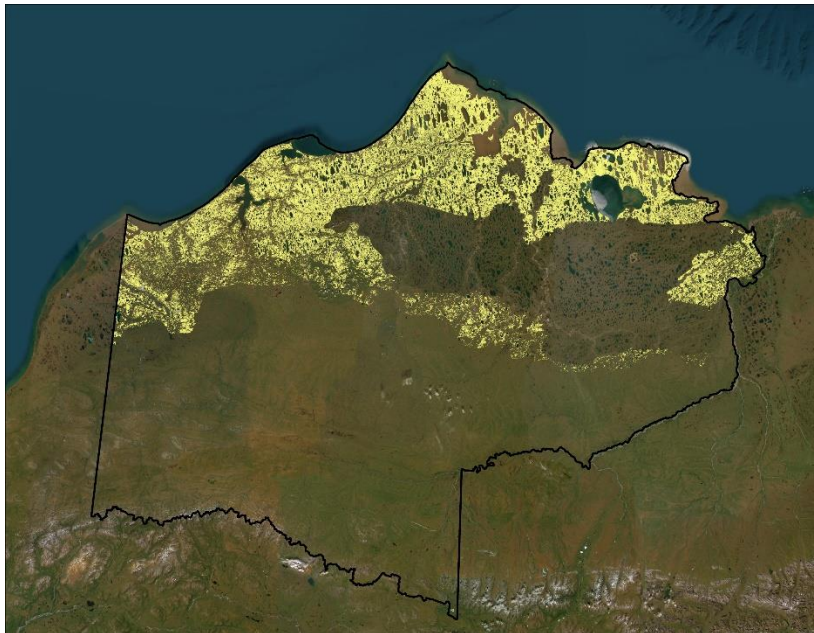


Coastal Plain Wetland



Stratum code: CPBWM

Number of plots sampled: 46

Physiography: lowland (Coastal Plain physiographic unit)

Geomorphology: coastal plain

Landforms: low-centered polygon, drained thaw lake basin

Hydrology: hygic to aquatic, poorly drained to flooded

Classification: An herbaceous wetland type. Average cover of obligate wetland plants is 48.2% and is concentrated in low polygon centers that are typically flooded in the growing season. Total cover of surface water averages 22.4% cover and increases at the expense of emergent sedge cover. Average cover of aquatic mosses 12.3%. Average shrub cover is 22.9% and is concentrated on polygon ridges.

Site characteristics: Occurs at low elevations over relatively flat ground. Developing on portions of the Arctic Coastal Plain that are characterized by ice-rich permafrost, yet not underlain by Pleistocene sands. Depth of seasonal thaw varies between polygon ridges (shallow) and flooded centers (deep) with average active layer thickness of 38 cm ranging from 18 to 65 cm. While community composition can vary significantly between polygon centers and ridges, the pattern is homogenous at the landscape scale.

Soil characteristics: Mean thickness of moss and duff combined is 3.7 cm. Organic horizons average 27 cm and overlay mineral horizons comprised of fine lacustrine silts. A or B horizons may develop at the transition between organic and mineral soils. Average soil water pH measured at 10 cm depth is 6.1.

Coastal Plain Wetland

Vegetation: The wetland sedges *Carex aquatilis*, *Carex chordorrhiza*, and *Eriophorum angustifolium* dominate the type and occur in water-filled basins. *Eriophorum angustifolium* together with aquatic mosses in the *Scorpidium* genus differentiate the stratum from other wetland types. The occurrence of the low shrubs, *Betula nana*, *Salix pulchra*, and *Rhododendron tomentosum* ssp. *decumbens* is restricted to raised microsites, such as polygon ridges; despite their high constancy within the stratum, they contribute little to overall canopy cover. Mean vascular plant richness is 25 taxa.

Indicators of change: Change in composition; change in hydrologic regime (more or less standing water); change in active layer; change in permafrost features (polygons).

Dominant Species (greater than 25% average cover):

- *Carex aquatilis* (only 22%)

Indicator Species Taxa with significant potential ($p < 0.0002$) to indicate wetlands (listed in decreasing order of indication) include:

Wetland Indicator Species:

- *Carex aquatilis*
- *Carex chordorrhiza*
- *Scorpidium* aquatic moss

Differential species: Taxa with significant potential to differentiate the Coastal Plain Wetland stratum from other wetland strata include:

- *Scorpidium* aquatic moss*
- *Eriophorum angustifolium**

*high value of indication (>20) but not significant

Succession and disturbance: A mid successional type where permafrost dynamics are the main disturbance process. Thaw lake drainage and formation.

Note: The dominance of *Salix richardsonii* appears to be very localized based on low (2%) constancy.



Coastal Plain Wetland

Table 5. Cover and constancy of plant taxa occurring in the Coastal Plain Wetland stratum. Species listed by habit, in decreasing order of percent cover.

Habit	Scientific Name	Average Cover (%)	Standard Deviation (%)	Minimum Cover (%)	Maximum Cover (%)	Constancy (%)
tall shrub	<i>Salix richardsonii</i>	26.0	na	26.0	26.0	2
	<i>Betula glandulosa</i>	8.9	2.3	6.7	11.3	7
	<i>Betula nana</i>	8.6	6.6	1.3	26.0	52
	<i>Salix pulchra</i>	5.0	4.1	1.3	17.3	61
	<i>Salix glauca</i>	2.0	na	2.0	2.0	2
low shrub	<i>Rhododendron tomentosum</i> ssp. <i>decumbens</i>	5.6	3.8	1.3	13.3	52
	<i>Salix fuscescens</i>	3.0	1.7	1.3	6.7	26
	<i>Vaccinium uliginosum</i>	1.7	0.4	1.3	2.0	11
dwarf shrub	<i>Vaccinium vitis-idaea</i>	8.9	5.9	1.3	20.7	54
	<i>Cassiope tetragona</i>	5.5	4.1	1.3	14.7	52
	<i>Salix phlebophylla</i>	4.0	2.8	2.0	6.0	4
	<i>Andromeda polifolia</i>	3.1	1.7	1.3	5.3	11
	<i>Dryas integrifolia</i>	2.7	1.9	1.3	8.0	28
	<i>Salix ovalifolia</i>	2.6	2.3	1.3	5.3	7
	<i>Salix reticulata</i>	1.7	0.7	1.3	3.3	20
	<i>Arctous alpina</i>	1.3	na	1.3	1.3	2
	<i>Arctous rubra</i>	1.3	na	1.3	1.3	2
graminoid	<i>Carex aquatilis</i>	22.8	19.4	1.3	84.7	91
	<i>Eriophorum angustifolium</i>	19.0	15.1	1.3	54.7	83
	<i>Eriophorum vaginatum</i>	12.4	8.5	1.3	25.3	52
	<i>Carex chordorrhiza</i>	10.9	11.4	1.3	42.0	43
	<i>Eriophorum scheuchzeri</i>	10.8	7.2	2.0	23.3	17
	<i>Eriophorum russeolum</i>	7.7	8.8	2.0	35.3	30
	<i>Carex rotundata</i>	7.6	6.4	1.3	26.0	52
	<i>Carex bigelowii</i> ssp. <i>ensifolia</i>	7.4	4.8	1.3	18.0	37
	<i>Carex bicolor</i>	4.0	na	4.0	4.0	2

Coastal Plain Wetland

Habit	Scientific Name	Average Cover (%)	Standard Deviation (%)	Minimum Cover (%)	Maximum Cover (%)	Constancy (%)
	<i>Eriophorum chamissonis</i>	4.0	na	4.0	4.0	2
	<i>Carex concolor</i>	3.3	na	3.3	3.3	2
	<i>Poa arctica</i>	3.0	2.4	1.3	4.7	4
	<i>Carex holostoma</i>	2.9	0.8	2.0	3.4	7
	<i>Arctagrostis latifolia</i>	2.7	1.9	1.3	4.0	4
	<i>Carex saxatilis</i>	2.3	1.8	1.3	6.0	13
	<i>Carex atrofusca</i>	2.0	na	2.0	2.0	2
	<i>Carex stylosa</i>	2.0	na	2.0	2.0	2
	<i>Luzula parviflora</i>	2.0	na	2.0	2.0	2
	<i>Carex vaginata</i>	1.7	0.5	1.3	2.0	4
	<i>Carex rariflora</i>	1.5	0.4	1.3	2.0	7
	<i>Luzula confusa</i>	1.3	0.0	1.3	1.3	4
	<i>Carex krausei</i>	1.3	na	1.3	1.3	2
	<i>Deschampsia sukatschewii</i> ssp. <i>orientalis</i>	1.3	na	1.3	1.3	2
	<i>Carex williamsii</i>	1.3	0.0	1.3	1.3	9
	<i>Carex livida</i>	1.3	na	1.3	1.3	2
forb	<i>Comarum palustre</i>	4.7	na	4.7	4.7	2
	<i>Ranunculus gmelinii</i>	3.3	na	3.3	3.3	2
	<i>Rubus chamaemorus</i>	3.0	2.2	1.3	7.3	13
	<i>Bistorta plumosa</i>	3.0	1.4	2.0	4.0	4
	<i>Pyrola grandiflora</i>	3.0	2.9	1.3	7.3	9
	<i>Saussurea angustifolia</i>	2.7	1.1	1.3	4.0	9
	<i>Astragalus alpinus</i>	1.3	na	1.3	1.3	2
	<i>Orthilia obtusata</i>	1.3	na	1.3	1.3	2
	<i>Saussurea nuda</i>	1.3	na	1.3	1.3	2
	<i>Bistorta vivipara</i>	1.3	na	1.3	1.3	2
	<i>Pedicularis labradorica</i>	1.3	na	1.3	1.3	2
	<i>Petasites frigidus</i>	1.3	na	1.3	1.3	2

Coastal Plain Wetland

Habit	Scientific Name	Average Cover (%)	Standard Deviation (%)	Minimum Cover (%)	Maximum Cover (%)	Constancy (%)
spore-bearing	<i>Equisetum arvense</i>	10.0	na	10.0	10.0	2
	<i>Equisetum scirpoides</i>	8.0	na	8.0	8.0	2
moss	<i>Scorpidium</i>	9.8	8.7	1.3	35.3	100
	<i>Hylocomium</i>	6.0	5.0	1.3	19.3	41
	<i>Ptychostomum</i>	5.7	6.1	1.3	10.0	4
	<i>Brachythecium</i>	5.7	5.7	1.3	15.3	13
	<i>Sphagnum</i>	4.6	6.1	1.3	32.7	96
	<i>Dicranum</i>	4.5	3.8	1.3	19.3	96
	<i>Drepanocladus</i>	4.3	3.1	1.3	9.3	22
	<i>Tomentypnum</i>	3.7	2.7	1.3	11.3	33
	<i>Aulacomnium</i>	3.6	2.6	1.3	12.7	96
	<i>Flexitrichum</i>	3.3	2.8	1.3	5.3	4
	<i>Calliergon</i>	3.3	na	3.3	3.3	2
	<i>Meesia</i>	3.3	2.9	1.3	5.3	4
	<i>Rhytidium</i>	3.0	1.5	1.3	5.3	15
	<i>Oncophorus</i>	2.9	2.2	1.3	8.0	35
	<i>Campylium</i>	2.8	1.5	1.3	6.7	28
	<i>Hypnum</i>	2.7	1.8	1.3	4.7	7
	<i>Loeskypnum</i>	2.7	na	2.7	2.7	2
	<i>Sanionia</i>	2.7	1.8	1.3	5.3	15
	<i>Polytrichum</i>	2.4	1.2	1.3	4.7	26
	<i>Hamatocaulis</i>	2.3	1.4	1.3	3.3	4
	<i>Sarmentypnum</i>	2.0	0.9	1.3	2.7	4
	<i>Cinclidium</i>	1.8	0.9	1.3	3.3	11
	<i>Pleurozium</i>	1.3	0.0	1.3	1.3	7
	<i>Ptilium</i>	1.3	0.0	1.3	1.3	4
	<i>Plagiomnium</i>	1.3	0.0	1.3	1.3	4
	moss	1.3	0.0	1.3	1.3	4

Coastal Plain Wetland

Habit	Scientific Name	Average Cover (%)	Standard Deviation (%)	Minimum Cover (%)	Maximum Cover (%)	Constancy (%)
	<i>Distichium</i>	1.3	na	1.3	1.3	2
lichen	<i>Bryocaulon</i>	6.0	4.7	2.7	9.3	4
	<i>Lobaria</i>	3.3	na	3.3	3.3	2
	<i>Peltigera</i>	3.0	2.0	1.3	6.7	20
	<i>Flavocetraria</i>	2.9	1.7	1.3	6.0	41
	<i>Cladonia</i>	2.5	2.1	1.3	8.7	54
	<i>Cetraria</i>	2.3	1.0	1.3	4.7	30
	<i>Thamnolia</i>	2.3	1.3	1.3	6.0	26
	<i>Sphaerophorus</i>	2.0	na	2.0	2.0	2
	<i>Nephroma</i>	1.3	na	1.3	1.3	2
	<i>Dactylina</i>	1.3	0.0	1.3	1.3	9
	crustose lichen	1.3	0.0	1.3	1.3	4
liverwort	liverwort	5.8	4.2	1.3	18.0	43
	<i>Ptilidium</i>	4.3	2.7	1.3	9.3	20
	<i>Fuscocephaloziopsis</i>	4.0	na	4.0	4.0	2
	<i>Tritomaria</i>	4.0	na	4.0	4.0	2
	<i>Cephalozia</i>	3.4	na	3.4	3.4	2
	<i>Blepharostoma</i>	3.4	2.7	1.3	8.7	24
	<i>Aneura</i>	2.0	na	2.0	2.0	2
	<i>Lophozia</i>	1.7	0.7	1.3	2.7	9
	<i>Scapania</i>	1.3	0.0	1.3	1.3	4