30
Whole Tussock Cover (%)	40	21	15	39	70	20

Environmental data summaries for *Betula nana–Salix pulchra/Eriophorum vaginatum*.



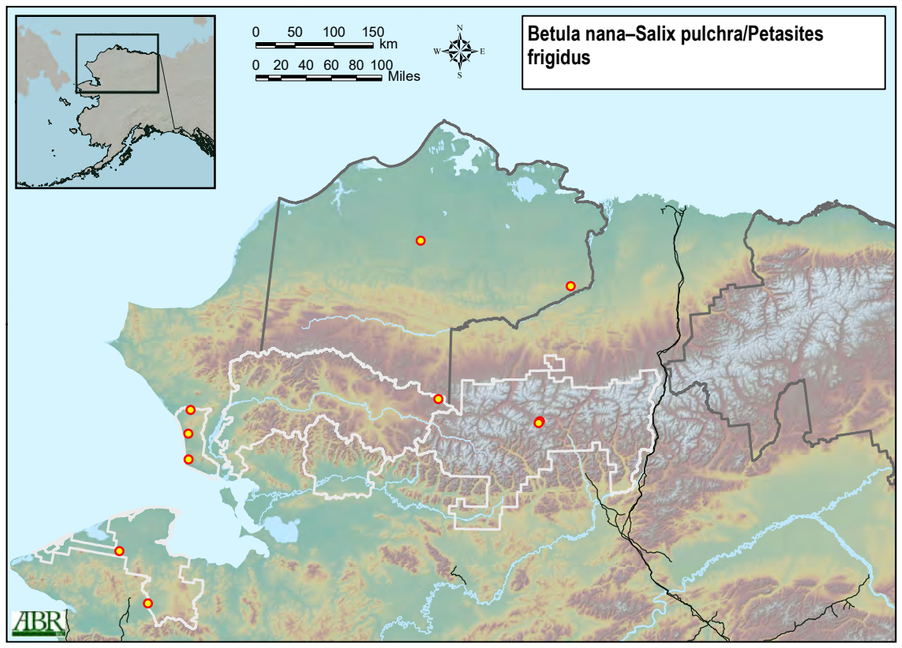
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Betula nana–Salix pulchra/Eriophorum vaginatum*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

					Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	BENA	*Betula nana*	100	18.5	9.2	10.0	15.0	30.0
Deciduous Shrubs	SAPU15	*Salix pulchra*	100	19.0	8.1	10.0	19.0	30.0
Evergreen Shrubs	CATE11	*Cassiope tetragona*	74	4.3	3.3	2.0	3.0	9.2
Evergreen Shrubs	EMNI	*Empetrum nigrum*	48	3.4	2.0	1.4	3.0	6.0
Evergreen Shrubs	LEPAD	*Ledum palustre* ssp. *decumbens*	90	6.5	3.3	3.0	5.5	10.0
Evergreen Shrubs	VAVI	*Vaccinium vitis-idaea*	94	10.9	7.7	3.0	10.0	21.0
Forbs	POBIP2	*Polygonum bistorta* ssp. *plumosum*	61	1.9	1.4	0.1	2.0	3.4
Grasses	ARLA2	*Arctagrostis latifolia*	74	1.4	1.4	0.1	1.0	3.0
Sedges	CABI5	*Carex bigelowii*	94	9.4	5.5	4.6	10.0	18.0
Sedges	ERVA4	*Eriophorum vaginatum*	100	21.2	12.8	10.0	20.0	35.0
Mosses	AUPA70	*Aulacomnium palustre*	45	4.0	3.2	1.0	3.0	9.1
Mosses	AUTU70	*Aulacomnium turgidum*	84	6.1	7.5	1.0	5.0	11.0
Mosses	HYSP70	*Hylocomium splendens*	90	11.5	10.9	1.7	8.5	26.5
Mosses	TONI70	*Tomentypnum nitens*	55	4.1	3.9	0.1	3.0	10.0
Liverworts	PTCI	*Ptilidium ciliare*	65	5.5	7.8	0.1	2.5	13.0
Lichens	DAAR60	*Dactylina arctica*	74	1.0	1.3	0.1	1.0	1.8
Lichens	FLCU	*Flavocetraria cucullata*	94	1.6	1.4	0.1	1.0	3.0
Lichens	PEAP60	*Peltigera aphthosa*	68	1.3	1.3	0.1	1.0	2.0
Lichens	THVE60	*Thamnolia vermicularis*	61	1.2	1.3	0.1	1.0	2.4

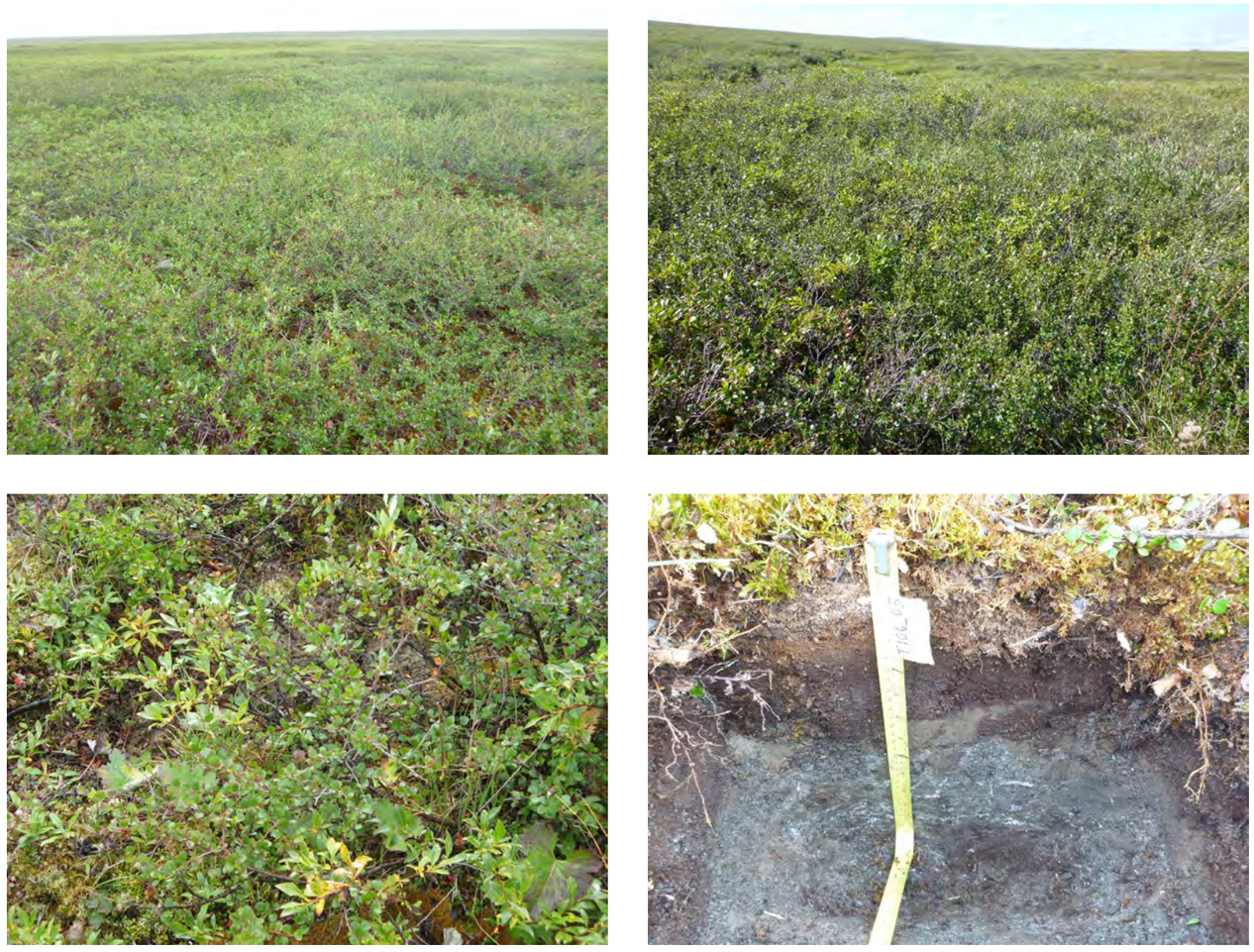
Constancy and foliar cover data summaries for *Betula nana–Salix pulchra/Eriophorum vaginatum*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

BETNAN–SALPUL1/PETFRI: *Betula nana–Salix pulchra/Petasites frigidus* (*n* = 10)

The plant association *Betula nana–Salix pulchra/Petasites frigidus* occurs in Lowland physiography most commonly on the following geomorphic units: Thaw Basin, ice-rich center and Hillside Colluvium. The average elevation in this plant association is 292 m (±383 m), and the slope gradient typically ranges between flat and gently sloping. This plant association was associated most commonly with the surface form Hummocks, but is also regularly associated with Nonpatterned; Beads; and Gelifluction lobes. Soils are poorly drained to somewhat poorly drained, surface organic thickness typically ranges from thin to moderately thick, coarse fragments are absent, dominant soil texture in the upper 40 cm is typically Loamy or Organic-rich, and permafrost was common with an average active layer thickness of 28 cm (±12 cm). Soil pH typically ranges from acidic to circumacidic, and the average electrical conductivity is 58 µS/cm (±36 µS/cm). The most common vegetation types include Closed Low Shrub Birch-Willow and Open Low Shrub Birch-Willow. The vegetation is co-dominated by *Betula nana* and *Salix pulchra*, and *Petasites frigidus* is always present at low to moderate cover in the understory. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Vaccinium uliginosum*, *Vaccinium vitis-idaea*, and *Ledum palustre* ssp. *decumbens*; the herbs *Carex bigelowii*, *Arctagrostis latifolia*, *Poa arctica*, and *Eriophorum vaginatum*; and the nonvasculars *Aulacomnium turgidum*, *Cladonia* sp., *Aulacomnium palustre*, *Hylocomium splendens*, and *Flavocetraria cucullata.*



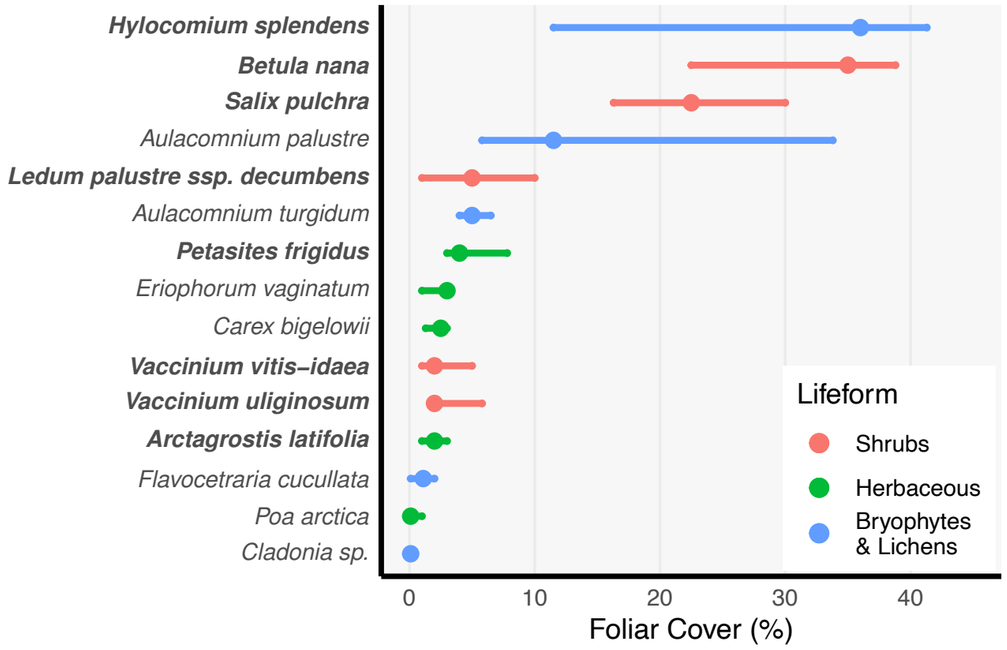
Distribution of *Betula nana–Salix pulchra/Petasites frigidus* in the study area.



Representative photos (if available) for *Betula nana–Salix pulchra/Petasites frigidus*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	292	383	26	86	927	10
Slope (degrees)	3	5	0	1	8	10
Surface Organic Thickness (cm)	14.4	8.6	4.8	14.0	21.2	10
Cumul. Org. Thickness (cm)	13.9	8.8	4.8	13.0	22.4	9
Depth to >15% Rock Fragments (cm)	200	0	200	200	200	4
Water Table Depth (cm)	-21	7	-29	-19	-15	6
Active Layer Thickness (cm)	28	12	19	25	36	9
Site pH	5.7	0.4	5.1	5.8	6.2	10
Electrical Conductivity (uS/cm)	58	36	29	40	120	10
Whole Tussock Cover (%)	1	2	0	0	3	10

Environmental data summaries for *Betula nana–Salix pulchra/Petasites frigidus*.



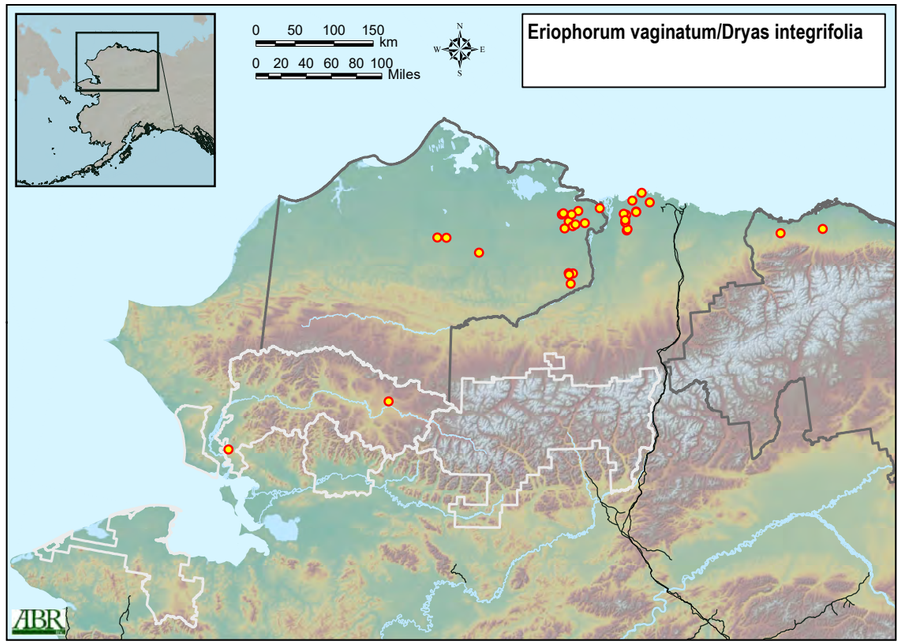
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Betula nana–Salix pulchra/Petasites frigidus*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

					Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	BENA	*Betula nana*	100	33.8	12.5	19.8	35.0	50.5
Deciduous Shrubs	SAPU15	*Salix pulchra*	100	23.5	10.8	10.0	22.5	31.5
Deciduous Shrubs	VAUL	*Vaccinium uliginosum*	80	4.0	3.3	1.7	2.0	8.6
Evergreen Shrubs	EMNI	*Empetrum nigrum*	40	3.5	4.5	0.1	2.0	7.9
Evergreen Shrubs	LEPAD	*Ledum palustre* ssp. *decumbens*	90	5.1	4.1	1.0	5.0	10.0
Evergreen Shrubs	VAVI	*Vaccinium vitis-idaea*	90	4.6	4.9	1.0	2.0	11.0
Forbs	PEFR5	*Petasites frigidus*	100	5.2	3.3	1.9	4.0	10.0
Grasses	ARLA2	*Arctagrostis latifolia*	80	1.9	1.4	0.1	2.0	3.3
Grasses	POAR2	*Poa arctica*	70	0.1	0.5	0.1	0.1	1.0
Sedges	CABI5	*Carex bigelowii*	60	3.0	2.6	1.0	2.5	5.5
Sedges	ERVA4	*Eriophorum vaginatum*	60	2.0	1.5	0.1	3.0	3.0
Mosses	AUPA70	*Aulacomnium palustre*	60	18.7	17.8	3.5	11.5	41.0
Mosses	AUTU70	*Aulacomnium turgidum*	70	5.3	2.9	2.2	5.0	8.2
Mosses	DICRA8	*Dicranum* sp.	40	3.3	4.5	1.0	1.0	7.3
Mosses	HYSP70	*Hylocomium splendens*	80	32.4	23.2	8.5	36.0	54.0
Mosses	PLSC70	*Pleurozium schreberi*	40	6.3	9.4	0.1	2.6	15.5
Mosses	POJU70	*Polytrichum juniperinum*	40	4.5	4.0	1.3	3.5	8.5
Lichens	CLADO3	*Cladonia* sp.	70	0.1	0.7	0.1	0.1	1.0
Lichens	FLCU	*Flavocetraria cucullata*	60	1.1	1.0	0.1	1.1	2.0

Constancy and foliar cover data summaries for *Betula nana–Salix pulchra/Petasites frigidus*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

ERIVAG/DRYINT: *Eriophorum vaginatum*/*Dryas integrifolia* (*n* = 31)

The plant association *Eriophorum vaginatum*/*Dryas integrifolia* occurs in Upland physiography most commonly on the following geomorphic units: Alluvial-Marine Deposit; Frozen Upland Silt; and Thaw Basin, ice-rich center. The average elevation in this plant association is 64 m (±71 m), and the slope gradient typically ranges between flat and nearly level. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with High-centered, Low-relief Polygons; Mixed pits and polygons; and Mixed High and Low-centered Polygons. Soils are poorly drained to moderately well drained, surface organic thickness typically ranges from thin to moderately thick, coarse fragments are uncommon, but when they do occur the average top depth is 34 cm (±18 cm), dominant soil texture in the upper 40 cm is typically Loamy or Organic-rich, and permafrost was common with an average active layer thickness of 38 cm (±8 cm). Soil pH typically ranges from circumacidic to circumalkaline, and the average electrical conductivity is 272 µS/cm (±213 µS/cm). The most common vegetation types include Tussock Tundra-*Dryas and* Tussock Tundra. *Eriophorum vaginatum* dominates the site, forming conspicuous tussocks with a cover of whole tussocks of at least 25%. Between the tussocks *Dryas integrifolia* is always present at moderate to high cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Cassiope tetragona*, *Salix richardsonii*, *Salix pulchra*, and *Salix reticulata*; the herbs *Saussurea angustifolia*, *Eriophorum angustifolium*, *Arctagrostis latifolia*, and *Carex bigelowii*; and the nonvasculars *Ptilidium ciliare*, *Tomentypnum nitens*, *Hylocomium splendens*, *Flavocetraria cucullata*, and *Aulacomnium turgidum.*

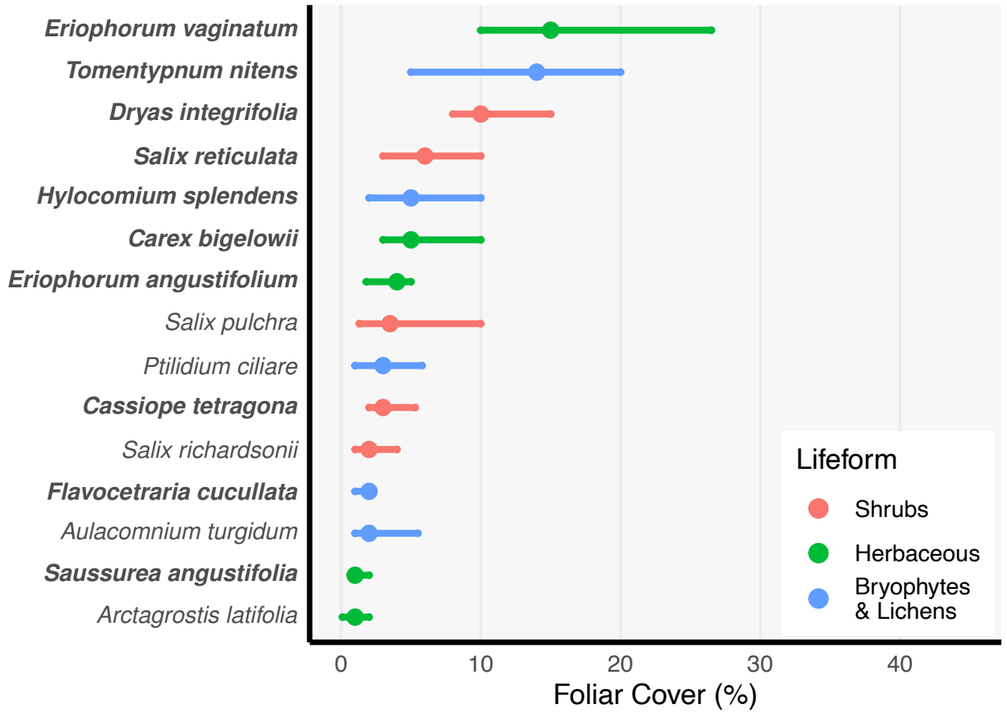


Distribution of *Eriophorum vaginatum*/*Dryas integrifolia* in the study area.

Representative photos (if available) for *Eriophorum vaginatum*/*Dryas integrifolia*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	64	71	16	34	117	28
Slope (degrees)	1	1	0	0	3	28
Surface Organic Thickness (cm)	12.3	6.3	5.0	12.0	22.9	31
Cumul. Org. Thickness (cm)	15.8	9.5	5.6	14.0	30.0	29
Depth to >15% Rock Fragments (cm)	34	18	18	32	50	7
Water Table Depth (cm)	-27	9	-37	-27	-16	18
Active Layer Thickness (cm)	38	8	30	37	45	19
Site pH	6.7	0.7	5.8	6.6	7.2	29
Electrical Conductivity (uS/cm)	272	213	88	210	570	29
Whole Tussock Cover (%)	28	13	15	25	40	21

Environmental data summaries for *Eriophorum vaginatum/Dryas integrifolia*.



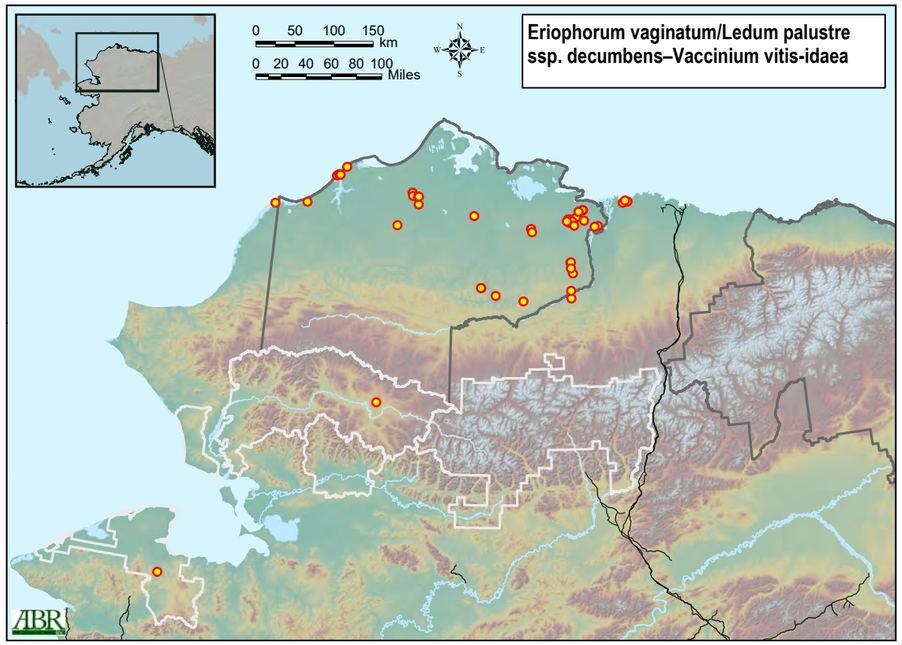
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Eriophorum vaginatum/Dryas integrifolia*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	SAAR27	*Salix arctica*	52	4.8	3.3	1.0	5.0	10.0
Deciduous Shrubs	SAPU15	*Salix pulchra*	58	5.7	4.9	1.0	3.5	12.0
Deciduous Shrubs	SARE2	*Salix reticulata*	94	7.3	4.9	2.0	6.0	15.0
Deciduous Shrubs	SARI4	*Salix richardsonii*	61	3.0	3.1	0.1	2.0	7.6
Evergreen Shrubs	CATE11	*Cassiope tetragona*	90	5.0	5.1	1.0	3.0	11.5
Evergreen Shrubs	DRIN4	*Dryas integrifolia*	100	13.5	7.6	7.0	10.0	20.0
Forbs	POVI3	*Polygonum viviparum*	61	1.0	0.4	0.1	0.1	1.0
Forbs	SAAN3	*Saussurea angustifolia*	81	2.2	3.2	0.1	1.0	4.2
Grasses	ARLA2	*Arctagrostis latifolia*	68	1.2	1.4	0.1	1.0	3.0
Grasses	POAR2	*Poa arctica*	61	1.0	1.1	0.1	1.0	1.0
Sedges	CABI5	*Carex bigelowii*	100	7.0	6.1	2.0	5.0	15.0
Sedges	ERAN6	*Eriophorum angustifolium*	77	4.4	5.1	0.1	4.0	7.7
Sedges	ERVA4	*Eriophorum vaginatum*	100	20.5	13.7	7.0	15.0	40.0
Mosses	AUTU70	*Aulacomnium turgidum*	65	5.6	7.0	0.1	2.0	15.5
Mosses	HYSP70	*Hylocomium splendens*	90	7.7	7.3	1.0	5.0	20.0
Mosses	TONI70	*Tomentypnum nitens*	94	15.5	14.5	4.0	14.0	27.0
Liverworts	PTCI	*Ptilidium ciliare*	58	4.5	5.8	1.0	3.0	7.9
Lichens	FLCU	*Flavocetraria cucullata*	81	2.1	1.8	1.0	2.0	4.6

Constancy and foliar cover data summaries for *Eriophorum vaginatum/Dryas integrifolia*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

ERIVAG/LEDDEC–VACVIT: *Eriophorum vaginatum*/*Ledum palustre* ssp. *decumbens*–*Vaccinium vitis-idaea* (*n* = 45)

The plant association *Eriophorum vaginatum*/*Ledum palustre* ssp. *decumbens*–*Vaccinium vitis-idaea* occurs in Upland physiography most commonly on the following geomorphic units: Eolian Sand Sheet Upland; Alluvial-Marine Deposit; and Thaw Basin, ice-rich center. The average elevation in this plant association is 61 m (±77 m), and the slope gradient typically ranges between flat and nearly level. This plant association was associated most commonly with the surface form High-centered, Low-relief Polygons, but is also regularly associated with Non-patterned; Mixed High and Low-centered Polygons; and High-centered, High-relief Polygons. Soils are somewhat poorly drained to moderately well drained, surface organic thickness typically ranges from thin to moderately thick, coarse fragments are rare, but when they do occur the average top depth is 45 cm (±64 cm), dominant soil texture in the upper 40 cm is typically Loamy or Organic-rich, and permafrost was common with an average active layer thickness of 30 cm (±8 cm). Soil pH typically ranges from acidic to circumacidic, and the average electrical conductivity is 83 µS/cm (±60 µS/cm). The most common vegetation types include Tussock Tundra-Ericaceous and Tussock Tundra. *Eriophorum vaginatum* dominates the site, forming conspicuous tussocks with a cover of whole tussocks of at least 25%. Between the tussocks *Ledum palustre* ssp. *decumbens* and *Vaccinium vitis-idaea* codominate in the dwarf shrub layer. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Betula nana*, *Salix pulchra*, and *Cassiope tetragona*; the herbs *Arctagrostis latifolia*, *Carex bigelowii*, *Rubus chamaemorus*, and *Polygonum bistorta*; and the nonvasculars *Dactylina arctica*, *Flavocetraria cucullata*, *Aulacomnium turgidum*, *Thamnolia vermicularis*, and *Dicranum* sp.



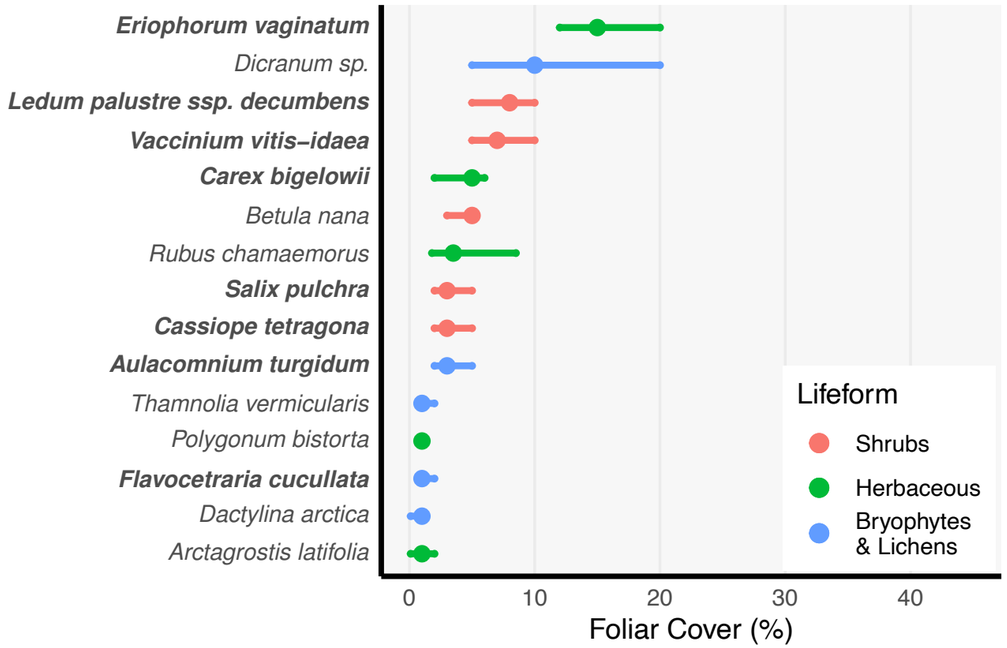
Distribution of *Eriophorum vaginatum*/*Ledum palustre* ssp. *decumbens*–*Vaccinium vitis-idaea* in the study area.

Representative photos (if available) for *Eriophorum vaginatum*/*Ledum palustre* ssp. *decumbens*–*Vaccinium vitis-idaea*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

ERIVAG/LEDDEC–VACVIT: *Eriophorum vaginatum*/*Ledum palustre* ssp. *decumbens*–*Vaccinium vitis-idaea*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	61	77	12	27	157	44
Slope (degrees)	1	1	0	0	3	45
Surface Organic Thickness (cm)	13.2	7.8	5.4	11.0	25.6	45
Cumul. Org. Thickness (cm)	16.9	8.1	8.0	15.0	28.6	43
Depth to >15% Rock Fragments (cm)	45	64	14	27	81	8
Water Table Depth (cm)	-25	9	-36	-24	-17	18
Active Layer Thickness (cm)	30	8	22	29	38	35
Site pH	5.3	0.8	4.2	5.3	6.3	44
Electrical Conductivity (uS/cm)	83	60	30	70	150	44
Whole Tussock Cover (%)	32	14	20	30	50	41

Environmental data summaries for *Eriophorum vaginatum*/*Ledum palustre* ssp. *decumbens*–*Vaccinium vitis-idaea*.



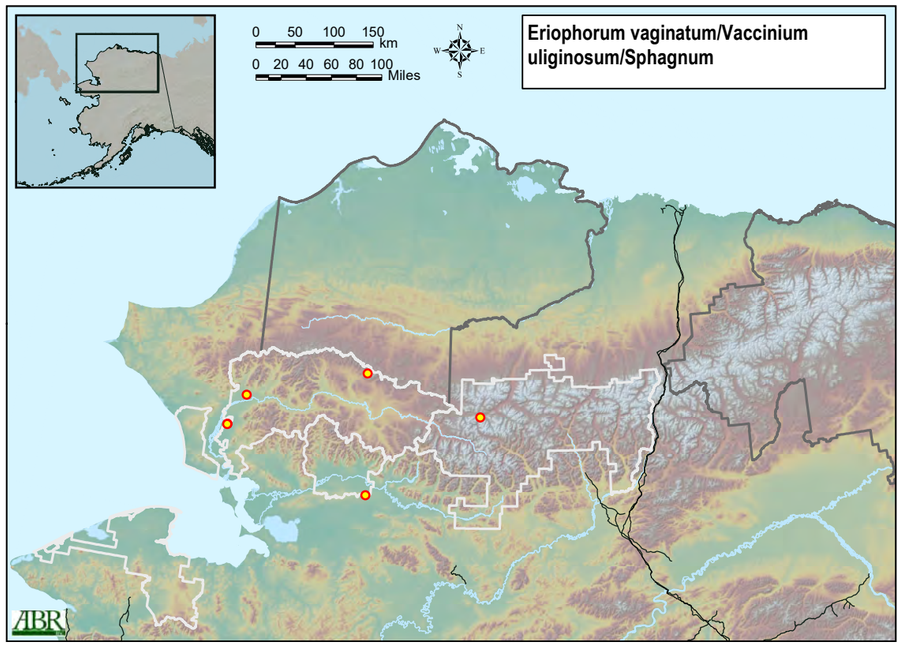
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Eriophorum vaginatum*/*Ledum palustre* ssp. *decumbens*–*Vaccinium vitis-idaea*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	BENA	*Betula nana*	56	4.4	2.2	2.0	5.0	7.6
Deciduous Shrubs	SAPU15	*Salix pulchra*	80	3.5	2.4	1.0	3.0	6.0
Evergreen Shrubs	CATE11	*Cassiope tetragona*	87	3.5	2.1	1.8	3.0	6.2
Evergreen Shrubs	LEPAD	*Ledum palustre* ssp. *decumbens*	100	8.9	4.2	5.0	8.0	15.0
Evergreen Shrubs	VAVI	*Vaccinium vitis-idaea*	100	8.6	4.8	3.0	7.0	15.0
Forbs	RUCH	*Rubus chamaemorus*	44	5.0	3.9	1.0	3.5	10.0
Sedges	CABI5	*Carex bigelowii*	78	4.5	3.0	1.0	5.0	9.2
Sedges	ERVA4	*Eriophorum vaginatum*	100	16.3	9.2	8.0	15.0	21.8
Mosses	AUTU70	*Aulacomnium turgidum*	73	5.0	5.3	1.0	3.0	10.0
Mosses	DICRA8	*Dicranum* sp.	47	13.7	10.4	5.0	10.0	30.0
Lichens	DAAR60	*Dactylina arctica*	64	1.0	0.6	0.1	1.0	2.0
Lichens	FLCU	*Flavocetraria cucullata*	96	1.8	1.4	1.0	1.0	3.0

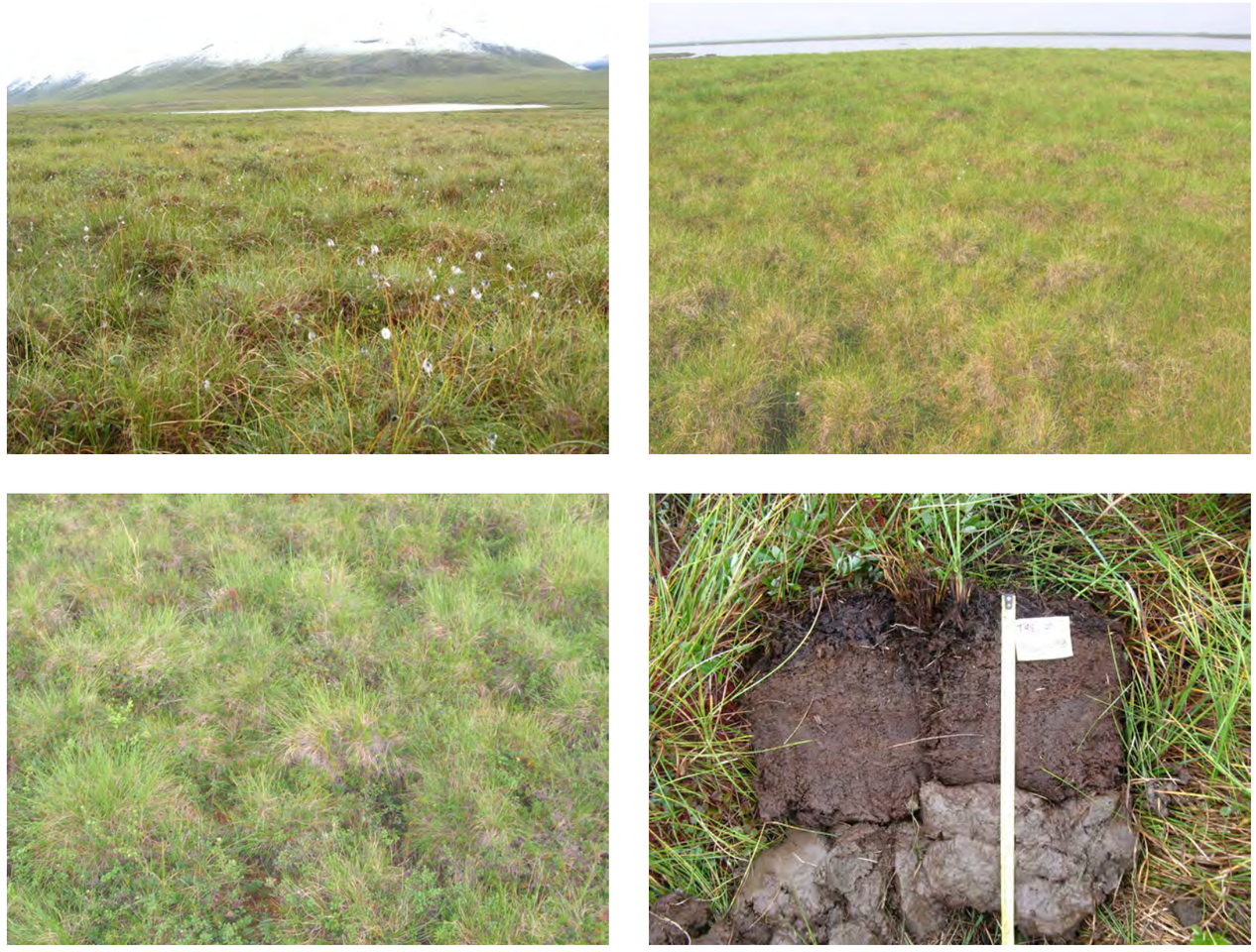
Constancy and foliar cover data summaries for *Eriophorum vaginatum*/*Ledum palustre* ssp. *decumbens*–*Vaccinium vitis-idaea*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

ERIVAG/VACULI/SPHAG: *Eriophorum vaginatum*/*Vaccinium uliginosum*/*Sphagnum* (*n* = 5)

The plant association *Eriophorum vaginatum*/*Vaccinium uliginosum*/*Sphagnum* occurs in Upland physiography most commonly on the following geomorphic units: Bogs; Moraine, older; and Hillside Colluvium. The average elevation in this plant association is 340 m (±382 m), and the slope gradient typically ranges between flat and gently sloping. This plant association was associated most commonly with the surface form High-centered, Low-relief Polygons, but is also regularly associated with Hummocks and Nonpatterned. Soils are poorly drained to somewhat poorly drained, surface organic thickness is typically moderately thick, coarse fragments are rare, but when they do occur the average top depth is 19 cm (±0 cm), dominant soil texture in the upper 40 cm is typically Loamy or Peat, and permafrost was common with an average active layer thickness of 34 cm (±9 cm). Soil pH is typically acidic, and the average electrical conductivity is 96 µS/cm (±71 µS/cm). The most common vegetation types include Tussock Tundra and Open Mixed Low Shrub-Sedge Tussock Bog Meadow. *Eriophorum vaginatum* dominates the site, forming conspicuous tussocks with a cover of whole tussocks of at least 25%. *Vaccinium uliginosum* and *Sphagnum* occur between the tussocks at moderate to high cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Ledum palustre* ssp. *decumbens*, *Vaccinium vitis-idaea*, *Salix pulchra*, and *Betula nana*; the herbs *Carex aquatilis*, *Carex rotundata*, *Rubus chamaemorus*, and *Carex bigelowii*; and the nonvasculars *Cladina rangiferina*, *Sphagnum* sp., *Flavocetraria cucullata*, *Sphagnum fuscum*, and *Aulacomnium turgidum.*



Distribution of *Eriophorum vaginatum*/*Vaccinium uliginosum*/*Sphagnum* in the study area.

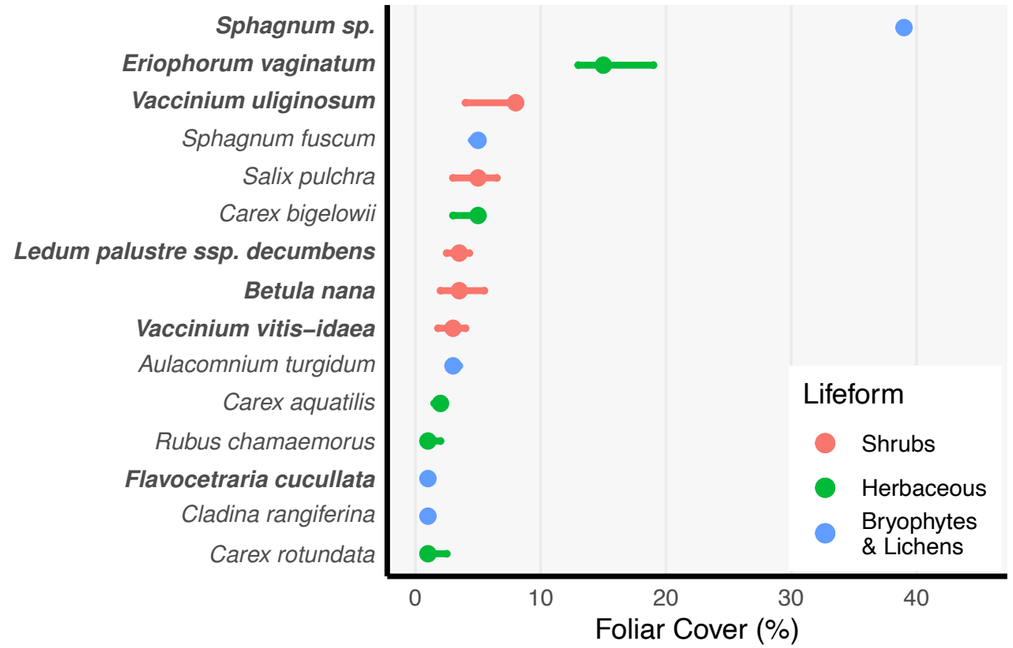


Representative photos (if available) for *Eriophorum vaginatum*/*Vaccinium uliginosum*/*Sphagnum*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

ERIVAG/VACULI/SPHAG: *Eriophorum vaginatum*/*Vaccinium uliginosum*/*Sphagnum*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	340	382	53	109	771	5
Slope (degrees)	2	2	0	0	4	5
Surface Organic Thickness (cm)	22.4	10.5	12.6	19.0	33.2	5
Cumul. Org. Thickness (cm)	23.0	10.3	12.6	22.0	33.2	5
Depth to >15% Rock Fragments (cm)	19		19	19	19	1
Water Table Depth (cm)	-25	18	-39	-35	-5	5
Active Layer Thickness (cm)	34	9	25	38	39	5
Site pH	4.9	0.8	4.2	4.7	5.8	5
Electrical Conductivity (uS/cm)	96	71	20	130	158	5
Whole Tussock Cover (%)	43	31	17	30	77	5

Environmental data summaries for *Eriophorum vaginatum*/*Vaccinium uliginosum*/*Sphagnum*.



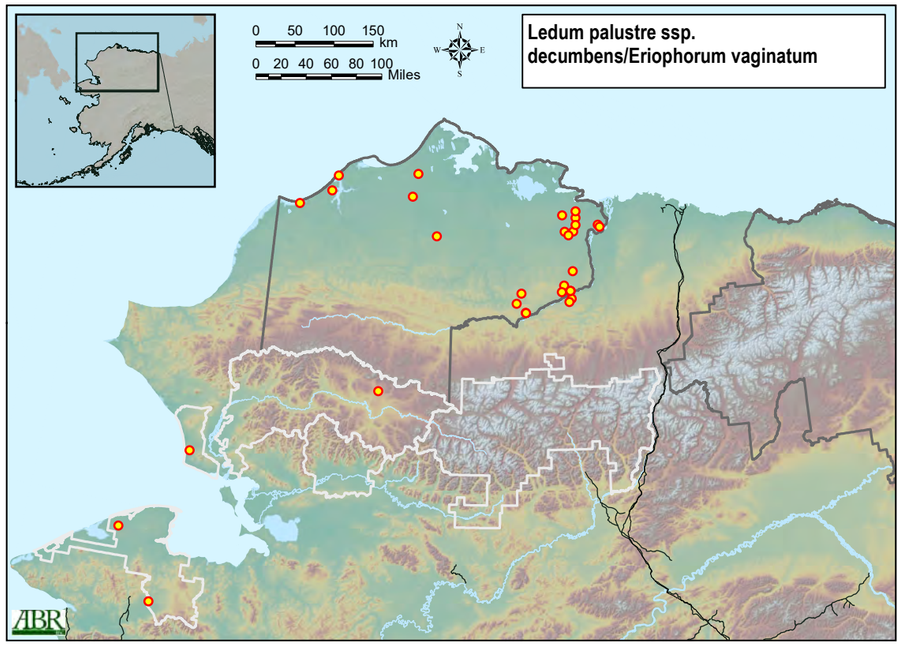
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Eriophorum vaginatum*/*Vaccinium uliginosum*/*Sphagnum*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	BENA	*Betula nana*	80	4.0	2.4	2.0	3.5	6.4
Deciduous Shrubs	SAPU15	*Salix pulchra*	60	4.7	3.5	1.8	5.0	7.4
Deciduous Shrubs	VAUL	*Vaccinium uliginosum*	100	6.8	2.7	4.0	8.0	9.2
Evergreen Shrubs	CATE11	*Cassiope tetragona*	40	3.0	2.8	1.4	3.0	4.6
Evergreen Shrubs	LEPAD	*Ledum palustre* ssp. *decumbens*	80	3.3	1.7	1.6	3.5	4.7
Evergreen Shrubs	VAVI	*Vaccinium vitis-idaea*	80	2.8	1.5	1.3	3.0	4.0
Forbs	RUCH	*Rubus chamaemorus*	60	1.7	1.2	1.0	1.0	2.6
Sedges	CAAQ	*Carex aquatilis*	60	1.7	0.6	1.2	2.0	2.0
Sedges	CABI5	*Carex bigelowii*	60	3.7	2.3	1.8	5.0	5.0
Sedges	CARO7	*Carex rotundata*	60	2.0	1.7	1.0	1.0	3.4
Sedges	ERAN6	*Eriophorum angustifolium*	40	8.5	9.2	3.3	8.5	13.7
Sedges	ERVA4	*Eriophorum vaginatum*	100	16.4	5.8	11.2	15.0	22.6
Mosses	AUTU70	*Aulacomnium turgidum*	60	3.3	0.6	3.0	3.0	3.8
Mosses	SASA19	*Sarmenthypnum sarmentosum*	40	3.5	2.1	2.3	3.5	4.7
Mosses	SPFU70	*Sphagnum fuscum*	60	4.7	0.6	4.2	5.0	5.0
Mosses	SPHAG2	*Sphagnum* sp.	80	40.8	33.0	11.5	39.0	71.4
Lichens	CLAR60	*Cladina arbuscula*	60	0.1	0.5	0.1	0.1	1.0
Lichens	CLRA60	*Cladina rangiferina*	60	1.0	0.0	1.0	1.0	1.0
Lichens	CLADI3	*Cladina* sp.	60	1.0	1.0	0.1	1.0	1.8
Lichens	FLCU	*Flavocetraria cucullata*	80	1.3	0.5	1.0	1.0	1.7

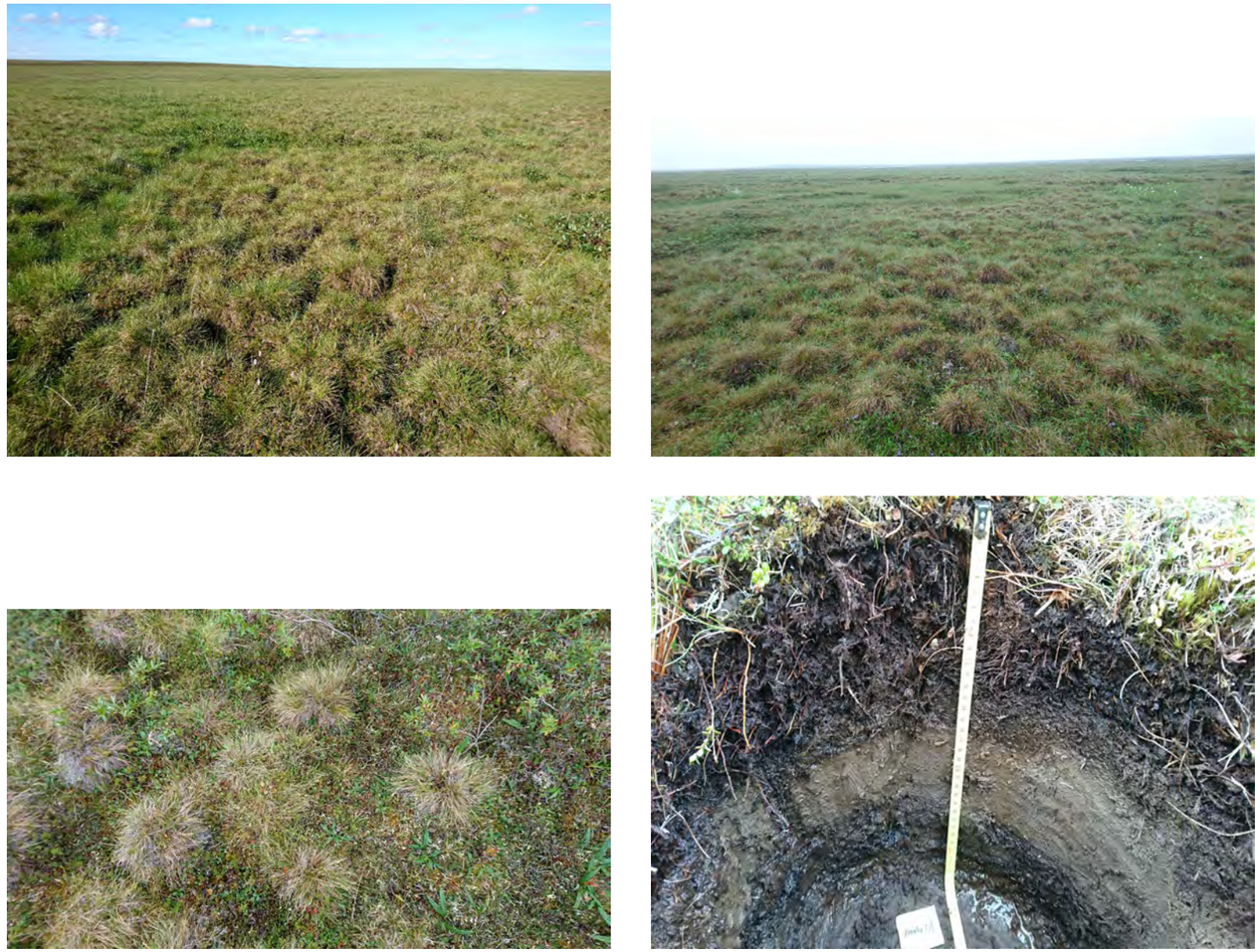
Constancy and foliar cover data summaries for *Eriophorum vaginatum*/*Vaccinium uliginosum*/*Sphagnum*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

LEDDEC/ERIVAG: *Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum* (*n* = 31)

The plant association *Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum* occurs in Upland physiography most commonly on the following geomorphic units: Frozen Upland Silt; Thaw Basin, ice-rich center; and Alluvial-Marine Deposit. The average elevation in this plant association is 102 m (±107 m), and the slope gradient typically ranges between flat and nearly level. This plant association was associated most commonly with the surface form High-centered, Low-relief Polygons, but is also regularly associated with Nonpatterned; Mixed High and Low-centered Polygons; and Mixed pits and polygons. Soils are poorly drained to somewhat poorly drained, surface organic thickness typically ranges from thin to moderately thick, coarse fragments are rare, but when they do occur the average top depth is 112 cm (±97 cm), dominant soil texture in the upper 40 cm is typically Organic-rich or Loamy, and permafrost was common with an average active layer thickness of 29 cm (±6 cm). Soil pH typically ranges from acidic to circumacidic, and the average electrical conductivity is 89 µS/cm (±51 µS/cm). The most common vegetation types include Open Mixed Low Shrub-Sedge Tussock Tundra and Tussock Tundra-Ericaceous. The vegetation is dominated by *Ledum palustre* ssp. *decumbens* which typically forms an open low shrub canopy, and *Eriophorum vaginatum* forms conspicuous tussocks with a cover of whole tussocks of at least 25%. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Vaccinium vitis-idaea*, *Betula nana*, *Salix pulchra*, and *Cassiope tetragona*; the herbs *Polygonum bistorta*, *Rubus chamaemorus*, *Arctagrostis latifolia*, and *Carex bigelowii*; and the nonvasculars *Dicranum elongatum*, *Flavocetraria cucullata*, *Dactylina arctica*, *Aulacomnium turgidum*, and *Hylocomium splendens.*



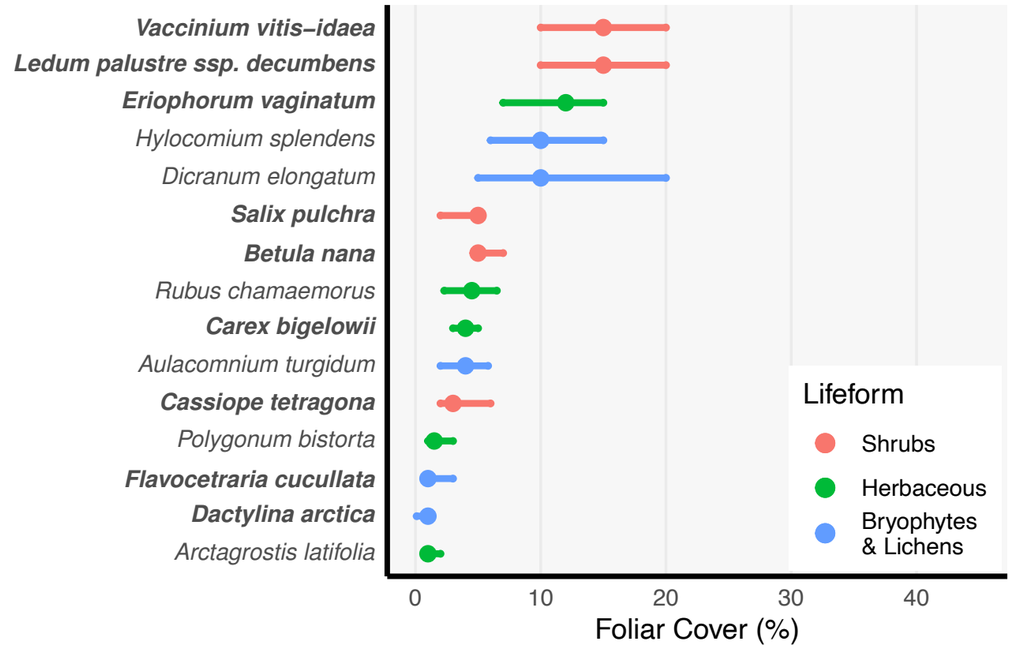
Distribution of *Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum* in the study area.



Representative photos (if available) for *Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	102	107	13	39	231	30
Slope (degrees)	2	3	0	0	4	31
Surface Organic Thickness (cm)	16.5	9.1	5.0	17.0	27.0	31
Cumul. Org. Thickness (cm)	19.8	7.6	11.8	19.0	27.1	30
Depth to >15% Rock Fragments (cm)	112	97	19	118	200	6
Water Table Depth (cm)	-23	12	-35	-27	-12	11
Active Layer Thickness (cm)	29	6	24	27	37	28
Site pH	5.1	1.0	4.0	5.0	6.2	31
Electrical Conductivity (uS/cm)	89	51	40	80	140	31
Whole Tussock Cover (%)	34	16	18	30	56	30

Environmental data summaries for *Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum*.



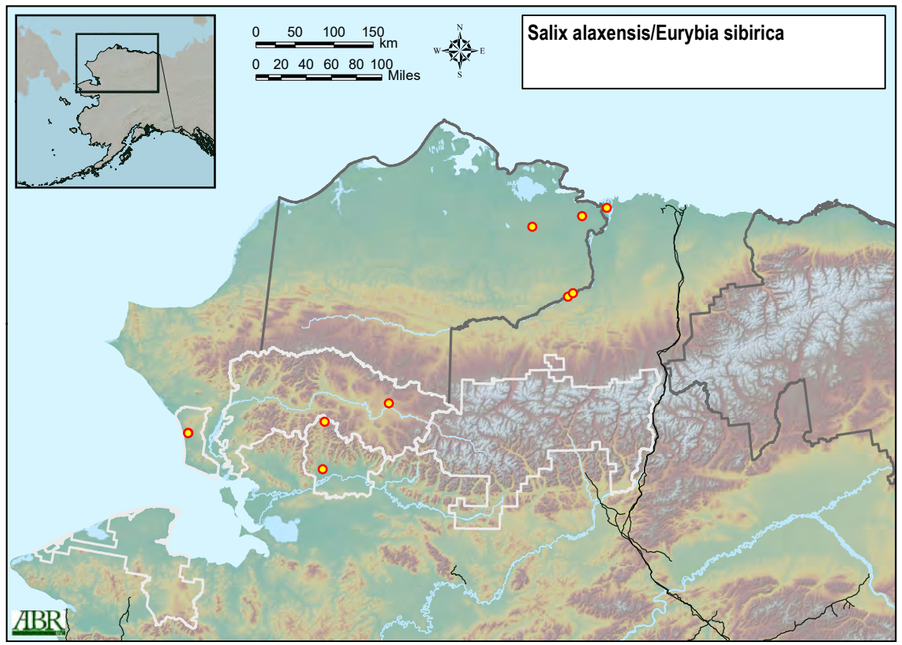
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

					Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	BENA	*Betula nana*	81	5.2	2.0	2.4	5.0	7.0
Deciduous Shrubs	SAPU15	*Salix pulchra*	81	3.6	2.3	1.0	5.0	7.0
Evergreen Shrubs	CATE11	*Cassiope tetragona*	74	4.6	3.0	2.0	3.0	9.8
Evergreen Shrubs	EMNI	*Empetrum nigrum*	61	5.9	6.1	1.0	3.0	11.0
Evergreen Shrubs	LEPAD	*Ledum palustre* ssp. *decumbens*	100	15.7	8.9	8.0	15.0	30.0
Evergreen Shrubs	VAVI	*Vaccinium vitis-idaea*	100	16.2	8.3	8.0	15.0	30.0
Forbs	RUCH	*Rubus chamaemorus*	45	6.1	6.6	1.3	4.5	12.9
Sedges	CABI5	*Carex bigelowii*	71	4.4	2.4	2.0	4.0	7.0
Sedges	ERVA4	*Eriophorum vaginatum*	100	11.9	5.8	5.0	12.0	20.0
Mosses	AUTU70	*Aulacomnium turgidum*	65	4.5	3.4	1.0	4.0	10.0
Mosses	DIEL70	*Dicranum elongatum*	55	13.9	11.6	4.0	10.0	31.6
Mosses	HYSP70	*Hylocomium splendens*	48	12.2	11.7	2.4	10.0	18.0
Lichens	DAAR60	*Dactylina arctica*	77	1.0	0.6	0.1	1.0	2.0
Lichens	FLCU	*Flavocetraria cucullata*	97	2.6	2.4	1.0	1.0	5.2

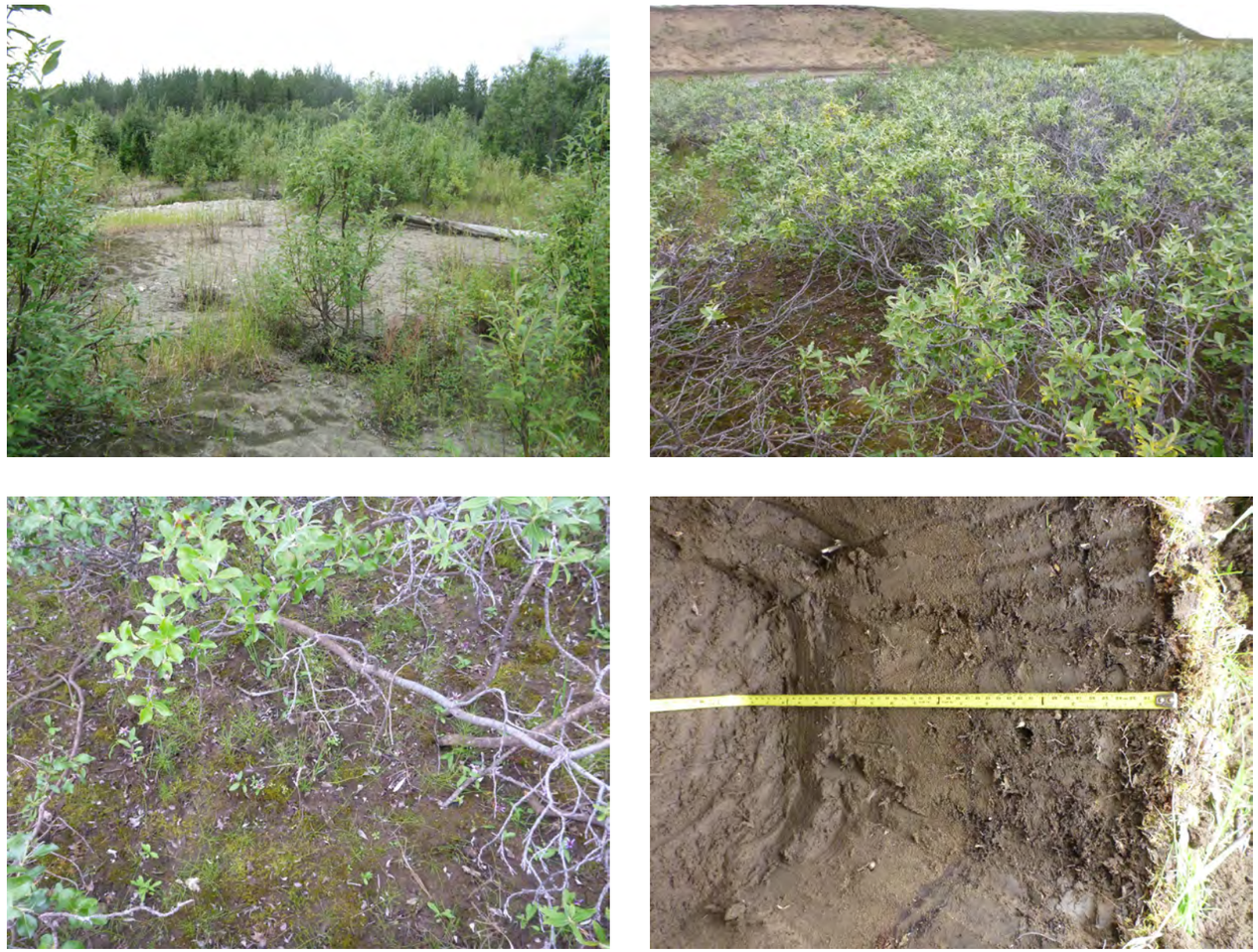
Constancy and foliar cover data summaries for *Ledum palustre* ssp. *decumbens*/*Eriophorum vaginatum*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALALA/ASTSIB: *Salix alaxensis*/*Eurybia sibirica* (*n* = 8)

The plant association *Salix alaxensis*/*Eurybia sibirica* occurs in Riverine physiography most commonly on the following geomorphic units: Braided Active Overbank Deposit; Meander Active Overbank Deposit; and Meander Coarse Active Channel Deposit. The average elevation in this plant association is 91 m (±120 m), and the slope gradient is typically flat. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with Scour channels-ridges and Tree mounds (downed logs and root balls). Soils are well drained to somewhat excessively drained, surface organic thickness typically ranges from absent to very thin, coarse fragments are common with an average top depth of 61 cm (±54 cm), dominant soil texture in the upper 40 cm is typically Sandy or Gravelly, and permafrost was rarely encountered, with an average active layer thickness of 128 cm (±0 cm). Soil pH typically ranges from circumacidic to alkaline, and the average electrical conductivity is 91 µS/cm (±68 µS/cm). The most common vegetation types include Open Tall Willow and Closed Low Willow. The vegetation is dominated by *Salix alaxensis*, and *Eurybia sibirica* is always present in the understory at moderate to high cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Dasiphora fruticosa*, *Salix arbusculoides*, *Salix glauca*, and *Salix hastata*; the herbs *Arctagrostis latifolia*, *Festuca rubra*, *Astragalus alpinus*, and *Equisetum arvense*; and the nonvasculars *Campylium polygamum*, *Brachythecium* sp., *Sanionia uncinata*, *Racomitrium lanuginosum*, and *Hylocomium splendens.*



Distribution of *Salix alaxensis*/*Eurybia sibirica* in the study area.

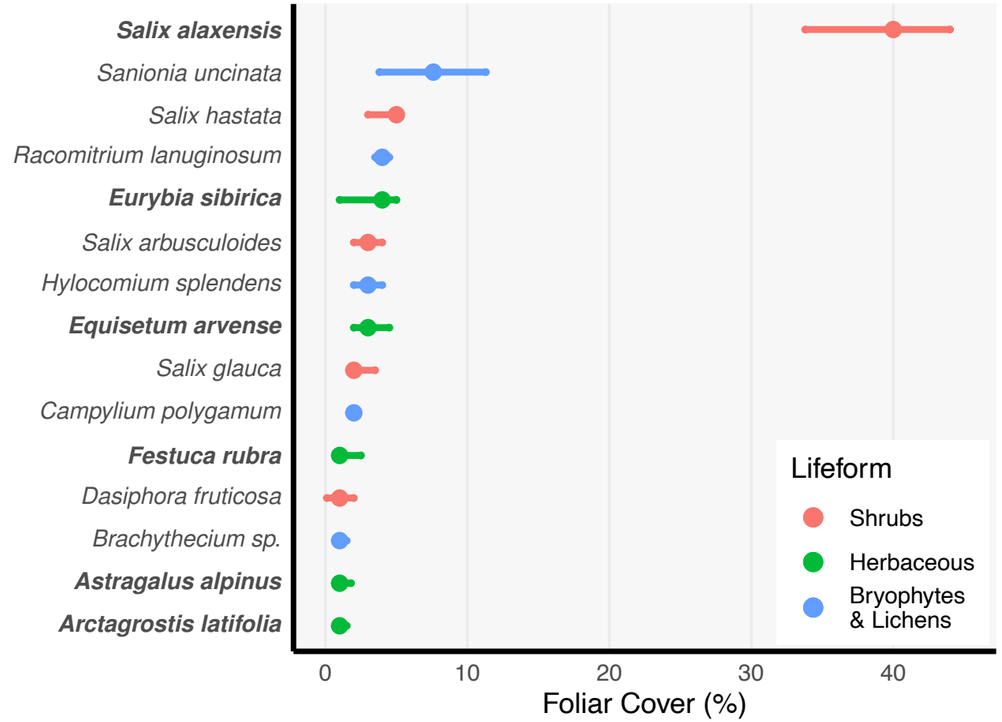


Representative photos (if available) for *Salix alaxensis*/*Eurybia sibirica*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALALA/ASTSIB: *Salix alaxensis*/*Eurybia sibirica*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	91	120	24	37	193	7
Slope (degrees)	0	0	0	0	0	7
Surface Organic Thickness (cm)	0.8	1.2	0.0	0.0	2.3	8
Cumul. Org. Thickness (cm)	2.0	2.3	0.0	2.0	4.8	7
Depth to >15% Rock Fragments (cm)	61	54	3	60	119	6
Water Table Depth (cm)						8
Active Layer Thickness (cm)	128		128	128	128	1
Site pH	7.4	0.8	6.2	7.5	8.1	8
Electrical Conductivity (uS/cm)	91	68	16	80	174	7
Whole Tussock Cover (%)	0	0	0	0	0	7

Environmental data summaries for *Salix alaxensis*/*Eurybia sibirica*.



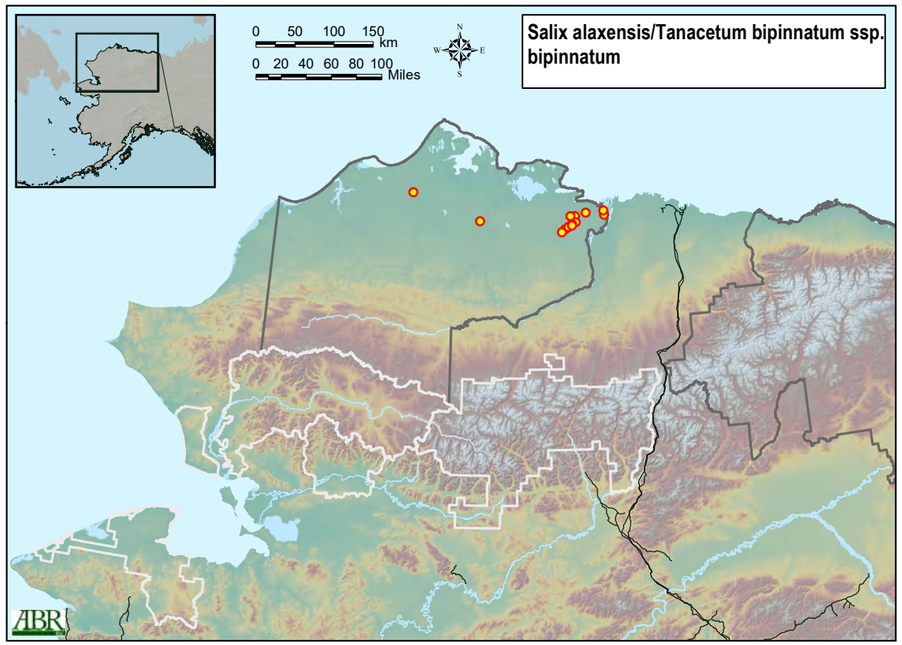
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix alaxensis*/*Eurybia sibirica*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	SAAL	*Salix alaxensis*	100	41.5	13.8	28.5	40.0	56.0
Deciduous Shrubs	SAHA	*Salix hastata*	63	5.8	5.4	1.8	5.0	11.0
Forbs	ARTI	*Artemisia tilesii*	63	1.0	0.8	0.1	1.0	1.6
Forbs	ASAL7	*Astragalus alpinus*	75	1.9	2.1	1.0	1.0	4.0
Forbs	CACA20	*Castilleja caudata*	63	1.6	2.0	0.1	1.0	3.8
Forbs	EUSI13	*Eurybia sibirica*	100	3.6	2.6	1.0	4.0	5.9
Forbs	PAPA8	*Parnassia palustris*	63	1.0	1.3	0.1	0.1	2.2
Forbs	POVI3	*Polygonum viviparum*	63	1.0	0.4	0.1	1.0	1.0
Ferns & Allies	EQAR	*Equisetum arvense*	88	3.3	1.9	1.0	3.0	5.4
Grasses	ARLA2	*Arctagrostis latifolia*	88	1.5	1.2	1.0	1.0	2.8
Grasses	FERU2	*Festuca rubra*	88	1.7	1.4	0.1	1.0	3.4
Grasses	TRSP2	*Trisetum spicatum*	63	0.1	0.4	0.1	0.1	1.0

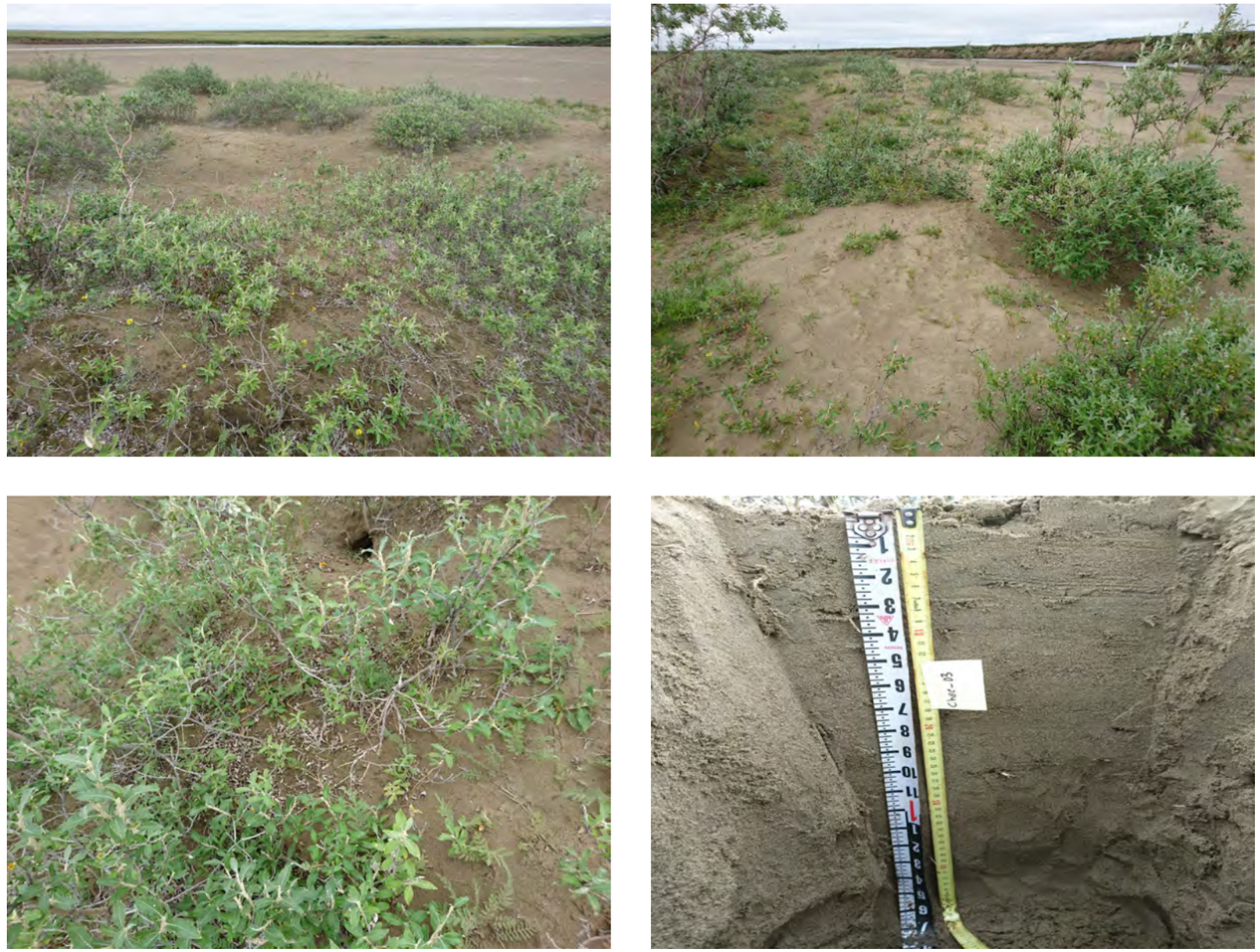
Constancy and foliar cover data summaries for *Salix alaxensis*/*Eurybia sibirica*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALALA/CHRBIP: *Salix alaxensis*/*Tanacetum bipinnatum* ssp. *bipinnatum* (*n* = 13)

The plant association *Salix alaxensis*/*Tanacetum bipinnatum* ssp. *bipinnatum* occurs in Riverine and Upland physiography most commonly on the following geomorphic units: Eolian Active Sand Dune; Eolian Active Sand Deposit; and Delta Inactive Channel Deposit. The average elevation in this plant association is 14 m (±8 m), and the slope gradient typically ranges between flat and moderately steep. This plant association was associated most commonly with the surface form Small dunes, but is also regularly associated with Nonpatterned and Wind deflation. Soils are well drained to somewhat excessively drained, surface organics are typically absent, coarse fragments are uncommon, but when they do occur the average top depth is 115 cm (±30 cm), dominant soil texture in the upper 40 cm is typically Sandy or Loamy, and permafrost was never encountered in the upper 130 cm of the soil profile. Soil pH typically ranges from circumalkaline to alkaline, and the average electrical conductivity is 105 µS/cm (±189 µS/cm). The most common vegetation types include Open Low Willow, Open Tall Willow, and Partially Vegetated. The vegetation is dominated by *Salix alaxensis*, and *Tanacetum bipinnatum* ssp. *bipinnatum* is always present in the understory at low to moderate cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix niphoclada*, *Salix glauca*, *Dryas integrifolia*, and *Arctostaphylos rubra*; the herbs *Stellaria longipes*, *Festuca rubra*, *Equisetum arvense*, and *Bromus pumpellianus*; and the nonvasculars *Bryum* sp., *Collema ceraniscum*, *Bryum pseudotriquetrum*, *Distichium capillaceum*, and *Ceratodon purpureus.*



Distribution of *Salix alaxensis*/*Tanacetum bipinnatum* ssp. *bipinnatum* in the study area.



Representative photos (if available) for *Salix alaxensis*/*Tanacetum bipinnatum* ssp. *bipinnatum*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

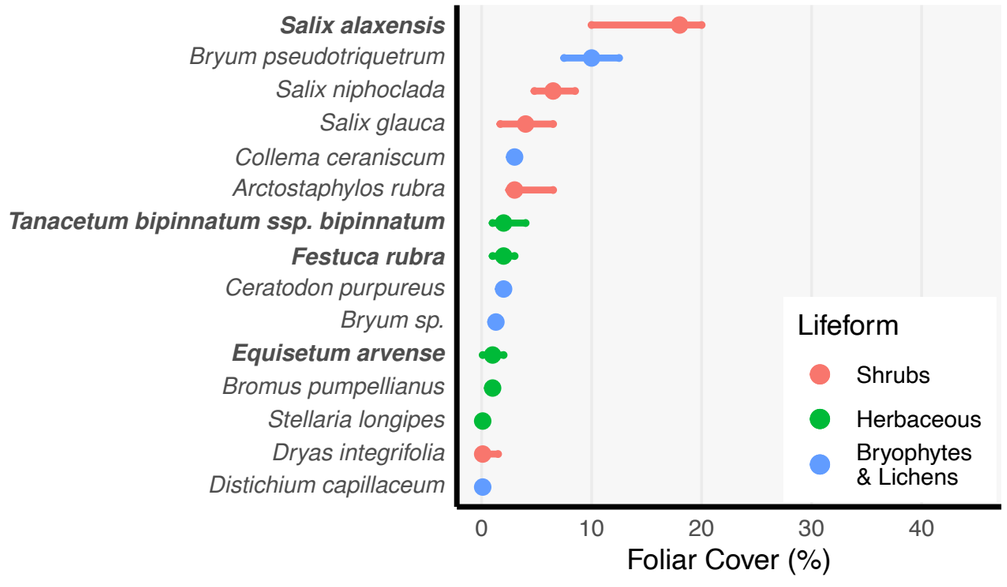
SALALA/CHRBIP: *Salix alaxensis*/*Tanacetum bipinnatum* ssp. *bipinnatum*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	14	8	5	14	19	13
Slope (degrees)	8	11	0	2	20	12
Surface Organic Thickness (cm)	0.1	0.3	0.0	0.0	0.0	13
Cumul. Org. Thickness (cm)	0.5	0.9	0.0	0.0	1.0	13
Depth to >15% Rock Fragments (cm)	115	30	86	127	134	4
Water Table Depth (cm)						13
Soil Thaw Depth (cm)						13
Site pH	7.9	0.6	6.8	8.2	8.3	13
Electrical Conductivity (uS/cm)	105	189	40	50	88	13
Whole Tussock Cover (%)	0	0	0	0	0	8

Environmental data summaries for *Salix alaxensis*/*Tanacetum bipinnatum* ssp. *bipinnatum*.

					Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	SAAL	*Salix alaxensis*	100	17.2	8.4	8.4	18.0	25.0
Deciduous Shrubs	SAGL	*Salix glauca*	46	4.1	3.1	1.0	4.0	7.4
Forbs	STLO2	*Stellaria longipes*	69	0.1	0.5	0.1	0.1	1.1
Forbs	TABIB	*Tanacetum bipinnatum* ssp. *bipinnatum*	100	2.7	2.3	0.1	2.0	5.0
Ferns & Allies	EQAR	*Equisetum arvense*	85	1.7	1.9	0.1	1.0	5.0
Grasses	BRPU3	*Bromus pumpellianus*	69	1.1	0.9	0.1	1.0	2.2
Grasses	FERU2	*Festuca rubra*	100	2.2	2.1	0.1	2.0	5.0

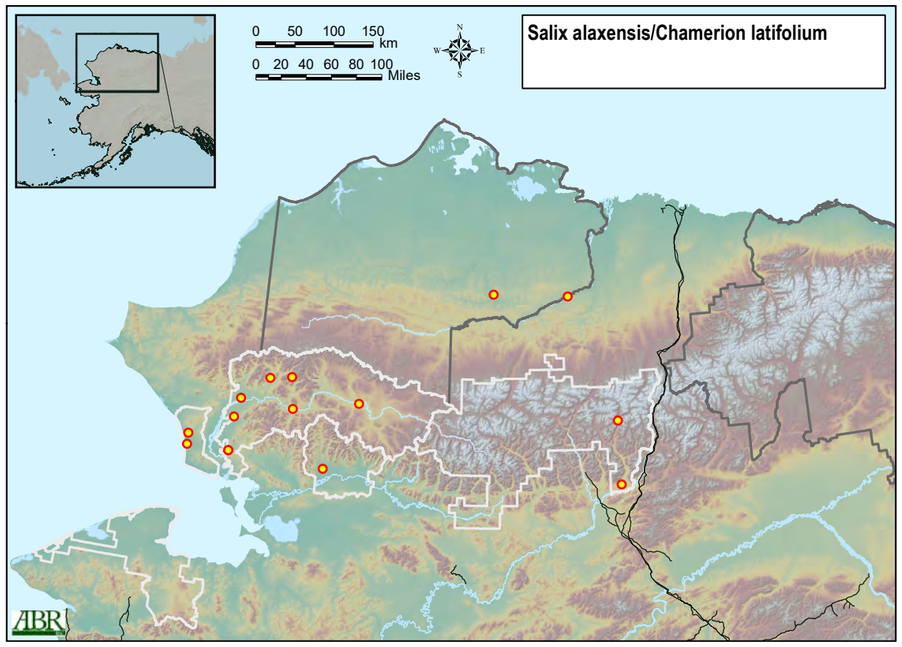
Constancy and foliar cover data summaries for *Salix alaxensis*/*Tanacetum bipinnatum* ssp. *bipinnatum*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.



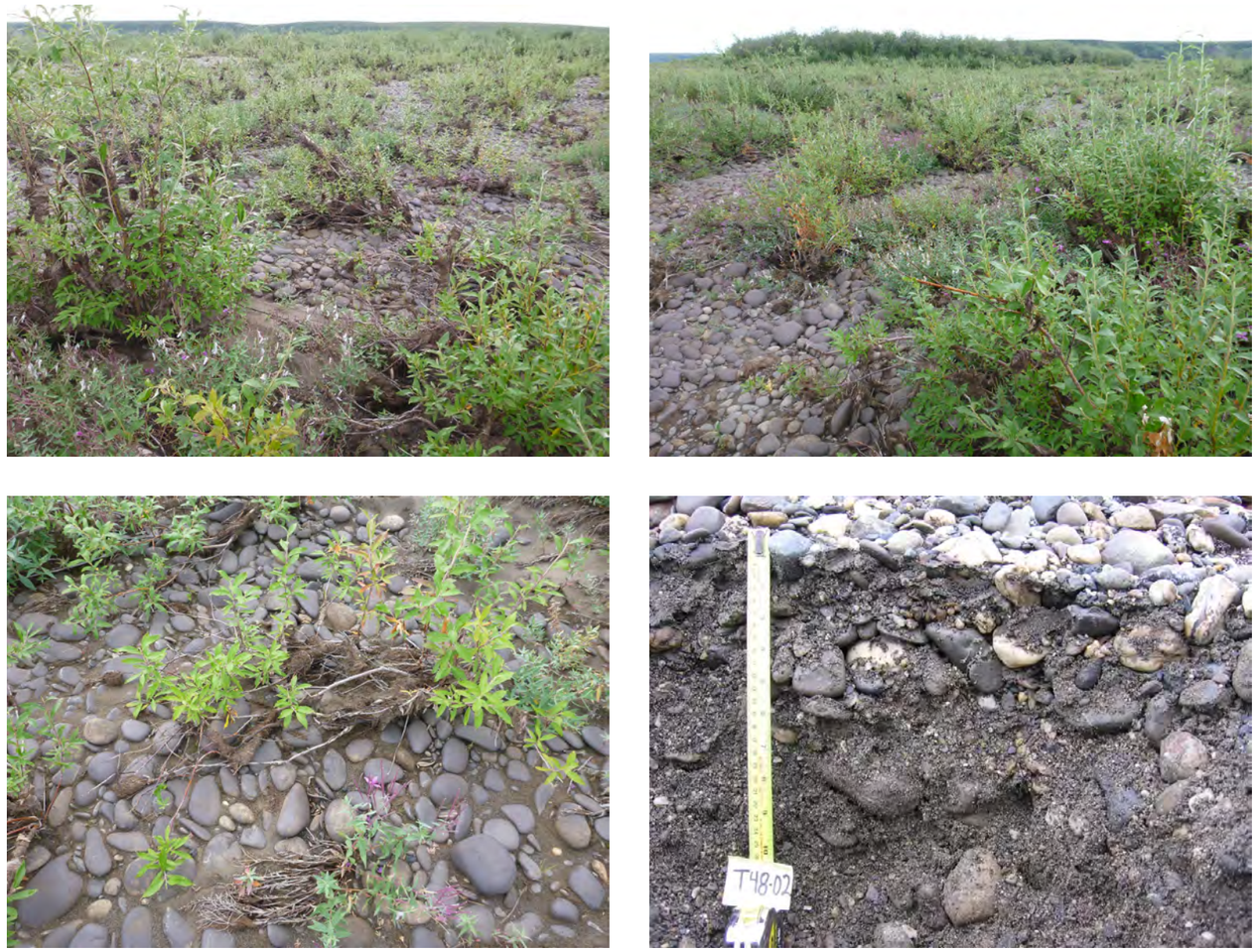
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix alaxensis*/*Tanacetum bipinnatum* ssp. *bipinnatum*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

SALALA/EPILAT: *Salix alaxensis*/*Chamerion latifolium* (*n* = 8)

The plant association *Salix alaxensis*/*Chamerion latifolium* occurs in Riverine physiography on the following geomorphic units: Braided Coarse Active Channel Deposit and Meander Coarse Active Channel Deposit. The average elevation in this plant association is 160 m (±159 m), and the slope gradient typically ranges between flat and nearly level. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with Riverbed Cobbles or Boulders; Rocks, Blockfields; and Scour channels-ridges. Soils are somewhat excessively drained to excessively drained, surface organics are typically absent, coarse fragments are common with an average top depth of 26 cm (±70 cm), dominant soil texture in the upper 40 cm is typically Gravelly or Bouldery, and permafrost was never encountered in the upper 130 cm of the soil profile. Soil pH typically ranges from circumalkaline to alkaline, and the average electrical conductivity is 80 µS/cm (±57 µS/cm). The most common vegetation type is Partially Vegetated. The vegetation is dominated by *Salix alaxensis*, and *Chamerion latifolium* is always present in the understory at low to moderate cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Dasiphora fruticosa*, *Betula nana*, *Vaccinium uliginosum*, and *Salix niphoclada*; the herbs *Artemisia tilesii*, *Astragalus alpinus*, *Wilhelmsia physodes*, and *Eurybia sibirica*; and the nonvasculars *Racomitrium lanuginosum*, *Ceratodon purpureus*, *Aongstroemia longipes*, *Bryoerythrophyllum recurvirostrum*, and *Campylium polygamum.*



Distribution of *Salix alaxensis*/*Chamerion latifolium* in the study area.



Representative photos (if available) for *Salix alaxensis*/*Chamerion latifolium*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

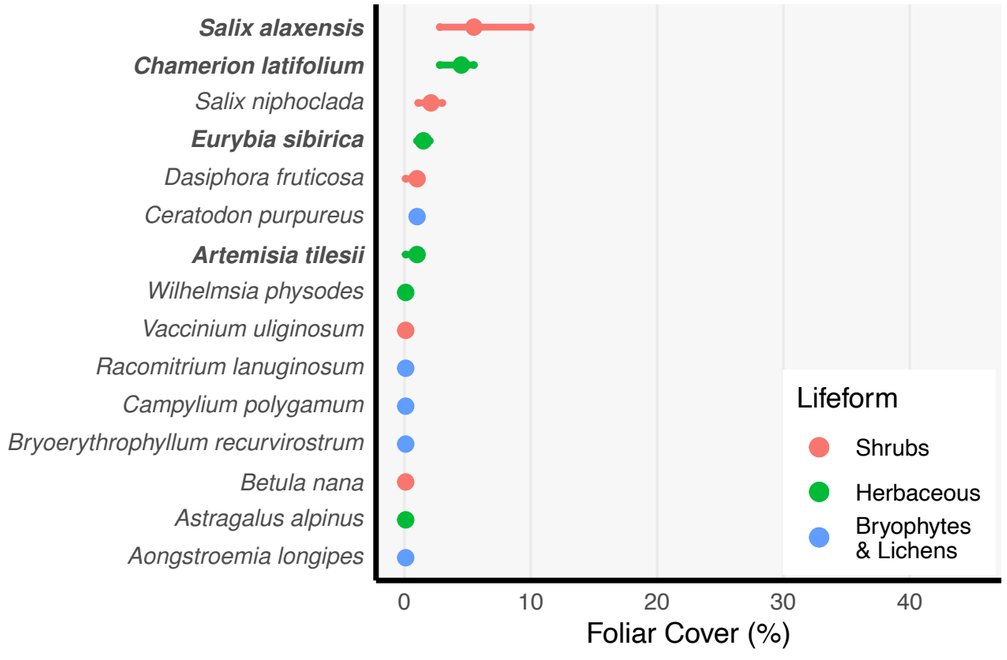
SALALA/EPILAT: *Salix alaxensis*/*Chamerion latifolium*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	160	159	18	119	322	8
Slope (degrees)	1	1	0	0	1	8
Surface Organic Thickness (cm)	0.0	0.0	0.0	0.0	0.0	8
Cumul. Org. Thickness (cm)	0.0	0.0	0.0	0.0	0.0	8
Depth to >15% Rock Fragments (cm)	26	70	0	0	67	8
Water Table Depth (cm)	-30		-30	-30	-30	1
Soil Thaw Depth (cm)						8
Site pH	7.8	0.5	7.0	8.0	8.3	8
Electrical Conductivity (uS/cm)	80	57	30	60	154	7
Whole Tussock Cover (%)	0	0	0	0	0	8

Environmental data summaries for *Salix alaxensis*/*Chamerion latifolium*.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	SAAL	*Salix alaxensis*	100	8.4	9.5	1.7	5.5	16.0
Forbs	ARTI	*Artemisia tilesii*	75	1.0	0.5	0.1	1.0	1.0
Forbs	ASAL7	*Astragalus alpinus*	63	0.1	0.0	0.1	0.1	0.1
Forbs	CHLA13	*Chamerion latifolium*	100	5.5	5.5	1.4	4.5	10.3
Forbs	EUSI13	*Eurybia sibirica*	75	1.9	1.7	1.0	1.5	3.5
Forbs	WIPH	*Wilhelmsia physodes*	63	0.1	0.4	0.1	0.1	1.0

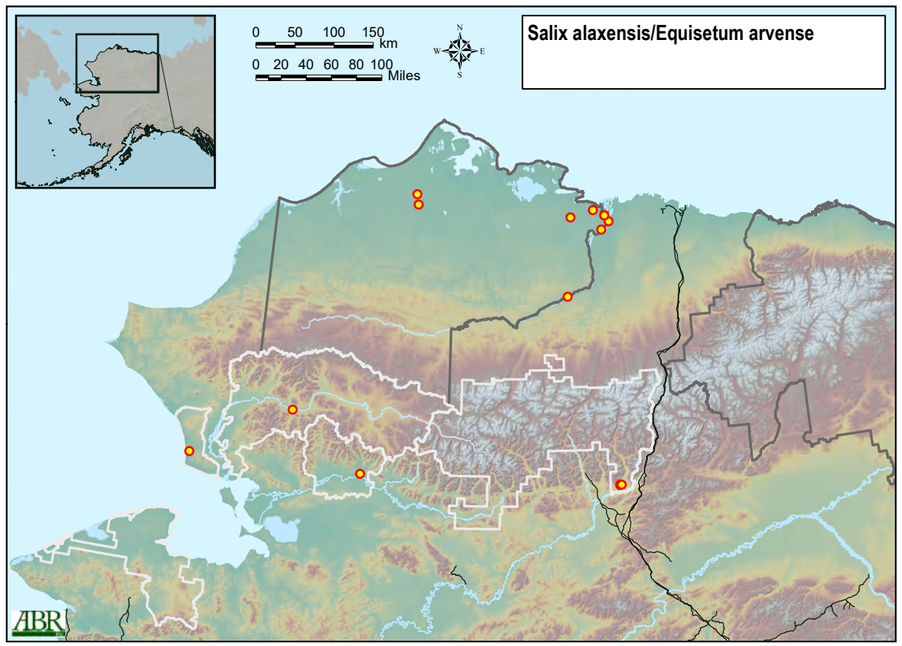
Constancy and foliar cover data summaries for *Salix alaxensis*/*Chamerion latifolium*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.



Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix alaxensis*/*Chamerion latifolium*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

SALALA/EQUARV: *Salix alaxensis*/*Equisetum arvense* (*n* = 11)

The plant association *Salix alaxensis*/*Equisetum arvense* occurs in Riverine physiography most commonly on the following geomorphic units: Braided Active Overbank Deposit; Delta Inactive Channel Deposit; and Meander Active Overbank Deposit. The average elevation in this plant association is 34 m (±50 m), and the slope gradient is typically flat. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with Small dunes and Tree mounds (downed logs and root balls). Soils are somewhat poorly drained to well drained, surface organic thickness typically ranges from absent to very thin, coarse fragments are uncommon, but when they do occur the average top depth is 101 cm (±72 cm), dominant soil texture in the upper 40 cm is typically Loamy or Sandy, and permafrost was common with an average active layer thickness of 100 cm (±35 cm). Soil pH is typically alkaline, and the average electrical conductivity is 319 µS/cm (±228 µS/cm). The most common vegetation types include Open Tall Willow, Closed Tall Willow, and Open Low Willow. The vegetation is dominated by *Salix alaxensis*, and *Equisetum arvense* is always present in the understory at moderate to high cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Alnus viridis* ssp. *fruticosa*, *Salix richardsonii*, *Salix glauca*, and *Arctostaphylos rubra*; the herbs *Festuca rubra*, *Artemisia tilesii*, *Petasites frigidus*, and *Eurybia sibirica*; and the nonvasculars *Brachythecium mildeanum*, *Bryum* sp., *Leptobryum pyriforme*, *Campylium stellatum*, and *Brachythecium* sp.



Distribution of *Salix alaxensis*/*Equisetum arvense* in the study area.

Representative photos (if available) for *Salix alaxensis*/*Equisetum arvense*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

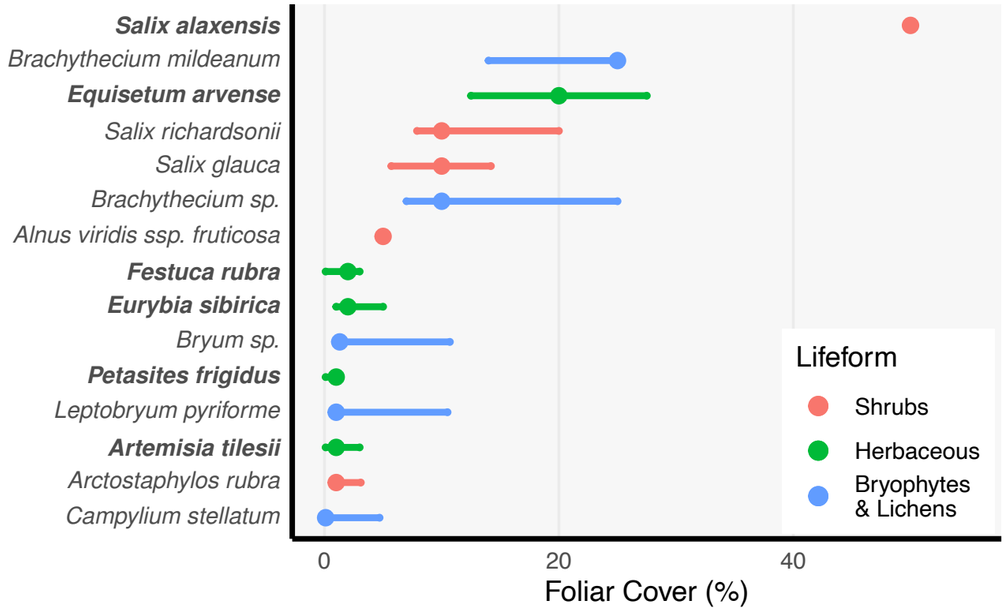
SALALA/EQUARV: *Salix alaxensis*/*Equisetum arvense*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	34	50	2	10	100	10
Slope (degrees)	0	0	0	0	0	10
Surface Organic Thickness (cm)	0.5	1.0	0.0	0.0	2.0	11
Cumul. Org. Thickness (cm)	0.9	1.2	0.0	0.0	2.6	10
Depth to >15% Rock Fragments (cm)	101	72	34	98	168	5
Water Table Depth (cm)						11
Active Layer Thickness (cm)	100	35	69	93	135	5
Site pH	7.7	0.3	7.3	7.8	8.0	10
Electrical Conductivity (uS/cm)	319	228	90	270	662	9
Whole Tussock Cover (%)	0	0	0	0	0	7

Environmental data summaries for *Salix alaxensis*/*Equisetum arvense*.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	SAAL	*Salix alaxensis*	100	51.2	22.6	24.0	50.0	75.0
Deciduous Shrubs	SARI4	*Salix richardsonii*	45	12.6	9.9	3.2	10.0	23.0
Forbs	ARTI	*Artemisia tilesii*	82	1.9	2.2	0.1	1.0	5.2
Forbs	EUSI13	*Eurybia sibirica*	91	3.1	3.2	0.1	2.0	5.5
Forbs	PEFR5	*Petasites frigidus*	73	2.5	5.1	0.1	1.0	5.4
Forbs	TABIB	*Tanacetum bipinnatum* ssp. *bipinnatum*	64	2.8	1.3	1.3	3.0	3.8
Ferns & Allies	EQAR	*Equisetum arvense*	100	21.0	11.0	10.0	20.0	30.3
Grasses	FERU2	*Festuca rubra*	82	2.6	3.6	0.1	2.0	4.8

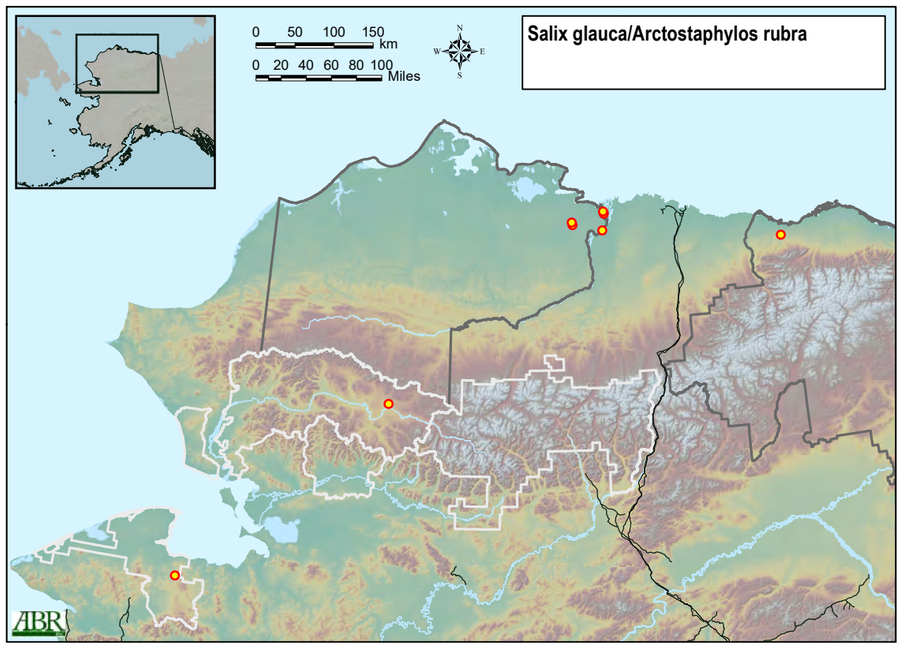
Constancy and foliar cover data summaries for *Salix alaxensis*/*Equisetum arvense*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.



Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix alaxensis*/*Equisetum arvense*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

SALGLA/ARCRUB1: *Salix glauca*/*Arctostaphylos rubra* (*n* = 8)

The plant association *Salix glauca*/*Arctostaphylos rubra* occurs in Riverine and Upland physiography most commonly on the following geomorphic units: Eolian Inactive Sand Dune; Meander Inactive Overbank Deposit; and Braided Inactive Overbank Deposit. The average elevation in this plant association is 85 m (±126 m), and the slope gradient typically ranges between flat and nearly level. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with Small dunes and Undifferentiated mounds. Soils are moderately well drained to well drained, surface organic thickness typically ranges from absent to thin, coarse fragments are uncommon, but when they do occur the average top depth is 85 cm (±100 cm), dominant soil texture in the upper 40 cm is typically Sandy or Loamy, and permafrost was common with an average active layer thickness of 78 cm (±27 cm). Soil pH typically ranges from circumalkaline to alkaline, and the average electrical conductivity is 104 µS/cm (±79 µS/cm). The most common vegetation type is Open Low Willow. The vegetation is dominated by *Salix glauca*, and *Arctostaphylos rubra* is always present in the understory at moderate to high cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix richardsonii*, *Salix reticulata*, and *Dryas integrifolia*; the herbs *Festuca rubra*, *Carex krausei*, *Eurybia sibirica*, *Equisetum arvense*, and *Astragalus alpinus*; and the nonvasculars *Aulacomnium palustre*, *Distichium capillaceum*, *Rhytidium rugosum*, *Hylocomium splendens*, and *Tomentypnum nitens.*



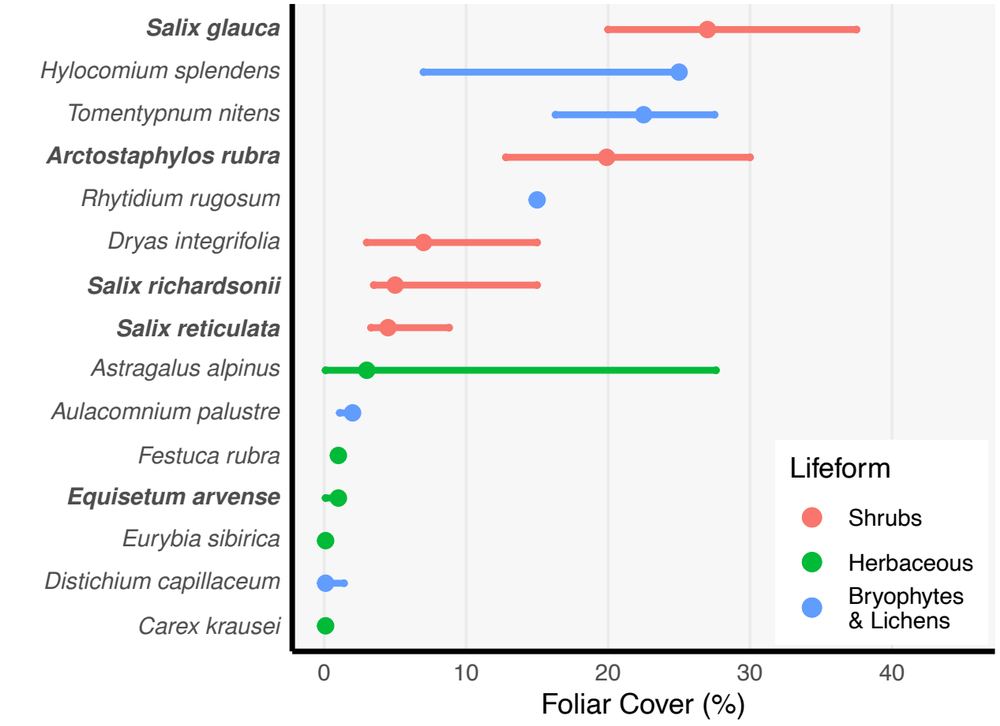
Distribution of *Salix glauca*/*Arctostaphylos rubra* in the study area.

Representative photos (if available) for *Salix glauca*/*Arctostaphylos rubra*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALGLA/ARCRUB1: *Salix glauca*/*Arctostaphylos rubra*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	85	126	5	15	226	8
Slope (degrees)	2	2	0	2	4	8
Surface Organic Thickness (cm)	4.0	3.9	0.0	4.1	7.9	8
Cumul. Org. Thickness (cm)	5.0	5.1	0.0	4.6	10.5	8
Depth to >15% Rock Fragments (cm)	85	100	23	36	167	3
Water Table Depth (cm)	-45		-45	-45	-45	1
Active Layer Thickness (cm)	78	27	56	72	104	4
Site pH	7.6	0.6	6.9	7.6	8.2	8
Electrical Conductivity (uS/cm)	104	79	37	80	223	8
Whole Tussock Cover (%)	0	0	0	0	0	4

Environmental data summaries for *Salix glauca*/*Arctostaphylos rubra*.



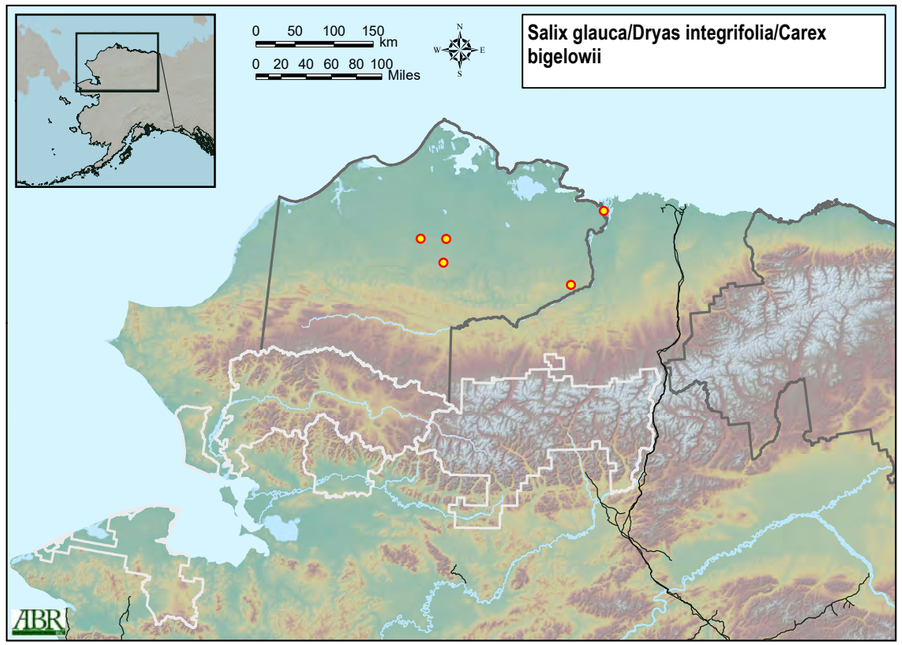
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix glauca*/*Arctostaphylos rubra*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	ARRU	*Arctostaphylos rubra*	100	21.9	15.9	4.8	19.9	36.8
Deciduous Shrubs	SAGL	*Salix glauca*	100	28.4	12.9	16.4	27.0	45.0
Deciduous Shrubs	SARE2	*Salix reticulata*	75	8.0	8.9	2.0	4.5	17.5
Deciduous Shrubs	SARI4	*Salix richardsonii*	88	8.2	6.6	1.8	5.0	15.0
Evergreen Shrubs	DRIN4	*Dryas integrifolia*	63	8.3	6.5	2.0	7.0	15.0
Forbs	ASAL7	*Astragalus alpinus*	63	12.7	16.1	0.1	3.0	30.8
Forbs	EUSI13	*Eurybia sibirica*	63	0.1	0.4	0.1	0.1	1.0
Ferns & Allies	EQAR	*Equisetum arvense*	75	1.0	0.6	0.1	1.0	1.2
Grasses	FERU2	*Festuca rubra*	63	1.3	1.1	0.1	1.0	2.3
Sedges	CAKR2	*Carex krausei*	63	0.1	0.5	0.1	0.1	1.0
Mosses	HYSP70	*Hylocomium splendens*	63	18.8	11.0	7.0	25.0	28.0
Mosses	TONI70	*Tomentypnum nitens*	50	21.3	12.5	9.5	22.5	32.0

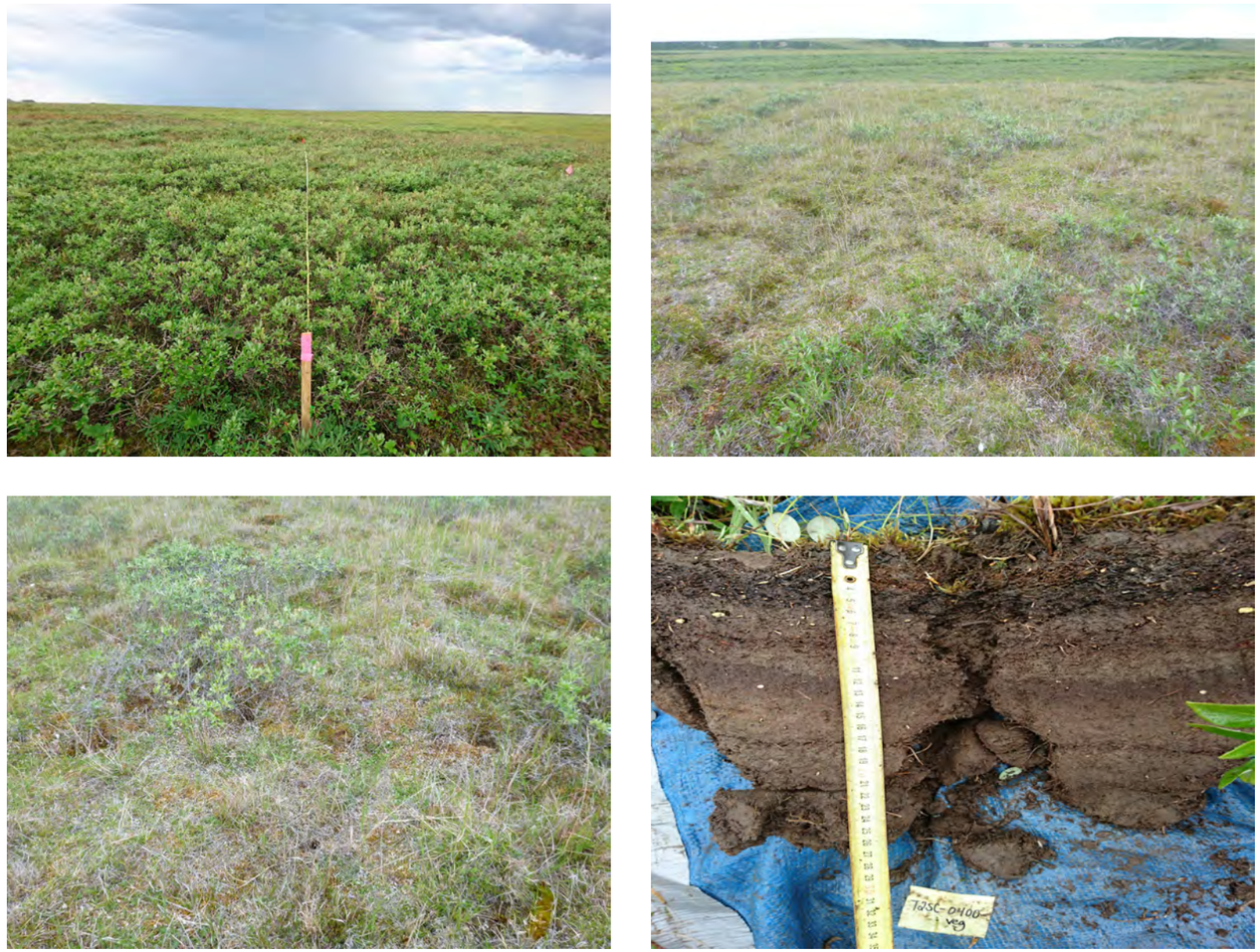
Constancy and foliar cover data summaries for *Salix glauca*/*Arctostaphylos rubra*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALGLA/DRYINT/CARBIG: *Salix glauca*/*Dryas integrifolia*/*Carex bigelowii* (*n* = 5)

The plant association *Salix glauca*/*Dryas integrifolia*/*Carex bigelowii* occurs in Riverine and Upland physiography most commonly on the following geomorphic units: Delta Inactive Overbank Deposit; Frozen Upland Silt; and Hillside Colluvium. The average elevation in this plant association is 71 m (±49 m), and the slope gradient typically ranges between nearly level and gently sloping. This plant association was associated with the surface form Nonpatterned. Soils are poorly drained to somewhat poorly drained, surface organic thickness typically ranges from very thin to thin, coarse fragments are rare, but when they do occur the average top depth is 0 cm (±0 cm), dominant soil texture in the upper 40 cm is typically Loamy, and permafrost was common with an average active layer thickness of 45 cm (±19 cm). Soil pH typically ranges from circumacidic to circumalkaline, and the average electrical conductivity is 214 µS/cm (±68 µS/cm). The most common vegetation types include Open Low Willow, Dryas-Forb Dwarf Shrub Tundra, and Moist Sedge-Shrub Tundra. The vegetation is dominated by *Salix glauca*, which typically forms an open low shrub canopy, and *Dryas integrifolia* is the most common and abundant species in the dwarf shrub layer. *Carex bigelowii* is always present at low to moderate cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix reticulata*, *Cassiope tetragona*, and *Vaccinium uliginosum*; the herbs *Lupinus arcticus*, *Arctagrostis latifolia*, *Pedicularis capitata*, and *Pyrola grandiflora*; and the nonvasculars *Hylocomium splendens*, *Flavocetraria cucullata*, *Aulacomnium turgidum*, *Tomentypnum nitens*, and *Thamnolia subuliformis.*



Distribution of *Salix glauca*/*Dryas integrifolia*/*Carex bigelowii* in the study area.

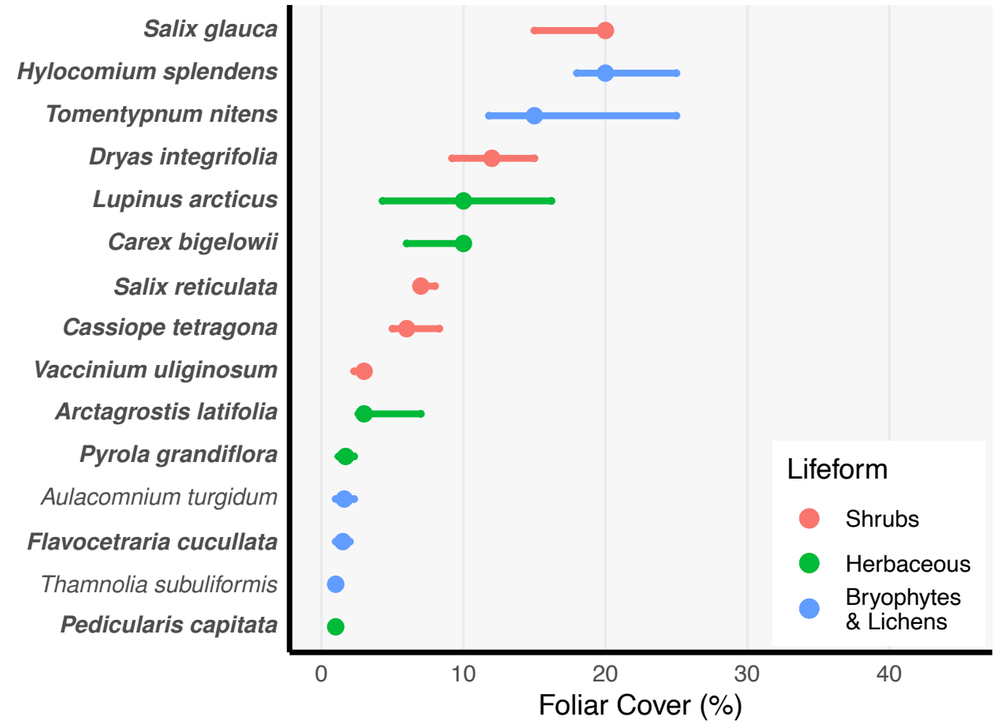


Representative photos (if available) for *Salix glauca*/*Dryas integrifolia*/*Carex bigelowii*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALGLA/DRYINT/CARBIG: *Salix glauca*/*Dryas integrifolia*/*Carex bigelowii*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	71	49	21	74	118	5
Slope (degrees)	3	2	0	3	5	5
Surface Organic Thickness (cm)	5.4	5.0	0.8	6.0	10.2	5
Cumul. Org. Thickness (cm)	9.0	6.4	3.6	6.0	16.0	5
Depth to >15% Rock Fragments (cm)	0		0	0	0	1
Water Table Depth (cm)	-39		-39	-39	-39	1
Active Layer Thickness (cm)	45	19	27	49	60	4
Site pH	6.8	0.8	5.9	7.0	7.4	5
Electrical Conductivity (uS/cm)	214	68	142	240	276	5
Whole Tussock Cover (%)	12	16	1	6	27	4

Environmental data summaries for *Salix glauca*/*Dryas integrifolia*/*Carex bigelowii*.



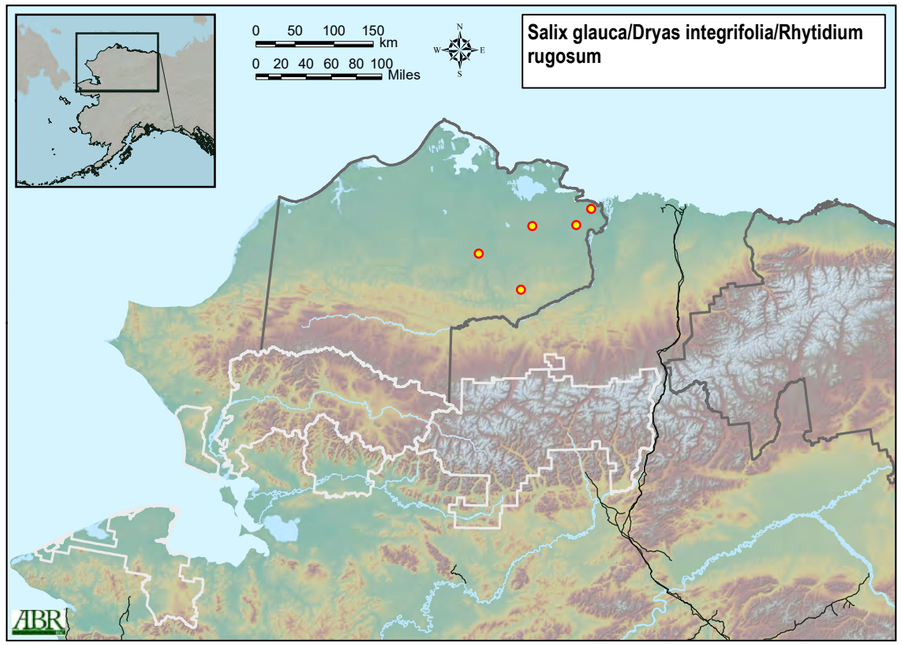
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix glauca*/*Dryas integrifolia*/*Carex bigelowii*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

					Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	ARRU	*Arctostaphylos rubra*	60	2.9	2.0	1.3	2.6	4.5
Deciduous Shrubs	SAGL	*Salix glauca*	100	20.0	8.8	12.6	20.0	28.5
Deciduous Shrubs	SAPU15	*Salix pulchra*	40	3.0	1.4	2.2	3.0	3.8
Deciduous Shrubs	SARE2	*Salix reticulata*	100	10.3	6.8	7.0	7.0	16.6
Deciduous Shrubs	SARI4	*Salix richardsonii*	60	6.9	0.2	6.7	7.0	7.0
Deciduous Shrubs	VAUL	*Vaccinium uliginosum*	80	2.3	1.5	1.0	3.0	3.0
Evergreen Shrubs	CATE11	*Cassiope tetragona*	80	7.3	3.3	5.0	6.0	10.5
Evergreen Shrubs	DRIN4	*Dryas integrifolia*	100	13.0	4.6	9.1	12.0	18.0
Forbs	LUAR2	*Lupinus arcticus*	80	10.4	8.3	2.9	10.0	18.3
Forbs	PECA2	*Pedicularis capitata*	100	1.0	0.4	0.1	1.0	1.0
Forbs	PEFR5	*Petasites frigidus*	60	4.3	1.5	3.2	4.0	5.6
Forbs	POBIP2	*Polygonum bistorta* ssp. *plumosum*	60	1.0	1.0	0.1	1.0	1.8
Forbs	POVI3	*Polygonum viviparum*	80	0.1	0.5	0.1	0.1	1.0
Forbs	PYGR	*Pyrola grandiflora*	80	1.8	0.9	1.1	1.7	2.7
Forbs	SAAN3	*Saussurea angustifolia*	80	1.0	0.8	0.1	1.0	1.7
Forbs	STLO2	*Stellaria longipes*	60	0.1	0.0	0.1	0.1	0.1
Ferns & Allies	EQAR	*Equisetum arvense*	40	5.0	2.8	3.4	5.0	6.6
Grasses	ARLA2	*Arctagrostis latifolia*	100	4.3	2.5	2.3	3.0	7.0
Sedges	CABI5	*Carex bigelowii*	100	8.7	4.7	4.0	10.0	13.0
Mosses	HYSP70	*Hylocomium splendens*	100	20.6	10.9	10.2	20.0	31.0
Mosses	TONI70	*Tomentypnum nitens*	100	21.4	14.4	10.7	15.0	37.0
Lichens	FLCU	*Flavocetraria cucullata*	80	1.5	0.6	1.0	1.5	2.0
Lichens	THSU60	*Thamnolia subuliformis*	60	1.0	0.5	0.1	1.0	1.0

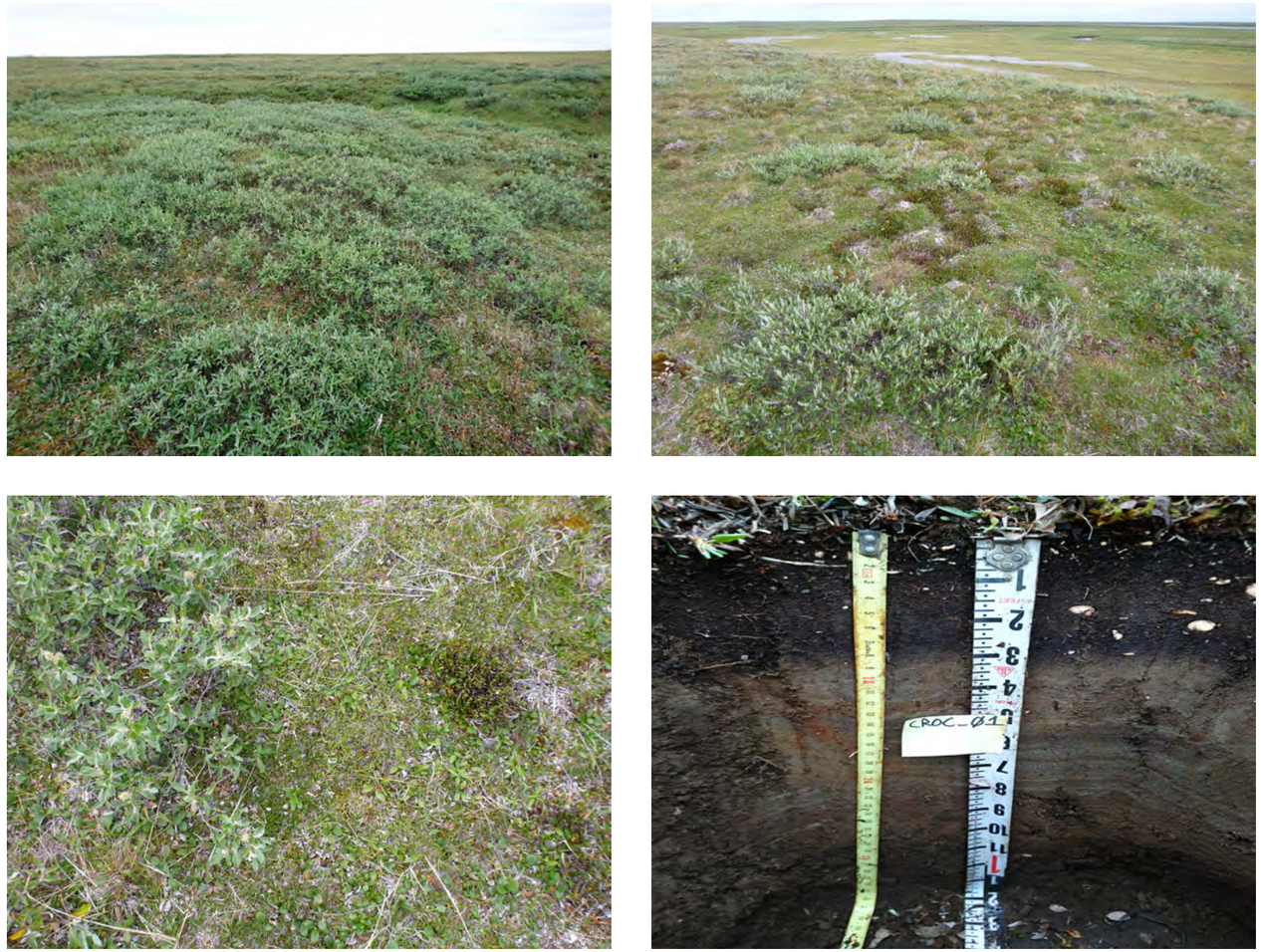
Constancy and foliar cover data summaries for *Salix glauca*/*Dryas integrifolia*/*Carex bigelowii*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALGLA/DRYINT/RHYRUG: *Salix glauca*/*Dryas integrifolia*/*Rhytidium rugosum* (*n* = 5)

The plant association *Salix glauca*/*Dryas integrifolia*/*Rhytidium rugosum* occurs in Lowland and Upland physiography most commonly on the following geomorphic units: Eolian Sand Sheet Upland; Frozen Upland Silt; and Hillside Colluvium. The average elevation in this plant association is 53 m (±50 m), and the slope gradient typically ranges between flat and gently sloping. This plant association was associated most commonly with the surface form Hummocks, but is also regularly associated with Nonpatterned and High-centered, High-relief Polygons. Soils are moderately well drained to well drained, surface organic thickness is typically thin, coarse fragments are rare, but when they do occur the average top depth is 48 cm (±0 cm), dominant soil texture in the upper 40 cm is typically Loamy or Organic-rich, and permafrost was common with an average active layer thickness of 58 cm (±35 cm). Soil pH typically ranges from circumacidic to alkaline, and the average electrical conductivity is 165 µS/cm (±68 µS/cm). The most common vegetation types include Open Low Willow and *Dryas Dwarf* Shrub Tundra. The vegetation is dominated by *Salix glauca*, which typically forms an open low shrub canopy, and *Dryas integrifolia* is the most common and abundant species in the dwarf shrub layer. *Rhytidium rugosum* is always present at low to moderate cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix reticulata*, *Cassiope tetragona*, and *Arctostaphylos rubra*; the herbs *Saussurea angustifolia*, *Astragalus alpinus*, *Pedicularis capitata*, *Poa arctica*, and *Stellaria longipes*; and the nonvasculars *Hylocomium splendens*, *Flavocetraria cucullata*, *Tomentypnum nitens*, and *Masonhalea richardsonii.*



Distribution of *Salix glauca*/*Dryas integrifolia*/*Rhytidium rugosum* in the study area.

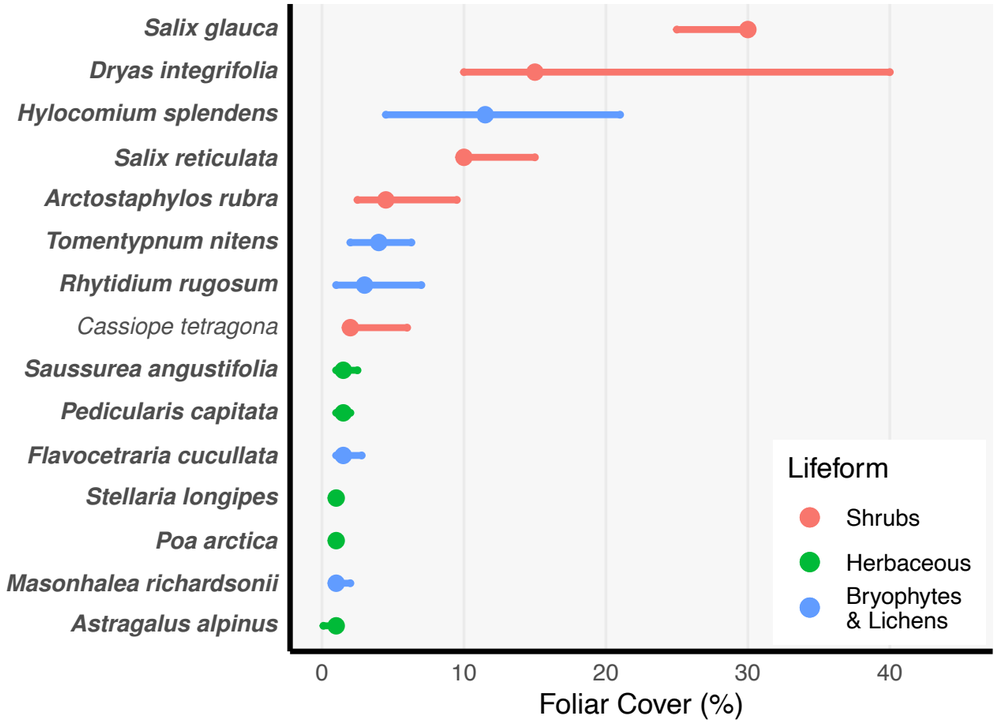


Representative photos (if available) for *Salix glauca*/*Dryas integrifolia*/*Rhytidium rugosum*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALGLA/DRYINT/RHYRUG: *Salix glauca*/*Dryas integrifolia*/*Rhytidium rugosum*, continued

	Avg.	Std Dev.	Percentile 10th	50th	90th	n
Elevation (m)	53	50	13	42	104	5
Slope (degrees)	6	10	0	3	15	5
Surface Organic Thickness (cm)	8.9	4.4	4.8	7.6	13.6	5
Cumul. Org. Thickness (cm)	13.2	7.7	5.4	14.0	20.9	5
Depth to >15% Rock Fragments (cm)	48		48	48	48	1
Water Table Depth (cm)	-40		-40	-40	-40	1
Active Layer Thickness (cm)	58	35	37	43	91	4
Site pH	7.0	1.0	6.0	7.3	7.8	5
Electrical Conductivity (uS/cm)	165	68	112	150	230	4
Whole Tussock Cover (%)	1	3	0	0	4	4

Environmental data summaries for *Salix glauca*/*Dryas integrifolia*/*Rhytidium rugosum*.



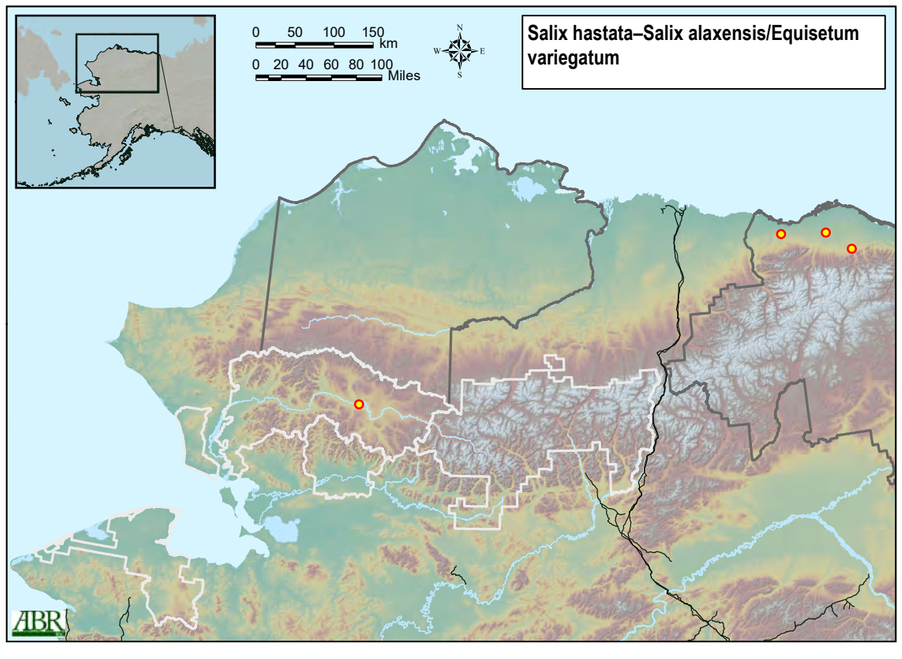
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix glauca*/*Dryas integrifolia*/*Rhytidium rugosum*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	Percentile 10th	50th	90th
Deciduous Shrubs	ARRU	*Arctostaphylos rubra*	80	7.5	8.6	1.6	4.5	15.8
Deciduous Shrubs	BENA	*Betula nana*	40	3.0	0.0	3.0	3.0	3.0
Deciduous Shrubs	SAGL	*Salix glauca*	100	29.0	10.8	19.0	30.0	39.0
Deciduous Shrubs	SARE2	*Salix reticulata*	100	11.0	4.2	7.0	10.0	15.0
Deciduous Shrubs	SARI4	*Salix richardsonii*	40	5.5	6.4	1.9	5.5	9.1
Evergreen Shrubs	CATE11	*Cassiope tetragona*	60	4.7	4.6	2.0	2.0	8.4
Evergreen Shrubs	DRIN4	*Dryas integrifolia*	100	22.0	16.8	7.0	15.0	40.0
Forbs	ANPA	*Anemone parviflora*	60	1.0	1.0	0.1	1.0	1.8
Forbs	ASAL7	*Astragalus alpinus*	80	1.0	0.5	0.1	1.0	1.0
Forbs	ASUM2	*Astragalus umbellatus*	40	3.0	2.8	1.4	3.0	4.6
Forbs	PECA2	*Pedicularis capitata*	80	1.3	0.9	0.1	1.5	2.0
Forbs	POBIP2	*Polygonum bistorta* ssp. *plumosum*	60	2.3	1.2	1.4	3.0	3.0
Forbs	PYSE	*Pyrola secunda*	60	1.3	0.6	1.0	1.0	1.8
Forbs	SAAN3	*Saussurea angustifolia*	80	2.0	1.4	1.0	1.5	3.4
Forbs	STLO2	*Stellaria longipes*	80	1.0	0.5	0.1	1.0	1.0
Forbs	VACA3	*Valeriana capitata*	60	1.4	1.5	0.1	1.0	2.6
Grasses	ARLA2	*Arctagrostis latifolia*	60	2.3	0.6	2.0	2.0	2.8
Grasses	POAR2	*Poa arctica*	80	1.0	0.0	1.0	1.0	1.0
Sedges	CASC10	*Carex scirpoidea*	60	1.0	1.0	0.1	1.0	1.8
Mosses	AUTU70	*Aulacomnium turgidum*	40	4.5	3.5	2.5	4.5	6.5
Mosses	DICRA8	*Dicranum* sp.	40	4.0	1.4	3.2	4.0	4.8
Mosses	HYSP70	*Hylocomium splendens*	80	14.0	12.6	3.6	11.5	26.4
Mosses	RHRU70	*Rhytidium rugosum*	100	4.4	4.0	1.0	3.0	8.8
Mosses	TONI70	*Tomentypnum nitens*	80	4.3	2.6	2.0	4.0	6.7
Lichens	DAAR60	*Dactylina arctica*	60	1.0	1.0	0.1	1.0	1.8
Lichens	FLCU	*Flavocetraria cucullata*	80	2.3	1.9	1.0	1.5	4.1
Lichens	MARI60	*Masonhalea richardsonii*	100	1.4	0.5	1.0	1.0	2.0
Lichens	PELTI2	*Peltigera* sp.	60	1.0	0.5	0.1	1.0	1.0

Constancy and foliar cover data summaries for *Salix glauca*/*Dryas integrifolia*/*Rhytidium rugosum*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALHAS–SALALA/EQUVAR: *Salix hastata–Salix alaxensis/Equisetum variegatum* (*n* = 4)

The plant association *Salix hastata–Salix alaxensis/Equisetum variegatum* occurs in Riverine physiography most commonly on the following geomorphic units: Braided Coarse Inactive Channel Deposit; Braided Coarse Active Channel Deposit; and Meander Active Overbank Deposit. The average elevation in this plant association is 189 m (±94 m), and the slope gradient is typically flat. This plant association was associated most commonly with the surface form Scour channels-ridges, but is also regularly associated with Nonpatterned and Riverbed Cobbles or Boulders. Soils are well drained, surface organics are typically absent, coarse fragments are common with an average top depth of 33 cm (±29 cm), dominant soil texture in the upper 40 cm is typically Gravelly or Loamy, and permafrost was never encountered in the upper 130 cm of the soil profile. Soil pH is typically alkaline, and the average electrical conductivity is 243 µS/cm (±119 µS/cm). The most common vegetation types include Open Low Willow and Open Tall Willow. The vegetation is co-dominated by *Salix hastata* and *Salix alaxensis*, and *Equisetum variegatum* is always present at low to moderate cover in the understory. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix reticulata*, *Salix glauca*, and *Arctostaphylos rubra*; the herbs *Eurybia sibirica*, *Parnassia kotzebuei*, *Anemone parviflora*, and *Bromus pumpellianus*; and the nonvasculars *Plagiomnium ellipticum*, *Brachythecium mildeanum*, *Abietinella abietina*, *Tomentypnum nitens*, and *Sanionia uncinata.*



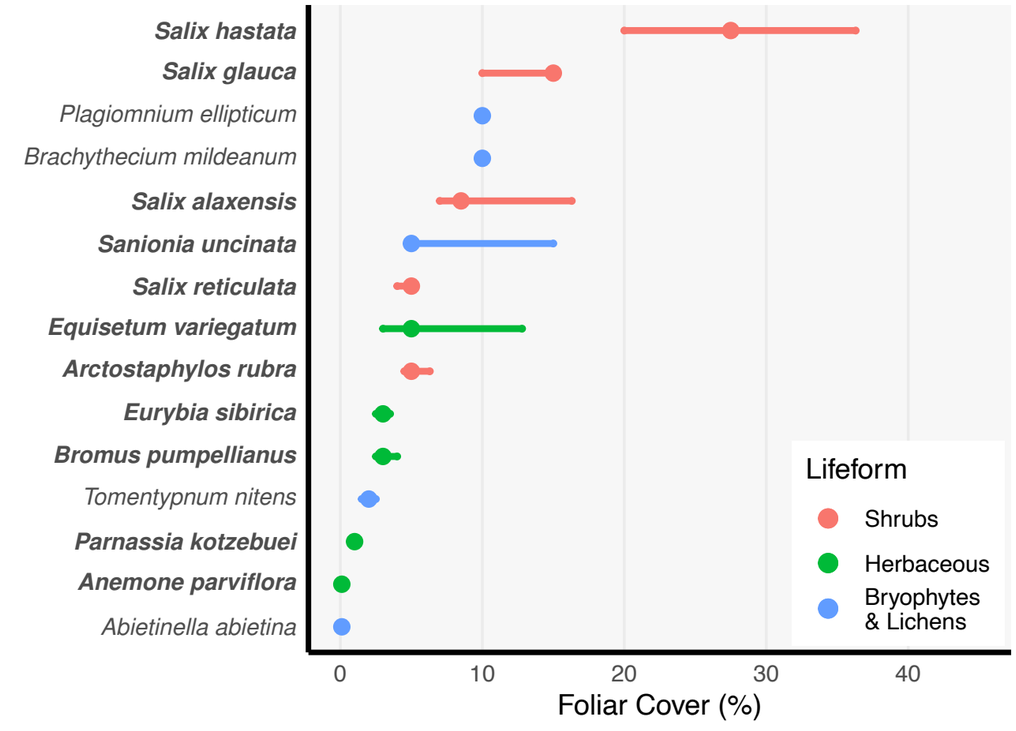
Distribution of *Salix hastata–Salix alaxensis/Equisetum variegatum* in the study area.

Representative photos (if available) for *Salix hastata–Salix alaxensis/Equisetum variegatum*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALHAS–SALALA/EQUVAR: *Salix hastata–Salix alaxensis/Equisetum variegatum*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	189	94	106	184	276	4
Slope (degrees)	0	1	0	0	1	4
Surface Organic Thickness (cm)	0.3	0.5	0.0	0.0	0.7	4
Cumul. Org. Thickness (cm)	1.6	1.1	0.7	1.5	2.7	4
Depth to >15% Rock Fragments (cm)	33	29	8	27	61	4
Water Table Depth (cm)						4
Soil Thaw Depth (cm)						4
Site pH	7.6	0.4	7.3	7.6	8.0	4
Electrical Conductivity (uS/cm)	243	119	139	240	348	4
Whole Tussock Cover (%)	0	0	0	0	0	4

Environmental data summaries for *Salix hastata–Salix alaxensis/Equisetum variegatum*.



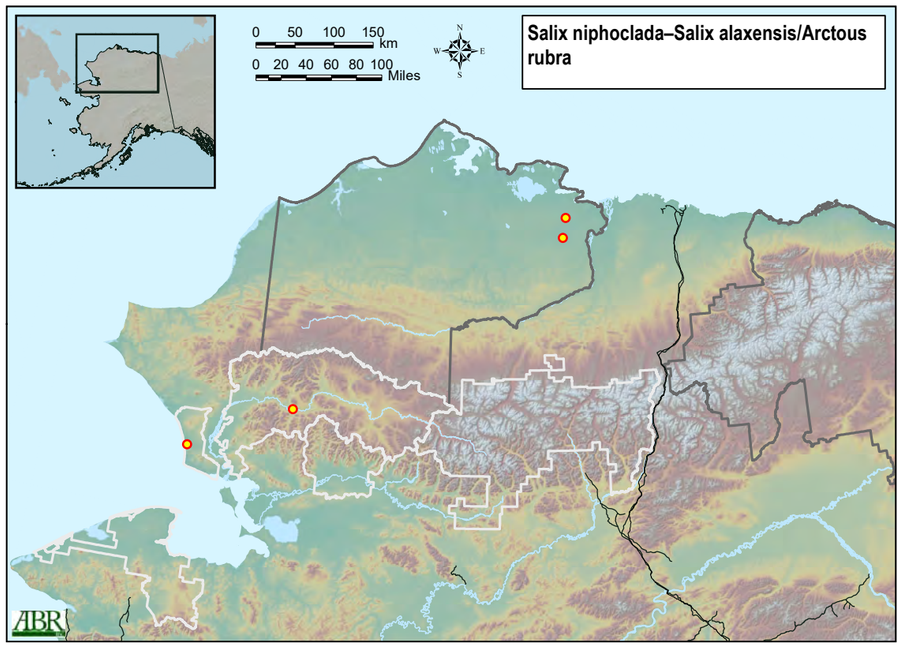
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix hastata–Salix alaxensis/Equisetum variegatum*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	ARRU	*Arctostaphylos rubra*	100	5.8	3.0	3.6	5.0	8.5
Deciduous Shrubs	SAAL	*Salix alaxensis*	100	14.8	13.6	7.0	8.5	27.5
Deciduous Shrubs	SAAR3	*Salix arbusculoides*	50	5.5	6.4	1.9	5.5	9.1
Deciduous Shrubs	SAGL	*Salix glauca*	75	11.7	5.8	7.0	15.0	15.0
Deciduous Shrubs	SAHA	*Salix hastata*	100	28.8	10.3	20.0	27.5	38.5
Deciduous Shrubs	SARE2	*Salix reticulata*	75	4.3	1.2	3.4	5.0	5.0
Deciduous Shrubs	SARI4	*Salix richardsonii*	50	6.5	2.1	5.3	6.5	7.7
Evergreen Shrubs	DRIN4	*Dryas integrifolia*	50	5.0	2.8	3.4	5.0	6.6
Forbs	ANPA	*Anemone parviflora*	100	0.1	0.5	0.1	0.1	1.0
Forbs	EUSI13	*Eurybia sibirica*	100	3.0	1.6	1.6	3.0	4.4
Forbs	HEAL	*Hedysarum alpinum*	50	6.0	1.4	5.2	6.0	6.8
Forbs	PAKO3	*Parnassia kotzebuei*	100	1.0	0.5	0.1	1.0	1.0
Ferns & Allies	EQVA	*Equisetum variegatum*	100	10.8	13.0	3.0	5.0	23.1
Grasses	BRPU3	*Bromus pumpellianus*	75	3.3	1.5	2.2	3.0	4.6
Grasses	FERU2	*Festuca rubra*	75	3.0	2.0	1.4	3.0	4.6
Sedges	CAKR2	*Carex krausei*	75	0.1	0.5	0.1	0.1	1.0
Mosses	SAUN8	*Sanionia uncinata*	75	11.7	11.5	5.0	5.0	21.0

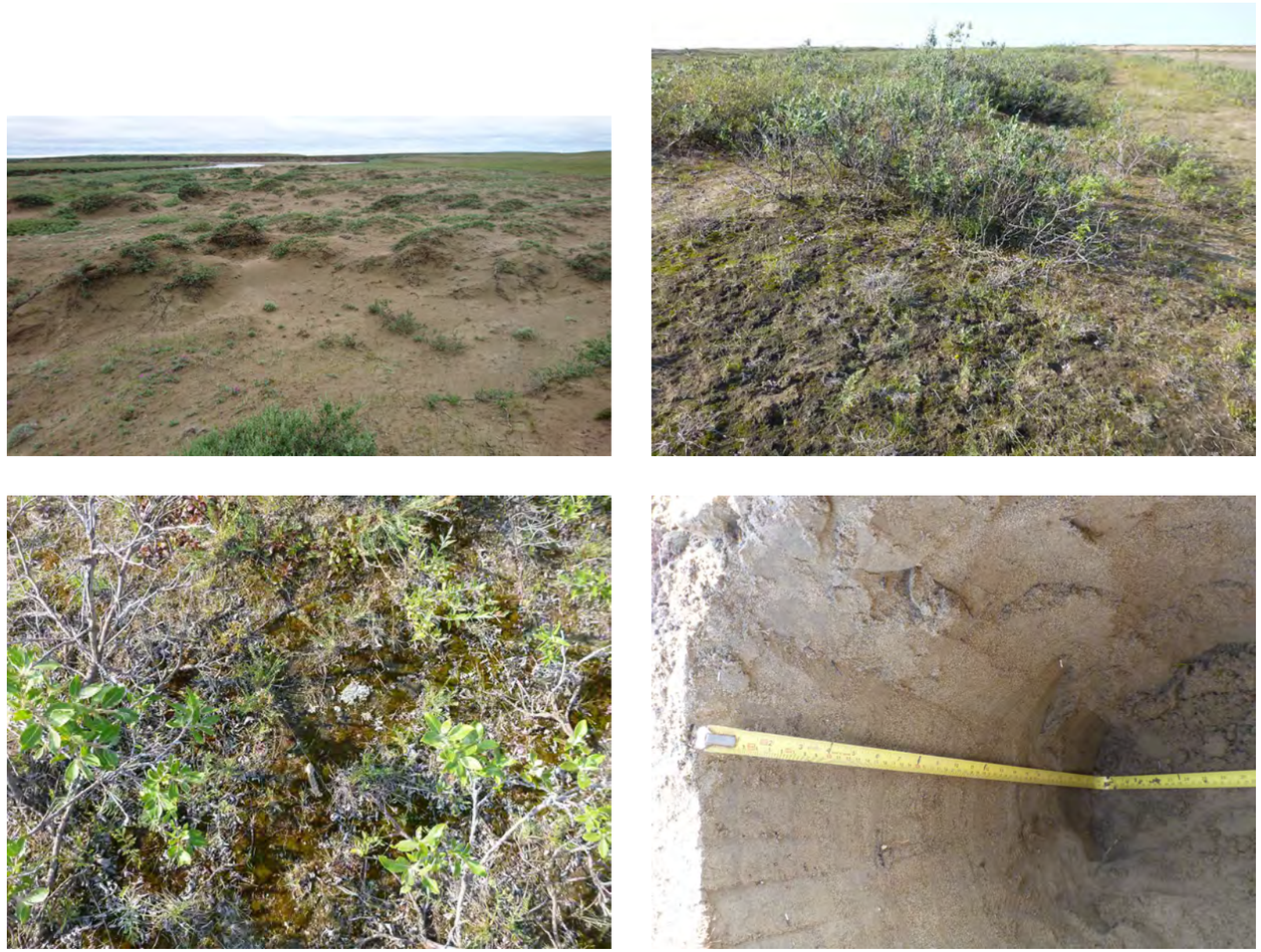
Constancy and foliar cover data summaries for *Salix hastata–Salix alaxensis/Equisetum variegatum*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALNIP1–SALALA/ARCRUB1: *Salix niphoclada–Salix alaxensis*/*Arctous rubra* (*n* = 4)

The plant association *Salix niphoclada–Salix alaxensis*/*Arctous rubra* occurs in Riverine and Upland physiography most commonly on the following geomorphic units: Meander Active Overbank Deposit; Braided Inactive Overbank Deposit; and Eolian Active Sand Dune. The average elevation in this plant association is 51 m (±68 m), and the slope gradient typically ranges between flat and nearly level. This plant association was associated most commonly with the surface forms Small dunes and Nonpatterned. Soils are well drained to somewhat excessively drained, surface organics are typically absent, coarse fragments are uncommon, but when they do occur the average top depth is 100 cm (±141 cm), dominant soil texture in the upper 40 cm is typically Sandy or Bouldery, and permafrost was common with an average active layer thickness of 140 cm (±21 cm). Soil pH is typically alkaline, and the average electrical conductivity is 35 µS/cm (±35 µS/cm). The most common vegetation types include Open Low Willow, Moist Sedge-Grass Meadow Tundra, and Open Tall Willow. The vegetation is co-dominated by *Salix niphoclada* and *Salix alaxensis*, and *Arctostaphylos rubra* is always present at low to moderate cover in the understory. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix glauca* and *Dryas integrifolia*; the herbs *Chamerion latifolium*, *Equisetum arvense*, *Eurybia sibirica*, *Equisetum variegatum*, and *Festuca rubra*; and the nonvasculars *Flavocetraria cucullata*, *Abietinella abietina*, *Ditrichum flexicaule*, *Bryum caespiticium*, and *Pohlia* sp.



Distribution of *Salix niphoclada–Salix alaxensis*/*Arctous rubra* in the study area.

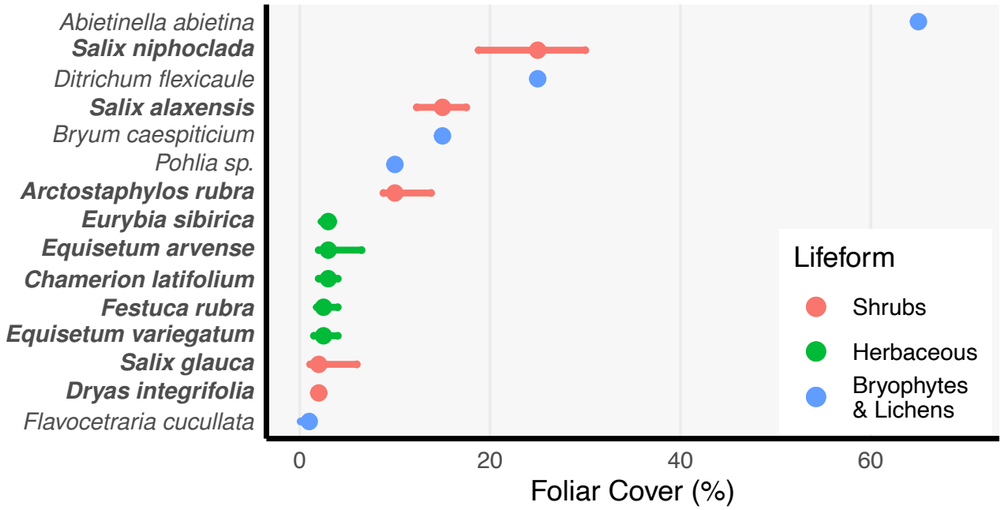


Representative photos (if available) for *Salix niphoclada–Salix alaxensis*/*Arctous rubra*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALNIP1–SALALA/ARCRUB1: *Salix niphoclada–Salix alaxensis/Arctous rubra*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	51	68	9	22	115	4
Slope (degrees)	1	3	0	0	4	4
Surface Organic Thickness (cm)	0.0	0.0	0.0	0.0	0.0	3
Cumul. Org. Thickness (cm)	0.0	0.0	0.0	0.0	0.0	3
Depth to >15% Rock Fragments (cm)	100	141	20	100	180	2
Water Table Depth (cm)						4
Active Layer Thickness (cm)	140	21	128	140	152	2
Site pH	8.0	0.3	7.8	7.9	8.3	3
Electrical Conductivity (uS/cm)	35	35	15	35	55	2
Whole Tussock Cover (%)	0	0	0	0	0	4

Environmental data summaries for *Salix niphoclada–Salix alaxensis/Arctous rubra*.



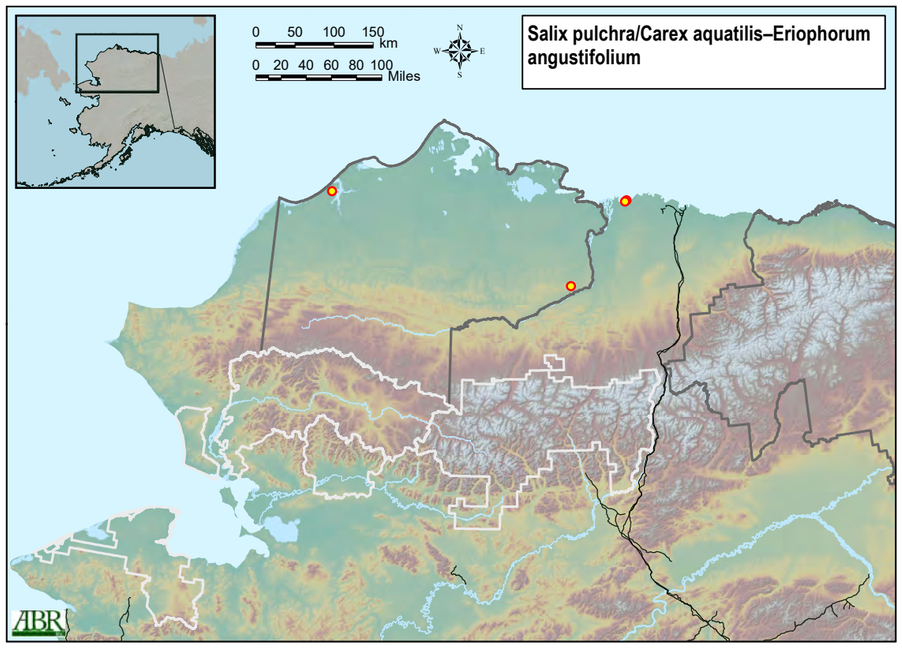
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix niphoclada–Salix alaxensis/Arctous rubra*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

					Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	ARRU	*Arctostaphylos rubra*	100	12.5	8.7	6.5	10.0	20.5
Deciduous Shrubs	DAFR6	*Dasiphora fruticosa*	50	3.6	4.9	1.0	3.6	6.3
Deciduous Shrubs	SAAL	*Salix alaxensis*	100	14.8	8.6	7.3	15.0	22.0
Deciduous Shrubs	SAGL	*Salix glauca*	75	4.0	5.3	0.1	2.0	8.4
Deciduous Shrubs	SANI10	*Salix niphoclada*	100	23.8	7.5	16.5	25.0	30.0
Evergreen Shrubs	DRIN4	*Dryas integrifolia*	75	2.0	1.0	1.2	2.0	2.8
Forbs	ANPA	*Anemone parviflora*	75	1.0	1.0	0.1	1.0	1.8
Forbs	ASAL7	*Astragalus alpinus*	50	3.0	0.0	3.0	3.0	3.0
Forbs	CHLA13	*Chamerion latifolium*	75	3.0	2.0	1.4	3.0	4.6
Forbs	EUSI13	*Eurybia sibirica*	100	2.8	2.0	1.0	3.0	4.4
Forbs	GABO2	*Galium boreale*	50	4.0	4.2	1.6	4.0	6.4
Forbs	PAPA8	*Parnassia palustris*	75	1.4	1.1	0.1	2.0	2.0
Forbs	TABIB	*Tanacetum bipinnatum* ssp. *bipinnatum*	50	4.5	3.5	2.5	4.5	6.5
Ferns & Allies	EQAR	*Equisetum arvense*	75	4.7	4.7	1.4	3.0	8.6
Ferns & Allies	EQVA	*Equisetum variegatum*	100	3.0	2.9	1.0	2.5	5.8
Grasses	n/a	*Calamagrostis purpurascens* ssp. *purpurascens*	50	3.0	2.8	1.4	3.0	4.6
Grasses	FERU2	*Festuca rubra*	100	3.3	2.6	1.3	2.5	5.8
Grasses	KOAS	*Koeleria asiatica*	50	3.5	2.1	2.3	3.5	4.7

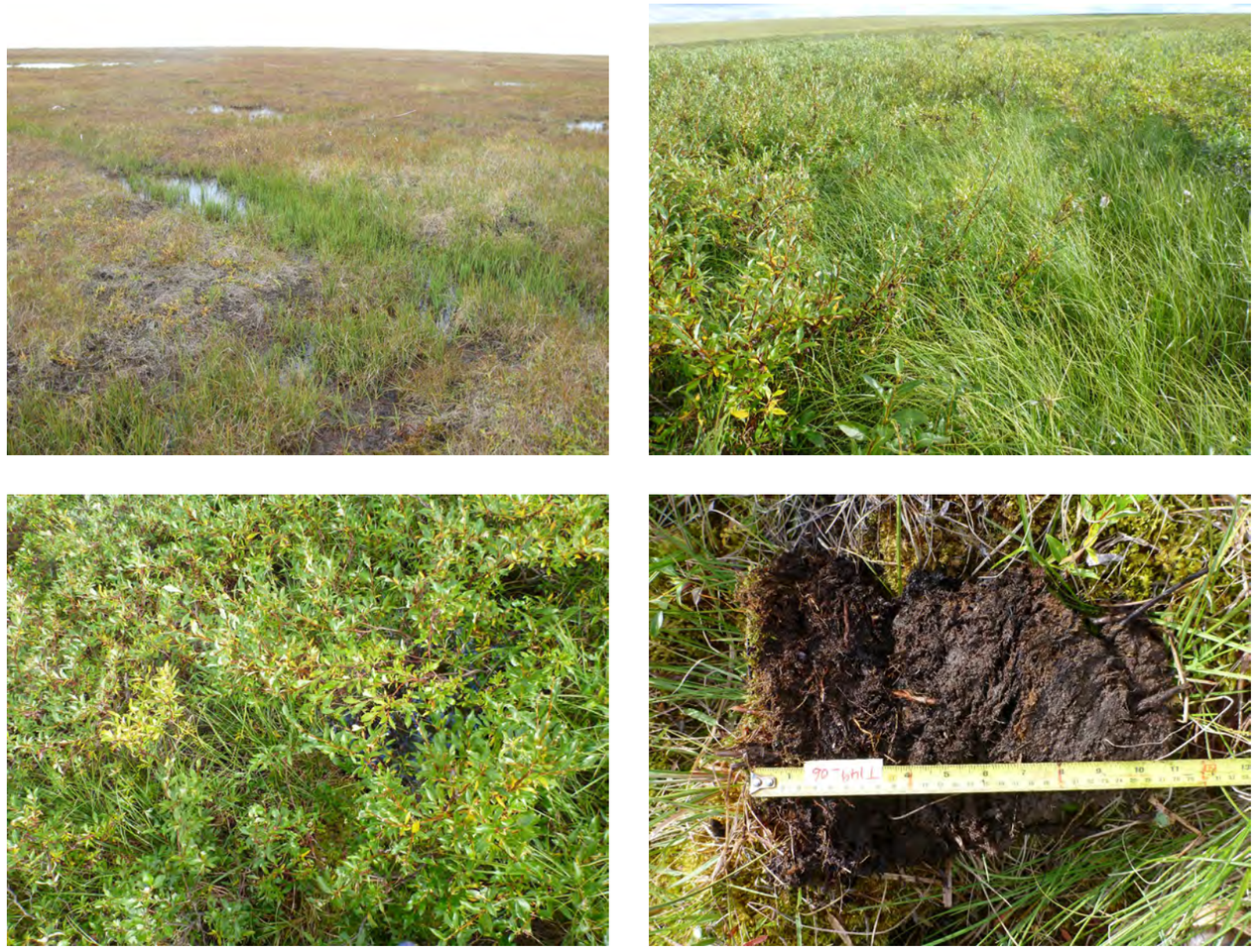
Constancy and foliar cover data summaries for *Salix niphoclada–Salix alaxensis/Arctous rubra*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALPUL1/CARAQU1–ERIANG1: *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium* (*n* = 4)

The plant association *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium* occurs in Lowland physiography most commonly on the following geomorphic units: Channel Fen; Delta Thaw Basin, ice-rich; and Emerged Estuarine Marine Deposit. The average elevation in this plant association is 33 m (±66 m), and the slope gradient is typically flat. This plant association was associated most commonly with the surface form High-centered, Low-relief Polygons, but is also regularly associated with Nonpatterned and Water tracks (non-incised drainages). Soils are flooded to very poorly drained, surface organic thickness typically ranges from thin to moderately thick, coarse fragments are absent, and permafrost was common with an average active layer thickness of 44 cm (±9 cm). Water pH is typically circumacidic, and the average electrical conductivity is 425 µS/cm (±390 µS/cm). The most common vegetation types include Open Low Willow and Open Low Willow-Sedge Shrub Tundra. The vegetation is dominated by *Salix pulchra*, which typically forms an open low shrub canopy, and *Carex aquatilis* and *Eriophorum angustifolium* co-dominate in the herbaceous layer. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix arctica*, *Dryas integrifolia*, *Salix reticulata*, and *Salix glauca*; the herbs *Carex bigelowii*, *Eriophorum vaginatum*, and *Poa arctica*; and the nonvasculars *Aulacomnium palustre*, *Polytrichum* sp., *Tomentypnum nitens*, *Sphagnum tundrae*, and *Hylocomium splendens.* The soils in this plant association range from wet to flooded, and dwarf shrubs are generally limited to moist microhighs.



Distribution of *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium* in the study area.



Representative photos (if available) for *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

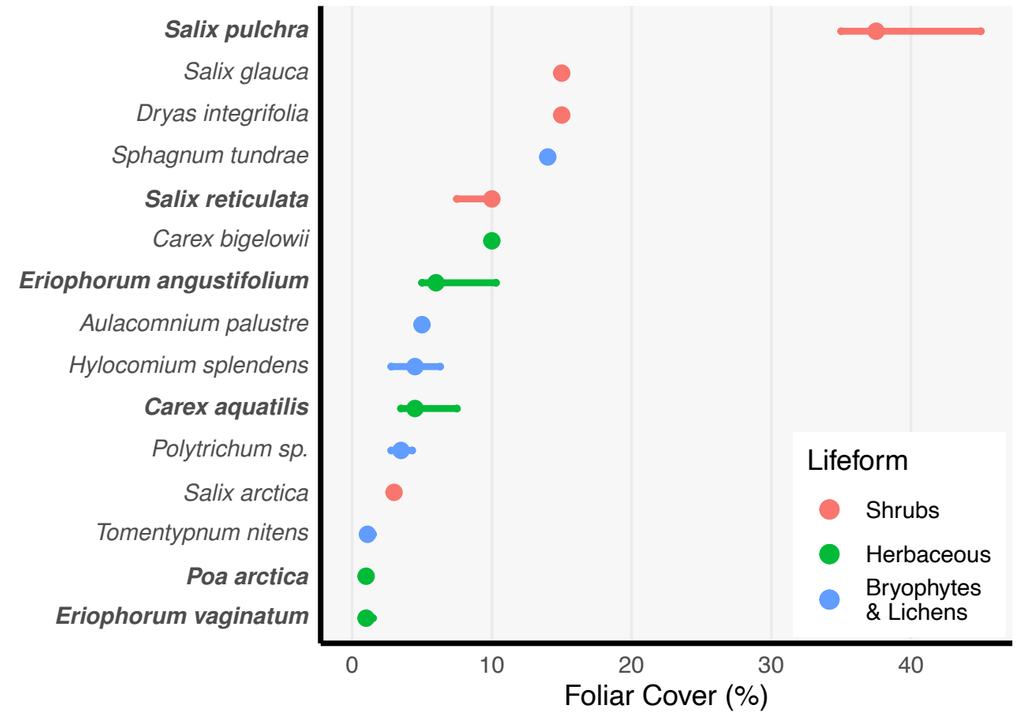
SALPUL1/CARAQU1–ERIANG1: *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	33	66	-4	3	94	4
Slope (degrees)	0	0	0	0	0	4
Surface Organic Thickness (cm)	25.3	14.3	12.6	24.5	38.5	4
Cumul. Org. Thickness (cm)	28.0	11.7	16.7	29.0	38.5	4
Depth to >15% Rock Fragments (cm)						4
Water Table Depth (cm)	-7	8	-13	-8	1	4
Active Layer Thickness (cm)	44	9	35	46	51	4
Site pH	6.4	0.3	6.2	6.4	6.7	4
Electrical Conductivity (uS/cm)	425	390	118	325	812	4
Whole Tussock Cover (%)	0	0	0	0	1	4

Environmental data summaries for *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium*.

					Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	SAPU15	*Salix pulchra*	100	42.5	11.9	35.0	37.5	54.0
Deciduous Shrubs	SARE2	*Salix reticulata*	75	8.3	2.9	6.0	10.0	10.0
Grasses	POAR2	*Poa arctica*	75	1.0	0.5	0.1	1.0	1.0
Sedges	CAAQ	*Carex aquatilis*	100	6.5	5.8	2.6	4.5	12.0
Sedges	CABI5	*Carex bigelowii*	50	10.0	0.0	10.0	10.0	10.0
Sedges	CAME4	*Carex membranacea*	50	8.5	9.2	3.3	8.5	13.7
Sedges	ERAN6	*Eriophorum angustifolium*	100	9.3	7.2	5.0	6.0	16.1
Sedges	ERVA4	*Eriophorum vaginatum*	75	1.3	0.6	1.0	1.0	1.8
Mosses	HYSP70	*Hylocomium splendens*	50	4.5	4.9	1.7	4.5	7.3
Mosses	POLYT5	*Polytrichum* sp.	50	3.5	2.1	2.3	3.5	4.7

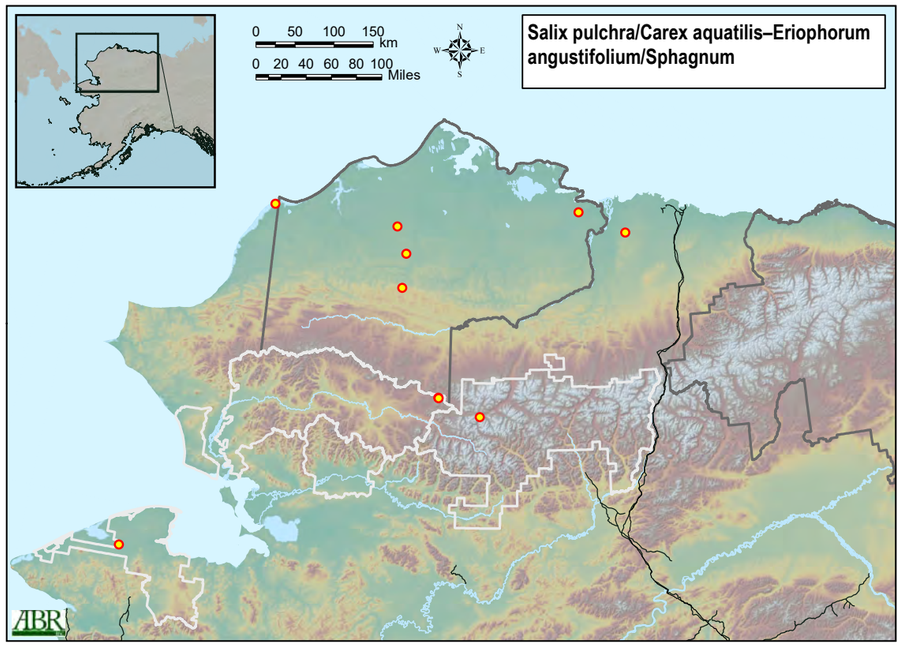
Constancy and foliar cover data summaries for *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.



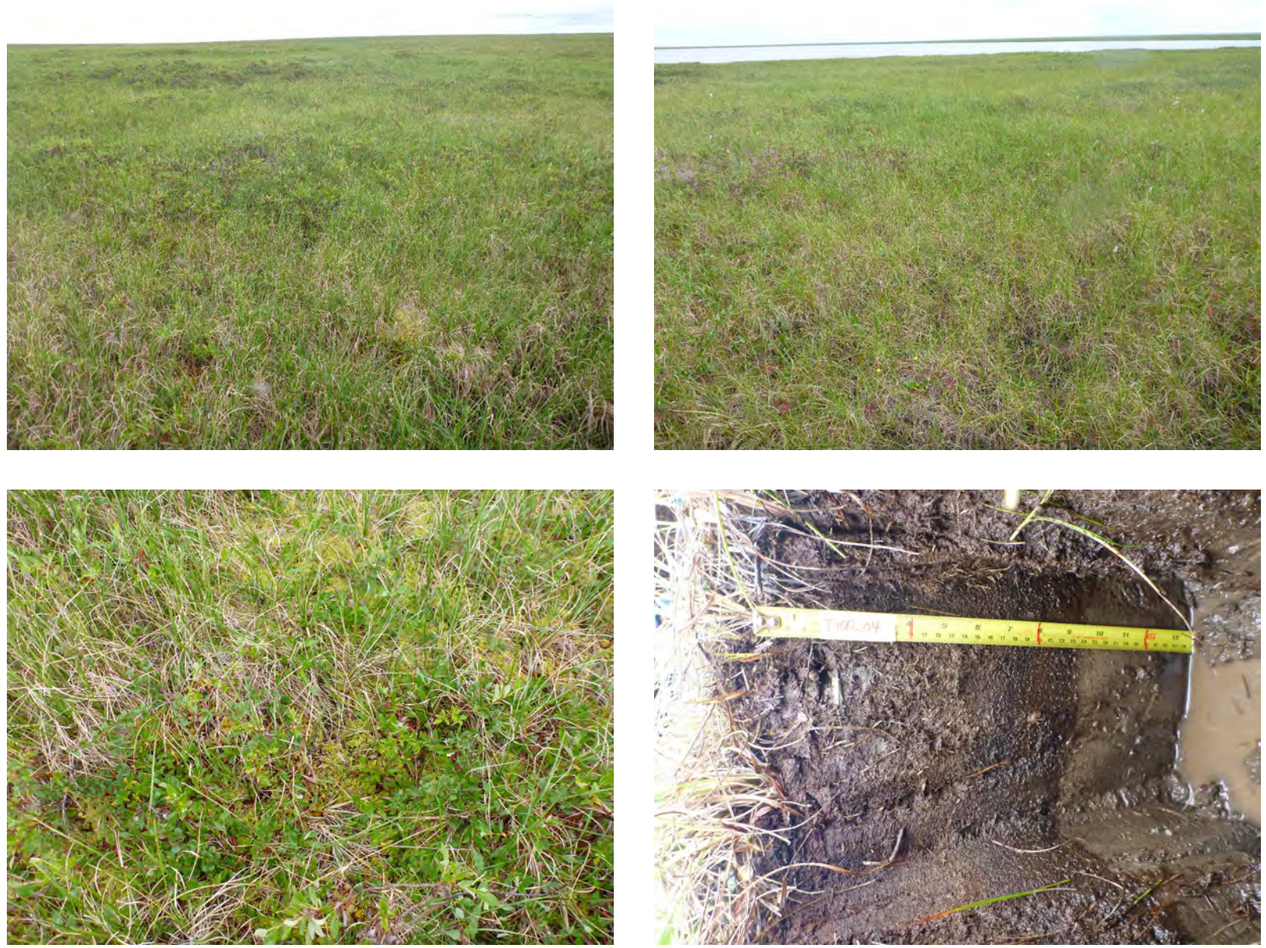
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

SALPUL1/CARAQU1–ERIANG1/SPHAG: *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium*/*Sphagnum* (*n* = 10)

The plant association *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium*/*Sphagnum* occurs in Lacustrine and Lowland physiography most commonly on the following geomorphic units: Lowland Retransported Deposit; Hillside Colluvium; and Lacustrine Deposit. The average elevation in this plant association is 273 m (±329 m), and the slope gradient typically ranges between flat and gently sloping. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with Water tracks (non-incised drainages); Low-centered, Low-relief, High-density Polygons; and Undifferentiated mounds. Soils are very poorly drained to poorly drained, surface organic thickness typically ranges from thin to moderately thick, coarse fragments are uncommon, but when they do occur the average top depth is 32 cm (±12 cm), and permafrost was common with an average active layer thickness of 40 cm (±19 cm). Water pH typically ranges from acidic to circumacidic, and the average electrical conductivity is 175 µS/cm (±244 µS/cm). The most common vegetation types include Open Low Willow-Sedge Shrub Tundra, Open Low Willow, and Closed Low Willow. The vegetation is dominated by *Salix pulchra*, which typically forms an open low shrub canopy, and *Carex aquatilis* and *Eriophorum angustifolium* co-dominate in the herbaceous layer. *Sphagnum* is always present at moderate to high cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Ledum palustre* ssp. *decumbens*, *Vaccinium uliginosum*, *Salix fuscescens*, and *Betula nana*; the herbs *Rubus chamaemorus*, *Petasites frigidus*, and *Potentilla palustris*; and the nonvasculars *Aulacomnium turgidum*, *Tomentypnum nitens*, *Aulacomnium palustre*, *Sphagnum squarrosum*, and *Hylocomium splendens.* The soils in this plant association range from wet to flooded, and dwarf shrubs, with the exception of *Salix fuscescens*, are generally limited to moist microhighs.



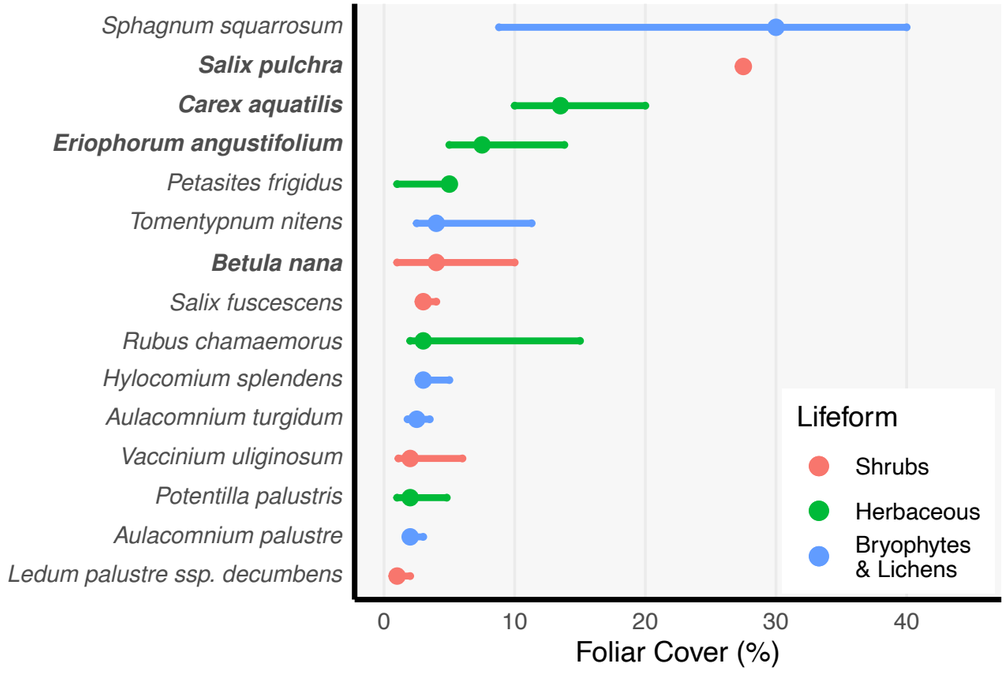
Distribution of *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium*/*Sphagnum* in the study area.



Representative photos (if available) for *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium*/*Sphagnum*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	273	329	6	84	675	10
Slope (degrees)	2	2	0	2	4	10
Surface Organic Thickness (cm)	20.5	10.2	5.9	22.5	30.3	10
Cumul. Org. Thickness (cm)	20.6	10.0	6.8	22.5	30.3	10
Depth to >15% Rock Fragments (cm)	32	12	21	35	41	3
Water Table Depth (cm)	-11	14	-31	-4	0	8
Active Layer Thickness (cm)	40	19	26	36	55	8
Site pH	5.6	0.6	4.8	5.7	6.1	10
Electrical Conductivity (uS/cm)	175	244	28	85	379	10
Whole Tussock Cover (%)	0	0	0	0	0	9

Environmental data summaries for *Salix pulchra/Carex aquatilis–Eriophorum angustifolium/Sphagnum*.



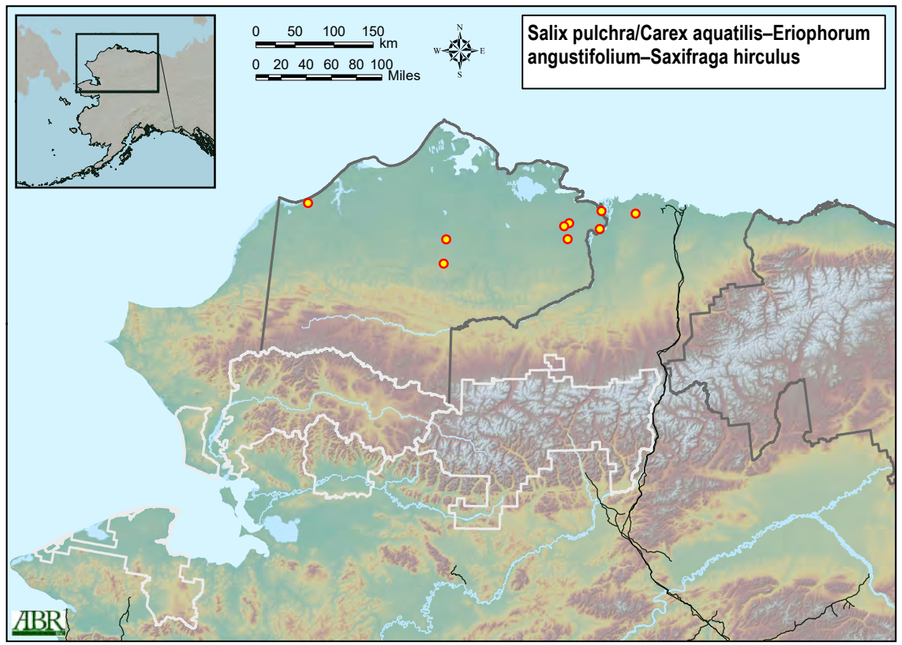
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix pulchra/Carex aquatilis–Eriophorum angustifolium/Sphagnum*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

					Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	BENA	*Betula nana*	80	5.0	4.4	1.0	4.0	10.0
Deciduous Shrubs	SAFU	*Salix fuscescens*	40	3.8	2.2	2.3	3.0	5.8
Deciduous Shrubs	SAPU15	*Salix pulchra*	100	38.3	21.0	20.0	27.5	73.2
Forbs	PEFR5	*Petasites frigidus*	50	4.0	3.0	1.0	5.0	6.8
Forbs	POPA14	*Potentilla palustris*	40	3.5	4.5	0.1	2.0	7.9
Forbs	RUCH	*Rubus chamaemorus*	50	9.2	10.5	1.4	3.0	21.0
Sedges	CAAQ	*Carex aquatilis*	100	15.7	10.3	5.0	13.5	22.0
Sedges	ERAN6	*Eriophorum angustifolium*	100	10.0	6.2	5.0	7.5	20.0
Mosses	HYSP70	*Hylocomium splendens*	50	4.4	3.4	1.8	3.0	8.0
Mosses	SPSQ70	*Sphagnum squarrosum*	60	28.0	22.5	4.0	30.0	50.0
Mosses	TONI70	*Tomentypnum nitens*	40	9.8	13.6	1.6	4.0	22.5

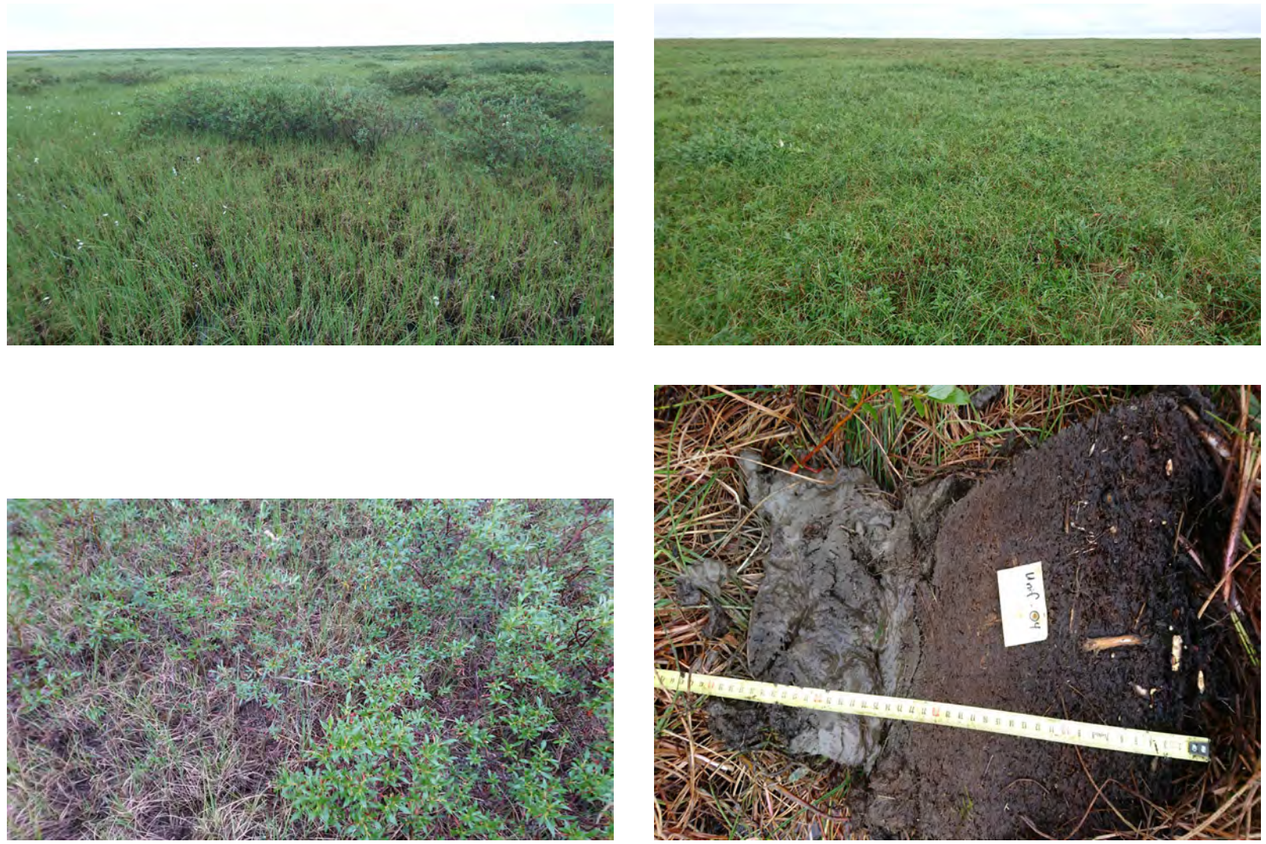
Constancy and foliar cover data summaries for *Salix pulchra/Carex aquatilis–Eriophorum angustifolium/Sphagnum*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALPUL1/CARAQU1–ERIANG1–SAXHIR: *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium*–*Saxifraga hirculus* (*n* = 9)

The plant association *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium*–*Saxifraga hirculus* occurs in Lacustrine, Lowland, and Riverine physiography most commonly on the following geomorphic units: Delta Inactive Overbank Deposit; Drained Lake Basin, ice-poor margin; and Drained Lake Basin, ice-rich margin. The average elevation in this plant association is 29 m (±26 m), and the slope gradient typically ranges between flat and nearly level. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with Low-centered, Low-relief, Low-density Polygons; Undifferentiated mounds; and Water tracks (non-incised drainages). Soils are very poorly drained to poorly drained, surface organic thickness is typically moderately thick, coarse fragments are absent, and permafrost was common with an average active layer thickness of 41 cm (±12 cm). Water pH typically ranges from circumacidic to circumalkaline, and the average electrical conductivity is 344 µS/cm (±348 µS/cm). The most common vegetation types include Open Low Willow-Sedge Shrub Tundra and Open Low Willow. The vegetation is dominated by *Salix pulchra*, which typically forms an open low shrub canopy, and *Carex aquatilis* and *Eriophorum angustifolium* co-dominate in the herbaceous layer. *Saxifraga hirculus* is always present at low cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix richardsonii*, *Salix reticulata*, *Betula nana*, and *Dryas integrifolia*; the herbs *Polygonum viviparum* and *Potentilla palustris*; and the nonvasculars *Drepanocladus* sp., *Limprichtia revolvens*, *Hylocomium splendens*, *Aulacomnium palustre*, and *Tomentypnum nitens.* The soils in this plant association range from wet to flooded, and dwarf shrubs are generally limited to moist micro-highs.



Distribution of *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium*–*Saxifraga hirculus* in the study area.

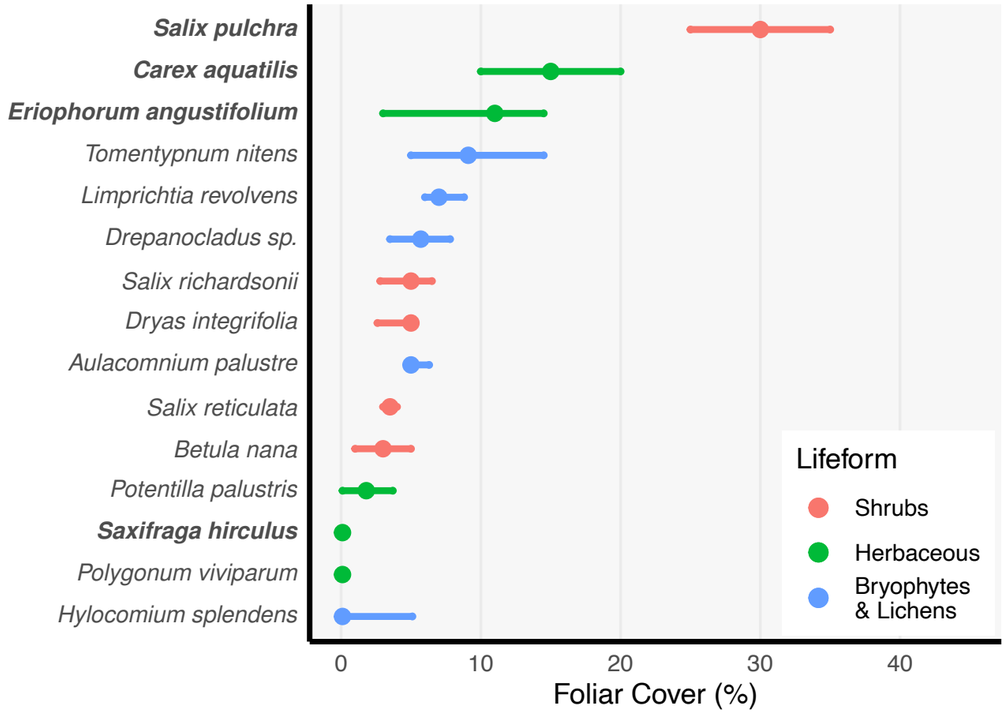


Representative photos (if available) for *Salix pulchra*/*Carex aquatilis*–*Eriophorum angustifolium*–*Saxifraga hirculus*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALPUL1/CARAQU1–ERIANG1–SAXHIR: *Salix pulchra/Carex aquatilis–Eriophorum angustifolium–Saxifraga hirculus*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	29	26	3	25	54	9
Slope (degrees)	1	1	0	0	2	9
Surface Organic Thickness (cm)	23.6	7.7	17.4	23.0	34.3	9
Cumul. Org. Thickness (cm)	26.8	6.6	18.6	25.4	34.3	9
Depth to >15% Rock Fragments (cm)						9
Water Table Depth (cm)	-12	13	-26	-13	0	7
Active Layer Thickness (cm)	41	12	31	41	52	9
Site pH	6.2	0.5	5.7	6.1	6.8	9
Electrical Conductivity (uS/cm)	344	348	76	210	918	9
Whole Tussock Cover (%)	1	2	0	0	3	7

Environmental data summaries for *Salix pulchra/Carex aquatilis–Eriophorum angustifolium–Saxifraga hirculus*.



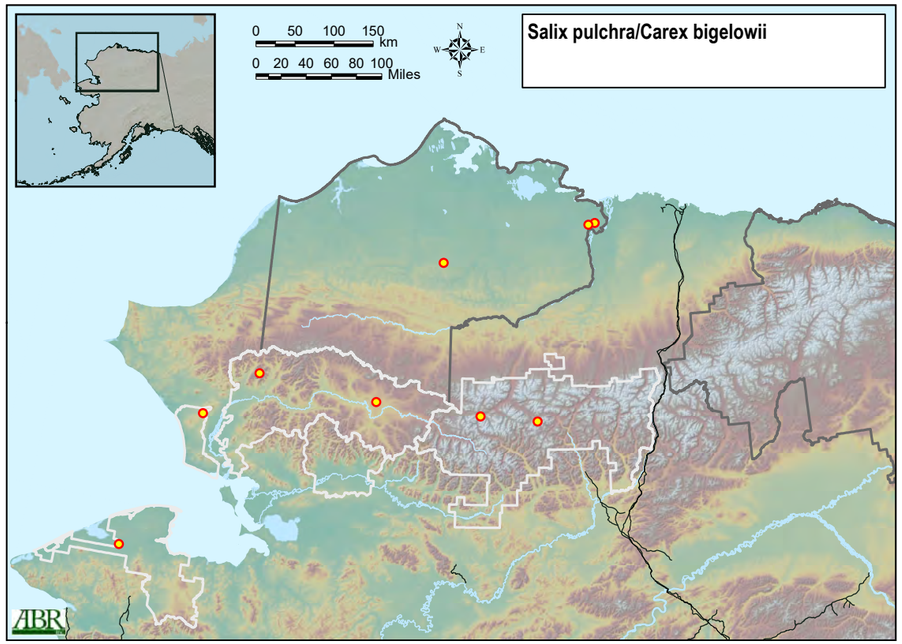
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix pulchra/Carex aquatilis–Eriophorum angustifolium–Saxifraga hirculus*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	BENA	*Betula nana*	56	3.8	3.9	0.1	3.0	8.0
Deciduous Shrubs	SAPU15	*Salix pulchra*	100	31.2	12.1	19.8	30.0	50.0
Deciduous Shrubs	SARE2	*Salix reticulata*	67	3.3	1.4	2.0	3.5	4.5
Deciduous Shrubs	SARI4	*Salix richardsonii*	67	5.7	5.2	1.1	5.0	11.0
Forbs	POVI3	*Polygonum viviparum*	67	0.1	0.4	0.1	0.1	1.0
Forbs	POPA14	*Potentilla palustris*	67	4.6	7.7	0.1	1.8	12.0
Forbs	SAHI3	*Saxifraga hirculus*	100	0.1	0.7	0.1	0.1	1.2
Sedges	CAAQ	*Carex aquatilis*	100	17.3	13.2	7.6	15.0	26.0
Sedges	ERAN6	*Eriophorum angustifolium*	100	9.8	6.6	1.8	11.0	16.0
Mosses	AUPA70	*Aulacomnium palustre*	44	6.0	2.7	4.3	5.0	8.5
Mosses	TONI70	*Tomentypnum nitens*	67	10.9	8.6	3.5	9.1	20.0

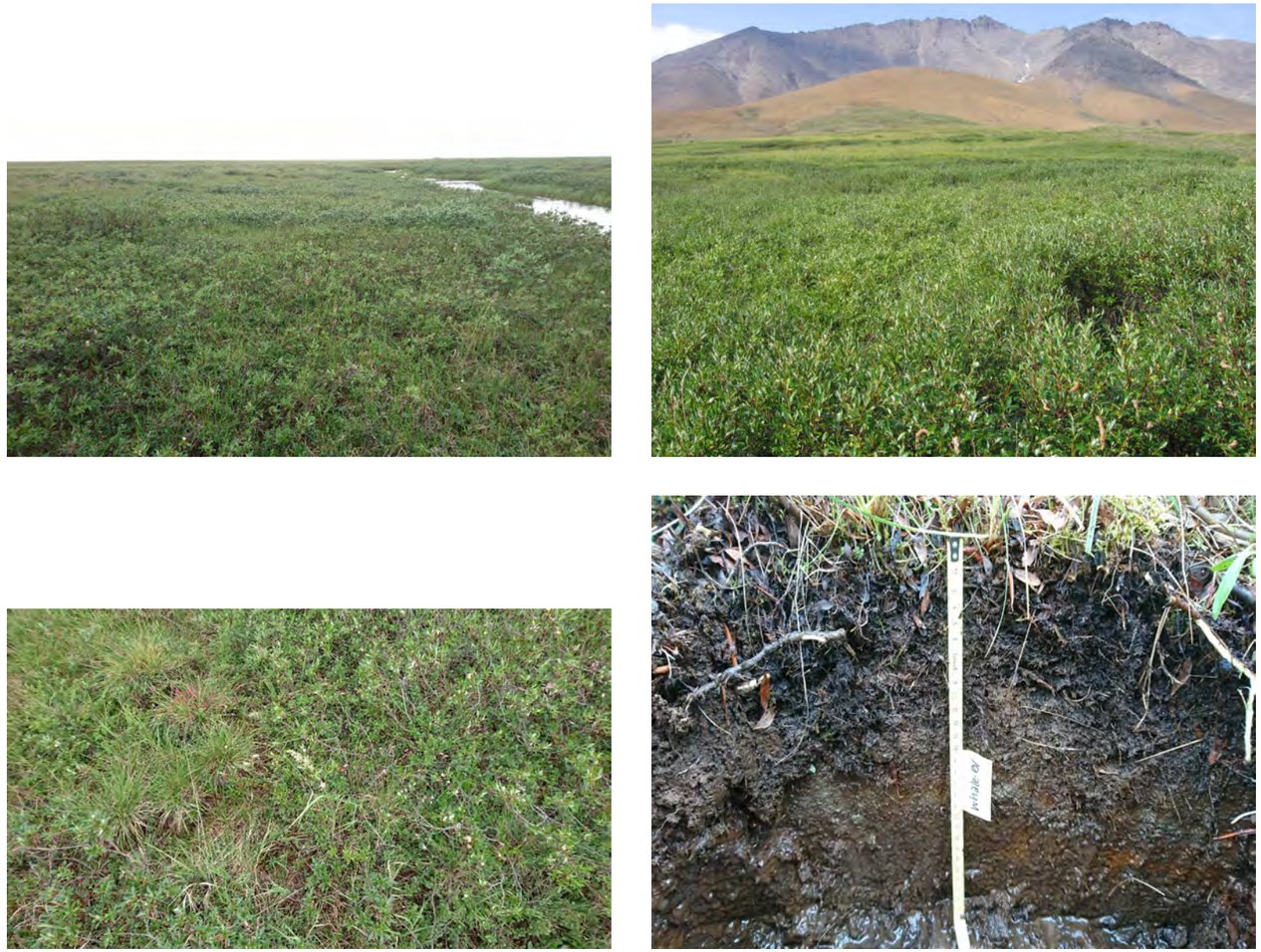
Constancy and foliar cover data summaries for *Salix pulchra/Carex aquatilis–Eriophorum angustifolium–Saxifraga hirculus*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALPUL1/CARBIG: *Salix pulchra*/*Carex bigelowii* (*n* = 9)

The plant association *Salix pulchra*/*Carex bigelowii* occurs in Lowland, Riverine, and Upland physiography most commonly on the following geomorphic units: Hillside Colluvium; Loess; and Lowland Headwater Floodplain Overbank Deposit. The average elevation in this plant association is 368 m (±406 m), and the slope gradient typically ranges between flat and strongly sloping. This plant association was associated most commonly with the surface form Non-patterned, but is also regularly associated with Hummocks; Non-sorted Circles, boils and scars; and Water tracks (non-incised drainages). Soils are somewhat poorly drained to moderately well drained, surface organic thickness typically ranges from thin to moderately thick, coarse fragments are uncommon, but when they do occur the average top depth is 68 cm (±77 cm), dominant soil texture in the upper 40 cm is typically Loamy or Organic-rich, and permafrost was common with an average active layer thickness of 37 cm (±14 cm). Soil pH typically ranges from acidic to circumacidic, and the average electrical conductivity is 80 µS/cm (±64 µS/cm). The most common vegetation types include Open Low Willow and Closed Low Willow. The vegetation is dominated by *Salix pulchra*, and *Carex bigelowii* is always present in the understory at moderate to high cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Vaccinium uliginosum*, *Salix reticulata*, *Ledum palustre* ssp. *decumbens*, and *Betula nana*; the herbs *Petasites frigidus*, *Eriophorum angustifolium*, *Carex aquatilis*, and *Poa arctica*; and the nonvasculars *Tomentypnum nitens*, *Aulacomnium palustre*, *Hylocomium splendens*, *Aulacomnium turgidum*, and *Polytrichum strictum.*



Distribution of *Salix pulchra*/*Carex bigelowii* in the study area.

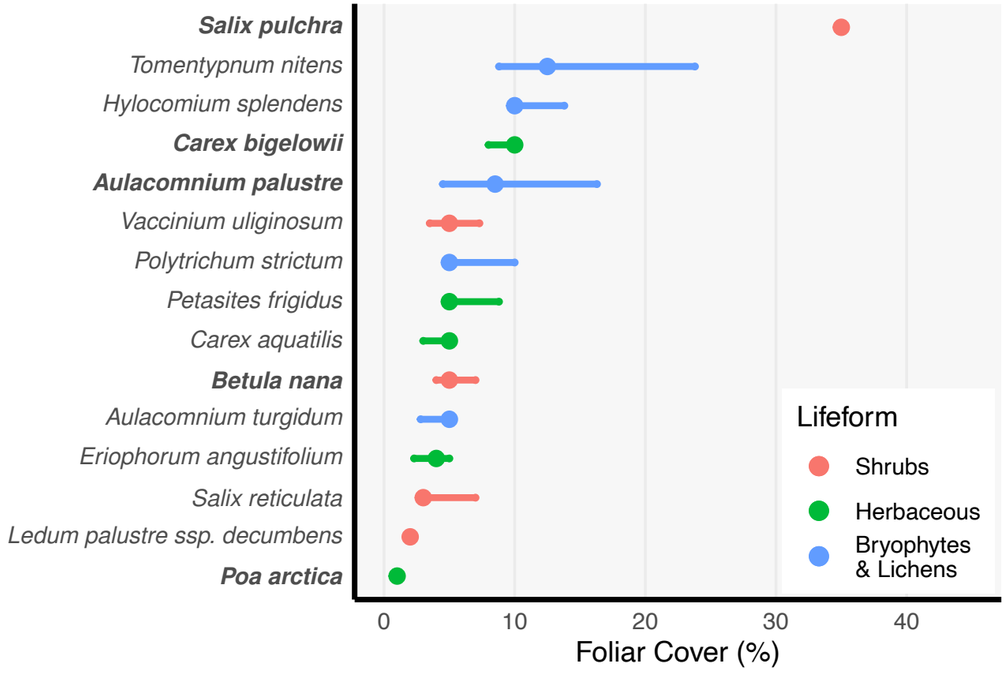


Representative photos (if available) for *Salix pulchra*/*Carex bigelowii*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALPUL1/CARBIG: *Salix pulchra*/*Carex bigelowii*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	368	406	15	237	943	9
Slope (degrees)	3	3	0	3	6	9
Surface Organic Thickness (cm)	15.8	8.1	6.6	15.0	25.2	9
Cumul. Org. Thickness (cm)	16.8	9.5	6.6	18.0	26.4	9
Depth to >15% Rock Fragments (cm)	68	77	20	26	150	5
Water Table Depth (cm)	-20	12	-33	-18	-9	5
Active Layer Thickness (cm)	37	14	26	34	51	6
Site pH	5.8	0.4	5.5	5.7	6.2	9
Electrical Conductivity (uS/cm)	80	64	30	50	182	9
Whole Tussock Cover (%)	2	3	0	1	4	9

Environmental data summaries for *Salix pulchra*/*Carex bigelowii*.



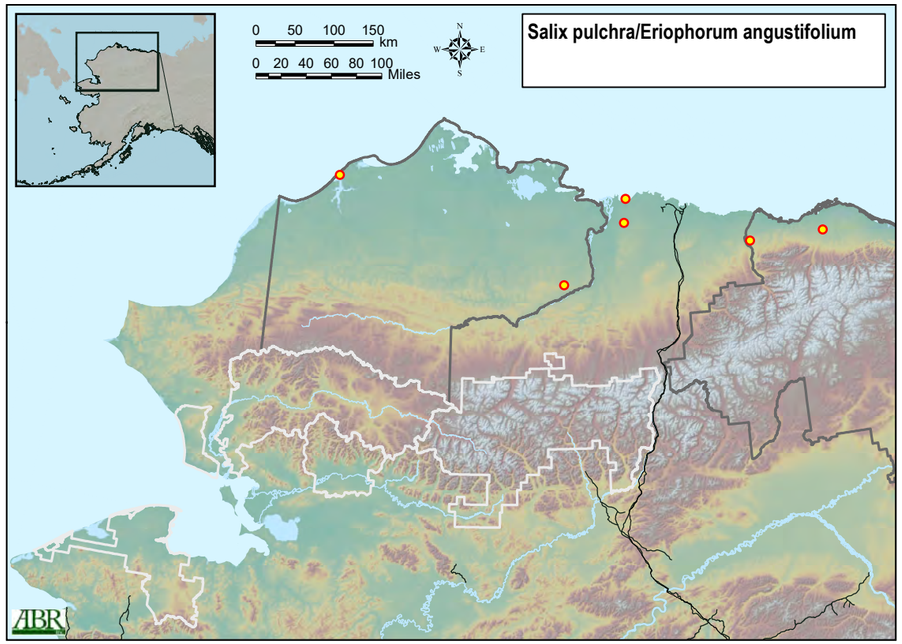
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix pulchra*/*Carex bigelowii*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	BENA	*Betula nana*	78	5.7	2.5	3.0	5.0	8.2
Deciduous Shrubs	SAPU15	*Salix pulchra*	100	43.0	22.6	19.0	35.0	76.0
Deciduous Shrubs	SARE2	*Salix reticulata*	56	5.0	3.4	2.4	3.0	8.8
Deciduous Shrubs	VAUL	*Vaccinium uliginosum*	67	7.3	6.5	3.0	5.0	14.0
Forbs	PEFR5	*Petasites frigidus*	67	6.7	5.1	2.6	5.0	12.5
Ferns & Allies	EQAR	*Equisetum arvense*	44	5.0	3.6	2.3	4.0	8.5
Grasses	ARLA2	*Arctagrostis latifolia*	56	3.8	2.8	1.4	3.0	6.8
Grasses	POAR2	*Poa arctica*	89	1.0	0.5	1.0	1.0	1.3
Sedges	CAAQ	*Carex aquatilis*	56	4.0	1.4	2.4	5.0	5.0
Sedges	CABI5	*Carex bigelowii*	100	10.2	4.2	6.6	10.0	13.6
Sedges	ERAN6	*Eriophorum angustifolium*	67	3.7	1.5	2.0	4.0	5.0
Sedges	ERVA4	*Eriophorum vaginatum*	44	3.5	4.4	1.0	1.5	7.6
Mosses	AUPA70	*Aulacomnium palustre*	89	12.9	12.5	3.0	8.5	26.0
Mosses	AUTU70	*Aulacomnium turgidum*	67	4.2	2.8	1.1	5.0	6.5
Mosses	HYSP70	*Hylocomium splendens*	67	12.0	7.6	6.0	10.0	20.0
Mosses	POST70	*Polytrichum strictum*	56	11.6	13.3	3.8	5.0	25.0
Mosses	TONI70	*Tomentypnum nitens*	44	20.0	20.4	6.5	12.5	39.5

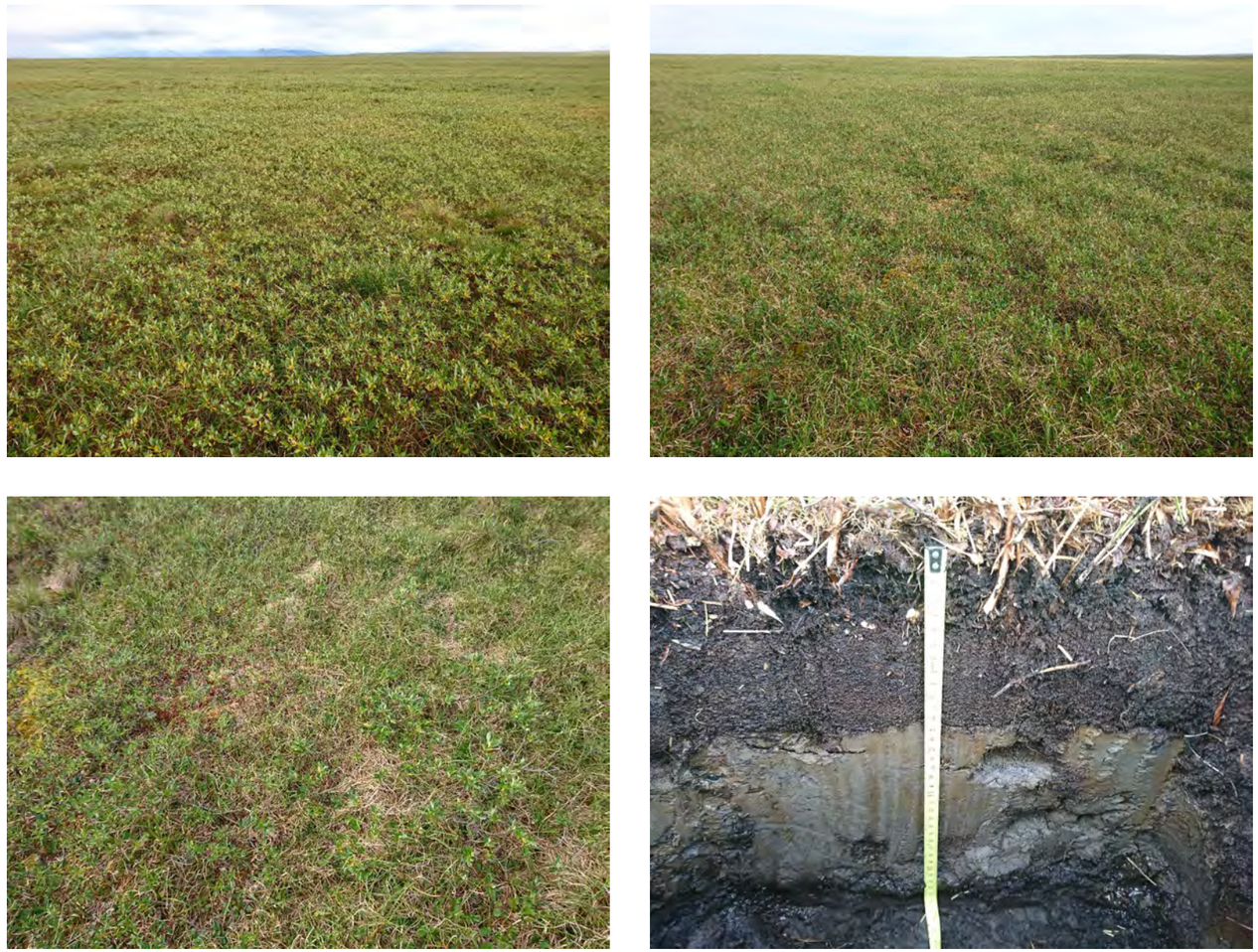
Constancy and foliar cover data summaries for *Salix pulchra*/*Carex bigelowii*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALPUL1/ERIANG1: *Salix pulchra*/*Eriophorum angustifolium* (*n* = 6)

The plant association *Salix pulchra*/*Eriophorum angustifolium* occurs in Lowland physiography most commonly on the following geomorphic units: Alluvial-Marine Deposit; Headwater Stream or Floodplain; and Lowland Headwater Floodplain Overbank Deposit. The average elevation in this plant association is 107 m (±116 m), and the slope gradient typically ranges between nearly level and gently sloping. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with Water tracks (non-incised drainages); High-centered, Low-relief Polygons; and Mixed pits and polygons. Soils are very poorly drained to poorly drained, surface organic thickness is typically moderately thick, coarse fragments are rare, but when they do occur the average top depth is 37 cm (±0 cm), and permafrost was common with an average active layer thickness of 52 cm (±14 cm). Water pH typically ranges from acidic to circumacidic, and the average electrical conductivity is 189 µS/cm (±241 µS/cm). The most common vegetation types include Open Low Willow-Sedge Shrub Tundra, Open Low Willow, and Wet Sedge-Willow Tundra. The vegetation is dominated by *Salix pulchra*, and *Eriophorum angustifolium* is always present in the understory at moderate to high cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix reticulata*, *Dryas integrifolia*, *Betula nana*, and *Salix arctica*; the herbs *Petasites frigidus*, *Carex bigelowii*, *Valeriana capitata*, and *Poa arctica*; and the nonvasculars *Hylocomium splendens*, *Aulacomnium palustre*, *Ditrichum flexicaule*, *Peltigera aphthosa*, and *Sphagnum squarrosum.* The soils in this plant association range from wet to flooded, and dwarf shrubs are generally limited to moist micro-highs.



Distribution of *Salix pulchra*/*Eriophorum angustifolium* in the study area.

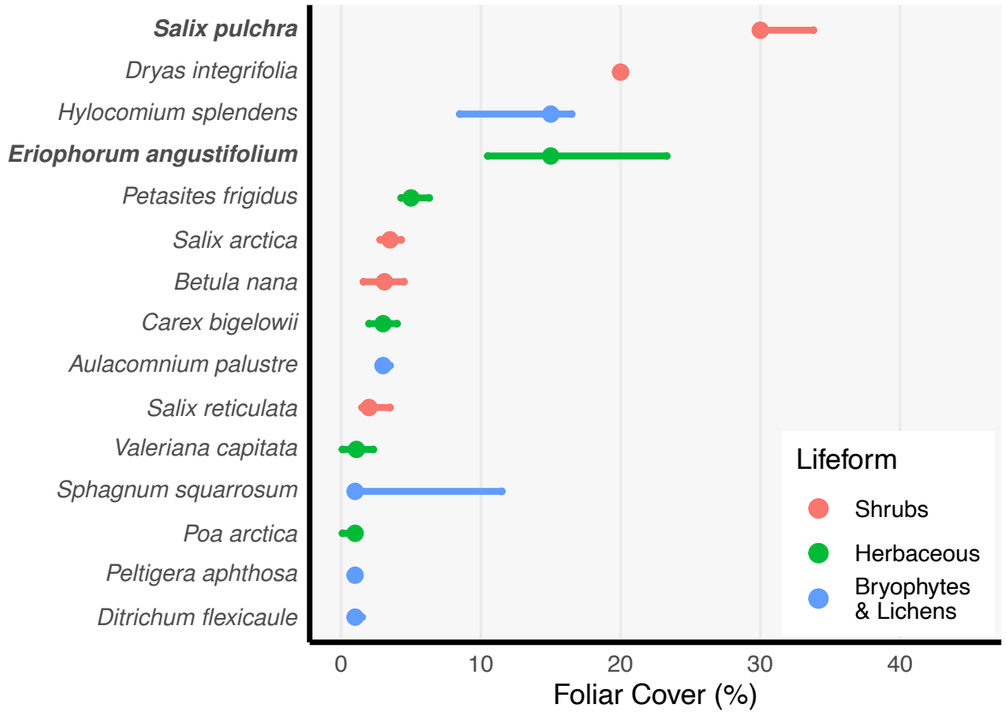


Representative photos (if available) for *Salix pulchra*/*Eriophorum angustifolium*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALPUL1/ERIANG1: *Salix pulchra*/*Eriophorum angustifolium*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	107	116	-3	78	247	6
Slope (degrees)	2	2	0	2	4	6
Surface Organic Thickness (cm)	17.5	3.2	14.5	17.0	21.0	6
Cumul. Org. Thickness (cm)	20.5	3.2	17.0	21.0	23.5	6
Depth to >15% Rock Fragments (cm)	37		37	37	37	1
Water Table Depth (cm)	-12	15	-26	-8	-1	5
Active Layer Thickness (cm)	52	14	38	55	63	4
Site pH	5.9	0.7	5.3	5.9	6.6	6
Electrical Conductivity (uS/cm)	189	241	45	80	441	6
Whole Tussock Cover (%)	1	1	0	0	3	5

Environmental data summaries for *Salix pulchra*/*Eriophorum angustifolium*.



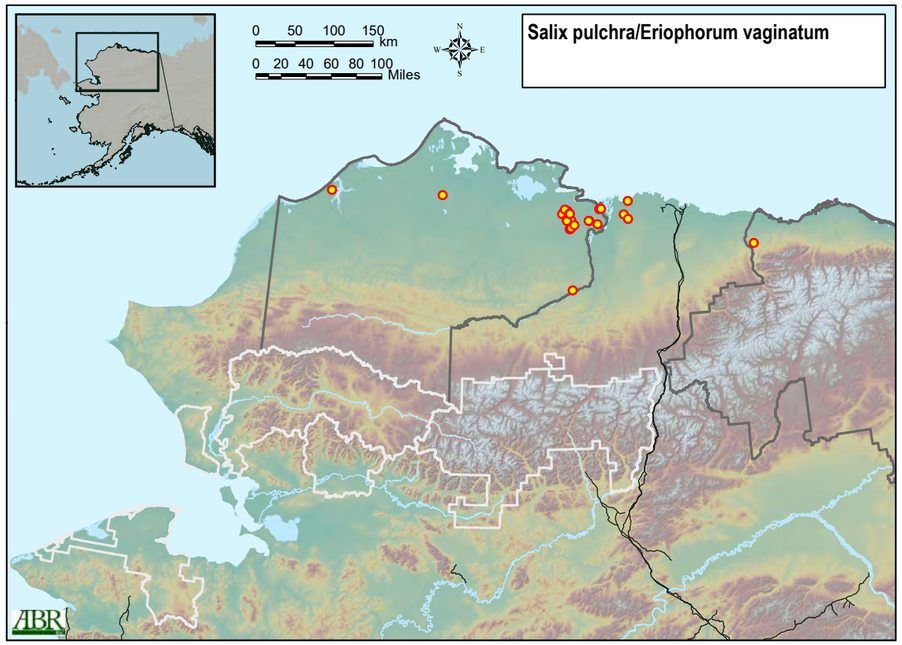
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix pulchra*/*Eriophorum angustifolium*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

					Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	SAPU15	*Salix pulchra*	100	33.3	6.1	30.0	30.0	40.0
Forbs	PEFR5	*Petasites frigidus*	67	5.5	3.3	2.9	5.0	8.5
Forbs	VACA3	*Valeriana capitata*	67	1.3	1.4	0.1	1.1	2.7
Grasses	POAR2	*Poa arctica*	67	1.0	0.5	0.1	1.0	1.0
Sedges	CABI5	*Carex bigelowii*	50	3.0	2.0	1.4	3.0	4.6
Sedges	ERAN6	*Eriophorum angustifolium*	100	17.5	8.4	10.0	15.0	27.5
Mosses	AUPA70	*Aulacomnium palustre*	50	3.3	0.6	3.0	3.0	3.8
Mosses	HYSP70	*Hylocomium splendens*	50	11.7	8.5	4.6	15.0	17.4
Mosses	SPSQ70	*Sphagnum squarrosum*	50	7.7	12.4	0.1	1.0	17.8

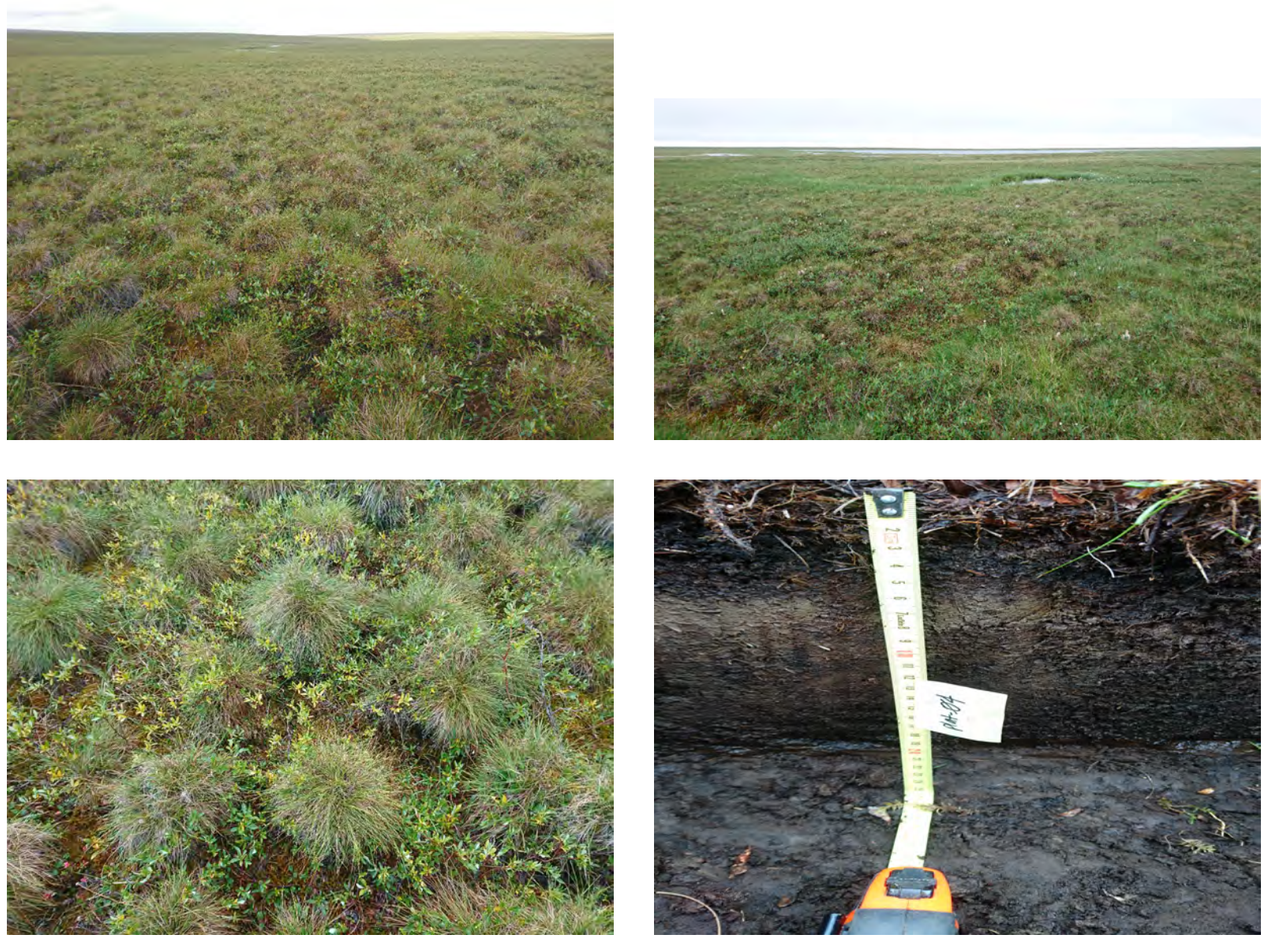
Constancy and foliar cover data summaries for *Salix pulchra*/*Eriophorum angustifolium*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALPUL1/ERIVAG: *Salix pulchra*/*Eriophorum vaginatum* (*n* = 27)

The plant association *Salix pulchra*/*Eriophorum vaginatum* occurs in Upland physiography most commonly on the following geomorphic units: Eolian Sand Sheet Upland; Alluvial-Marine Deposit; and Upland Loess. The average elevation in this plant association is 34 m (±48 m), and the slope gradient typically ranges between flat and nearly level. This plant association was associated most commonly with the surface form High-centered, Low-relief Polygons, but is also regularly associated with Nonpatterned; Mixed pits and polygons; and Low-centered, High-relief, High-density Polygons. Soils are poorly drained to somewhat poorly drained, surface organic thickness typically ranges from thin to moderately thick, coarse fragments are uncommon, but when they do occur the average top depth is 23 cm (±8 cm), dominant soil texture in the upper 40 cm is typically Loamy or Organic-rich, and permafrost was common with an average active layer thickness of 33 cm (±7 cm). Soil pH is typically circumacidic, and the average electrical conductivity is 147 µS/cm (±131 µS/cm). The most common vegetation type is Open Mixed Low Shrub-Sedge Tussock Tundra. The vegetation is dominated by *Salix pulchra* which typically forms an open low shrub canopy, and *Eriophorum vaginatum* forms conspicuous tussocks with a cover of whole tussocks of at least 25%. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Vaccinium vitis-idaea*, *Cassiope tetragona*, *Ledum palustre* ssp. *decumbens*, and *Salix reticulata*; the herbs *Arctagrostis latifolia*, *Polygonum bistorta*, *Saussurea angustifolia*, and *Carex bigelowii*; and the nonvasculars *Aulacomnium turgidum*, *Hylocomium splendens*, *Dactylina arctica*, *Thamnolia vermicularis*, and *Flavocetraria cucullata.*



Distribution of *Salix pulchra*/*Eriophorum vaginatum* in the study area.

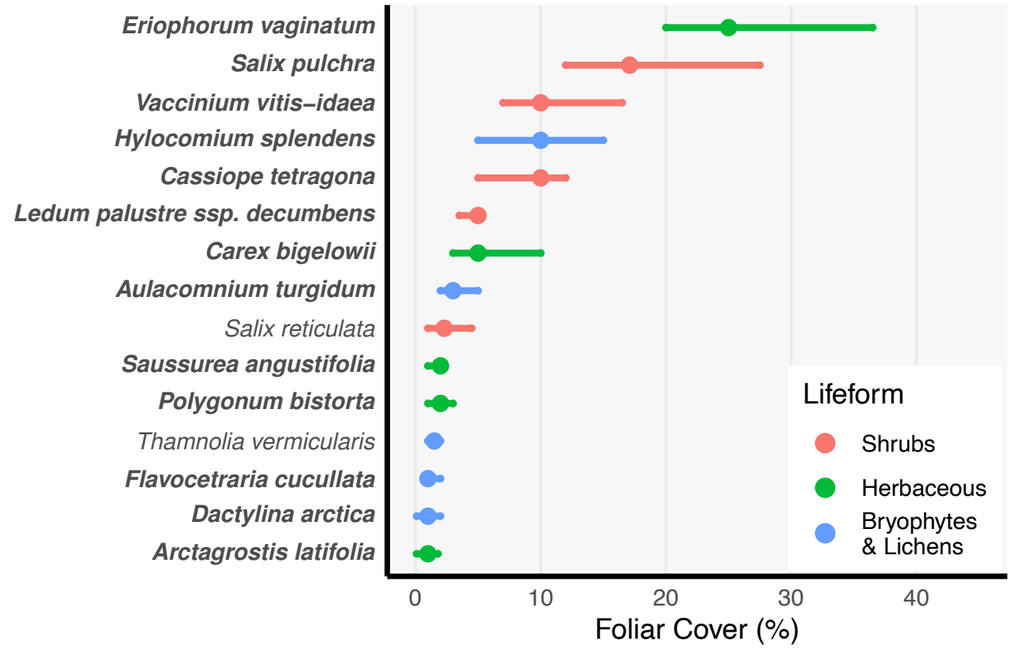


Representative photos (if available) for *Salix pulchra*/*Eriophorum vaginatum*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALPUL1/ERIVAG: *Salix pulchra*/*Eriophorum vaginatum*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	34	48	11	24	31	25
Slope (degrees)	2	1	0	2	3	25
Surface Organic Thickness (cm)	11.1	6.6	6.0	10.2	22.0	27
Cumul. Org. Thickness (cm)	14.3	6.7	8.2	10.2	23.0	25
Depth to >15% Rock Fragments (cm)	23	8	14	22	32	7
Water Table Depth (cm)	-26	9	-34	-25	-21	15
Active Layer Thickness (cm)	33	7	25	33	44	20
Site pH	6.0	0.7	5.3	5.9	6.9	25
Electrical Conductivity (uS/cm)	147	131	53	110	273	24
Whole Tussock Cover (%)	41	17	20	35	64	14

Environmental data summaries for *Salix pulchra*/*Eriophorum vaginatum*.



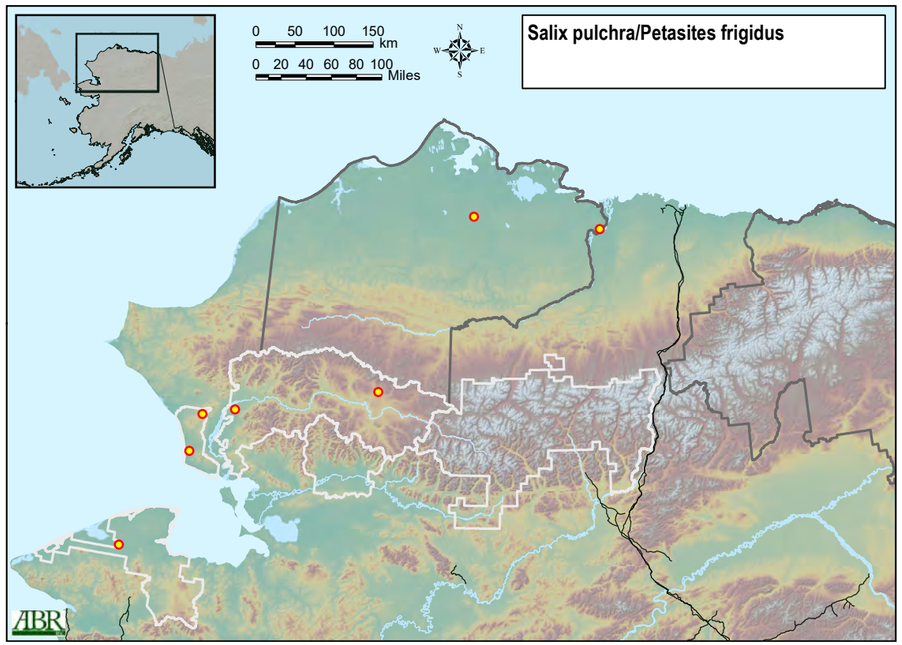
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix pulchra*/*Eriophorum vaginatum*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

					Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	BENA	*Betula nana*	48	3.9	2.5	2.0	3.0	6.6
Deciduous Shrubs	SAPH	*Salix phlebophylla*	41	5.1	5.7	1.0	3.0	10.0
Deciduous Shrubs	SAPU15	*Salix pulchra*	100	20.2	10.5	10.0	17.1	35.4
Deciduous Shrubs	SARE2	*Salix reticulata*	67	3.1	2.7	0.1	2.3	7.0
Evergreen Shrubs	CATE11	*Cassiope tetragona*	93	9.7	6.4	3.4	10.0	15.6
Evergreen Shrubs	DRIN4	*Dryas integrifolia*	63	4.5	5.3	1.0	2.0	12.0
Evergreen Shrubs	LEPAD	*Ledum palustre* ssp. *decumbens*	85	5.0	2.6	2.0	5.0	9.6
Evergreen Shrubs	VAVI	*Vaccinium vitis-idaea*	100	11.4	7.2	4.2	10.0	20.0
Forbs	POBIP2	*Polygonum bistorta* ssp. *plumosum*	78	3.2	3.5	1.0	2.0	8.0
Forbs	SAAN3	*Saussurea angustifolia*	78	2.5	2.6	1.0	2.0	6.0
Forbs	SEAT2	*Senecio atropurpureus*	74	1.0	0.9	0.1	1.0	2.0
Grasses	ARLA2	*Arctagrostis latifolia*	81	1.4	1.7	0.1	1.0	3.0
Grasses	POAR2	*Poa arctica*	78	0.1	0.4	0.1	0.1	1.0
Sedges	CABI5	*Carex bigelowii*	100	6.4	4.7	1.6	5.0	10.8
Sedges	ERAN6	*Eriophorum angustifolium*	44	3.8	3.6	0.1	2.5	9.1
Sedges	ERVA4	*Eriophorum vaginatum*	100	29.5	12.9	16.8	25.0	50.0
Mosses	AUPA70	*Aulacomnium palustre*	52	3.1	3.3	0.1	2.0	8.5
Mosses	AUTU70	*Aulacomnium turgidum*	78	4.3	4.5	0.1	3.0	8.0
Mosses	HYSP70	*Hylocomium splendens*	74	11.7	12.2	1.9	10.0	20.5
Mosses	TONI70	*Tomentypnum nitens*	56	5.4	4.1	2.0	5.0	10.0
Liverworts	PTCI	*Ptilidium ciliare*	52	3.7	4.0	1.0	2.0	8.5
Lichens	DAAR60	*Dactylina arctica*	74	1.5	2.0	0.1	1.0	4.1
Lichens	FLCU	*Flavocetraria cucullata*	85	1.8	2.1	0.1	1.0	4.6

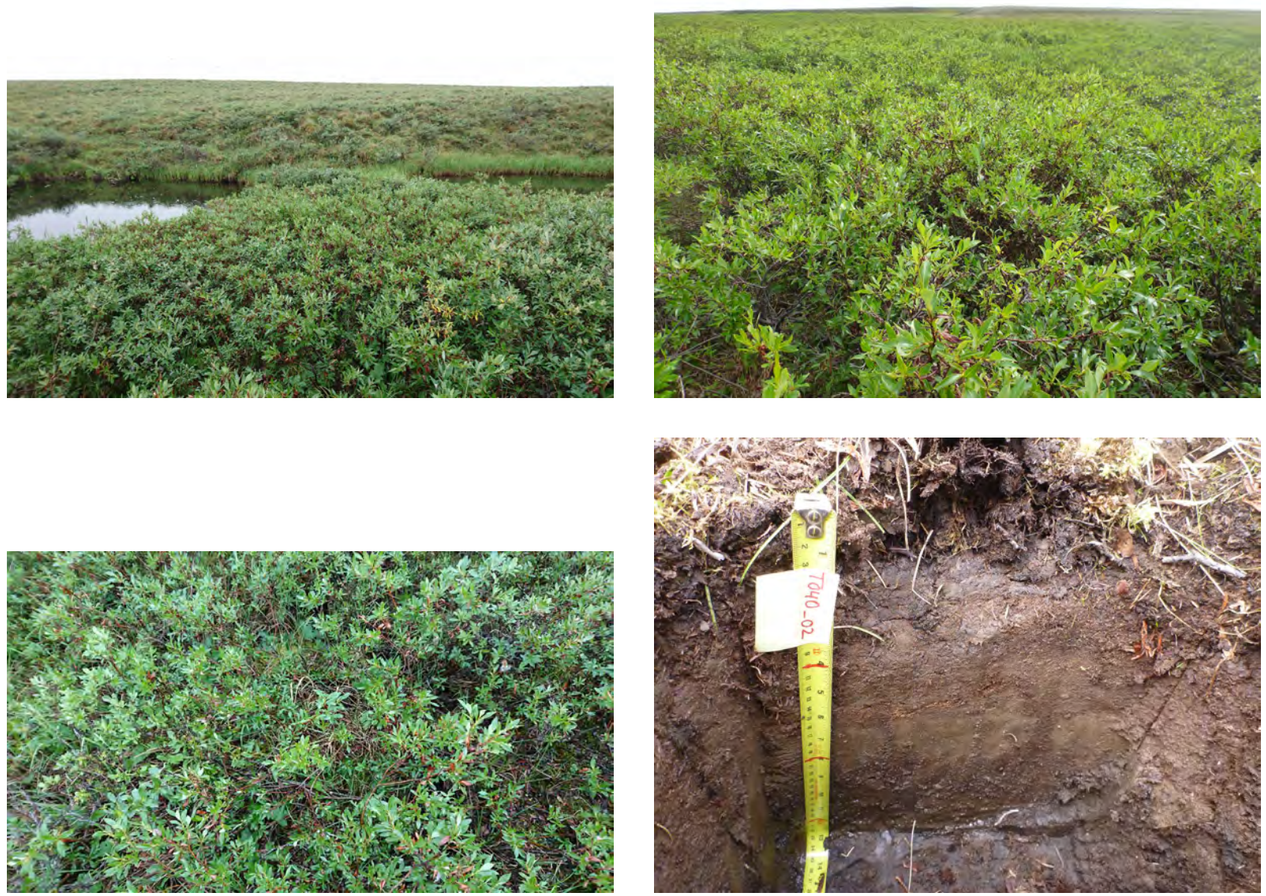
Constancy and foliar cover data summaries for *Salix pulchra*/*Eriophorum vaginatum*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALPUL1/PETFRI: *Salix pulchra*/*Petasites frigidus* (*n* = 7)

The plant association *Salix pulchra*/*Petasites frigidus* occurs in Lowland and Riverine physiography most commonly on the following geomorphic units: Hillside Colluvium; Lowland Headwater Floodplain Overbank Deposit; and Meander Abandoned Overbank Deposit. The average elevation in this plant association is 114 m (±150 m), and the slope gradient typically ranges between flat and nearly level. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with Hummocks; Undifferentiated mounds; and Water tracks (non-incised drainages). Soils are somewhat poorly drained to moderately well drained, surface organic thickness typically ranges from thin to moderately thick, coarse fragments are absent, dominant soil texture in the upper 40 cm is typically Loamy or Organic-rich, and permafrost was common with an average active layer thickness of 48 cm (±20 cm). Soil pH typically ranges from acidic to circumacidic, and the average electrical conductivity is 49 µS/cm (±32 µS/cm). The most common vegetation types include Closed Low Willow, Open Low Willow, and Open Tall Willow. The vegetation is dominated by *Salix pulchra*, and *Petasites frigidus* is always present in the understory at moderate to high cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Vaccinium uliginosum*, *Vaccinium vitis-idaea*, *Salix richardsonii*, and *Betula nana*; the herbs *Carex aquatilis*, *Calamagrostis canadensis*, *Arctagrostis latifolia*, and *Carex bigelowii*; and the nonvasculars *Hylocomium splendens*, *Dicranum* sp., *Peltigera aphthosa*, *Tomentypnum nitens*, and *Aulacomnium palustre.*



Distribution of *Salix pulchra*/*Petasites frigidus* in the study area.



Representative photos (if available) for *Salix pulchra*/*Petasites frigidus*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

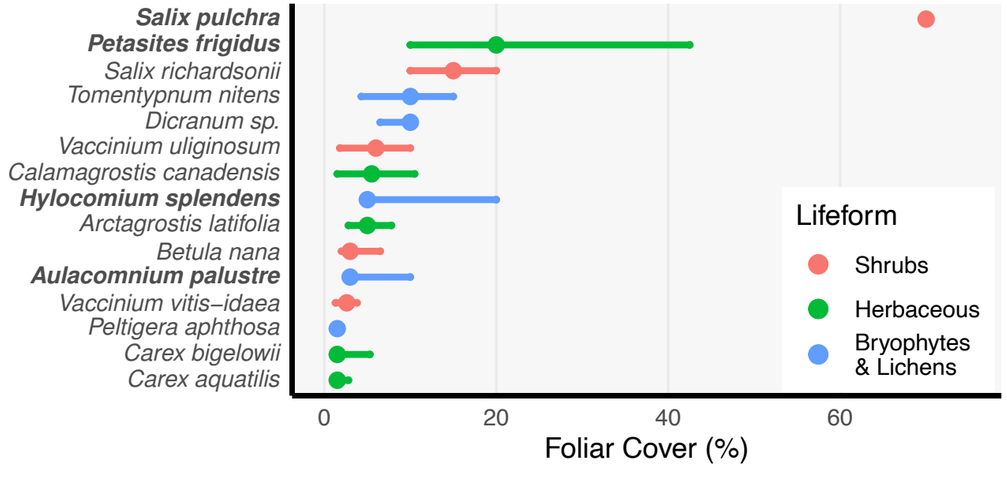
SALPUL1/PETFRI: *Salix pulchra*/*Petasites frigidus*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	114	150	6	49	283	7
Slope (degrees)	2	4	0	1	5	7
Surface Organic Thickness (cm)	13.9	10.7	4.0	13.0	24.2	7
Cumul. Org. Thickness (cm)	16.1	10.9	6.4	13.0	29.6	7
Depth to >15% Rock Fragments (cm)	200	0	200	200	200	2
Water Table Depth (cm)	-22	14	-31	-29	-9	4
Active Layer Thickness (cm)	48	20	30	40	73	7
Site pH	5.5	0.4	5.1	5.6	5.7	7
Electrical Conductivity (uS/cm)	49	32	20	30	88	7
Whole Tussock Cover (%)	0	0	0	0	0	7

Environmental data summaries for *Salix pulchra*/*Petasites frigidus*.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	BENA	*Betula nana*	43	4.7	4.7	1.4	3.0	8.6
Deciduous Shrubs	SAPU15	*Salix pulchra*	100	67.9	13.2	53.0	70.0	82.0
Deciduous Shrubs	VAUL	*Vaccinium uliginosum*	57	5.8	4.9	1.3	6.0	10.0
Forbs	ANRI	*Anemone richardsonii*	43	3.7	3.1	1.4	3.0	6.2
Forbs	PEFR5	*Petasites frigidus*	100	30.3	27.5	8.8	20.0	65.0
Forbs	RUCH	*Rubus chamaemorus*	43	5.0	5.0	1.1	5.0	9.0
Grasses	ARLA2	*Arctagrostis latifolia*	57	5.5	3.7	2.3	5.0	9.1
Grasses	CACA4	*Calamagrostis canadensis*	57	6.5	6.8	1.0	5.5	13.2
Sedges	CABI5	*Carex bigelowii*	57	4.8	6.8	1.0	1.5	11.1
Mosses	AUPA70	*Aulacomnium palustre*	71	7.2	8.0	1.3	3.0	16.0
Mosses	AUTU70	*Aulacomnium turgidum*	43	5.3	2.5	3.4	5.0	7.4
Mosses	DICRA8	*Dicranum* sp.	43	7.7	4.0	4.4	10.0	10.0
Mosses	HYSP70	*Hylocomium splendens*	86	16.7	22.9	2.6	5.0	42.5
Mosses	TONI70	*Tomentypnum nitens*	57	9.3	6.8	2.9	10.0	15.0

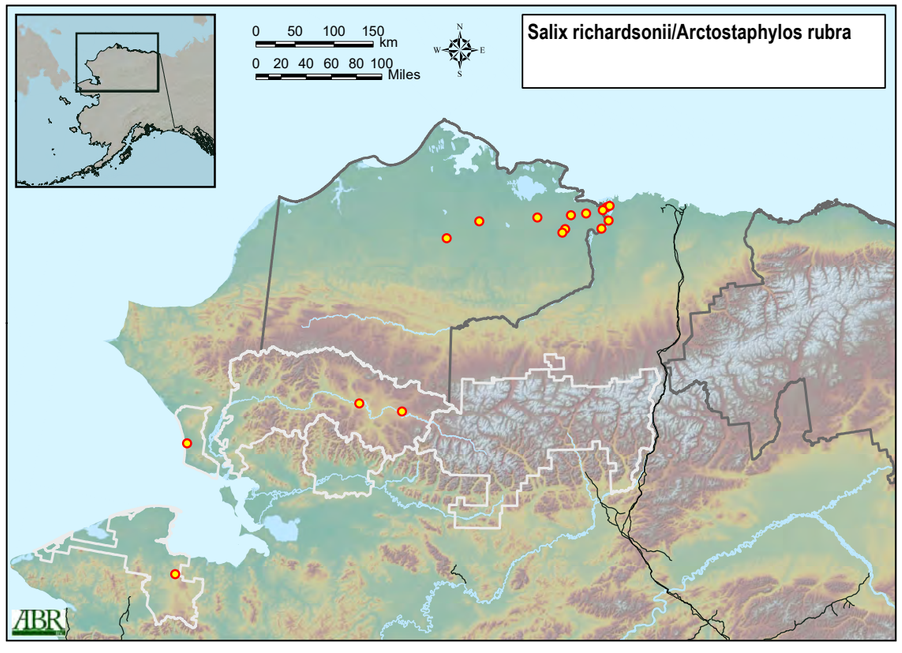
Constancy and foliar cover data summaries for *Salix pulchra*/*Petasites frigidus*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.



Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix pulchra*/*Petasites frigidus*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

SALRIC1/ARCRUB1: *Salix richardsonii/Arctostaphylos rubra* (*n* = 16)

The plant association *Salix richardsonii/Arctostaphylos rubra* occurs in Lacustrine, Riverine, and Upland physiography most commonly on the following geomorphic units: Meander Active Overbank Deposit; Meander Inactive Overbank Deposit; and Delta Active Channel Deposit. The average elevation in this plant association is 78 m (±129 m), and the slope gradient is typically flat. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with Gelifluction lobes; Scour channels-ridges; and Small dunes. Soils are somewhat poorly drained to moderately well drained, surface organic thickness typically ranges from absent to very thin, coarse fragments are uncommon, but when they do occur the average top depth is 81 cm (±85 cm), dominant soil texture in the upper 40 cm is typically Sandy or Loamy, and permafrost was common with an average active layer thickness of 74 cm (±21 cm). Soil pH typically ranges from circumalkaline to alkaline, and the average electrical conductivity is 335 µS/cm (±363 µS/cm). The most common vegetation types include Open Low Willow and Closed Low Willow. The vegetation is dominated by *Salix richardsonii*, and *Arctostaphylos rubra* is always present in the understory at moderate to high cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix glauca*, *Salix reticulata*, and *Dryas integrifolia*; the herbs *Polygonum viviparum*, *Valeriana capitata*, *Eurybia sibirica*, *Equisetum arvense*, and *Equisetum variegatum*; and the nonvasculars *Sanionia uncinata*, *Tomentypnum nitens*, *Campylium stellatum*, *Distichium capillaceum*, and *Catoscopium nigritum.*



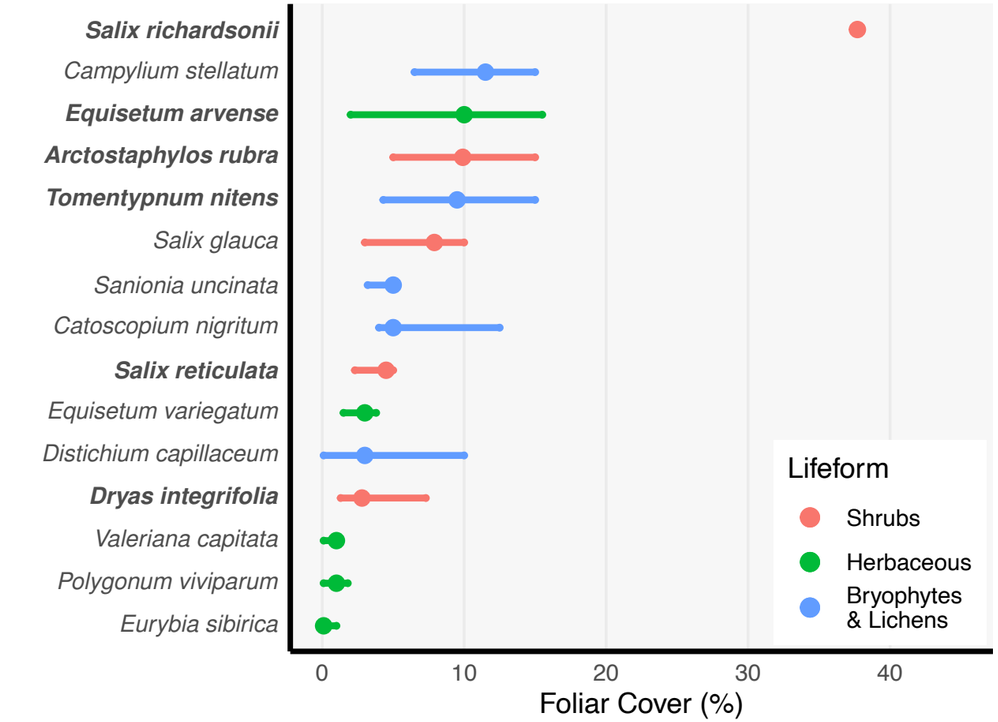
Distribution of *Salix richardsonii/Arctostaphylos rubra* in the study area.

Representative photos (if available) for *Salix richardsonii/Arctostaphylos rubra*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALRIC1/ARCRUB1: *Salix richardsonii/Arctostaphylos rubra*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	78	129	6	15	236	13
Slope (degrees)	1	3	0	0	1	12
Surface Organic Thickness (cm)	2.5	2.8	0.0	1.3	5.0	16
Cumul. Org. Thickness (cm)	5.7	4.3	1.0	5.0	11.6	13
Depth to >15% Rock Fragments (cm)	81	85	20	51	165	4
Water Table Depth (cm)	-27	6	-31	-28	-21	6
Active Layer Thickness (cm)	74	21	47	77	99	10
Site pH	7.5	0.3	7.2	7.5	7.9	15
Electrical Conductivity (uS/cm)	335	363	84	200	924	15
Whole Tussock Cover (%)	0	0	0	0	0	11

Environmental data summaries for *Salix richardsonii/Arctostaphylos rubra*.



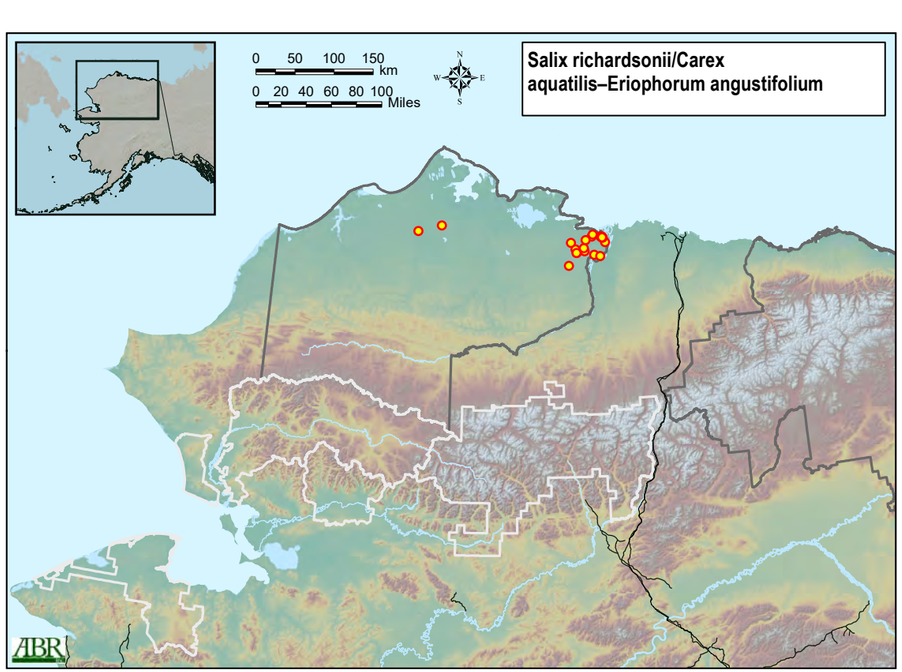
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix richardsonii/Arctostaphylos rubra*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	ARRU	*Arctostaphylos rubra*	100	13.2	13.9	3.5	9.9	21.0
Deciduous Shrubs	SAGL	*Salix glauca*	56	7.4	4.3	2.8	7.9	11.0
Deciduous Shrubs	SARE2	*Salix reticulata*	88	9.6	15.9	1.0	4.5	22.0
Deciduous Shrubs	SARI4	*Salix richardsonii*	100	41.1	16.7	22.5	37.7	57.5
Evergreen Shrubs	DRIN4	*Dryas integrifolia*	88	4.8	5.5	0.1	2.8	10.0
Forbs	ASAL7	*Astragalus alpinus*	44	4.1	4.9	1.0	2.0	8.8
Forbs	ASUM2	*Astragalus umbellatus*	56	3.8	7.1	0.1	1.0	9.2
Forbs	EUSI13	*Eurybia sibirica*	63	1.0	0.9	0.1	0.1	1.2
Forbs	POVI3	*Polygonum viviparum*	63	1.3	1.5	0.1	1.0	4.0
Forbs	VACA3	*Valeriana capitata*	63	1.0	0.6	0.1	1.0	1.1
Ferns & Allies	EQAR	*Equisetum arvense*	75	9.6	7.3	1.1	10.0	17.9
Ferns & Allies	EQVA	*Equisetum variegatum*	63	3.4	3.0	1.0	3.0	5.6
Mosses	TONI70	*Tomentypnum nitens*	75	13.2	14.6	1.1	9.5	37.5

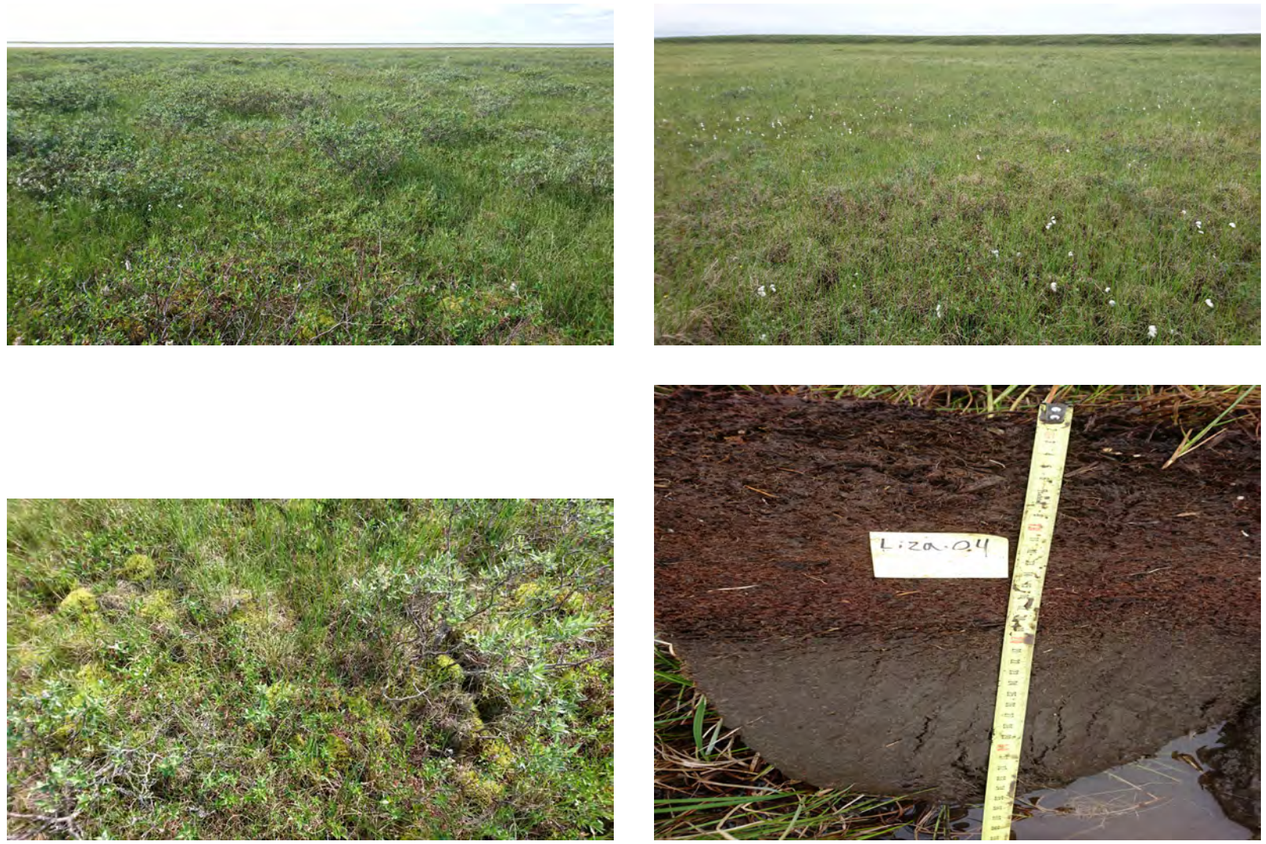
Constancy and foliar cover data summaries for *Salix richardsonii/Arctostaphylos rubra*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALRIC1/CARAQU1–ERIANG1: *Salix richardsonii*/*Carex aquatilis*–*Eriophorum angustifolium* (*n* = 23)

The plant association *Salix richardsonii*/*Carex aquatilis*–*Eriophorum angustifolium* occurs in Lacustrine, Lowland, and Riverine physiography most commonly on the following geomorphic units: Delta Inactive Overbank Deposit; Meander Inactive Overbank Deposit; and Delta Active Overbank Deposit. The average elevation in this plant association is 12 m (±10 m), and the slope gradient is typically flat. This plant association was associated most commonly with the surface form Disjunct Polygon Rims, but is also regularly associated with Nonpatterned; Low-centered, Low-relief, Low-density Polygons; and Hummocks. Soils are very poorly drained to somewhat poorly drained, surface organic thickness typically ranges from very thin to moderately thick, coarse fragments are uncommon, but when they do occur the average top depth is 82 cm (±73 cm), and permafrost was common with an average active layer thickness of 50 cm (±11 cm). Water pH typically ranges from circumacidic to circumalkaline, and the average electrical conductivity is 550 µS/cm (±480 µS/cm). The most common vegetation types include Open Low Willow-Sedge Shrub Tundra, Open Low Willow, and Wet Sedge-Willow Tundra. The vegetation is dominated by *Salix richardsonii*, which typically forms an open low shrub canopy, and *Carex aquatilis* and *Eriophorum angustifolium* co-dominate in the herbaceous layer. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Dryas integrifolia*, *Salix reticulata*, *Salix pulchra*, and *Arctostaphylos rubra*; the herbs *Saxifraga hirculus*, *Poa arctica*, and *Polygonum viviparum*; and the non-vasculars *Tomentypnum nitens*, *Campylium stellatum*, *Hylocomium splendens*, *Aulacomnium turgidum*, and *Aulacomnium palustre.* The soils in this plant association range from wet to flooded, and dwarf shrubs are generally limited to moist micro-highs.



Distribution of *Salix richardsonii*/*Carex aquatilis*–*Eriophorum angustifolium* in the study area.

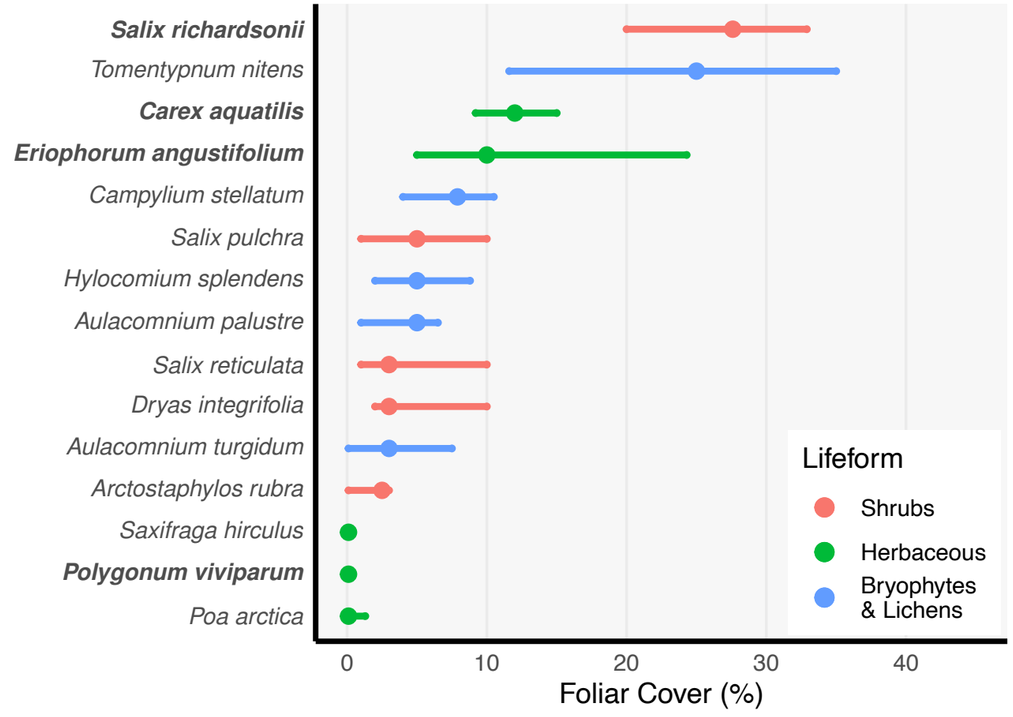


Representative photos (if available) for *Salix richardsonii*/*Carex aquatilis*–*Eriophorum angustifolium*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALRIC1/CARAQU1–ERIANG1: *Salix richardsonii/Carex aquatilis–Eriophorum angustifolium*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	12	10	1	9	27	23
Slope (degrees)	0	1	0	0	1	23
Surface Organic Thickness (cm)	12.2	12.1	0.0	12.0	30.0	23
Cumul. Org. Thickness (cm)	17.7	11.6	5.2	15.0	33.0	23
Depth to >15% Rock Fragments (cm)	82	73	33	59	154	6
Water Table Depth (cm)	-19	13	-37	-20	0	17
Active Layer Thickness (cm)	50	11	37	51	61	15
Site pH	6.5	0.4	5.8	6.6	7.1	23
Electrical Conductivity (uS/cm)	550	480	140	460	988	23
Whole Tussock Cover (%)	0	1	0	0	1	12

Environmental data summaries for *Salix richardsonii/Carex aquatilis–Eriophorum angustifolium*.



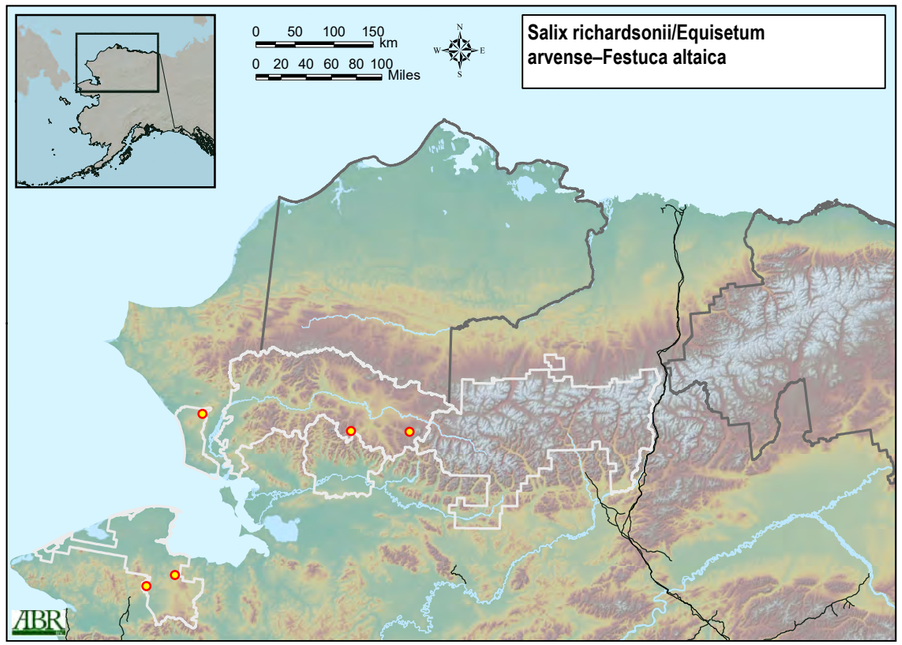
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix richardsonii/Carex aquatilis–Eriophorum angustifolium*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	SAPU15	*Salix pulchra*	43	7.1	7.7	0.1	5.0	15.9
Deciduous Shrubs	SARE2	*Salix reticulata*	70	4.9	4.7	1.0	3.0	10.0
Deciduous Shrubs	SARI4	*Salix richardsonii*	100	28.0	7.5	20.0	27.6	38.7
Evergreen Shrubs	DRIN4	*Dryas integrifolia*	57	7.5	8.7	0.1	3.0	17.2
Forbs	POVI3	*Polygonum viviparum*	74	0.1	0.3	0.1	0.1	0.1
Forbs	SAHI3	*Saxifraga hirculus*	70	0.1	0.8	0.1	0.1	1.3
Ferns & Allies	EQVA	*Equisetum variegatum*	43	5.7	6.6	1.0	2.6	11.2
Sedges	CAAQ	*Carex aquatilis*	100	15.0	11.2	5.2	12.0	33.0
Sedges	ERAN6	*Eriophorum angustifolium*	100	16.0	12.7	3.4	10.0	35.8
Mosses	AUPA70	*Aulacomnium palustre*	48	11.0	22.0	0.1	5.0	20.0
Mosses	AUTU70	*Aulacomnium turgidum*	48	4.6	5.1	0.1	3.0	10.0
Mosses	HYSP70	*Hylocomium splendens*	43	5.1	3.7	1.3	5.0	10.0
Mosses	TONI70	*Tomentypnum nitens*	65	26.2	19.6	5.0	25.0	56.0

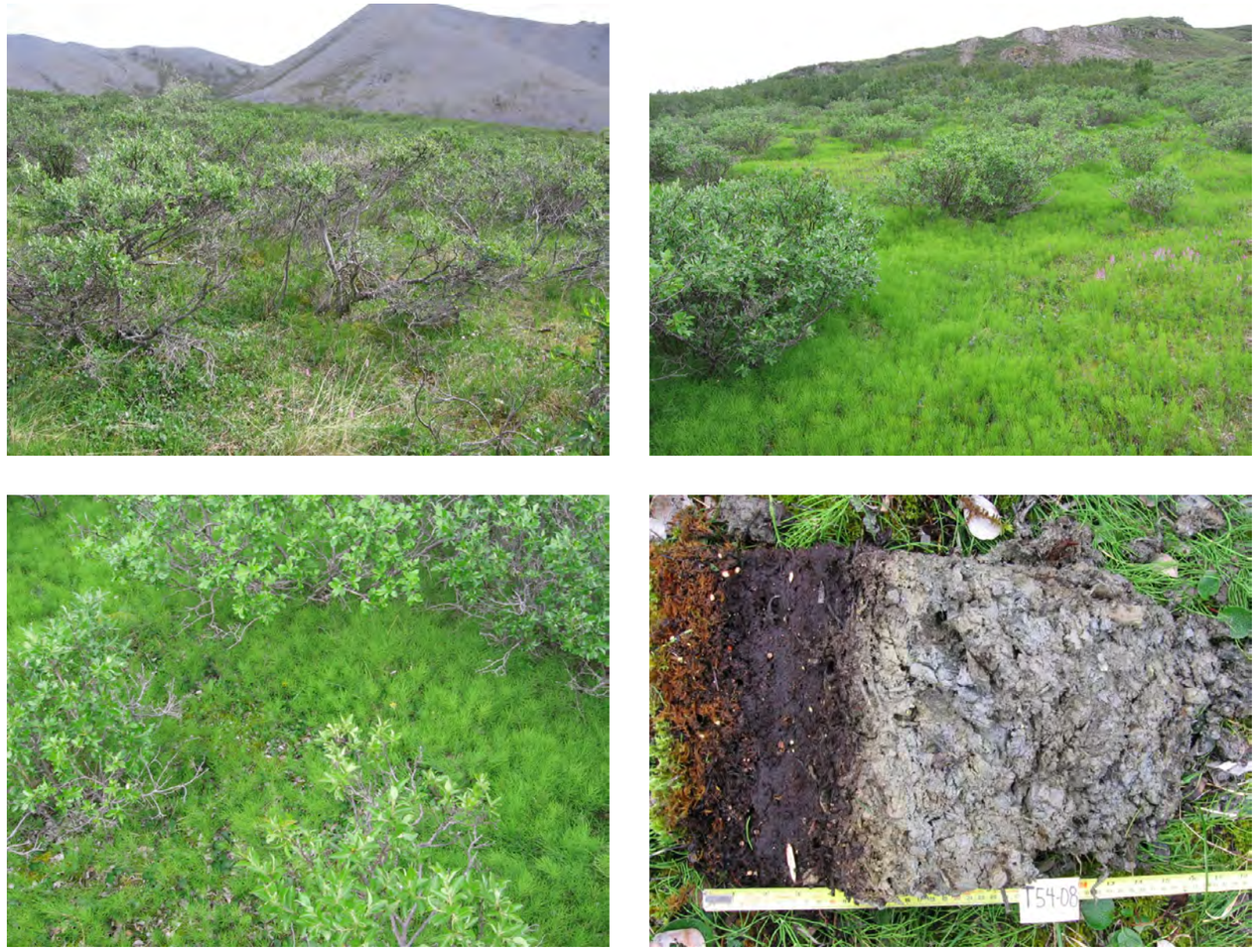
Constancy and foliar cover data summaries for *Salix richardsonii/Carex aquatilis–Eriophorum angustifolium*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALRIC1/EQUARV–FESALT: *Salix richardsonii/Equisetum arvense–Festuca altaica* (*n* = 5)

The plant association *Salix richardsonii/Equisetum arvense–Festuca altaica* occurs in Upland physiography on the following geomorphic unit: Hillside Colluvium. The average elevation in this plant association is 358 m (±230 m), and the slope gradient typically ranges between gently sloping and strongly sloping. This plant association was associated most commonly with the surface form Gelifluction lobes, but is also regularly associated with Hummocks; Mounds caused by wildlife; and Stripes (non-sorted, sorted). Soils are somewhat poorly drained to moderately well drained, surface organic thickness typically ranges from very thin to thin, coarse fragments are common with an average top depth of 81 cm (±68 cm), dominant soil texture in the upper 40 cm is typically Loamy, and permafrost was common with an average active layer thickness of 44 cm (±6 cm). Soil pH typically ranges from circumalkaline to alkaline, and the average electrical conductivity is 236 µS/cm (±157 µS/cm). The most common vegetation types include Open Low Willow and Open Tall Willow. The vegetation is dominated by *Salix richardsonii*, which typically forms an open low shrub canopy. *Equisetum arvense* dominates the forb layer, with *Festuca altaica* always present at low to moderate cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Vaccinium uliginosum*, *Salix reticulata*, *Salix pulchra*, and *Cassiope tetragona*; the herbs *Polemonium acutiflorum*, *Trisetum spicatum*, and *Valeriana capitata*; and the nonvasculars *Hylocomium splendens*, *Cladonia* sp., *Aulacomnium palustre*, *Dicranum* sp., and *Tomentypnum nitens.*



Distribution of *Salix richardsonii/Equisetum arvense–Festuca altaica* in the study area.

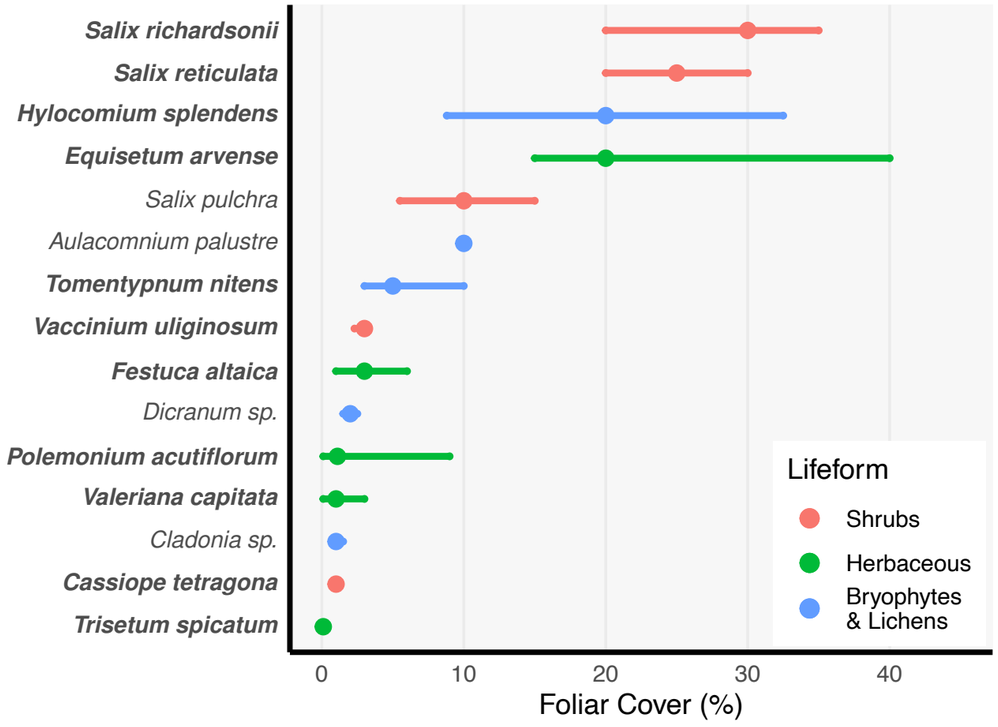


Representative photos (if available) for *Salix richardsonii/Equisetum arvense–Festuca altaica*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALRIC1/EQUARV–FESALT: *Salix richardsonii/Equisetum arvense–Festuca altaica*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	358	230	171	274	611	5
Slope (degrees)	8	3	4	10	11	5
Surface Organic Thickness (cm)	6.0	3.2	3.4	5.0	9.4	5
Cumul. Org. Thickness (cm)	7.6	2.9	4.8	7.0	10.6	5
Depth to >15% Rock Fragments (cm)	81	68	37	64	146	5
Water Table Depth (cm)	-21	16	-35	-14	-11	3
Active Layer Thickness (cm)	44	6	41	44	47	2
Site pH	7.2	0.5	6.7	7.2	7.7	5
Electrical Conductivity (uS/cm)	236	157	92	200	404	5
Whole Tussock Cover (%)	0	0	0	0	0	5

Environmental data summaries for *Salix richardsonii/Equisetum arvense–Festuca altaica*.



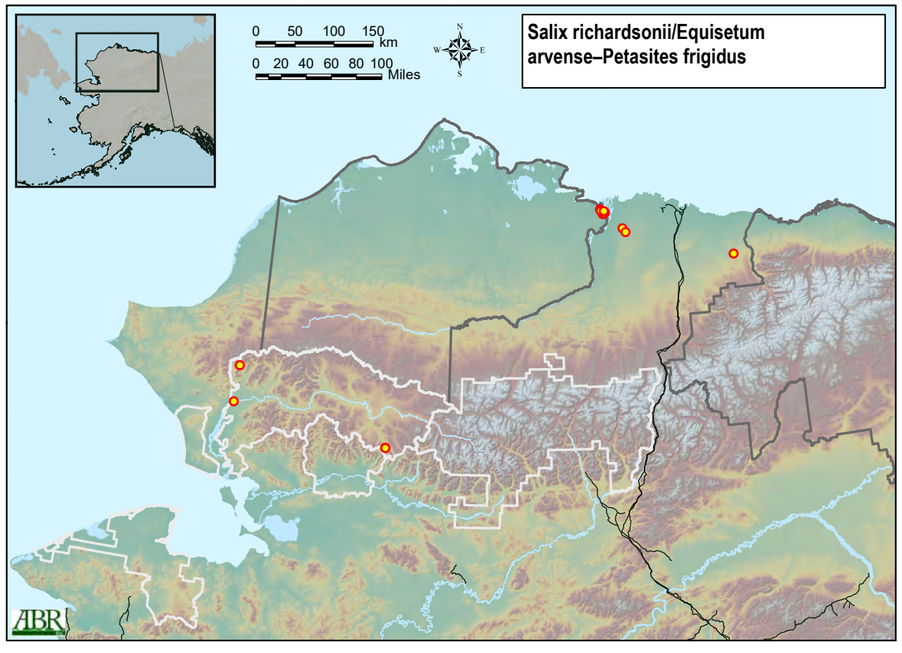
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix richardsonii/Equisetum arvense–Festuca altaica*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	ARRU	*Arctostaphylos rubra*	60	4.0	1.7	2.6	5.0	5.0
Deciduous Shrubs	BENA	*Betula nana*	40	3.0	2.8	1.4	3.0	4.6
Deciduous Shrubs	SAGL	*Salix glauca*	40	17.5	10.6	11.5	17.5	23.5
Deciduous Shrubs	SAPU15	*Salix pulchra*	60	10.3	9.5	2.8	10.0	18.0
Deciduous Shrubs	SARE2	*Salix reticulata*	100	26.0	9.6	17.0	25.0	36.0
Deciduous Shrubs	SARI4	*Salix richardsonii*	100	33.0	16.4	20.0	30.0	50.0
Deciduous Shrubs	VAUL	*Vaccinium uliginosum*	80	2.5	1.7	1.0	3.0	3.7
Evergreen Shrubs	CATE11	*Cassiope tetragona*	80	1.0	0.5	0.1	1.0	1.0
Evergreen Shrubs	DRIN4	*Dryas integrifolia*	40	17.5	3.5	15.5	17.5	19.5
Evergreen Shrubs	DROC	*Dryas octopetala*	40	10.0	7.1	6.0	10.0	14.0
Forbs	ANPA	*Anemone parviflora*	60	4.0	5.2	1.0	1.0	8.2
Forbs	DOFR	*Dodecatheon frigidum*	60	4.0	2.6	1.8	5.0	5.8
Forbs	HEAL	*Hedysarum alpinum*	40	4.5	4.9	1.7	4.5	7.3
Forbs	PEFR5	*Petasites frigidus*	40	5.1	7.0	1.1	5.1	9.0
Forbs	POAC	*Polemonium acutiflorum*	80	8.1	14.7	0.1	1.1	21.6
Forbs	POVI3	*Polygonum viviparum*	60	0.1	0.5	0.1	0.1	1.0
Forbs	VACA3	*Valeriana capitata*	100	2.8	4.2	0.1	1.0	7.2
Ferns & Allies	EQAR	*Equisetum arvense*	100	35.0	29.8	15.0	20.0	67.0
Ferns & Allies	EQSC	*Equisetum scirpoides*	60	0.1	0.5	0.1	0.1	1.0
Grasses	FEAL	*Festuca altaica*	100	9.2	14.6	1.0	3.0	23.4
Grasses	TRSP2	*Trisetum spicatum*	80	0.1	0.5	0.1	0.1	1.0
Sedges	CABI5	*Carex bigelowii*	60	3.7	1.5	2.4	4.0	4.8
Sedges	CASC10	*Carex scirpoidea*	60	1.0	1.0	0.1	1.0	1.8
Mosses	AUPA70	*Aulacomnium palustre*	40	10.0	0.0	10.0	10.0	10.0
Mosses	HYSP70	*Hylocomium splendens*	80	21.3	16.5	6.5	20.0	37.0
Mosses	TONI70	*Tomentypnum nitens*	100	12.0	16.0	2.4	5.0	28.0
Lichens	CLADO3	*Cladonia* sp.	60	1.0	1.0	0.1	1.0	1.8

Constancy and foliar cover data summaries for *Salix richardsonii/Equisetum arvense–Festuca altaica*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.

SALRIC1/EQUARV–PETFRI: *Salix richardsonii*/*Equisetum arvense*–*Petasites frigidus* (*n* = 13)

The plant association *Salix richardsonii*/*Equisetum arvense*–*Petasites frigidus* occurs in Riverine and Upland physiography most commonly on the following geomorphic units: Delta Active Overbank Deposit; Delta Active Channel Deposit; and Lowland Headwater Floodplain Channel Deposit. The average elevation in this plant association is 143 m (±183 m), and the slope gradient typically ranges between flat and gently sloping. This plant association was associated most commonly with the surface form Nonpatterned, but is also regularly associated with Hummocks and Scour channels-ridges. Soils are somewhat poorly drained to moderately well drained, surface organic thickness typically ranges from absent to thin, coarse fragments are uncommon, but when they do occur the average top depth is 29 cm (±23 cm), dominant soil texture in the upper 40 cm is typically Loamy or Gravelly, and permafrost was common with an average active layer thickness of 85 cm (±23 cm). Soil pH typically ranges from circumalkaline to alkaline, and the average electrical conductivity is 240 µS/cm (±159 µS/cm). The most common vegetation types include Open Low Willow, Closed Tall Willow, and Closed Low Willow. The vegetation is dominated by *Salix richardsonii*, which typically forms an open low shrub canopy. *Equisetum arvense* dominates the forb layer, with *Petasites frigidus* always present at low to moderate cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix alaxensis*, *Salix pulchra*, *Arctostaphylos rubra*, and *Salix reticulata*; the herbs *Polygonum viviparum*, *Arctagrostis latifolia*, and *Valeriana capitata*; and the nonvasculars *Hylocomium splendens*, *Sanionia uncinata*, *Brachythecium* sp., *Tomentypnum nitens*, and *Campylium stellatum.*



Distribution of *Salix richardsonii*/*Equisetum arvense*–*Petasites frigidus* in the study area.

Representative photos (if available) for *Salix richardsonii*/*Equisetum arvense*–*Petasites frigidus*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

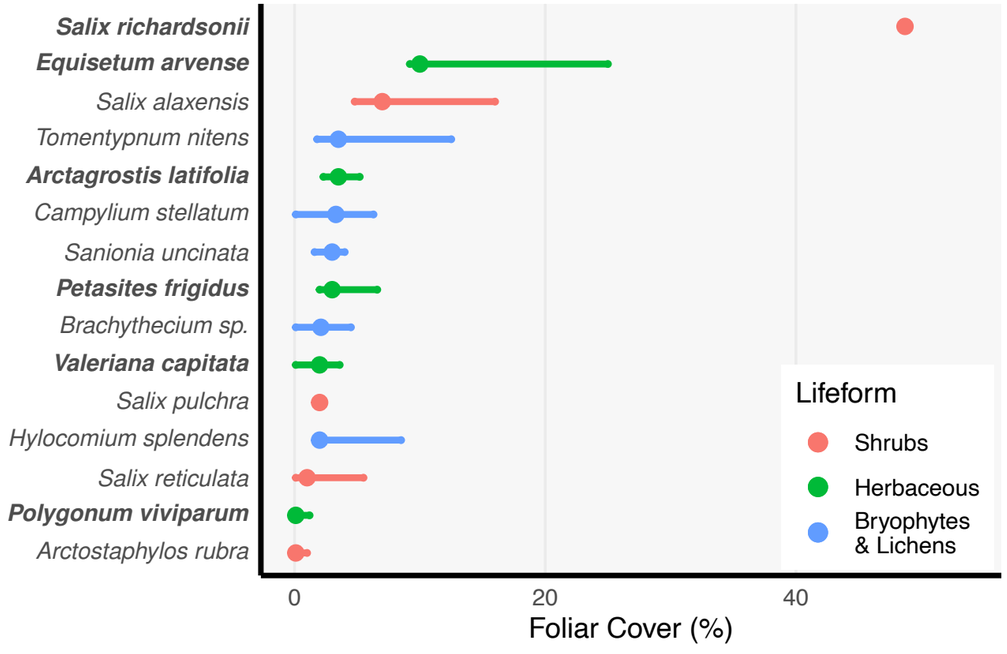
SALRIC1/EQUARV–PETFRI: *Salix richardsonii/Equisetum arvense–Petasites frigidus*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	143	183	2	51	419	11
Slope (degrees)	2	2	0	0	3	11
Surface Organic Thickness (cm)	3.8	5.7	0.0	3.0	8.4	13
Cumul. Org. Thickness (cm)	7.2	6.5	0.0	6.0	12.0	11
Depth to >15% Rock Fragments (cm)	29	23	9	21	58	6
Water Table Depth (cm)	-25		-25	-25	-25	1
Active Layer Thickness (cm)	85	23	66	82	106	4
Site pH	7.5	0.5	6.9	7.7	7.9	11
Electrical Conductivity (uS/cm)	240	159	100	170	450	11
Whole Tussock Cover (%)	0	0	0	0	0	4

Environmental data summaries for *Salix richardsonii/Equisetum arvense–Petasites frigidus*.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	SARE2	*Salix reticulata*	54	7.5	14.6	0.1	1.0	20.8
Deciduous Shrubs	SARI4	*Salix richardsonii*	100	51.5	18.9	33.3	48.7	73.2
Forbs	ASAL7	*Astragalus alpinus*	69	2.5	5.3	0.1	0.1	7.4
Forbs	PEFR5	*Petasites frigidus*	100	4.2	3.6	1.3	3.0	9.3
Forbs	POVI3	*Polygonum viviparum*	77	1.0	1.5	0.1	0.1	1.7
Forbs	VACA3	*Valeriana capitata*	77	2.7	2.9	0.1	2.0	6.3
Ferns & Allies	EQAR	*Equisetum arvense*	100	15.6	11.0	5.6	10.0	32.4
Ferns & Allies	EQVA	*Equisetum variegatum*	62	4.2	3.8	1.0	2.6	8.9
Grasses	ARLA2	*Arctagrostis latifolia*	77	4.1	3.0	1.2	3.5	7.7
Mosses	CAST51	*Campylium stellatum*	46	4.2	4.6	0.1	3.3	9.2

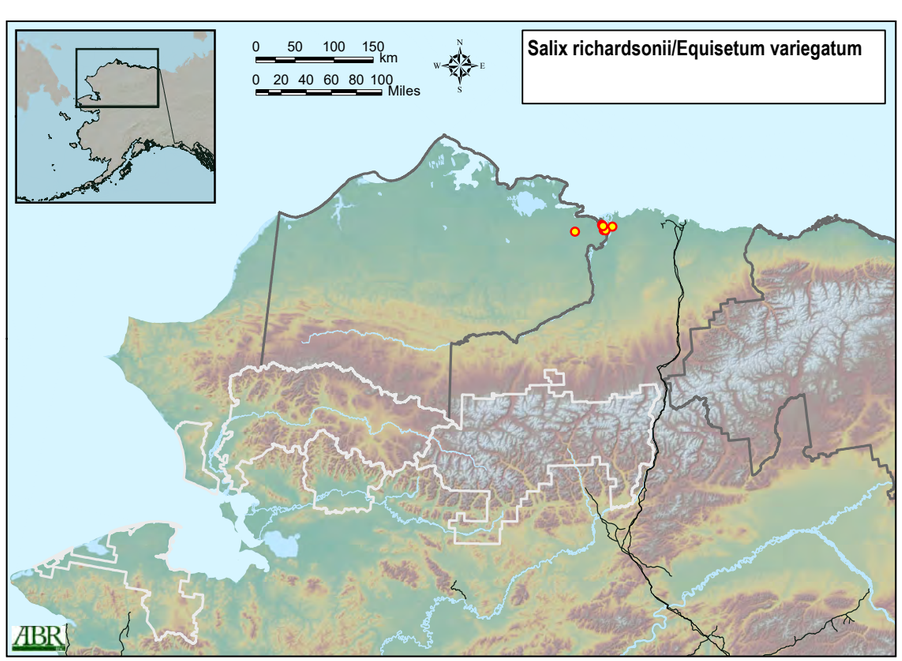
Constancy and foliar cover data summaries for *Salix richardsonii/Equisetum arvense–Petasites frigidus*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.



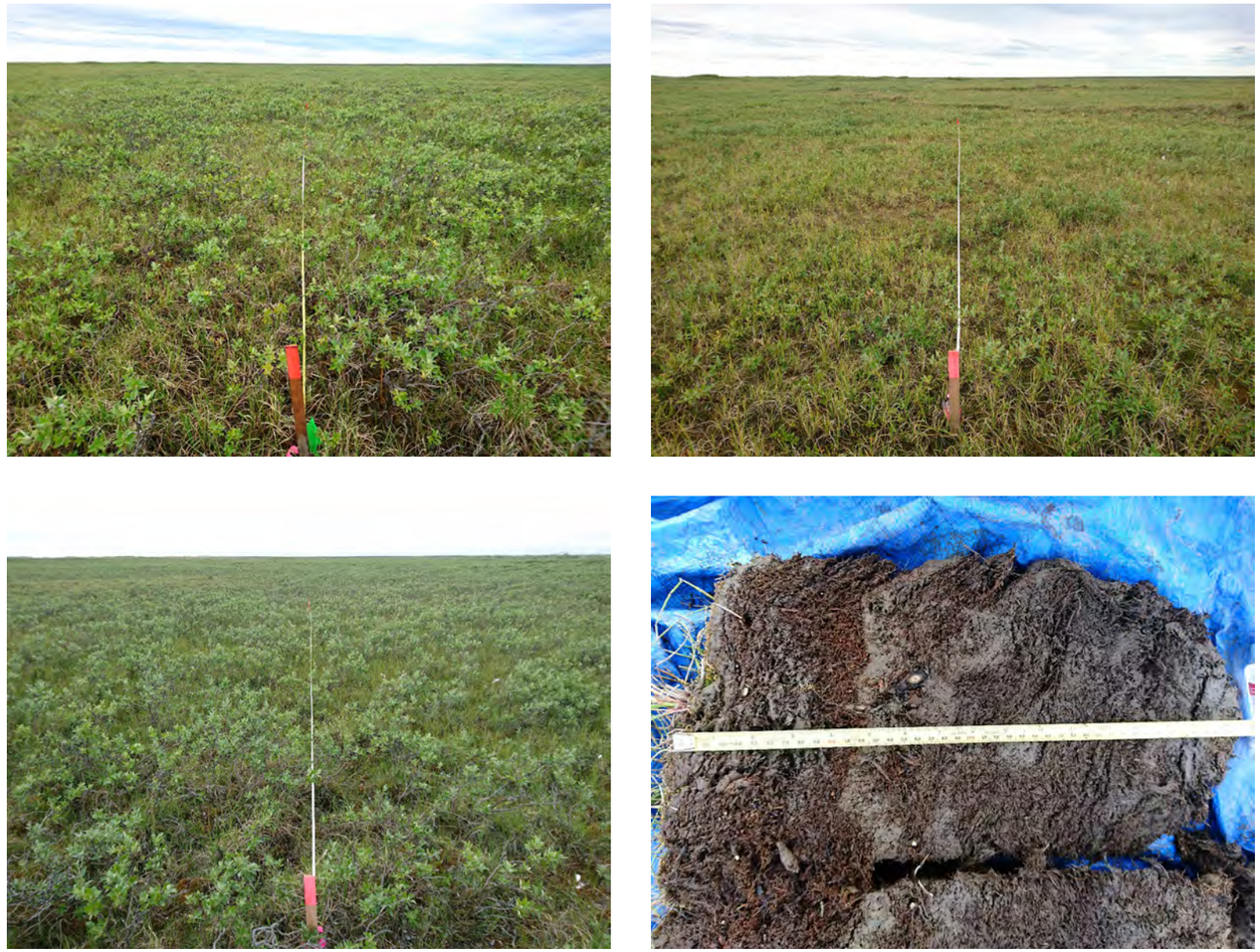
Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix richardsonii/Equisetum arvense–Petasites frigidus*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

SALRIC1/EQUVAR: *Salix richardsonii*/*Equisetum variegatum* (*n* = 9)

The plant association *Salix richardsonii*/*Equisetum variegatum* occurs in Riverine physiography on the following geomorphic units: Delta Inactive Overbank Deposit and Meander Active Overbank Deposit. The average elevation in this plant association is 4 m (±2 m), and the slope gradient is typically flat. This plant association was associated most commonly with the surface form Disjunct Polygon Rims, but is also regularly associated with Low-centered, Low-relief, Low-density Polygons; Nonpatterned; and Low-centered, High-relief, Low-density Polygons. Soils are very poorly drained to moderately well drained, surface organic thickness typically ranges from absent to very thin, coarse fragments are rare, but when they do occur the average top depth is 94 cm (±0 cm), dominant soil texture in the upper 40 cm is typically Loamy or Organic-rich, and permafrost was common with an average active layer thickness of 49 cm (±11 cm). Water pH typically ranges from circumacidic to alkaline, and the average electrical conductivity is 279 µS/cm (±183 µS/cm). The most common vegetation types include Open Low Willow, Open Low Willow-Sedge Shrub Tundra, and Moist Sedge-Willow Tundra. The vegetation is dominated by *Salix richardsonii*, and *Equisetum variegatum* is always present in the understory at moderate to high cover. Other plant taxa that commonly occur in this plant association at low abundance include, the shrubs *Salix reticulata*, *Arctostaphylos rubra*, *Salix ovalifolia*, and *Dryas integrifolia*; the herbs *Eriophorum angustifolium*, *Polygonum viviparum*, *Astragalus alpinus*, and *Carex aquatilis*; and the nonvasculars *Distichium capillaceum*, *Tomentypnum nitens*, *Calliergon richardsonii*, *Limprichtia revolvens*, and *Campylium stellatum.*



Distribution of *Salix richardsonii*/*Equisetum variegatum* in the study area.

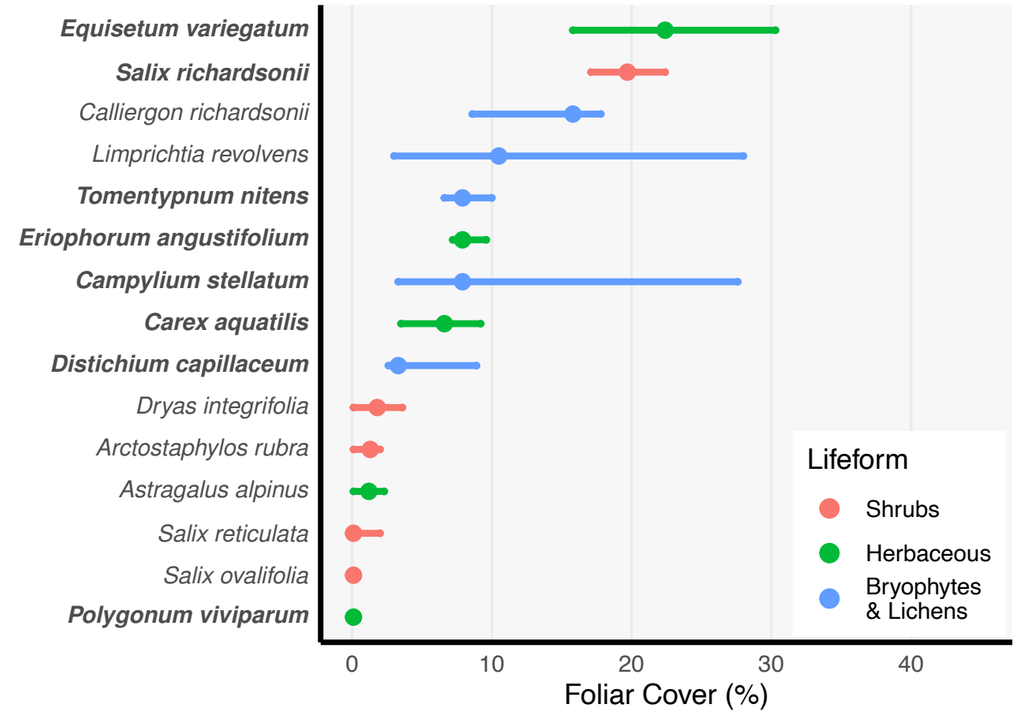


Representative photos (if available) for *Salix richardsonii*/*Equisetum variegatum*. Top row: landscape photos, bottom row: ground photo (left), soil photo (right).

SALRIC1/EQUVAR: *Salix richardsonii*/*Equisetum variegatum*, continued

			Percentile			
	Avg.	Std Dev.	10th	50th	90th	n
Elevation (m)	4	2	3	3	6	8
Slope (degrees)	0	1	0	0	1	8
Surface Organic Thickness (cm)	1.4	2.1	0.0	1.0	5.0	9
Cumul. Org. Thickness (cm)	13.1	11.8	4.4	8.8	30.1	8
Depth to >15% Rock Fragments (cm)	94		94	94	94	1
Water Table Depth (cm)	-46	11	-56	-41	-40	4
Active Layer Thickness (cm)	49	11	42	45	60	6
Site pH	6.8	0.6	6.1	6.9	7.6	8
Electrical Conductivity (uS/cm)	279	183	135	225	488	8
Whole Tussock Cover (%)	0		0	0	0	1

Environmental data summaries for *Salix richardsonii*/*Equisetum variegatum*.



Median and 25th and 75th percentiles of foliar cover for the most common species in 3 lifeform groups in *Salix richardsonii*/*Equisetum variegatum*. Latin names on y-axis in bold font occur in ≥70% of plots in this plant association.

						Percentile		
Lifeform	Code	USDA Scientific Name	Const.	Avg.	Std Dev.	10th	50th	90th
Deciduous Shrubs	SARE2	*Salix reticulata*	67	1.2	1.7	0.1	0.1	3.3
Deciduous Shrubs	SARI4	*Salix richardsonii*	100	24.4	12.6	15.5	19.7	38.8
Evergreen Shrubs	DRIN4	*Dryas integrifolia*	67	2.4	2.5	0.1	1.8	5.3
Forbs	ASAL7	*Astragalus alpinus*	67	1.5	1.5	0.1	1.2	3.3
Forbs	PESU	*Pedicularis sudetica*	67	1.0	0.6	0.1	0.1	1.3
Forbs	POVI3	*Polygonum viviparum*	78	0.1	0.5	0.1	0.1	1.0
Ferns & Allies	EQSC	*Equisetum scirpoides*	56	11.8	7.9	2.9	17.1	17.9
Ferns & Allies	EQVA	*Equisetum variegatum*	100	22.4	9.0	12.4	22.4	34.0
Sedges	CAAQ	*Carex aquatilis*	89	6.7	4.3	2.0	6.6	10.8
Sedges	ERAN6	*Eriophorum angustifolium*	78	9.1	6.7	4.0	7.9	14.9
Mosses	CAST51	*Campylium stellatum*	78	16.4	17.1	2.1	7.9	38.7
Mosses	DICA29	*Distichium capillaceum*	89	6.6	6.4	2.2	3.3	14.3
Mosses	LIRE13	*Limprichtia revolvens*	67	15.8	16.0	2.0	10.5	34.9
Mosses	TONI70	*Tomentypnum nitens*	100	9.6	7.7	4.0	7.9	16.1

Constancy and foliar cover data summaries for *Salix richardsonii*/*Equisetum variegatum*. Constancy/cover summaries limited to taxa occurring in this plant association with a constancy ≥60 and average cover >0, or taxa with a constancy ≥40 and average cover ≥3.