# APPENDIX A

## VEGETATION PLOT DATA SHEET

- Vegetation Data Sheet as used in the field in 2008

| **Date: Y** 2008 | **M:** 08 | **D:** | **Plot #:** | **Code:** Mary River | **Notes:** |
|---|---|---|---|---|---|
| Team: | | | | | Perm. Plot: |
| Location: | | | | | |
| | | | | | |

| **Photos** | Card: | Photo #'s: | | | |
|---|---|---|---|---|---|
| **Coordinates:** | | **Lat. /Northing** | | **Long./Easting** | **Elevation:** |
| **Wpt:** | **UTM:** | | | | |

| **SITE INFO:** | | | | | | |
|---|---|---|---|---|---|---|
| **Slope:** | | **Aspect:** | | **Moist.** | **Nutrients:** | |
| **Terrain:** | **(Circle)** | | **Microtopography:** | | **(X)** | |
| beach | | alluv fan | hummocky | | frost fiss. | |
| terrace | | floodplain | frost boils | | flat | |
| plateau | | ridge crest | solifluct | | br. outcrop | |
| valley bottom | | cliff: | circles | | boulders | |
| slope: | | stream | bould strm | | bould field | |
| delta | | old polygons | polygon | | shattered br. | |

| **Substrate:** | | | | | | |
|---|---|---|---|---|---|---|
| Organics: | | Mineral soil: | | Water: | | |
| Bedrock | | % Sand | % Gravel | Standing | Flowing | |
| Rocks: | | | | | | |
| % of surf. covered: | | **Moisture:** | | | | |
| dist betw stones: | | Wet | Wet-mesic | Mesic | Mesic-Dry | Dry |
| type of stones: | | | | | | |

| **Perm. Plot species coll.:** | a. | b. |
|---|---|---|
| c. | d. | |
| e. | f. | |

| Soils notes (for soil plots only): |
|---|
| |
| |
| |
| |
| |
| |
| |

Misc. notes

| **Vegetation:** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | Veg. Code 1: | |
| Representing: | | | | | | | | Veg. Code 2: | |
| **% Cover by layer:** | | Organics, fr other side: _____ | | Tree/erect shrub: _____ | | | | **Lichens:** | % |
| Shrub: | _____ | Herb: | _____ | Moss/Lichen: | _____ | | | cetrniva | |
| **Shrubs:** | % | **Non-flow:** | % | **Saxifrages** | % | | | cetrtile | |
| saliarct | | cystfrag | | chrytetr | | | | Cladina | |
| salirich | | equiarve | | saxiaizo | | | | Cladonia | |
| Salix | | Equisetum | | saxicaes | | | | stertome | |
| ledupalu | | Lycopodium | | saxicern | | | | thamsubu | |
| **Dwarf shr.** | % | | | saxifoli | | | | Alectoria | |
| saliherb | | | | saxihier | | | | | |
| salireti | | **Forbs:** | % | saxihirc | | | | **Rock lichens** | |
| Salix | | toficocc | | saxiniva | | | | map | |
| Potentilla _____ | | tofipusi | | saxioppo | | | | jewel | |
| vaccviti | | oxyrdigy | | saxirivu | | | | rock tripe | |
| vacculig | | polyvivi | | saxitenu | | | | bloodspot | |
| casstetr | | ceraalpi | | saxitric | | | | blk crustose | |
| rhodlapp | | cerabeer | | Saxifraga | | | | sunburst | |
| dryainte | | melaaffi | | epillati | | | | Halloween | |
| **Sedges:** | % | melaapet | | hippvul | | | | | |
| careaqua | | Minuartia | | pyrogran | | | | **Mosses** | |
| caremisa | | sileacau | | armemari | | | | racolanu | |
| carebige | | Stellaria | | pediarct | | | | Sphagnum | |
| carecapi | | ranuniva | | pedicapi | | | | str. mosses | |
| carememb | | ranupygm | | pedihirs | | | | cushion | |
| carenard | | ranulapp | | pedilana | | | | | |
| carescir | | papacorn | | pedisude | | | | **Biol. crust.** | |
| Carex 1 | | paparadi | | **Composite** | | | | | |
| Carex 2 | | **Mustards** | % | Antennaria | % | | | **Other:** | % |
| **Cottongr:** | % | Arabis | | chryinte | | | | Campanula | |
| erioangu | | Braya | | Erigeron | | | | empenigr | |
| eriocalli | | cardbell | | matrambi | | | | | |
| erioruss | | cardprat | | senecong | | | | | |
| eriosche | | cochoffi | | Taraxacum | | | | | |
| eriovagi | | Draba | | **Grasses:** | | | | **Legumes:** | |
| **Rushes:** | % | drabalpi | | arctlati | | | | astralp | |
| luzuconf | | drabglab | | calapupu | | | | oxytmayd | |
| luzuniva | | Eutrema | | alopalpi | | | | oxytnigr | |
| Juncus | | lesqarct | | | | | | | |
| | | | | | | | | | |

| WILDLIFE NOTES: | Sighting/heard | Scats | Dens/burrows | Runs/trails | Nests | Other |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| ARCHAEOLOGY NOTES: | |
|---|---|
| | |
| | |
| | |

# APPENDIX B

## PLOT LOCATION DATA 2005, 2006, 2007 AND 2008

- Spreadsheet of Plot Locations, 2005
- Spreadsheet of Plot Locations, 2006
- Spreadsheet of Plot Locations, 2007
- Spreadsheet of Plot Locations, 2008
- Baseline Stations for Metal Analysis

**TABLE 3.1**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V001 | 5-Aug-05 | Nuluugoak Mountain, south of east end Deposit 1 | Upland association, saxifrage/moss | Moss | | - | 05 | 25 | 30 | *Salix* sp. 1 10<br>small leaves, prostrate<br>*Salix* sp. 2 10<br>larger leaves, prostrate<br>*Salix* sp. 3 .1<br>woolly leaves<br>*Salix herbacea* .1<br>*Dryas integrifolia* 2 | *Carex* sp. 5<br>small, xeric<br>*Poa* sp. .1<br>*Luzula confusa* 10<br>*Oxyria digyna* 10<br>*Cerastium alpinum* 5<br>*Draba* sp. 1 .1<br>*Draba* sp. 2 .1<br>*Saxifraga cernua* .1<br>*Saxifraga caespitosa* .2<br>*Saxifraga nivalis* .2<br>*Papaver radicatum* .5<br>*Papaver cornwallisensis* .1 | mosses 20<br>*Cetraria tilesii* 5 | rocks 60% covered with lichen, map<br>rock tripe<br>black crustose | Ground covered with black lichen film, many cobbles, probably ice-laid.<br>Vegetation is scattered, mostly purple mountain saxifrage, Luzula confusa, mt. sorrel, two poppies, and some mountain avens.<br>Photos: Closeups of Saxicaes, Papacorn, Paparadi, willow, Saxioppo, plus area. | Scats: caribou<br>Small brown birds, immatures, probably redpolls |
| V002 | 5-Aug-05 | Nuluugoak Mountain, southeast of east end of Deposit 1, centre of drainage area. | Boulder field with some standing water | Boulder | LR | - | - | 02 | 03 | *Salix* sp. 1 .1<br>oval shiny leaves<br>*Salix* sp. 2 .1<br>pointed leaves | grass (1 species) .1<br>small, no inflorescences<br>*Luzula nivalis* .1<br>*Sparganium hyperboreum* .1<br>*Oxyria digyna* .1<br>*Cerastium alpinum* .1<br>*Papaver cornwallisensis* .1<br>*Cochlearia officinalis* .1<br>*Saxifraga tenuis* .1<br>*Saxifraga cernua* .1<br>*Saxifraga nivalis* .1<br>*Saxifraga rivularis* .1<br>*Ranunculus nivalis* .1 | bright green cushion moss .5<br>no lichens | | Little vegetation, some bright green moss, small saxifrages (S. cernua, S. tenuis, S. nivalis, S. rivularis, all very small plants), and an emergent plant in a small pool amidst the rocks. This turns out to possibly be Sparganium hyperboreum, and VERY unusual (heretofore not reported) for North Baffin.<br>Photos: Saxifraga oppositifolia, S. tenuis, Cochlearia officinalis, Sparganium sp., area. | Families of small birds in the area, flitting around and calling. Redpolls? |
| V003 | 5-Aug-05 | Nuluugoak Mountain, southeast of east end of Deposit 1. | Lichen-rock | Lichen Rock | LR | - | 01 | 40 | 10 | *Salix arctica* 5 | *Poa* sp. .2<br>grass (1 species) .1<br>*Luzula nivalis* .1<br>*Cochlearia officinalis* .1<br>*Oxyria digyna* 5<br>*Cerastium alpinum* 2<br>*Saxifraga hieracifolia* .1<br>*Saxifraga oppositifolia* 10<br>*Saxifraga cernua* .1<br>*Papaver radicatum* 5<br>*Papaver cornwallisensis* 1 | black lichen film on soil.<br>*Cetraria nivalis* .1<br>*Cetraria* sp. .5<br>*Dactylina arctica* .5<br>*Stereocaulon tomentosum* 2<br>*Thamnolia subuliformis* 2 | | Vegetation sparse, including mostly a black soil lichen film, Luzula nivalis, Saxifraga oppositifolia, Cochlearia officinalis, and Cerastium alpinum. A few poppies, mostly Papaver cornwallisense.<br>Photos: Cochlearia officinalis, Saxifraga nivalis, Saxifraga hieracifolia, Senicio congestus (not in plot, nearby), Carex aquatilis (?). | Scats: fox. |
| V004 | 5-Aug-05 | Nuluugoak Mountain, southeast of east end of Deposit 1. | Riparian community - moss | Moss | R | - | - | - | 20 | | grass (1 species) .5<br>*Saxafraga foliolosa* .1<br>*Saxafraga cernua* .1 | green moss with red areas 20 | | Thick cushions of moss on rocks in the stream. Wide areas without defined stream channels, with water flowing across a rocky slope.<br>Photos: Red moss, Senecio congestus (not in plot). | |
| V005 | 5-Aug-05 | Nuluugoak Mountain, east end of Deposit 1, below snowfield. | Saxifraga/poppy association | Lichen Rock | | - | - | 15 | 15 | | *Alopecurus alpinus* 10<br>*Oxyria digyna* 5<br>*Cerastium alpinum* .1<br>*Papaver radicatum* .2<br>*Saxifraga nivalis* .5<br>*Saxifraga cernua* 1<br>*Saxifraga foliolosa* .2 | *Cetraria tilesii* 1<br>black soil lichen 15<br>*Stereocaulon tomentosum* 2<br>*Thamnolia subuliformis* .2 | mosses 5 | Sparse vegetation amidst boulders on a slope above a snowbank that seems to drain both ways, crest of a drainage. A black lichen (?)forms a crust on the soil in many places. | Scats: ptarmigan, caribou, lemming<br>Lemming nest (old). |
| V006 | 5-Aug-05 | Nuluugoak Mountain, east end of Deposit 1. | Moss association | Moss Rock | | - | - | 25 | 15 | | *Alopecurus alpinus* 1<br>grass (2 species) 2<br>*Oxyria digyna* 2<br>*Cerastium alpinum* .2<br>*Draba* sp. .1<br>*Ranunculus* sp .1<br>*Papaver radicatum* .2<br>*Saxifraga nivalis* 5<br>*Saxifraga caespitosa* .1<br>*Saxifraga hieracifolia* .1<br>*Saxifraga cernua* 2 | | | Moss and scattered vascular plants on rocky end of ridge.<br>Photos: Photo of area to SE, open valley; photo of iron-bearing rock. | Scats: lemming, ptarmigan. Snow buntings, two young birds. |

**TABLE 3.1**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V007 | 5-Aug-05 | Nuluugoak Mountain, south side of end of Deposit 1, on slope of deposit. | Moss association | Luzula Moss | | - | - | 20 | 40 | | *Poa* sp. .2<br>*Luzula nivalis* 15<br><br>*Oxyria digyna* .2<br>*Cerastium alpinum* .1<br>*Draba* sp. .2<br><br>*Papaver radicatum* .5<br>*Papaver cornwallisensis* .1<br>*Saxifraga nivalis* .2<br>*Saxifraga Aizoon* .2 ?<br>*Saxifraga oppositifolia* .5 | *Cladonia* sp. .5<br>*Peltigera* sp. .1<br>*Thamnolia subuliformis* 1<br><br>*Racomitrium lanuginosum* 20<br>other mosses 20 | map<br>rock tripe | Moss carpet on rockfall, with thick growth of woodrush, Luzula nivalis. | Scats of hare, ptarmigan. |
| V008 | 5-Aug-05 | Nuluugoak Mountain, east end of Deposit 1, south side. | Moss community | Luzula Moss | | - | 5 | 25 | 30 | *Salix arctica* 5 | *Poa* sp. 5<br>*Alopecurus arcticum* .1<br>*Luzula nivalis* 15<br><br>*Oxyria digyna* 5<br>*Cerastium alpinum* .2<br><br>*Ranunculus* sp .1<br>*Draba* sp. .1<br><br>*Papaver radicatum* .5<br>*Saxifraga cernua* 10<br>*Saxifraga nivalis* .2<br>*Saxifraga hieracifolia* .2<br>*Saxifraga caespitosa* 5 | *Racomitrium lanuginosum* 1<br>star moss .1<br>other mosses 30 | map<br>rock tripe | Mosses and a variety of forbs, a few willows, prostrate.<br>Photos: Saxifraga caespitosa ssp. uniflora<br>Caribou | Scats of hare, ptarmigan.<br>Small herd of caribou; 10 adults, 2 calves. |
| V009 | 8-Aug-05 | Deposit 1, top of deposit in small saddle. | Lichen rock, bedrock | Lichen Rock | LR | - | - | 8 | 2 | | *Luzula confusa* 2<br><br>*Cerastium alpinum* 1<br>*Draba* sp. .1<br>*Minuartia* sp. .1<br><br>*Papaver radicatum* .5<br>*Saxifraga oppositifolia* 8<br>*Saxifraga caespitosa* .1 | *Cetraria tilesii* .1<br>*Alectoria* sp. .5<br>*Thamnolia subuliformis* .1<br><br>star moss 1 | | Very sparse vegetation, mostly Saxifraga oppositifolia.<br>Photos: Poppy, mouse-eared chickweed | |
| V010 | 8-Aug-05 | Deposit 1, on top of deposit. | Lichen rock, fractured rock crest | Lichen Rock | LR | - | - | 1.5 | .5 | | *Luzula confusa* .1<br><br>*Cerastium alpinum* .1<br><br>*Papaver radicatum* .1<br>*Saxifraga oppositifolia* .1 | *Racomitrium lanuginosum* .5 | bloodspot .1<br>Halloween .1<br>map .1<br>sunburst .1<br>white lichen .1<br>(have photo) | Scattered plants in niches between rocks. No shrubs, only forbs and woodrushes, and purple mountain saxifrage. | |
| V011 | 8-Aug-05 | Deposit 1, crest of middle of deposit, south slope | Lichen rock, crest of narrow ridge | Lichen Rock | LR (DS) | - | - | .5 | .5 | | *Silene acaulis* .1<br>(very small) | *Alectoria* sp. .2<br>*Cladonia* sp. .1<br><br>*Racomitrium lanuginosum* .2<br>star moss .1 | map<br>rock tripe<br>sunburst<br><br>unknown orange and grey lichen | Almost no vegetation at all on the fractured rock. It is hard to find a place where there has been no blasting, so the vegetation is almost absent.<br>Photos: spectral hematite, Papaver radicatum, helicopter. | |
| V012 | 8-Aug-05 | Deposit 1, crest of deposit ridge, in saddle with sandstone outcrop. | Lichen rock, limestone rubble slope | Lichen Rock | LR | - | - | 5 | 1 | | *Poa* sp. .2<br>*Luzula confusa* 5<br><br>*Oxyria digyna* .1<br>*Cerastium alpinum* .5<br>*Draba* sp. .1<br><br>*Papaver radicatum* .2<br>*Saxifraga oppositifolia* 5<br>*Saxifraga nivalis* .1<br>*Saxifraga cernua* .1 | *Alectoria* sp. .1<br><br>green moss .2 | calcareous rocks<br><br>map | Sporadic scattered vegetation.<br>Photos: Draba (unknown, branched hairs, not blooming, possibly D. lactea); Saxifraga cernua. | |

**TABLE 3.1**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V013 | 8-Aug-05 | Deposit 1, southeast slope about halfway down slope, mid-deposit. | Lichen rock on rubble slope | Lichen Rock | LR | - | - | 07 | 03 | | *Luzula confusa* 5<br><br>*Oxyria digyna* 2<br>*Cerastium alpinum* .5<br>*Ranunculus* sp. .1<br>(leaves only)<br>*Draba* sp. 1 .1<br>*Draba* sp. 2 .1<br>*Papaver radicatum* 1<br>*Saxifraga oppositifolia* 1<br>*Saxifraga cernua* .1<br>*Saxifraga nivalis* .1<br>*Saxifraga caespitosa* .5 | *Alectoria* sp. .1<br>*Cladonia* sp. .1<br>*Peltigera* sp. .1<br>(orange-rimmed)<br><br>*Racomitrium lanuginosum* 2 | orange crustose on iron rocks<br>map<br>rock tripe<br>black crustose | Sparsely vegetated. | Scats: hare, lemming |
| V014 | 8-Aug-05 | Deposit 1, scree slope below deposit, calcareous slope | Luzula association on scree slope | Luzula | | -- | -- | 25 | 05 | | *Luzula confusa* 15<br>*Poa* sp. 2<br>*Oxyria digyna* 5<br>*Cerastium alpinum* .5<br>*Draba* sp. 1 .1<br>*Draba* sp. 2 .1<br>*Potentilla nivea* .5<br>*Papaver radicatum* .2<br><br>*Saxifraga nivalis* .1<br>*Saxifraga tricuspidata* 2<br>*Saxifraga oppositifolia* 5<br>*Saxifraga cernua* .1 | *Cetraria nivalis* 1<br>*Cetraria tilesii* .5<br>*Alectoria* sp. .5<br>*Cladonia* sp. .1<br>*Stereocaulon tomentosum* .5 | star moss .5<br>green mosses .1<br>*Racomitrium lanuginosum* 5<br><br>map<br>rock tripe<br>black crustose | Thin vegetation, mostly Luzula confusa plus Poa sp. and mixture of saxifrages, a few poppies. Dry site. | Scats: lemming |
| V015 | 8-Aug-05 | Deposit 1, below deposit slope, old road along base of deposit. | Disturbed site - old road | Disturbed | DS | - | - | 35 | 35 | *Salix arctica* 5 | *Luzula confusau* 20<br>*Cerastium alpinum* 10<br>*Papaver radicatum* 1<br>*Saxifraga radiata* 5<br>*Saxifraga oppositifolia* 5<br>*Saxifraga nivalis* .1 | *Stereocaulon tomentosum* 1<br>black lichen (?) film on soil<br>small green mosses 15 | | Old road, likely from 1960s, used only lightly at present. Woodrush, Luzula confusa, is dominant. | |
| V016 | 8-Aug-05 | Deposit 1, slopes below old road | Avens association | Aven Willow | A | | | | | | | | | Dry slope with increasing amounts of avens, willow, and purple mtn. saxifrage. | Scats: hare |
| V017 | 8-Aug-05 | Near Deposit 1, slope to southeast of west end of deposit. | Moss/sedge association | Moss Sedge | | | | | | *Salix richardsonii* 1<br>*Salix arctica* 1 | *Carex aquatilis* 30<br><br>Small grass plant, purple head. .2<br><br>*Draba* sp. .2<br>*Braya purpurascens* .1 imm<br>*Cochlearia officinalis* .1<br>*Melandrium apetalum* .2<br>*Saxifraga Hirculus* .1<br>*Saxifraga foliolosa* .1 | green moss 50<br>with red tips<br><br>perhaps 3-4 species of moss | | Seep on hillside, with moss and sedges. The moss forms cascading mounds. There is a lot of red pigment in the moss, does not seem to be a different species. New species this plot: Braya purpurascens (immature plant), Cochlearia officinalis, Melandrium apetalum. | Scats: hare |
| V018 | 8-Aug-05 | Near Deposit 1, lower slope south of deposit. | Avens/grass association | Aven Grass | A | - | - | 90 | 05 | *Salix arctica* 10<br>*Salix reticulata* 2 | *Carex rupestris 10*<br>*Carex scirpoidea 5*<br>*Poa sp.*<br>*Luzula confusa 5*<br>*Polygonum viviparum 20*<br>*Oxyria digyna 15*<br>*Stellaria longipes 15*<br>*(Blue-green)*<br>*Potentilla Vahliana 10*<br>*Melandrium apetalum .1*<br>*Aster alpinus 2*<br>*Oxytropis Maydelliana 2*<br>*Pedicularis capitata 1*<br>*Saxifraga oppositifolia 2*<br>*Saxifraga cernua .1* | none | no rocks | Unusual assn. in that there is a diverse but uniform cover of a mixture of avens, Polygonum viviparum, small sedges (inc. Carex rupestris), Poa, Luzula confusa, Potentilla vahliana and others. We saw nothing else like this on the project. | Scats: hare, caribou.<br>Lemming trails/runs through the grasses. |
| V019 | 8-Aug-05 | Near Deposit 1, above water supply for drills, below drills. | Avens association with willows | Aven Willow | A | - | - | 90 | 05 | *Salix reticulata* 30<br>*Salix arctica* 10<br><br>*Dryas integrifolia* 40 | *Carex rupestris* 15<br>*Carex scirpoidea* 2<br><br>*Oxytropis Maydelliana* 15<br>*Pedicularis capitata* 10 | mosses 1 | | Avens association with prostrate willows (Salix arctica and Salix reticulata) on gentle slope above ravine with snowbanks. | |

**TABLE 3.1**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V020 | 8-Aug-05 | Near Deposit 1, small valley to east of water supply for drills, edge of valley. | Snowbank community | Aven Willow | SB | - | - | 60 | | *Salix arctica* 10 (oval leaves)<br>*Salix herbacea* 10<br>*Salix reticulata* 5<br>*Cassiope tetragona* 5<br>*Dryas integrifolia* 30 | *Carex scirpoidea* .5<br><br>*Polygonum viviparum* 1<br>*Oxyria digyna* 10<br>*Cerastium alpinum* .2<br>*Silene acaulis* .2<br><br>*Draba* sp. .5<br>*Potentilla Vahliana* 5<br>*Melandrium affine* .1<br><br>*Oxytropis Maydelliana* .1<br>*Pedicularis capitata* 2<br>*Saxifraga tricuspidata* .5<br>*Saxifraga caespitosa* .1<br>*Pyrola grandiflora* 20<br>*Saxifraga cernua* .2<br>*Saxifraga oppositifolia* .1 | Adjacent to and below plot:<br>*Senecio congestus*<br>*Saxifraga caespitosa*<br>*Draba alpina*<br>*Oxyria digyna*<br>*Draba* sp. (white)<br>*Chrysosplenium tetrandrum*<br>*Saxifraga nivalis*<br>*Saxifraga rivularis*<br>*Saxifraga oppositifolia*<br>*Salix reticulata*<br>*Saxifraga hieracifolia*<br>*Erigeron humilis*<br>*Melandrium affine* | No lichens on rocks, likely under snow too long each year. | Diverse vegetation on steep slope with vertical drop to small ledges. Snowbank upstream, retreating. Much blooming. New species picked up here: Chrysosplenum tetrandrum. Classic snowbank community.<br>PHOTOS: 233 - 259 (240 - 263) of blooming species. | Scats: hare |
| V021 | 8-Aug-05 | Near Deposit 1, west of deposit, ridge to west of water supply for drills, top of ridge above the Mary River. | Avens association | Aven Sedge | A | - | - | 70 | 05 | *Salix arctica* 5<br>*Cassiope tetragona* 5<br><br>*Dryas integrifolia* 40 | *Carex rupestris* 30<br><br>*Oxytropis Maydelliana* .1<br>*Pedicularis lanata* .5<br><br>*Saxifraga oppositifolia* .5 | small mosses .2 | | Thin cover of avens and Carex rupestris on gentle slope. Very exposed to wind influence and drying. One of the very few places we encountered Pedicularis lanata. | |
| V022 | 8-Aug-05 | Near Deposit 1, west of deposit, watershed of stream draining Deposit 1, below drills | Riparian association? | Sedge Willow | R | - | 05 | 80 | 10 | *Salix richardsonii* 15<br>*Salix reticulata* 25<br><br>*Cassiope tetragona* 30 | *Carex aquatilis* 15<br>*Carex* sp. 15<br>(several)<br>*Eriophorum angustifolium* .2<br>*Eriophorum* sp. 10<br>grass 10<br>*Luzula nivalis* 2<br><br>*Stellaria longipes* .2<br>(monantha)<br>*Draba* sp. .2<br>*Eutrema Edwardsii* .1<br>*Oxytropis Maydelliana* 2<br>*Pedicularis capitata* .5<br>*Saxifraga oppositifolia* .5<br>*Saxifraga Hirculus* .2 | *Cetraria tilesii* .5<br><br>mosses 10 | | Fairly thick vegetation in watershed of small stream with steep banks below site. Gorge is deep, seems larger than needed for existing watershed. Heather is the dominant plant. | |
| V023 | 9-Aug-05 | Deposit 1, north side, mid-slope | Riparian moss | Moss | R (M) | | | | | | | | | | |
| V024 | 9-Aug-05 | Deposit 1, north side, upper slopes. | Lichen rock on boulder field (glaciated felsenmeer) | Luzula | LR | - | - | 05 | 05 | *Salix arctica* 3<br><br>*Dryas integrifolia* 2 | *Carex* sp. .1<br><br>*Luzula confusa* 5<br><br>*Oxyria digyna* .5<br>*Cerastium alpinum* .5<br><br>*Draba* sp. 1 .5<br>*Draba* sp. 2 .1<br><br>*Potentilla* sp. .1<br>*Papaver radicatum* .1<br>*Papaver cornwallisensis* .1<br>*Saxifraga oppositifolia* .2<br>*Saxifraga cernua* .1 | *Cetraria nivalis* .1<br>*Stereocaulon tomentosum* .2<br>*Thamnolia subuliformis* .1<br><br>mosses .5<br>*Racomitrium lanuginosum* 2 | | Very little vegetation, mostly in mats and between boulders. Some seepage from above boulders. | Scats: hare<br>Sighting: arctic fox, probably yearling, approached from west. We enticed it by squeakin and it came quite close, squinting into the sun, trying to see what we were. Debra got good photos. |
| V025 | 9-Aug-05 | Deposit 1, north side, upper third of slope, below snowbank. | Lichen rock on boulder field | Luzula | LR | - | - | 20 | 10 | *Salix arctica* 1<br>*Salix* sp. 1 | *Carex scirpoidea* .2<br>*Luzula confusa* 10<br><br>*Oxyria digyna* 2<br>*Draba* sp. .1<br><br>*Papaver radicatum* 2<br>*Saxifraga oppositifolia* 5<br>*Saxifraga nivalis* .5<br>*Saxifraga caespitosa* .5 | | | Scattered plants, dom. by Luzula confusa, several saxifrages. | Scats: hare |

**TABLE 3.1**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V026 | 9-Aug-05 | Deposit 1, north side, shoulder of ridge below exposed Fe formation. | Luzula/saxifrage association on solifluction slope | Luzula | | - | - | 08 | 02 | | | | | Sparse vegetation on lobes. | |
| V027 | 9-Aug-05 | Deposit 1, crest of deposit ridge, calcareous slope. | Luzula/saxifrage association | Luzula | | - | - | 10 | 10 | | | | | Sparse vegetation on gentle slope, seemingly calcareous in origin, mostly gravel and erratics. Dominated by Luzula and Saxifraga oppositifolia. | |
| V028 | 9-Aug-05 | Deposit 1, west end, below crest, on steep slope of Fe formation. | Xeric moss association | Lichen Rock | | - | - | 02 | 08 | | *Luzula confusa* 2<br><br>*Papaver radicatum* .2<br>*Papaver cornwallisensis* .1<br><br>*Saxifraga oppositifolia* 2<br>*Saxifraga cernua* .1 | *Cetraria nivalis* .2<br>*Cetraria tilesii* .1<br><br>*Alectoria* sp. .5<br>*Stereocaulon tomentosum* .1<br>*Thamnolia subuliformis* .2<br><br>*Racomitrium lanuginosum* 5 | orange lichens typical of those growing on Fe slope.<br><br>map<br>rock tripe | Very sparse vegetation possibly due to instability of slope. Mostly Luzula confusa and moss. | |
| V029 | 9-Aug-05 | Near Deposit 1, northwest corner of proposed pit (?), below snowbank, seepage area. | Riparian moss association, moss and Luzula | Luzula Moss | | - | - | 20 | 40 | | | | | Vegetated "strip" down a steep slope below large snowbank, mostly Luzula nivalis and green cushion moss. | Scats: hare |
| V030 | 9-Aug-05 | Near Deposit 1, lower 1/3 of mountain below deposit. | Frost scars, toe of solifluction lobe | Grass Moss | | - | - | 30 | 20 | | | | | Avens, Polygonum, and willows on ledges and Polygonum, grasses, and sedges on vertical faces of lobes. Small ferns, prob. Woodsia glabella. | Scats: hare<br>Funnel web spider. |
| V031 | 9-Aug-05 | Deposit 1, northwest end, bottom of slope below deposit. | Heather/willow association | Heather Willow | | - | - | 90 | 05 | *Salix arctica* 15<br>*Salix reticulata* 20<br><br>*Cassiope tetragona* 40<br>*Dryas integrifolia* 20 | *Poa sp.* .5<br>*Calamagrostis purpurascens* .2<br>*Luzula nivalis* .2<br><br>*Polygonum viviparum* 2<br>*Oxyria digyna* 2<br><br>*Stellaria longipes* 1<br>*Silene acaulis* 5<br><br>*Papaver radicatum* 1<br>*Aster alpinus* 2<br>*Oxytropis Maydelliana* 5<br>*Pedicularis capitata* 1 | *Stereocaulon tomentosum* 5<br><br>mosses 5 | | Base of slope with lush growth of heather, net-veined willow, and avens. Thick growth on level terrace with small rivulets crossing the terrace. NOTE: In this area, the heather seems very adaptable, growing in a variety of habitats -- on slopes where the snow stays long, AND on very dry slopes. Not sure why. | Scats: caribou |
| V032 | 9-Aug-05 | Lower slopes of mountain. | Sedge association, plus riparian willow | Sedge Willow | S (R ) | - | - | 75 | 25 | *Salix arctica* 20<br>*Salix* sp. 10<br>*Salix reticulata* 10 | *Carex* sp. 60 | mosses 10 | | Thick growth of sedges and willows on terrace on lower slopes of Deposit 1. Plot located where a stream flows through the area. | |
| V033 | 9-Aug-05 | Mary River, sample location 2843, secondary channel. | Sedge association, non-tussock | Sedge | S | - | - | 70 | 30 | *Salix arctica* 15<br>*Salix reticulata* 15<br><br>*Dryas integrifolia* 20 | *Carex sp. 80*<br>*Eriophorum angustifolium* 2<br><br>*Equisetum arvense* .2<br>*Equisetum variegatum* .1<br><br>*Alopecurus alpinus* .2<br><br>*Polygonum viviparum* 10<br><br>*Pedicularis sudetica* 1<br><br>*Saxifraga Hirculus* .2 | mosses 30 | | Sedge association on floodplain with small channels. Mixture of sedges and prostrate willows. | Fish bones in raptor or gull pellet, including small jaw bones with visible teeth. Teeth seemed too big for char. |
| V034 | 9-Aug-05 | Mary River, sandy area | Sedge association, river backshore | Sedge | S | - | 15 | 55 | 30 | *Salix richardsonii* 15<br>(ca. 30 cm)<br>*Salix arctica* 20<br>*Salix reticulata* .5 | *Carex aquatilis* 15<br>*Carex sp.* 15<br><br>*Equisetum arvense* 10<br><br>*Polygonum viviparum* 2<br><br>*Ranunculus sp.* .1<br>*Epilobium latifolium* 1<br>*Aster alpinus* 2<br>*Pedicularis hirsuta* .5<br>*Armeria maritima* .2<br>*Antennaria sp.* .1<br>(no flowers)<br>*Saxifraga hieracifolia* .2 | | | Sparse vegetatioin on sandy shores of river, inland from river channel, on terrace. This was the only place we found Antennaria. Could not identify to species as there were no flowers. | Scats: goose, ptarmigan.<br>Goose feathers<br>Caribou tracks. |

**TABLE 3.1**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V035 | 9-Aug-05 | Mary River, sandy/gravelly shore | Sandy river shore | Aven | R ? | - | 50 | 20 | - | *Salix arctica* 10<br>*Salix reticulata* 10<br><br>*Dryas integrifolia* 30 | *Carex sp.* .5<br>*Luzula confusa* .2<br>*Poa sp.* .2<br><br>*Polygonum viviparum* 10<br>*Stellaria longipes* .1<br>*(monantha)*<br>*Silene acaulis* .1<br><br>*Potentilla Vahliana* .1<br>*Minuartia sp.* .1<br>*Melandrium apetalum* .1<br><br>*Epilobium latifolium* 20<br>*Aster alpinus* 2<br>*Pedicularis hirsuta* .5<br>*Pedicularis capitata* .5<br><br>*Saxifraga oppositifolia* .5<br>*Saxifraga Hirculus* .1 | | | Scattered vegetation on sand. | Caribou about 1 km downstream from site.<br>Red-throated loon, calling in flight. |
| V036 | 9-Aug-05 | Mary River, west of minesite, sample location 35B | Floodplain, Heather association on sand | Heather | | - | - | 75 | 05 | *Salix arctica* 5<br><br>*Cassiope tetragona* 70<br><br>*Dryas integrifolia* 5 | *Carex* sp. 10<br>*Carex aquatilis* 10<br><br>*Oxyria digyna* .2<br><br>*Papaver radicatum* .2<br>*Oxytropis Maydelliana* .2<br>*Armeria maritima* 2 | *Cetraria nivalis* .2<br>*Thamnolia subuliformis* .2<br><br>*Racomitrium lanuginosum* 5<br>star moss .2 | | Thick growth of white arctic heather and avens on sand above the normal flood stage of the river. | Scats: caribou |
| V037 | 9-Aug-05 | Mary River, west of minesite, braided section. | Stream channel, not active in summer | Moss Willow | | - | 10 | 60 | | *Salix richardsonii* 10<br>*Salix reticulata* 15<br>*Salix arctica* 15 | *Polygonum viviparum* 10<br><br>*Stellaria longipes* 5<br>*(monantha)*<br><br>*Epilobium latifolium* 2<br><br>*Aster alpinus* 2<br><br>*Pedicularis capitata* .5 | mosses 30 | | Low vegetation, lots of moss, willows, some small bush-type willows (Salix richardsonii). Much avens and reticulated willows. | Scats: hare.<br>Wolf spiders. |
| V038 | 9-Aug-05 | Small river to northwest of camp, in floodplain, near sample sites 2864/2865 above floodplain of river | Heather association | Heather | | | | | | *Salix arctica* .5<br>*Salix* sp. .2<br>(oval leaves)<br><br>*Cassiope tetragona* 30<br><br>*Dryas integrifolia* 20 | *Carex rupestris* 10<br>*Carex scirpoidea* .5<br><br>*Polygonum viviparum* 5<br>*Oxyria digyna* .5<br><br>*Oxytropis Maydelliana* .2<br><br>*Pedicularis capitata* .2 | mushrooms .1 | | Arctic heather in patchy stands on sand above the annual floodplain of a small river. Some avens and curly sedge, but not much variety of veg. | |
| V039 | 9-Aug-05 | Small river to northwest of camp, floodplain of tributary stream, near sample sites 2864 and 2865. | Riparian association | Willow | R | - | 20 | 20 | | *Salix richardsonii* 10<br><br>*Salix reticulata* 5<br>*Salix arctica* 2 | *Carex aquatilis* 2<br><br>*Poa* sp. .5<br>*Luzula nivalis* 2<br><br>*Stellaria* sp. .1<br><br>*Epilobium latifolium* 15<br><br>*Papaver radicatum* .2<br>*Oxytropis Maydelliana* .2<br><br>*Saxifraga oppositifolia* .5 | | | Vegetation mostly on sides and margins of the channel. Salix richardsonii shrubs with understory of net-veined willow, arctic willow and woodrush, plus dwarf fireweed. | |

**TABLE 3.1**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V040 | 9-Aug-05 | Small river to northwest of camp, floodplain, bank above floodplain, near Sample sites 2864 and 2865 | Avens/sedge | Aven Sedge | A | - | 70 | 15 | 20 | *Salix arctica* 10<br>*Salix reticulata* 15<br><br>*Cassiope tetragona* 25<br>*Dryas integrifolia* 2 | *Carex aquatilis* 15<br>*Carex sp. 2*<br>*(pendant head)*<br><br>*Polygonum viviparum* 1<br>*Oxyria digyna* 1<br><br>*Aster alpinus* .5<br>*Pyrola grandiflora* 1 | *Cetraria nivalis* 1<br>*Stereocaulon tomentosum* .5<br>*Thamnolia subuliformis* .5<br><br>small brown mushroom .1 | mosses 20<br><br>sunburst lichen<br>map<br>rock tripe<br>black crustose | Even cover of mixed species (heather is dominant) on gentle slope with sedges above. | |
| V041 | 9-Aug-05 | Small river to northwest of camp, side of valley at sample site 2864 and 2865. | Heather/moss association | Heather Moss | | - | 50 | 01 | 50 | *Salix arctica* 1<br><br>*Cassiope tetragona* 40<br>*Dryas integrifolia* 10 | *Carex rupestris* 5<br><br>*Oxyria digyna* .2<br><br>*Papaver radicatum* .1<br><br>*Oxytropis Maydelliana* .2 | *Cetraria nivalis* .5<br>*Cetraria tilesii* .2<br><br>*Racomitrium lanuginosum* 50 | | Mostly heather and Rhacomitrium moss. | Caribou tracks. |
| V042 | 10-Aug-05 | Mary River camp, flat area to southwest of camp, near weather station. | Sedge/saxifrage association on polygons | Sedge Saxifrage | | - | 05 | 40 | 35 | *Salix arctica* 5 | *Carex rupestris* 30<br>*Carex scirpoidea* 5<br>*Carex* sp. 2<br>(pendant)<br>*Carex aquatilis* 2<br><br>*Tofieldia coccinea* .5<br>*Oxyria digyna* .5<br>*Silene acaulis* 1<br><br>*Saxifraga oppositifolia* 10<br>*Armeria maritima* 1 | *Cetraria tilesii* 5<br><br>mosses 20 | | Mixture of heather, curly sedge, avens and purple mountain saxifrage on flat area, in polygon surrounded by frost cracks. | Scats: caribou, hare. |
| V043 | 10-Aug-05 | Mary River Camp, near weather station to southwest of camp. | Avens/heather association in frost cracks in raised-centre polygons | Aven Heather | A | - | - | 50 | 50 | *Salix arctica* 10<br><br>*Vaccinium uliginosum* 30<br>*Cassiope tetragona* 40<br><br>*Dryas integrifolia* 20 | *Carex* sp. 15<br>(several species)<br>*Poa* sp. 2<br>*Calamogrostis purpurascens* 2<br>*Luzula confusa* 5<br><br>*Stellaria longipes* .1<br>(monantha)<br>*Saxifraga tricuspidata* .2 | *Cetraria tilesii* 2<br><br>*Racomitrium lanuginosum* 20<br>other moss 10 | | Thicker vegetation in frost cracks between polygons -- mosses, heather, some sedges, Poa sp. | Scats: caribou |
| V044 | 10-Aug-05 | Flat area to southwest of Mary River camp, about 300 m south of weather station. | Willow shrub | Sedge WIllow | | - | 20 | 25 | 05 | *Salix richardsonii* 20<br>(about 40 cm)<br>*Salix arctica* 10 | *Carex aquatilis 20*<br>*Poa sp. 2*<br>*Calamagrostis* sp. .2<br>*Alopecurus alpinus 1*<br><br>*Tofieldia sp. 1*<br>*(very small plant)*<br>*Polygonum viviparum .2*<br><br>*Lycopodium Selago .1*<br>*Saxifraga oppositifolia 2* | mosses 5 | | Scattered vegetation in bottom of what is probably a transitory pond earlier in the season. | Scats: hare.<br>Glaucous gull. |
| V045 | 10-Aug-05 | Small stream to west of Mary River camp, about 300 m south of weather station. | Riparian association | Sedge Willow | R | - | 20 | 30 | 15 | *Salix richardsonii* 20<br>*Salix reticulata* 10<br>*Salix arctica* 5 | *Carex sp. 20*<br>*Eriophorum angustifolium 10*<br>*Luzula confusa .1*<br><br>*Polygonum viviparum .5*<br>*Oxyria digyna 2*<br>*Melandrium apetalum .1* | mosses 15 | | Shrubs and sedges along shore of small stream, still flowing in August. | |
| V046 | 10-Aug-05 | Flats to southwest of Mary River camp, along bank of stream about 500 m south of weather station. | Heather/moss association | Heather Moss | | - | - | 75 | 25 | *Salix arctica* 5<br>*Cassiope tetragona* 50<br>*Dryas integrifolia* 20 | | *Racomitrium lanuginosum* 30 | | | Small fish sighting, arctic char |

**TABLE 3.1**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V047 | 10-Aug-05 | Flats to southwest of Mary River camp, about 500 m south of weather station. | Disturbed site | Disturbed | DS | - | - | 30 | 10 | *Salix arctica* 5<br>*Salix reticulata* 10<br>*Cassiope tetragona* 25<br>*Dryas integrifolia* 15 | *Carex scirpoidea* 5<br>*Carex rupestris* 15<br>*Poa* sp. 2<br>grass 1 (tall, slender heads) 5<br>grass 2 (____ heads, clumps)<br><br>*Luzula confusa* .2<br>*Saxifraga tricuspidata* 2<br>*Saxifraga oppositifolia* 2<br>*Papaver radicatum* .5<br>*Oxyria digyna* 2<br>*Ceratium alpinum* 5<br>*Stellaria monantha* 2<br>*Silene acaulis* 2<br>*Draba* sp. .1<br>*Minuartia rubella* (?) .5(prob) | *Cetraria nivalis* 1<br>*Thamnolia subuliformis* .2<br>mosses 10 | | On mound, heather at S edge, thick growth of Carex rupestris on S side, sparse vegetation on top and N side. Scattered clumps of vegetation in scooped out area. | Scats: Hare.<br>Geometrid caterpillar. |
| V048 | 10-Aug-05 | Flats to southwest of Mary River camp, wide area in stream below first lake south of camp. | Sedge association on frost scars | Sedge | S | - | 2 | 50 | 10 | *Salix richardsonii* 2 (in ridge)<br>*Salix reticulata* .5<br>*Salix arctica* .5 | *Carex aquatilis* 10<br>*Carex* ? ?<br>*Eriophphorum Scheuchzeri* 30<br><br>*Luzula confusa* 2<br>*Pedicularis sudetica* 10 | moss on ridge 10 | | | young lap. longspur near pur. site. |
| V049 | 10-Aug-05 | South end of airstrip, about 200 m south of strip. | Avens/heather on dry polygon crest | Aven Heather | | - | - | 25 | 25 | *Salix arctica* 2<br>*Cassiope tetragona* 20<br>*Dryas integrifolia* 20 | *Carex rupestris* 5<br><br>*Luzula confusa* .5 (rolled)<br>*Tofieldia coccinea* .2<br>*Stellaria monantha* 2<br>*Papaver cornwallis* .1<br>*Oxytropis Maydelliana* 2<br>*Saxifraga tricuspidata* 15<br>*Saxifraga oppositifolia* 2 | *Cetraria nivalis* 5<br>*Alectoria* sp. (hair) .5 blk<br>*Thamnolia subuliformis* .2<br>other mosses 5<br>*Racomitrium lanuginosum* 10 | star mosses 1 | | |
| V050 | 10-Aug-05 | South of airstrip, north edge of large lake. | Riparian association | Moss Willow | R | - | 10 | 20 | 60 | *Salix richardsonii* 20<br>*Salix reticulata* 30<br>*Dryas integrifolia* 20 | *Carex aquatilis* 30<br>*Carex* sp. ? 10<br>*Calamagrostis purpurascens* .5<br><br>*Equisetum variegatum* .5<br>*Polygonum viviparum* 2<br>*Pedicularis capitata* 2<br>*Saxifraga Hirculus* 2 | *Cetraria nivalis* .2<br>*Cetraria tilesii* .1<br>*Thamnolia subuliformis* .1<br>*Racomitrium lanuginosum* .2<br>green moss 40 | | | Scats: fox, hare<br>Caribou hair and antler (old) |
| V051 | 10-Aug-05 | Old camp south of airstrip, near shore of lake. | Riparian shoreline shrub | Willow | R | - | 60 | 30 | 30 | *Salix richardsonii* 60<br>*Salix herbacea* 15<br>*Salix arctica* 10<br>*Dryas integrifolia* 10 | *Poa* sp. 10<br>*Polygonum viviparum* 5<br><br>*Oxyria digyna* 5<br>*Silene acaulis* 5<br>*Astragalus alpina* 5<br>*Saxifraga cernua* .5<br>*Armeria maritima* .2 | green mosses under willows 30<br>slime mold .1 | | | Scats: hare<br>Wolf spider, lemming burrow, caribou tibia bone, glaucous gull, caddisflyy, wolf skull. |
| V052 | 10-Aug-05 | Near old camp to south of airstrip about 2.56 km from Mary River Camp, in stream valley. | Sedge association, emergent | Sedge | S | - | 5 | 70 | 5 | *Salix richardsonii* 5<br>*Salix reticulata* 10 | *Carex aquatilis* 75<br>*Eriophorum angustifolium* 10<br><br>*Armeria maritima* .2 (at edges)<br>*Saxifraga sudetica* 1 | moss in water at edges 10 | | | fresh, recently split caribou bone |
| V053 | 10-Aug-05 | Near old camp to south of airstrip, about 200 m southeast of old camp. | Avens/xeric sedge association | Aven Sedge | | - | 15 | 15 | - | *Salix arctica* .2<br>*Dryas integrifolia* 15 | *Carex rupestris* 15<br><br>*Saxifraga oppositifolia* .2<br>*Silene acaulis* 5<br>*Astragalus alpina* 1 | | sunburst<br>map<br>rock tripe<br>black Crustose | | fox trap in rock pile<br>red throated |
| V054 | 10-Aug-05 | Flat area to south of old camp, slope of flatland. | Heather/avens association | Aven Heather | | - | - | 80 | 15 | *Salix arctica*<br>*Cassiope tetragona* 75<br>*Dryas integrifolia* 10 | *Oxyria digyna* .2<br>*Silene acaulis* 5<br>*Papaver radicatum* .1<br>*Oxytropis Maydelliana* .5<br>*Pedicularis capitata* .5<br>*Saxifraga oppositifolia* .2 | *Dactylina* sp. (glove) .2<br>*Cetraria nivalis* 1<br>*Cetraria* sp. 1<br>*Thamnolia subuliformis* .2<br>mosses 10<br>puffball .1 | | | lemming nest and scats |

**TABLE 3.1**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V055 | 10-Aug-05 | Flat area, about .5 k south of old camp, side of valley. | Riparian willow | Heather Willow | R | - | 30 | 15 | 15 | *Salix reticulata* 25<br>*Cassiope tetragona* 35<br>*Dryas integrifolia* 20 | *Carex aquatilis* 10<br><br>*Polygonum viviparum* 1<br>*Epilobium latifolium* 10<br>*Oxytropis Maydelliana* .5<br>*Pedicularis capitata* 2 | mosses 15 | | | |
| V056 | 10-Aug-05 | Lower slopes to west of Deposit 1, top of sandstone ridge to south of old camp. | Avens association | Aven Sedge | A | - | 15 | 40 | 15 | *Salix arctica* (or *Salix glauca* ssp. *callicarpaea*) 15 | *Carex rupestris* 20<br>*Carex scirpoidea* 10<br>*Poa* sp. .2<br><br>*Tofieldia coccinea* .5<br>*Cerastium alpinum* 2<br>*Silene acaulis* 2<br>*Potentilla nivea* .5<br>*Papaver radicatum* .2<br>*Oxytropis Maydelliana* 5<br>*Saxifraga tricuspidata* .2<br>*Potentilla Vahliana* .2 | mosses 10<br>*Racomitrium lanuginosum* 2 | | | lapland longsur (young bird) |
| V057 | 10-Aug-05 | Below Deposit 1, stream draining mine work area, near EKP2894 | Sedge association, non-tussock | Sedge | S | - | 5 | 80 | 5 | *Salix arctica* 5 | *Carex aquatilis* 50<br>*Eriophorum angustifolium* 30<br><br>*Polygonum viviparum* 1<br>*Cerastium alpinum* 5<br>*Silene acaulis* .2<br>*Pedicularis sudetica* .5<br>*Saxifraga Hirculus* .2<br>*Melandrium apetalum* .2 | mosses 5<br>small brown mushrooms .1 | | | |
| V058 | 10-Aug-05 | Below Deposit 1, stream draining mine area, where it enters flat area at base of mountain. | Riparian association | Sedge Willow | R | - | 30 | 30 | 10 | *Salix richardsonii* 30<br>*Salix reticulata* 10<br>*Salix arctica* 5 | *Carex aquatilis* 15<br><br>*Draba* sp. .1 | green/red moss 10 | | | |
| V059 | 10-Aug-05 | Below Deposit 1, valley below road and above Sample site 2894. | Lichen-rock association on boulder field | Sedge Willow | LR | - | - | 20 | 20 | *Salix richardsonii* .5<br>*Salix arctica* 10<br>*Salix reticulata* 15<br><br>*Dryas integrifolia* 10 | *Carex rupestris 10*<br>*Carex aquatilis 10*<br><br>*Calamagrostis sp. .2*<br><br>*Polygonum viviparum 1* | green cushion moss 20 | | Vegetation in mats on top of and between boulders, a mixture of moss and willows, with xeric sedges in the drier spots. | |
| V060 | 10-Aug-05 | Below Deposit 1, below slopes, area to east of road. | Avens/Oxytropis association on calcareous rock | Aven Oxytrope | A | - | 15 | 15 | - | *Salix arctica* .5<br>*Dryas integrifolia* 15 | *Carex rupestris* 5<br><br>*Potentilla Vahliana* .1<br>*Oxytropis Maydelliana* 2<br>*Saxifraga tricuspidata* 5<br>*Oxytropis arctobia* 10 | *Cetraria tilesii* .1<br>*Thamnolia subuliformis* .1 | | | scats: hare<br>caribou tibia bone |
| V061 | 10-Aug-05 | Below Deposit 1, area to southwest of road, along watershed from mine area. | Sedge association, non-tussock | Sedge | S | - | 15 | 50 | 40 | *Salix richardsonii* 10<br>*Salix reticulata* 5<br>*Cassiope tetragona* 10 | *Carex aquatilis* 50<br>*Eriophorum angustifolium* 10<br><br>*Oxytropis Maydelliana* .2<br>*Pedicularis capitata* .5 | mosses under sedges 40 | | | |
| V062 | | Number not used for a plot. | | | | | | | | | | | | | |
| V063 | 10-Aug-05 | Below Deposit 1, above road where road switchbacks up to mine site. | Sedge/Avens association | Aven Sedge | | - | 30 | 60 | 01 | *Dryas integrifolia* 30 | *Carex rupestris 60*<br><br>*Polygonum viviparum .5*<br>*Silene acaulis .5*<br><br>*Epilobium latifolium .2*<br>*Papaver radicatum .2*<br><br>*Saxifraga oppositifolia 2* | *Cetraria tilesii* .2<br>*Thamnolia subuliformis* .1<br><br>*Racomitrium lanuginosum* 2 | | Mixture of curly sedge and avens with scattered moss cushions on very dry terrace. Adjacent to calcite/feldspar/mica outcrop. | |

**TABLE 3.1**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V064 | 10-Aug-05 | Below Deposit 1, road to minesite, at switchback are above Mary River. | Snowbank association | Willow | SB | - | - | 30 | 20 | *Salix herbacea* 15<br>*Cassiope tetragona* 10 | *Poa* sp. 1<br><br>*Luzula nivalis* 10<br>*Oxyria digyna* 15<br>*Cerastium alpinum* 5<br>*Stellaria monantha* 1<br>*Silene acaulis* 5<br>*Draba* sp. 2<br>*Melandrium apetalum* .1<br>*Saxifraga tricuspidata* 5<br>*Saxifraga cernua* 2<br>*Erigeron eriocephalus* 15<br>*Taraxacum* sp. 2 | *Stereocaulon* sp. 10 | | | scats: hare |

**TABLE 3.2**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - SOIL AND LOCATION DATA**

Print Mar/27/06 15:24:33

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]exp-veg

Rev'd Mar/22/06

| Plot | Date | Location | UTM zone | Latitude (North) | Longitude (East) | Elevation (meters) | Slope (%) | Aspect | Moisture* | Nutrients* | Substrate | | | | | Soil Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Organic Material (%) | Rocks (%) | Mineral Soil (%) | Bedrock (%) | Water (%) | |
| V001 | 5-Aug-05 | Nuluugoak Mt., S of E end Deposit 1 | 17W | 0566916 | 7917216 | 563 | > 5 | s | l₂ | l₂ | 60 | 40 | 01 | 01 | - | Plot at edge of open valley, thin soil with many rocks. Open slopes to small drainage. |
| V002 | 5-Aug-05 | Nuluugoak Mt., SE of E end of Deposit 1, centre of drainage area. | 17W | 0566404 | 7917126 | 552 | <5 | SW | H | L | 05 | 90 | - | - | 05 | No soil except a bit between rocks. The soil is saturated, and there are no lichens. This area likely receives sheet flow during much of the growing season. I am guessing that this area is not long exposed from under ice. |
| V003 | 5-Aug-05 | Nuluugoak Mtn., SE of E end of Deposit 1. | 17W | 0564069 | 7916669 | 581 | <1 | S | usually low | | 50 | 50 | - | - | - | Thin soil amidst rocks and gravel on crest of ridge near stone cairn with iron rod. |
| V004 | 5-Aug-05 | Nuluugoak Mtn., SE of E end of Deposit 1. | 17W | 0563972 | 7916498 | 576 | <5 | S | H | M | 30 | 40 | - | - | 30 | Laminar flow of water across the land. Soil between rocks is saturated with water and spongy. You must walk on the rocks or sink into the ground. |
| V005 | 5-Aug-05 | Nuluugoak Mtn., E end of Deposit 1, below snowfield. | 17W | 0563860 | 7916008 | 604 | 15 | NW | L | L | 20 | 60 | 20 | - | - | Thin soil with many rocks on a slope above a snowbank. |
| V006 | 5-Aug-05 | Nuluugoak Mtn., E end of Deposit 1. | 17W | 0563790 | 7915724 | 623 | 20 | SE | M | M | 40 | 30 | - | 30 | - | Thin soil between bedrock outcrops and erratic rocks on fairly steep slope on end of iron deposit ridge. |
| V007 | 5-Aug-05 | Nuluugoak Mtn., S side of end of Deposit 1, on slope of deposit.. | 17W | 0563823 | 7915685 | 612 | steep | SE | M | M | 60 | 40 | - | - | - | Rockfall, little soil at surface. |
| V008 | 5-Aug-05 | Nuluugoak Mtn., E end of Deposit 1, S side. | 17W | 0563704 | 7915468 | 642 | steep | S | H | M | 60 | 25 | - | 15 | - | Thin soil, very steep, surface runoff. |
| V009 | 8-Aug-05 | Deposit 1, top of deposit in small saddle. | 17W | 0563051 | 7914403 | 675 | crest of ridge | | L | L | 10 | 86 | 02 | 02 | - | Little soil, but this area is calcareous bedrock which is frost-shattered, and/or affected by blasting. It is on top of the iron formation and surrounded by the iron bearing rock. |
| V010 | 8-Aug-05 | Deposit 1, on top of deposit. | 17W | 0563038 | 7914327 | 672 | crest of ridge | | L | L | 02 | 78 | - | 20 | - | Virtually no soil. Much shattered rock, maybe due to blasting. Some areas look weathered and have more lichens, but most of the crest has no plants. |
| V011 | 8-Aug-05 | Deposit 1, crest of middle of deposit, S slope | 17W | 0563232 | 7914640 | 703 | <1 (crest) | S | L | L | 01 | 88 | - | 10 | - | Virtually no soil. Mostly fractured rocks due to weathering and blasting, and bedrock. Iron bearing ore. |
| V012 | 8-Aug-05 | Deposit 1, crest of deposit ridge, in saddle with sandstone outcrop. | 17W | 0563326 | 7914756 | 688 | >1 | N | L | L | 10 | 80 | - | 10 | - | Little soil, mostly rocks and gravel/cobbles; small seep at lower end of plot. |
| V013 | 8-Aug-05 | Deposit 1, SE slope about halfway down slope, mid-deposit. | 17W | 0563408 | 7914760 | 661 | 58% | E | L | L | 10 | 90 | - | - | - | Unstable scree slope, rubble |
| V014 | 8-Aug-05 | Deposit 1, scree slope below deposit, calcareous slope | 17W | 0563434 | 7914738 | 655 | 50% | SE | M | ? | 30 | 70 | - | - | - | Rocky, scree slope. |
| V015 | 8-Aug-05 | Deposit 1, below deposit slope, old road along base of deposit. | 17W | 0563472 | 7914724 | 627 | flat | NA | M | | 70 | 15 | 15 | - | - | gravelly soil levelled when road was built. |
| V016 | 8-Aug-05 | Deposit 1, slopes below old road | 17W | 0563578 | 7914656 | 595 | | | | | | | - | - | - | |

**TABLE 3.2**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - SOIL AND LOCATION DATA**

Print Mar/27/06 15:24:33

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]exp-veg

Rev'd Mar/22/06

| Plot | Date | Location | UTM zone | Latitude (North) | Longitude (East) | Elevation (meters) | Slope (%) | Aspect | Moisture* | Nutrients* | Substrate | | | | | Soil Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Organic Material (%) | Rocks (%) | Mineral Soil (%) | Bedrock (%) | Water (%) | |
| V017 | 8-Aug-05 | Near Deposit 1, slope to SE of W end of deposit. | 17W | 0563800 | 7914134 | 476 | 17% | S | H | M ? | 80 | 15 | - | - | 05 | Saturated, many rocks, water flowing as sheet across wide area. |
| V018 | 8-Aug-05 | Near Deposit 1, lower slope S of deposit. | 17W | 0563874 | 7913937 | 430 | 40% | S | M | M | 95 | 05 | - | - | - | Seems to have a fairly deep, turfy soil. |
| V019 | 8-Aug-05 | Near Deposit 1, above water supply for drills, below drills. | 17W | 0563947 | 7923392 | 298 | 40% | S | L | M ? | 95 | 05 | - | - | - | |
| V020 | 8-Aug-05 | Near Deposit 1, sm. valley to E of water supply for drills, edge of valley. | 17W | 0563906 | 7913338 | 283 | 50% to vertical | SW | H | M | 60 | 40 | - | - | - | Thin soil on ledges. |
| V021 | 8-Aug-05 | Near Deposit 1, W of deposit, ridge to W of water supply for drills, top of ridge above the Mary River. | 17W | 0563776 | 7913003 | 265 | 7% | SE | L | L ? | 75 | 25 | - | - | - | Gravelly soil. |
| V022 | 8-Aug-05 | Near Deposit 1, W of deposit, watershed of stream draining Deposit 1, below drills | 17W | 0563716 | 7923227 | 264 | 18% | W | H | M | 95 | 05 | - | - | - | |
| V023 | 9-Aug-05 | Deposit 1, N side, mid-slope | 17W | 0562778 | 7914788 | 592 | | | | | | | - | - | - | |
| V024 | 9-Aug-05 | Deposit 1, N side, upper slopes. | 17W | 0562871 | 7914698 | 617 | 34% | NW | L | L | 10 | 80 | - | 10 | - | Boulder field, glaciated felsenmeer plus erratics. Little real soil, mostly bedrock and rocks. |
| V025 | 9-Aug-05 | Deposit 1, N side, upper third of slope, below snowbank. | 17W | 0562940 | 7914498 | 639 | 20% | W | L | L | 30 | 70 | - | - | - | Felsenmeer and glacial erratic boulders and cobbles. |
| V026 | 9-Aug-05 | Deposit 1, N side, shoulder of ridge below exposed Fe formation. | 17W | 0562930 | 7914351 | 654 | 27% | W | H (seasonal) | M ? | 10 | 30 | 30 | - | - | Solifluction slope with ripples and lobes over boulders. Lobes are 2-5 m wide. |
| V027 | 9-Aug-05 | Deposit 1, crest of deposit ridge, calcareous slope. | 17W | 0562961 | 7914122 | 658 | 11% | W | L | L | 20 | 80 | - | - | - | Cobbles and gravel. |
| V028 | 9-Aug-05 | Deposit 1, W end, below crest, on steep slope of Fe formation. | 17W | 0562968 | 7914006 | 643 | 35% | W | L | L | 10 | 80 | - | 10 | - | Fractured rock, unstable, mostly scree. |
| V029 | 9-Aug-05 | Near Deposit 1, NW corner of proposed pit (?), below snowbank, seepage area. | 17W | 0562893 | 7914024 | 606 | 30% | NW | H | L ? | 50 | 40 | - | - | 10 | Gravel, cobbles and water. |
| V030 | 9-Aug-05 | Near Deposit 1, lower 1/3 of mountain below deposit. | 17W | 0562698 | 7913889 | 587 | 39% | W | M | | 50 | 50 | - | - | - | Toe of solifluction lobe. |

**TABLE 3.2**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - SOIL AND LOCATION DATA**

Print Mar/27/06 15:24:33

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]exp-veg

Rev'd Mar/22/06

| Plot | Date | Location | UTM zone | Latitude (North) | Longitude (East) | Elevation (meters) | Slope (%) | Aspect | Moisture* | Nutrients* | Substrate | | | | | Soil Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Organic Material (%) | Rocks (%) | Mineral Soil (%) | Bedrock (%) | Water (%) | |
| V031 | 9-Aug-05 | Deposit 1, NW end, bottom of slope below deposit. | 17W | 0562260 | 7913698 | 341 | 5% | N | M/H | M ? | 95 | 05 | - | - | - | Level terrace, gravelly/sandy soil. |
| V032 | 9-Aug-05 | Lower slopes of mountain. | 17W | 0562206 | 7913570 | 306 | 11% | N | M | | 98 | - | 2 | - | - | |
| V033 | 9-Aug-05 | Mary River, sample location 2843, secondary channel. | 17W | 0562382 | 7911308 | 211 | flat | | | | 100 | | - | - | - | Sandy soil in floodplain of the Mary River, below the slopes of the mountain. |
| V034 | 9-Aug-05 | Mary River, sandy area | 17W | 0556362 | 7906880 | 172 | flat | | H (seasonal) | | 80 | | 20 | | | Sandy soil |
| V035 | 9-Aug-05 | Mary River, sandy/gravelly shore | 17W | 0560715 | 7911628 | 178 | | | | | 60 | - | 40 | - | - | Sandy soil. |
| V036 | 9-Aug-05 | Mary River, W of minesite, sample location 35B | 17W | 0560696 | 7911591 | 181 | flat | | L | L | 80 | - | 20 | - | - | Sandy soil. |
| V037 | 9-Aug-05 | Mary River, W of minesite, braided section. | 17W | 0562452 | 7911859 | 192 | 2% | W | | | 75 | 25 | - | - | - | Old stream channel. |
| V038 | 9-Aug-05 | Small river to NW of camp, in floodplain, near sample sites 2864/2865 above floodplain of river | 17W | 0557375 | 7919392 | 245 | <1% | N | | | 50 | 20 | 30 | - | - | Sand. |
| V039 | 9-Aug-05 | Small river to NW of camp, floodplain of tributary stream, near sample sites 2864 and 2865. | 17W | 0557401 | 7919392 | 249 | 5% | NW | H (seasonal) | L | 40 | 50 | 10 | - | - | Stream channel in floodplain, not active in mid-summer. Sandy soil. |
| V040 | 9-Aug-05 | Small river to NW of camp, floodplain, bank above floodplain, near Sample sites 2864 and 2865 | 17W | 0557359 | 7919450 | 251 | 5% | NW | M | M | 100 | - | - | - | - | Sand. |
| V041 | 9-Aug-05 | Small river to NW of camp, side of valley at sample site 2864 and 2865. | 17W | 0557368 | 7919466 | 253 | 5% | NW | | | 100 | - | - | - | - | Floodplain of small river. |
| V042 | 10-Aug-05 | Mary River camp, flat area to SW of camp, near weather station. | 17W | 0558171 | 7914435 | 179 | flat | | L | L | 70 | - | 30 | - | - | Gravelly soil. |
| V043 | 10-Aug-05 | Mary River Camp, near weather station to SW of camp. | 17W | 0558165 | 7914439 | 180 | flat | | M | M | 100 | - | - | - | - | |

**TABLE 3.2**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - SOIL AND LOCATION DATA**

Print Mar/27/06 15:24:33

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]exp-veg

Rev'd Mar/22/06

| Plot | Date | Location | UTM zone | Latitude (North) | Longitude (East) | Elevation (meters) | Slope (%) | Aspect | Moisture* | Nutrients* | Substrate | | | | | Soil Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Organic Material (%) | Rocks (%) | Mineral Soil (%) | Bedrock (%) | Water (%) | |
| V044 | 10-Aug-05 | Flat area to SW of Mary River camp, about 300 m S of weather station. | 17W | 0558289 | 7914314 | 180 | flat | | | | 50 | - | 50 | - | - | Sandy soil with black lichen or algal film. |
| V045 | 10-Aug-05 | Small stream to W of Mary River camp, about 300 m S of weather station. | 17W | 0558289 | 7914206 | 180 | 2% | E | H (seasonal) | | 70 | 10 | 20 | - | - | Sandy soil. |
| V046 | 10-Aug-05 | Flats to SW of Mary River camp, along bank of stream about 500 m S of weather station. | 17W | 0558388 | 7914148 | 179 | 5% | W | | | 100 | - | - | - | - | |
| V047 | 10-Aug-05 | Flats to SW of Mary River camp, about 500 m S of weather station. | 17W | 0558387 | 7914158 | 185 | | | | | 40 | - | 60 | - | - | Gravel. This is a scar made by a machine, not natural. It is a scooped out area with a pile of gravel on the south side. |
| V048 | 10-Aug-05 | Flats to SW of Mary River camp, wide area in stream below first lake S of camp. | 17W | 0558497 | 7914064 | 181 | level | NA | H | M | 60 | - | - | - | 40 | |
| V049 | 10-Aug-05 | South end of airstrip, about 200 m S of strip. | 17W | 0559253 | 7913886 | 178 | | | | | 50 | - | 50 | - | - | |
| V050 | 10-Aug-05 | South of airstrip, N edge of large lake. | 17W | 0559637 | 7913662 | 178 | 5% | S | | | 90 | - | - | - | 10 | |
| V051 | 10-Aug-05 | Old camp S of airstrip, near shore of lake. | 17W | 0560161 | 7913532 | 183 | 11% | | | | 90 | - | - | - | - | |
| V052 | 10-Aug-05 | Near old camp to S of airstrip about 2.56 km from Mary River Camp, in stream valley. | 17W | 0560385 | 7913555 | 178 | >1% | NW | | | 80 | - | - | - | 20 | |
| V053 | 10-Aug-05 | Near old camp to S of airstrip, about 200 m SE of old camp. | 17W | 0560586 | 7913634 | 197 | level | | | | 30 | 50 | 20 | - | - | |
| V054 | 10-Aug-05 | Flat area to S of old camp, slope of flatland. | 17W | 0560738 | 7913644 | 190 | 15% | NE | | | 95 | - | 5 | - | - | |
| V055 | 10-Aug-05 | Flat area, about .5 k S of old camp, side of valley. | 17W | 0560925 | 7913779 | 198 | 20% | | H | H? | 60 | 20 in channel | - | - | 20 in channel | |
| V056 | 10-Aug-05 | Lower slopes to W of Deposit 1, top of sandstone ridge to S of old camp. | 17W | 0560970 | 7913816 | 216 | | | | | 70 | 15 (broken rock) | 15 (mineral / gravel) | - | - | |
| V057 | 10-Aug-05 | Below Deposit 1, stream draining mine work area, near EKP2894 | 17W | 0561209 | 7913576 | 190 | flat | | | | 90 | - | 10 (sand) | - | - | |

**TABLE 3.2**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**EXPLORATION PROPERTY - SOIL AND LOCATION DATA**

Print Mar/27/06 15:24:33

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]exp-veg

Rev'd Mar/22/06

| Plot | Date | Location | UTM zone | Latitude (North) | Longitude (East) | Elevation (meters) | Slope (%) | Aspect | Moisture* | Nutrients* | Substrate | | | | | Soil Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Organic Material (%) | Rocks (%) | Mineral Soil (%) | Bedrock (%) | Water (%) | |
| V058 | 10-Aug-05 | Below Deposit 1, stream draining mine area, where it enters flat area at base of mountain. | 17W | 0561284 | 7913614 | 202 | level | | H | M? | 60 | 20 | - | - | 20 | |
| V059 | 10-Aug-05 | Below Deposit 1, valley below road and above Sample site 2894. | 17W | 0561594 | 7913493 | 203 | <1% | NW | H (under boulders) | M ? | 40 | 60 | | | | Boulders |
| V060 | 10-Aug-05 | Below Deposit 1, below slopes, area to E of road. | 17W | 0561712 | 7913319 | 212 | level | | | | 30 | 70 | - | - | - | |
| V061 | 10-Aug-05 | Below Deposit 1, area to SW of road, along watershed from mine area. | 17W | 0562386 | 7912830 | 207 | <1% | | H | | 65 | 25 | - | - | 10 | |
| V062 | | Number not used for a plot. | | | | | | | | | | | - | - | - | |
| V063 | 10-Aug-05 | Below Deposit 1, above road where road switchbacks up to mine site. | 17W | 0562977 | 7912706 | 235 | level | | | | 90 | 05 | 05 | - | - | Gravel |
| V064 | 10-Aug-05 | Below Deposit 1, road to minesite, at switchback are above Mary River. | 17W | 0563075 | 7912725 | 243 | 30% | W | H (seasonal) | M? | 50 | 50 | - | - | - | |

* Moisture and Nutrients: L = low, M = medium, H = high.

**TABLE 3.3**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**MILNE INLET POTENTIAL TRANSPORTATION ROUTE - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VN001 | 6-Aug-05 | Near Milne Inlet, small stream to east of road route, near sample site EKP 2801. | Avens / Oxytropis arctobia | Aven Sedge | | - | - | 85 | 10 | *Salix* sp. 3 5<br>*Dryas integrifolia* 50 | *Carex rupestris* 60<br><br>*Oxytropis Maydelliana* 1<br>*Saxifraga oppositifolia* .2<br>*Oxytropis arctobia* 5 | *Cetraria nivalis* 10 | | | Scats: ptar, hare, caribou, goose<br>Raven and semipalm plover calling |
| VN002 | 6-Aug-05 | Near Milne Inlet, small stream east of main road route, near Sample site EKP 2801 | Riparian moss association | Moss | R | - | - | 10 | 80 | *Salix reticulata* 20<br>*Salix* sp. 15 (tall flowers)<br>*Cassiope tetragona* .5 (edge)<br>*Dryas integrifolia* .1 (edge) | *Carex* sp. 1 .5 (sm)<br>*Carex* sp. 2 .5<br><br>*Equisetum variegatum* 1<br>*Luzula confusa* 2<br>*Polygonum viviparum* .2<br>*Oxyria digyna* .2 (edge)<br>*Cerastium alpinum* .1<br>*Stellaria* sp. .5<br>*Cardamine* sp. .1<br>*Draba alpina* .5<br>*Saxifraga caespitosa* .5<br>*Melandrium apetalum* .1<br>*Eutrema Edwardsii* .1<br>*Epilobium latifolium* .5 (edge)<br>*Saxifraga cernua* 5<br>*Saxifraga aizoides* .1 | bright green moss 75 | | | Scats: hare, ptar, goose, caribou (old)<br>Many lemming burrows in upper levels.<br>Caribou bone (tibia) |
| VN003 | 6-Aug-05 | Near Milne Inlet, north end of Philip's Creek where it enters lacustrine flats, near Sample site EKP 2802. | Avens association | Aven | A | - | - | 50 | - | *Salix* sp. .2 (shiny leaves)<br>*Dryas integrifolia* 30 | *Carex rupestris* .2<br><br>*Polygonum viviparum* .1<br>*Saxifraga oppositifolium* .2<br>*Potentilla nivea* .1<br>*Epilobium latifolia* 5<br>*Oxytropis Maydelliana* .5<br>*Pedicularis capitata* .5<br>*Oxytropis arctobia* 1<br>*Chrysanthemum integrifolium* .2 | *Cetraria nivalis* .1 | | Mats of avens and dwarf fireweed on low dunes with blowouts.<br>PHOTOS: VN003&4area, VN003, VN003close. (new numbers) | Scats: goose<br>Old antler |
| VN004 | 6-Aug-05 | Near Milne Inlet, north end of Philip's Creek where it enters lacustrine flats, near Sample site EKP 2802. | Avens association on sand | Aven | A | - | - | 40 | 40 | *Salix* sp. 15 (oval, pitd.)<br>*Dryas integrifolia* 70 | *Carex rupestris* 5<br>*Carex* sp. 2<br><br>*Polygonum viviparum* 10<br>*Potentilla nivea* .2<br>*Melandrium apetalum* .1<br>*Epilobium latifolia* 2<br>*Astragalus alpina* .5<br>*Oxytropis Maydelliana* .1<br>*Saxifraga oppositifolia* .2 | mosses 20<br>*Thamnolia subuliformis* .1<br>*Cetraria nivalis* .1 | | PHOTOS: VN003&4area, VN004, VN004close. | Scats: goose and hare |
| VN005 | 6-Aug-05 | Philip's Creek near Milne Inlet, west side of creek, near Sample site EKP 2803. | Riparian willow | Sedge Willow | R | - | 60 | 40 | 15 | *Salix lananta* (*richardsonii*?) 60<br>*Salix reticulata* 15<br>*Cassiope tetragona* 1<br>*Dryas integrifolia* 10 | *Carex aquatilis* 20<br>*Carex* sp. (2 or 3 additional species) 20<br>*Eriophorum angustifolium* .2<br><br>*Equisetum variegatum* .2<br>*Equisetum arvense* .5<br>*Polygonum viviparum* .5<br>*Pedicularis sudetica* 1<br>*Pedicularis capitata* .1<br>*Chrysanthemum integrifolia* .1 | mosses 15 | | | goose flt feather and body feather |
| VN006 | 6-Aug-05 | Philip's Creek, near Sample site EKP 2804 | Avens association | Aven | A | - | - | 29 | 1 | *Dryas integrifolia* 25 | *Carex rupestris* 15<br><br>*Lesquerella arctica* 1<br>*Saxifraga oppositifolia* 10 | *Cetraria nivalis* 10<br>*Cetraria tilesii* 5<br>*Thamnolia subuliformis* 10 | | | |

**TABLE 3.3**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**MILNE INLET POTENTIAL TRANSPORTATION ROUTE - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VN007 | 6-Aug-05 | Philip's Creek, slope below VN006. | Transition from avens association on top of bank to sedge association in stream channel. | Aven Sedge | | - | - | 75 | 10 | *Salix* sp. .5<br>*Salix reticulata* .2<br>*Cassiope tetragona* 20 (zone at slope base)<br>*Dryas integrifolia* 35 | *Carex rupestris* 15<br>*Carex* (2 species) 10<br><br>*Tofieldia* sp. .2<br>*Polygonum viviparum* .2<br>*Pedicularis capitata* 2<br>*Tofieldia pusilla* .2<br>*Epilobium latifolium* .1<br>*Saxifraga oppositifolia* 5<br>*Saxifraga aizoides* 1 | *Cetraria nivalis* 5<br>*Cetraria tilesii* 5<br>*Dactylina* sp. (glove) 1<br>mosses 10<br>different mosses 5 | | | scats: ptar, goose |
| VN008 | 6-Aug-05 | Philip's Creek, near Sample site EKP 2805. | Avens/sedge association | Aven Sedge | A | - | 20 | 45 | 5 | *Salix lanata* ssp. *richardsonii* 10<br>*Salix arctica* ? 5<br>*Salix reticulata* 2 | *Carex sp.* pend, head (2 sp.) 20<br>*Carex rupestris* 25<br><br>*Luzula confusa* 10<br>*Carex aquatilis* .2<br>*Polygonum viviparum* .5<br>*Oxyria digyna* 1<br>*Epilobium latifolium* .2<br>*Oxytropis Maydelliana* .5<br>*Chrysanthemum integrifolium* .2 | mosses 5 | | | scats: goose, ptar, hare |
| VN009 | 6-Aug-05 | Philip's Creek, gravel bank near Sample site 2805. | Avens association? | Aven Sedge | A | - | - | 10 | - | *Salix arctica* .1 (mean?)<br>*Dryas integrifolia* 2 | *Carex rupestris* 2<br><br>*Lesquerella arctica* .1<br>*Draba* sp. .1<br>*Oxytropis arctobia* .1<br>*Saxifraga oppositifolia* 2<br>*Melandrium apetalum* .1 | *Cetraria nivalis* .1<br>*Cetraria tilesii* .1<br>*Thamnolia subuliformis* | | Sparse vegetation on gravel flats along upper bank. | scats: caribou |
| VN010 | 6-Aug-05 | Philip's Creek, side creek flowing into main creek from east, near Sample site EKP 2806. | Riparian | Aven Willow | R (SB) | - | - | 70 | - | *Salix arctica* 2<br>*Salix herbacea* 2<br>*Dryas integrifolia* 20 | *Equisetum variegatum* .1<br>*Epilobium latifolium* 60<br>*Pedicularis capitata* 5<br>*Saxifraga oppositifolia* .2 | *Cetraria nivalis* 1<br>*Cetraria tilesii* 1 | | Thick growth of dwarf fireweed along bank in floodplain of side creek flowing into Philip's Creek. | |
| VN011 | 6-Aug-05 | Philip's Creek, side stream flowing into main creek, near old road. Near Sample site 2806. | Sedge association, non-tussock | Sedge | S | | | | | *Salix* sp. 10<br>*Salix reticulata* 5 | *Carex aquatilis* 20<br>*Carex* sp. (pend. hd.) 20<br>*Eriophorum angustifolium* 30<br>*Calamagrostis* sp. 10<br><br>*Equisetum variegatum* 2<br>*Polygonum viviparum* 1<br>*Saxifraga aizoides* .2 | moss 10 | | Thick growth of sedges and cottongrass in small tributary stream below pond. | scats: goose<br>redpolls heard<br>lemming burrows<br>sighted: red-throuted loon (prob) |
| VN012 | 6-Aug-05 | Old road route to Milne Inlet, small stream flowing northeast, near Sample site EKP 2808, sandy area above bank of creek. | Riparian (?), sandy river bank | Willow | | - | 30 | 5 | 2 | *Salix* sp. (red stemmed) 35<br>*Salix lanata* ssp. *richardsonii* 10 | *Carex aquatilis* 1<br><br>*Equisetum variegatum* .2<br>*Polygonum viviparum* 2 | moss 2 | | PHOTO: 103 (106) red-stemmed willow. | snow goose feathers |
| VN013 | 6-Aug-05 | Old road route to Milne Inlet, small stream flowing northeast, near Sample site EKP 2808, sandy area above bank of creek. | Sedge association, emergent | Sedge | S | - | - | 50 | 10 | | *Carex aquatilis* .1<br>*Eriophorum angustifolium* 50<br><br>*Cardamine pratensis* .1<br>*Pedicularis sudetica* 10<br>*Saxifraga Hirculus* .2 | mosses 10<br>algae under plants 15 | | Sedges in end of shallow pond in about 15 cm water. Cottongrass in shallower parts, moss mounds with Pedicularis sudetica and Cardamine pratensis. | snow goose feathers |

**TABLE 3.3**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**MILNE INLET POTENTIAL TRANSPORTATION ROUTE - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VN014 | 6-Aug-05 | Old road route, in tributary crossing road, flowing south. Near Sample site EKP 2810. | Snowbank | Heather | SB | - | - | 70 | 20 | *Salix arctica* 5<br>*Cassiope tetragona* 50<br>*Dryas integrifolia* 15 | *Carex* sp. (tall) .2<br>*Carex rupestris* 2<br>*Luzula nivalis* 2<br>*Equisetum variegatum* .1<br>*Oxyria digyna* 2<br>*Cerastium alpinum* .2<br>*Stellaria monantha* ? .1<br>*Silene acaulis* 2<br>*Papaver radicatum* .1<br>*Oxytropis Maydelliana* .5<br>*Pedicularis capitata* 2<br>*Saxifraga tricuspidata* 5 | *Cetraria nivalis*<br>*Thamnolia subuliformis* .1<br>*Racomitrium lanuginosum* 40 | | Band of arctic heather along slope and in small depressions. | scats: caribou calf |
| VN015 | 6-Aug-05 | Old road route, in tributary crossing road, flowing south. Near Sample site EKP 2810. | Snowbank, moss community, riparian | Moss Willow | R | | | | | *Salix reticulata* 20 | *Polygonum viviparum* 10<br>*Ranunculus nivalis* 2<br>*Saxifraga cernua* 5 | bright green moss 60 | | Moss community or snowbank at small tributary stream, likely a snowbank until recently, shows effects of both snow accum. and running water. | fossils: ammonite and unknown |
| VN016 | 6-Aug-05 | North road route, small tributary stream opposite tundra pond system near Sample site EKP 2812. | Riparian willow | Willow | R | | | | | *Salix richardsonii* 40<br>*Cassiope tetragona* 5<br>*Dryas integrifolia* 10 | *Luzula nivalis* 2<br>*Polygonum viviparum* 5<br>*Oxyria digyna* 5<br>*Silene acaulis* 10<br>*Oxytropis Maydelliana* 2<br>*Saxifraga capitata* 2<br>*Saxifraga aizoides* .2<br>*Chrysanthemum Minuartia* ? .1<br>(*rubella* ?)<br>*Potentilla hyparctica* (?) .1<br>*Saxifraga oppositifolia* .1<br>*Stellaria monantha* .1 | *Cetraria nivalis* 2<br>*Cetraria tilesii* .1<br>mosses 10 | | Diverse stand of willows and forbs on both sides of small stream. | junenile char in stream |
| VN017 | 6-Aug-05 | Tundra pond system, at end of lake, near Sample site EKP 2814. | Sedge/moss association on ridges of low centre polygons. | Moss Sedge | | - | 1 | 50 | 50 | *Salix herbacea* 30<br>*Cassiope tetragona* 5<br>*Dryas integrifolia* 10 | *Carex* sp. (2 species) 20<br>*Luzula nivalis* 5<br>*Polygonum viviparum* .5<br>Pedicularis sudetica .1 | mosses | | Low-centre polygons with 12-20 cm ridges, sedges in lower centres. This plot is in the ridge. | |
| VN018 | 6-Aug-05 | Tundra pond system, at end of lake, near Sample site EKP 2814. | Sedge association in centre of low-centre polygons. | Sedge | S | - | - | 60 | 30 | | *Carex aquatilis* 30<br>*Eriophorum angustifolium* 2<br>*Eriophorum* sp. (sql. hd.) 2<br>*Pedicularis sudetica* .2 | moss (brownish) 10<br>star moss 5 | | Centre of low-centre polygon, sedges, dark moss and star moss. | |
| VN019 | 6-Aug-05 | Old road route, below rimrock near Sample site EKP 2815 | Sedge/willow association, possibly riparian. | Sedge Willow | | - | 20 | 60 | 10 | *Salix richardsonii* 20<br>*Salix arctica* ? 10<br>*Salix reticulata* 5<br>*Dryas integrifolia* 2 | *Carex aquatilis* 40<br>*Carex* sp. 1 10<br>*Eriophorum angustifolium* 20<br>*Carex* sp. 2 10<br>*Pedicularis sudetica* .1<br>*Saxifraga Hirculus* .1 | *Cetraria nivalis* .1<br>mosses 20 | | Thick growth of cottongrass and willows at base of limestone slope. | Lemming runs and scat |

**TABLE 3.4**

**BAFFINLAND IRON MINES C0RPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**MILNE INLET POTENTIAL TRANSPORT ROUTE - SOIL AND LOCATION DATA**

Print Mar/27/06 15:24:33

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]exp-veg

Rev'd Mar/22/06

| Plot | Date | Location | UTM zone | Latitude (North) | Longitude (East) | Elevation (meters) | Slope (%) | Aspect | Moisture* | Nutrients* | Substrate | | | | | Soil Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Organic Material (%) | Rocks (%) | Mineral Soil (%) | Bedrock (%) | Water (%) | |
| VN001 | 6-Aug-05 | Near Milne Inlet, small stream to east of road route, near sample site EKP 2801. | 17W | 0505911 | 7976045 | 39 | flat | NW | L | L | 95 | 1 | 5 | - | - | |
| VN002 | 6-Aug-05 | Near Milne Inlet, small stream east of main road route, near Sample site EKP 2801 | 17W | 0505942 | 7976035 | 36 | 5% | W | H | H? | 90 | 1 | - | - | 10 | |
| VN003 | 6-Aug-05 | Near Milne Inlet, north end of Philip's Creek where it enters lacustrine flats, near Sample site EKP 2802. | 17W | 0502579 | 7973979 | 10 | <5% | NW | L | L | 50 | - | 50 (sand) | - | - | Marine sand dunes at mouth of river. |
| VN004 | 6-Aug-05 | Near Milne Inlet, north end of Philip's Creek where it enters lacustrine flats, near Sample site EKP 2802. | 17W | 0502596 | 7973937 | 4 | flat | NW | H | M? | 80 | - | 20 (sand) | - | - | |
| VN005 | 6-Aug-05 | Philip's Creek near Milne Inlet, west side of creek, near Sample site EKP 2803. | 17W | 0515213 | 7965400 | 78 | flat | | H | H? | 80 | - | - | - | 20 (in channels) | |
| VN006 | 6-Aug-05 | Philip's Creek, near Sample site EKP 2804 | 17W | 0515031 | 7964340 | | flat | NW | L | L | 30 | 65 (limestone) | 5 | - | - | Flats above river channel, flat, dry, with pavement of limestone rocks. |
| VN007 | 6-Aug-05 | Philip's Creek, slope below VN006. | 17W | 0515011 | 7964339 | 85 | 25% | W | | | 85 | 15 | - | - | - | |
| VN008 | 6-Aug-05 | Philip's Creek, near Sample site EKP 2805. | 17W | 0521905 | 7948914 | 131 | | | | | 75 | 15 | 5 | - | - | Lacustrine (?) flats along stream, gravel and sand, flat. |
| VN009 | 6-Aug-05 | Philip's Creek, gravel bank near Sample site 2805. | 17W | 0521855 | 7948905 | 128 | <1% | SW | L | L | 10 | - | 90 (gravel) | - | - | |
| VN010 | 6-Aug-05 | Philip's Creek, side creek flowing into main creek from east, near Sample site EKP 2806. | 17W | 0525809 | 7936806 | 172 | <5% | | | | 70 | 30 | - | - | - | Gravel and cobbles. |
| VN011 | 6-Aug-05 | Philip's Creek, side stream flowing into main creek, near old road. Near Sample site 2806. | 17W | 0525895 | 7936821 | 171 | <1% | NE | H | M | 90 | - | - | - | 10 | |
| VN012 | 6-Aug-05 | Old road route to Milne Inlet, small stream flowing northeast, near Sample site EKP 2808, sandy area above bank of creek. | 17W | 0528448 | 7926612 | 141 | <1% | | H | L | 40 | - | 60 (sand) | - | - | Sand |
| VN013 | 6-Aug-05 | Old road route to Milne Inlet, small stream flowing northeast, near Sample site EKP 2808, sandy area above bank of creek. | 17W | 0528429 | 7926655 | 147 | flat | - | H | ? | 50 | - | - | - | 50 | Saturated soil, standing water. |
| VN014 | 6-Aug-05 | Old road route, in tributary crossing road, flowing south. Near Sample site EKP 2810. | 17W | 0535532 | 7919430 | 227 | NA | | | | 90 | - | 10 (sand) | - | - | |

**TABLE 3.4**

**BAFFINLAND IRON MINES C0RPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**MILNE INLET POTENTIAL TRANSPORT ROUTE - SOIL AND LOCATION DATA**

Print Mar/27/06 15:24:33

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]exp-veg

Rev'd Mar/22/06

| Plot | Date | Location | UTM zone | Latitude (North) | Longitude (East) | Elevation (meters) | Slope (%) | Aspect | Moisture* | Nutrients* | Substrate | | | | | Soil Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Organic Material (%) | Rocks (%) | Mineral Soil (%) | Bedrock (%) | Water (%) | |
| VN015 | 6-Aug-05 | Old road route, in tributary crossing road, flowing South. Near Sample site EKP 2810. | 17W | did not get | did not get | | 5% | | | | 80 | - | 20 (sand / mud) | - | - | Sand and mud. Limestone bedrock in main stream just above confluence. Fossils of ammonite and unknown invertebrate. |
| VN016 | 6-Aug-05 | North road route, small tributary stream opposite tundra pond system near Sample site EKP 2812. | 17W | 0539718 | 7921085 | 158 | >3% | | H | H? | 60 | 20 (in stream) | - | - | 20 (in stream) | |
| VN017 | 6-Aug-05 | Tundra pond system, at end of lake, near Sample site EKP 2814. | 17W | 0545113 | 7921924 | 156 | level | | | | 100 | - | - | - | - | |
| VN018 | 6-Aug-05 | Tundra pond system, at end of lake, near Sample site EKP 2814. | 17W | 0545106 | 7921920 | 151 | level | | | | 90 | - | 5 | - | 5 | Saturated dark soil. |
| VN019 | 6-Aug-05 | Old road route, below rimrock near Sample site EKP 2815 | 17W | 0550424 | 7917908 | 171 | level | | H | L | 80 | - | - | - | 20 | Saturated, some standing water. |

* Moisture and Nutrients: L = low, M = medium, H = high.

**TABLE 3.5**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**STEENSBY INLET POTENTIAL TRANSPORT ROUTE - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code(1) | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VS001 | 7-Aug-05 | Stream south of Nina Barr Lake, near Sample site 2838. | Heath tundra with boulders | Aven Heather | HT | - | - | 30 | 20 | *Salix arctica* 5<br>*Vaccinium uliginosum* 15<br>*Cassiope tetragona* 20<br>*Dryas integrifolia* 25 | *Carex rupestris* 2<br><br>*Oxytropis Maydelliana* 5<br>*Pedicularis lapponica* ? .2<br>*Saxifraga oppositifolia* .5 | *Cetraria nivalis* 5<br>*Thamnolia subuliformis* .5<br>*Racomitrium lanuginosum* 20<br><br>puffballs (*Boletus* sp.) | map<br>rock tripe<br>black crustose | Thin heath and avens on bank above river. Moss between boulders and in hollows. | scat: caribou |
| VS002 | 7-Aug-05 | Stream south of Nina Bang Lake, near Sample site 2838. | Snowbank | Moss Willow | SB | | | | | *Salix herbacea* 70<br>*Salix arctica* ? 10<br>*Dryas integrifolia* 5 | *Carex scirpoidea* 2<br>*Carex aquatilis* 5<br><br>*Alopecurus alpinus* .1<br>*Oxyria digyna* 2<br>*Cerastium alpinum* .1<br>*Stellaria* sp. .1 (large)<br>*Silene acaulis* .1<br>*Rananculus nivalis* .2<br>*Draba* sp. 1 .2<br>*Draba* sp. 2 .2<br>*Pedicularis capitata* 5 | *Stereocaulon* sp. .2<br>moss 15 | | Typical snowbank community with bands of least willow, heather, buttercups. | scat: goose<br>burrows: lemming |
| VS003 | 7-Aug-05 | North end of large lake, in braided stream, near Sample site 2824. | Avens association in bend of stream. | Aven | A | - | 35 | 15 | 5 | *Salix arctica* 5<br>*Vaccinium uliginosum* 5<br>*Cassiope tetragona* nearby<br>*Empetrum nigrum* (?) nearby<br>*Dryas integrifolia* 40 | *Carex rupestris* 15<br>*Carex scirpoidea* 2<br><br>*Hierochloe* sp. .2<br>*Epilobium latifolium* 5<br>*Papaver* sp. (rad.) nearby<br>*Oxytropis Maydelliana* .5<br>*Pedicularis lanata* .1<br>*Pyrola grandiflora* .5<br>*Eupetrum* sp. and heather just outside plot | *Cetraria nivalis* 1<br>*Alectoria* sp. .2<br>*Dactylina* sp. (glove) .2<br>*Alectoria* sp. (hair) .2<br>*Cladonia* sp. (pixy cup) .2<br>*Thamnolia subuliformis* .5<br>moss 5<br>*Racomitrium lanuginosum* 30 | sunburst<br>map<br>rock tripe<br>black crustose | Thin avens and Rhacomitrium moss between boulders. Blueberry at edge in water. First appearance of sunburst lichen and woolly lousewort. | scats: hare<br>caribou scapula |
| VS004 | 7-Aug-05 | Near mouth of stream, near Sample site 2823. | Snowbank or riparian | Sedge Willow | | - | 35 | 55 | 5 | *Ledum palustre* var. *decumbens* .5<br>*Salix lanata* ssp. *richardsonii* ? 10 (50cm)<br>*Salix reticulata* .5<br>*Salix arctica* 5<br>*Salix herbacea* 40<br>*Vaccinium uliginosum* 2 (at edge)<br>*Cassiope tetragona* 10<br>*Empetrum nigrum* (?) 2 (at edge)<br>*Dryas integrifolia* 1 | *Carex scirpoidea* .2<br>*Carex collinsii* 15<br>*Poa* sp. 15<br>*Alopecurus alpinus* .1<br>*Calamagrostis purpurascens* 10 (dark heads)<br><br>*Luzula* sp. .5<br>*Polygonum viviparum* 10<br>*Oxyria digyna* 1<br>*Cerastium alpinum* 2<br>*Stellaria monantha* 5<br>*Silene acaulis* .1<br>*Ranunculus* sp. .5 (same as previous)<br>*Draba* sp. (unknown mustard) .1<br>*Potentilla nivea* .1<br>*Melandrium affine* .1<br>*Cardamine bellidifolia* .1<br>*Pedicularis capitata* 2<br>*Pedicularis hirsuta* ? 5 (prob)<br>*Pedicularis lanata*<br>*Taraxacum* sp. .1 (not blooming) (*lacerum* ?) | *Cetraria nivalis* .1<br>*Stereocaulon* sp. .5<br>moss 5 | | Beautiful example of snowbank community in a tiny valley.<br>Several new species for this project show up here: Pedicularis hirsuta, Ledum palustre decumbens, Melandrium affine, Potentilla nivea, Taraxcum sp., and Cardamine bellidifolia. | Caribou skull with antlers. (Possible wolf kill?)<br>Lemming nest<br>Scats: goose, hare, lemming. |
| VS005 | 7-Aug-05 | Near Sample site 2817, margin of small stream flowing into small lake. | Sedge association, non-tussock | Sedge | S | - | 2 | 80 | 5 | *Salix lanata* ssp. *richardsonii* ? 10<br>*Salix arctica* 5<br>*Salix reticulata* 10<br>*Dryas integrifolia* 5 | *Carex aquatilis* 80<br>*Carex* sp. (3-5 other species)<br>*Eriophorum angustifolium*<br><br>*Pedicularis sudetica* 10 | *Cetraria nivalis* .5<br>mosses 10<br>small red mushroom .1 | | Low vegetation, thick growth of sedges in low area around lake and small stream. | Caribou trails.<br>Scats: snow goose.<br>Many snow geese in area, flying in flocks, some on lakes with grey young. |

**TABLE 3.5**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**STEENSBY INLET POTENTIAL TRANSPORT ROUTE - VEGETATION DATA**

Print Mar/28/06 9:40:03

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]SR-veg

Rev'd Mar/22/06

| Plot | Date | Location | Plot Represents | Community | Association Code(1) | Tree Cover (%) | Shrub Cover (%) | Herb Cover (%) | Moss & Lichen Cover (%) | Tree & Shrub Species | Herb Species | Moss & Lichen Species | Rock-Lichen Species | Vegetation Notes | Wildlife Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VS006 | 7-Aug-05 | Near south end of road route to Steensby Inlet, near Sample site 2818. | Avens/heather association | Aven Heather | A | - | 2 | 40 | 20 | *Salix arctica* 10<br>Salix reticulata 15<br>*Vaccinium uliginosum* 15<br>*Cassiope tetragona* 15<br>*Dryas integrifolia* 15 | *Poa* sp. 2<br><br>*Luzula confusa* .1<br>*Polygonum viviparum* .1<br>*Stellaria monantha* .5<br>*Astragalus alpina* .5<br>*Oxytropis Maydelliana* 2<br>*Pyrola grandiflora* 15 | *Cetraria nivalis* 5<br>*Dactylina* sp. (glove) .2<br>*Alectoria* sp. (hair) 5<br>*Cladonia* sp. (pixy cup) 2<br>*Racomitrium lanuginosum* 5 | sunburst<br>map<br>rock tripe<br>jewel (small amounts) | Low heath tundra on boulders with frost scars. Frost boils with marine shells. | scats: goose<br>burrows: lemming<br>goose feathers |
| VS007 | 7-Aug-05 | Island in large stream near lake, near Sample site 2819. | Avens/heather | Aven Heather | A | - | - | 30 | 20 | *Salix arctica* 10<br>*Cassiope tetragona* 20<br>*Dryas integrifolia* 20 | *Carex* collinsii 15<br>(most sedges not in bloom)<br><br>*Luzula nivalis* .1<br>*Polygonum viviparum* .1<br>Silene acaulis .2<br>*Oxytropis Maydelliana* 2<br>*Pyrola grandiflora*<br>Unknown 1. | *Racomitrium lanuginosum* 15 | sunburst<br>map<br>rock tripe<br>black crustose | Low vegetation on boulders in island in stream, mostly moss, heather, avens and low sedges with some arctic willows. | goose sighting, scats and feathers |
| VS008 | 7-Aug-05 | Ravn River, about 0.5 k downstream from Angajurjuak Lake, near Sample site ___. | Sedge association, tussock | Sedge | S | - | 20 | 70 | 1 | *Salix lanata* ssp. *richardsonii* 5<br>*Salix reticulata* 5<br>*Vaccinium uliginosum* 2<br>*Cassiope tetragona* 2<br>*Dryas integrifolia* 5 | *Carex* sp. (4-5 species) 20<br>*Eriophorum angustifolium* 10<br>*Eriophorum vaginatum* 50 | *Cladina* sp. 1 | | Tussock assn. | |
| VS009 | 7-Aug-05 | Outlet of Mary Lake, into Mary River, near Sample site 2834. | Moss association, shoreline | Moss | M | - | 15 | 15 | 75 | *Salix* sp. (low oblong)<br>*Salix herbacea* (?) 5<br>*Dryas integrifolia* 10 | *Carex* sp. (2?) 10<br><br>*Polygonum viviparum* .5<br>*Oxyria digyna* 1<br>*Cerastium alpinum* .5<br>*Stellaria monantha* .5<br>*Potentilla nivea* .1<br>*Saxifraga oppositifolia* .5<br>*Saxifraga cernua* .5 | moss 75 | | Low vegetation on saddle between two lakes, low moss carpet with many small red-stemmed willows, small sedges. | Glaucous gulls with one fledged young, nested on nearby rock outcrop. |
| VS010 | 7-Aug-05 | Mary River, near Sample site 2834. | Avens/moss association | Aven Moss | A | - | - | 50 | 40 | *Salix* sp. (red stemmed) 10 | *Luzula confusa* 2<br>*Polygonum viviparum* .5<br>*Oxyria digyna* .5<br>*Silene acaulis* 1<br>*Potentilla nivea* .1<br>*Boletus* sp. .1<br>*Oxytropis Maydelliana* 1<br>*Pedicularis capitata .2*<br>*Saxifraga oppositifolia* .2 | *Cetraria nivalis* 10<br>*Dactylina* sp. (glove) 1<br>*Cladonia* sp. (pixy cup) 1<br>*Stereocaulon* sp. 2<br>*Racomitrium lanuginosum* 40 | bloodspot<br>sunburst<br>map<br>rock tripe<br>black crustose | Mats of Rhacomitrium and avens on thin soil on rocks (boulders). | scats: goose<br>gull |

**TABLE 3.6**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**2005 BASELINE VEGETATION REPORT**
**STEENSBY INLET POTENTIAL TRANSPORT ROUTE - SOIL AND LOCATION DATA**

Print Mar/27/06 15:24:33

M:\1\02\00181\02\A\Data\2005 Baseline Vegetation Data\[veg and soil tables_03-22_+-columns.xls]exp-veg

Rev'd Mar/22/06

| Plot | Date | Location | UTM zone | Latitude (North) | Longitude (East) | Elevation (meters) | Slope (%) | Aspect | Moisture* | Nutrients* | Substrate | | | | | Soil Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Organic Material (%) | Rocks (%) | Mineral Soil (%) | Bedrock (%) | Water (%) | |
| VS001 | 7-Aug-05 | Stream south of Nina Barr Lake, near Sample site 2838. | 17W | 0572609 | 7851124 | dnr | level | - | M | M | 50 | 50 | - | - | - | Many boulders and frost boils. |
| VS002 | 7-Aug-05 | Stream south of Nina Bang Lake, near Sample site 2838. | 17W | 0572592 | 7851091 | 95 | 15% | NW | H (seasonal) | L? | 80 | 20 | - | - | - | |
| VS003 | 7-Aug-05 | North end of large lake, in braided stream, near Sample site 2824. | 17W | 0575391 | 7846636 | 50 | level | - | L | L | 50 | 50 | - | - | - | Many water-laid boulders, boulder streams and circles. |
| VS004 | 7-Aug-05 | Near mouth of stream, near Sample site 2823. | 17W | 0577300 | 7844889 | 35 | - | - | - | - | 90 | - | 10 | - | - | |
| VS005 | 7-Aug-05 | Near Sample site 2817, margin of small stream flowing into small lake. | 17W | 0594942 | 7802735 | 25 | flat | - | - | - | 90 | 2 | - | - | 5 | Saturated soil. |
| VS006 | 7-Aug-05 | Near south end of road route to Steensby Inlet, near Sample site 2818. | 17W | 0598161 | 7807311 | 12 | - | - | - | - | 60 | 40 | - | - | - | |
| VS007 | 7-Aug-05 | Island in large stream near lake, near Sample site 2819. | 17W | 0592159 | 7817715 | 29 | level | - | - | - | 50 | 50 | - | - | - | |
| VS008 | 7-Aug-05 | Ravn River, about 0.5 k downstream from Angajurjuak Lake, near Sample site ___. | 17W | 0556885 | 2892782 | 127 | <1% | NW | H | M | 90 | - | - | - | 10 | Terraced bank of Ravn River, above high water mark. |
| VS009 | 7-Aug-05 | Outlet of Mary Lake, into Mary River, near Sample site 2834. | 17W | 0557367 | 7903281 | 159 | - | - | - | - | 80 | 15 | 5 | - | - | |
| VS010 | 7-Aug-05 | Mary River, near Sample site 2834. | 17W | 0557367 | 7903233 | 165 | <2% | SE | M | M | 80 | 20 | - | - | - | |

* Moisture and Nutrients: L = low, M = medium, H = high.

Baffinland Iron Mines Corporation
Mary River Project

Vegetation Baseline Study Report
2006 Vegetation Plots

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | Moisture | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | Wildlife notes | Archaeology notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | | |
| 06_V_044 | 04/08/2006 | 17W | 7916594 | 571339 | Mary River, upper reaches, sample site G0-09 river right at 5m stream | | | | | | 5 | SE | dry | | Thin vegetation on crest of small ridge/knob overlooking the confluence of stream and river. Mostly pricly sax and luzula confusa. | | | 20 | 10 | | | paparada .1 | | Rushes luzuconf 15 | Poa sp. 1; other grasses .5 | | saxitric 10 | cetrniva .2; cetrtile .1; Alectoria 10; glove .5 | asstd mosses 5 | Scats: Fox and hare Runs/trails and Den/burrows: lemmings | |
| 06_V_045 | 05/08/2006 | 17W | 7914407 | 557866 | Mary River Camp area, stream valley to SW of camp, ca. 300 m from camp | Moss community along stream | M | s | GF | s | level | | wet | Saturated, sandy bottom. | Thick growth of mosses in stream valley between glaciofluvial hills. Water is standing or only slowly flowing in this area. Sandy substrate. Lots of mastodon flower, yellow marsh saxifrage, golden saxifrage, and Calamagrostis, some Alopecurus alpina, and Pleuropogon sabineii. | | | 40 | 60 | | | melaapet 1; stellong 2; epilarct .2 ? | | Rushes luzuniva .1 | pleusabi .5; calapupu 10; alopalpi 5; | | chrytetr 5; saxicern 2; saxifoli 1; saxihirc 5 | | Bryum sp. (red) 2; Mixed mosses 60; green algae, filamentous | Arctic fox seen in this area, hunting in the hills and along the stream. | |
| 06_V_046 | 05/08/2006 | 17W | 7914417 | 557885 | Slope above stream valley to W of camp, sandy hills with patterned gr. on top (lacustrine?) | | | | | | 22 | W | mesic | | Thin veg. scattered plants on sand/gravel slope with abundant flowers at this time. | | | | | | potenive .1 | oxyrdigy 15; ceraalpi 10; melaaffi 1; melaapet .1; Stellaria 3; paparadi 1 | xytmayd .1; sagina ? .1 (photo); ranunc sp? .1 (photo) | Rushes luzuniva .1 | | cardbell .1; draba sp., several, 10 | saxicaes 2; saxicern 2 | | | Scats: ptar and lemming. Tracks: fox | |
| 06_V_047 | 05/08/2006 | 17W | 7914462 | 558017 | Mary River Camp area, between camp and weather station, on patterned ground. | Barrens, avens - xeric sedge association; glaciofluvial complex | B | ax | GF | | ~1 | sw | Mesic | Sandy/gravelly soil, mesic | Vegetation in frost fissures in patterned ground (high centre polygons). Fairly deep cracks in a glaciofluvial surface, plot located at the juncture of two cracks. | | tall 15, dw 30 | 25 | 15 | saliarct 5; salirich 15 | salireti 10; casstetr 25; dryainte 15 | oxyrdigy 1 polyvivi 0.1 minuartia 0.1 sileacau 5 stellaria 0.5 | pea 0.2; oxytmayd 0.5; mushroom 0.1 | Sedges carerupe 0.2; careatro 1; caresciu 1; Carex sp. 10 Rushes luzuniva 0.2 | | Draba sp. .2; eutredw .1 | saxicaes 0.1; saxioppo 0.2; saxitric 0.2; pedicapi 0.1 | cetrniva 2; cetrtile 0.1; cladina 0.1; stertome 0.1; thamsubu 0.1; glove 0.1 | racolanu 10; other moss 5 | Scats: lemming, caribou. Lemming runs, burrows. Ptarmigan feathers. | |
| 06_V_048 | 05/08/2006 | 17W | 7930216 | 527164 | Near road route-beside abandoned airstrip north west of camp on lakeshore | | | | | | flat | | | | Lacustrine Flat - heather and moss | | | 50 | 2 | 28 | | salix 10; casstetr 35; dryainte 2 | ceraalpi 1 | | Sedges carerupe 2 Rushes luzuniva 1 | | | armemari 2; pedihirs 0.1 | cetrniva 3; thamsubu 2; alectoria 2 | racolanu 25 | Scats: Goose, Caribou(old), Fox | |
| 06_V_184 | 12/08/2006 | 17W | 7914880 | 564886 | Deposit #1, foot of the mountain | | | | | | 10 | SE | mesic | | shrub (aven)forb on gentle slope | | | 50 | 30 | 20 | | salireti 10; dryainte 40 | polyvivi 5 | oxytmayd 15; 3 mushrooms | Sedges sedges 0.1 Rushes luzuconf 1 | alopalpi 5; | | saxifraga sp. 10 | lichens: cetrniva 5; cetrtile 1; alectoria 2 glove .1 0.1 | mosses 15; biol. crust 5 | sighting/heard: snowy owl | |
| 06_V001 | 01/08/2006 | 17W | 7914361 | 558109 | Mary River Camp, near weather station | Avens - xeric sedge association with some heather | B | ax | GF | | level | | dry | Dry, gravelly, flat high centre polygons with frost fissures between. | Thin vegetation, mostly avens, Carex rupestris, and heather on flat terrace near weather station. | | | 50 | 50 | saliarct 5; salirich 15 | casstetr 15; dryainte 15 | sileacau 5 | oxytmayd .1 | Sedges carerupe 10 | | | saxioppo .2 | cetrniva 1; cladonia .1; stertome .1; thamsubu .2; alectoria 2 | racolanu 10 | none | |
| 06_V002 | 01/08/2006 | 17W | 7914385 | 557940 | Mary River Camp area, near weather station, vicinity of stream valley to west of camp. | Heath tundra grading into sedge association near pond. | HT | c | GF | | > 5 | N | wet-mesic | Small swale above tiny pond. Sandy soil, saturated near pond. | Sedges and other plants in small swale above tiny pond in glaciofluvial terrace landform. This area is actually in a large frost fissure between high centre polygons. Dominants: Salix arctica, S. reticulata, Cassiope tetragona and Dryas integrifolia. | | | 50 | 50 | saliarct 10 | salireti 15 caaatetr 15 dryaninte 15 | oxyrdigy 2 sileacau 5 armemari 2 | pedisude .2 | Sedges careaqua .2 caremisa 2 Cottongrass Rushes luzuniva 5 | | | saxifoli .1 saxihirc 10 saxioppo 2 saxitric .1 | stertome 2 | | Caribou: old antler and bone pieces. | |
| 06_V034 | 04/08/2006 | 17W | 7912679 | 567299 | Mary River, near water sample site G0-03. | Sedge association, non-tussock, small sedge meadow. | S | nt | | | level | NW | wet | Soil saturated | Thick growth of sedges in flat area above Mary River, mounds of moss and reticulated willow, much sign of lemming activity. | | 2, 20 dwarf shrub | 70 | 10 | saliarct 2 salirich 2 | salireti 20 | polyvivi .5 melaapet .1 ranuniva .1 | pedihirs .1 | Sedges careaqua 50 Cottongrass erioangu .1 Rushes Grasses: calapurp 5 Other: equivari .2 | | | saxihirc 2 | stertome .1 peltapth .1 | | Active lemming runs, with scats, burrows, etc. Scats: goose, lemming, | |
| 06_V035 | 04/08/2006 | 17W | 7912650 | 567287 | Mary River valley, near water sample site G0-03, crest of small knob. | Lichen-rock association on boulders/cobbles, on small esker crest near stream (Mary River). | LR | b | EC | c | ~ 2 | S | mesic-dry | Most fines blown away, leaving only cobbles and boulders, sand under these rocks. | Scattered vegetation, mostly avens and xeric sedgeswith some heather, avens and heather in small mats. | | 10 | | | saliarct 2 salirich 2 | salireti 20 dryainte 1 | polyvivi .5 melaapet .1 | ranuniva .1 pedihirs .1 | Sedges careaqua 50 Cottongrass erioangu .1 Rushes | | | saxahirc 2 | stertome .1 Peltigera apthosa .1 | | Lemmings, many active lemming runs, dens, scats. | |
| 06_V036 | 04/08/2006 | 17W | 7912114 | 569369 | Mary River valley, near water sample site G0-05. | Lichen veneer on gravel? Unsure, atypical site. | LR | b | EC | s | ~ 1 | NW | mesic-dry | Gravelly substrate. | Thin veneer of lichens and mosses with a few vascular plants (Luzula, Cerastium alpinum, and heather) in small depression inshore from cobble ridge. Could be esker slope. | | 1 dw | 5 | 70 | | casstetr 1 | ceraalpi 1 paparadi .1 | | Sedges Cottongrass Rushes luzuconf 2 luzuniva 3 | | | | cetrniva 10 thamsubu .1 Alectoria sp..2 | racolanu 10 asstd sm moss 30 | small caribou antler | |
| 06_V037 | 04/08/2006 | 17W | 7913117 | 569400 | Mary River, near water sample site G0-05, at small side stream flowing into the Mary River | Sedge association in dry pond. | S | nt | | | < 1 | NW | wet | Soil covered with a black "biological crust". Wet soil, sandy with cobbles and boulders. | Black biological crust, least willow and Carex aquatilis. Odd association as it is very simple. Probably floods more than just during spring freshet. Plants recorded in old system. | | | 20 | 65 | | saliherb 15 | | | Sedges careaqua 15 Cottongrass Rushes | | | | stertome .1 | biological crust 70 brownish moss 15 | Scats: caribou, lemming | |
| 06_V038 | 04/08/2006 | 17W | 7913323 | 569414 | Mary River near sample site G3-01, shore above channel | | | | | | < 1 | W | mesic | Cobble ridge. | Thich growth of heather and mosses on flat ground. | | 55dw | 5 | 10 | saliarct 15 | saliherb 2 casstetr 50 dryainte 2 | oxyrdigy .1 sileacau .1 Stellaria .2 paparadi .1 | Oxytmayd 1 Alopec alpinees 1 pedihirs .1 | Sedges careaqua .1 Cottongrass Rushes | | | | cetrniva .1 stertome .2 thamsubu.1 glove .1 | asstd. mosses 10 | | |
| 06_V039 | 04/08/2006 | 17W | 7913322 | 569382 | Mary River valley, above Plot 038, near water sampling site, G3-01, on cobble ridge facing river. | Heather - moss association and possibly snowbank | | | EC | s | 20 | S | mesic | Soil covered with boulders and cobbles. Probably a fragment of an esker or drumlin. Likely too small to show up on aerial photos. | Thick growth of Racomitrium moss on slope in apparent lee of ridge. | | 10 | 5 | 55 | saliarct 5 | casstetr 5 | oxyrdigy .2 ceraalpi .2 sileacau .2 paparadi .2 | | Sedges Cottongrass Rushes luzuconf .2 luzuniva .1 | | | saxiooppo .2 | cetrniva 5 Cladina sp. 10 Cladonia sp .2 Alectoria sp. .1 Pertusaria dactylina .1 | racolanu 50 asstd other mosses 10 | Scats: hare Caribou antler | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_V040 | 04/08/2006 | 17W | 7913890 | 570401 | Mary River near site G0-07, right of river | | | | | | < 1 | SE | mesic | Cobble field. | Sparse vegetation, mostly dry mosses. | | 10dw | 5 | 35 | saliarct 3 | | ceraalpi .2 paparad 2 | | Sedges<br>Cottongrass<br>Rushes<br>luzuconf 1 | | | saxioppo .2 | cetrniva 2 cetrile .2 stertome 1 thamsubu .5 | asstd. mosses 30 | Scats: goose and hare. | |
| 06_V041 | 04/08/2006 | 17W | 7913887 | 570403 | Mary River valley, near water sample site G0-07, small knob above shore of river. | Lichen-rock vegetation on cobble crest in boulder field | LR | b | EC | c | level to domed | | dry | Sand under cobbles. | Scattered plants, including Potentilla vahliana, on grave top of knob, possibly remnants of a small esker or drumlin. | | 1 | 5 | 2 | | dryainte 1 | potevahl 2 | | Sedges<br>carerupe 2<br>Cottongrass<br>Rushes<br>Poa sp. 1 | | | saxitric 1 | | Biol. crust 2 | Scats: ptarmigan, hare Lemming burrows | |
| 06_V042 | 04/08/2006 | 17W | 7917660 | 571552 | Upper Mary River, Sample site G6-01, slope above river right | | | | | | 11 | w | mesic | | Relatively diverse veg. on slope above river | dw. 30 | | 20 | 15 | saliarct 1 | saliherb .5 salireti 1 casstetr 15 dryainte 15 | polyvivi .1 ceraalpi .1 sileacau 1 | | Sedges<br>careatro 2<br>Cottongrass<br>Rushes<br>luzuniva 1 | | | saxiniva .1 saxioppo .5 | cetrniva 1 cetrile 1 Cladonia .1 stertome .1 thamsubu .1 Alectoria .1 | | Scats: hare | |
| 06_V043 | 04/08/2006 | 17W | 7917746 | 571632 | Hill above 042 and sample site G6-01 above Mary River | | | | | | 5 | sw | mesic | | Vegetation around a frost boil or solid lobe (small). Rim is covered with heather and drya, some moss. Centre is not vegetated, only a few sm. willos, some c. rupestris, some saxi. oppos and sm avens. | dw 20 | | 10 | 10 | saliarct 10 | casstetr 10 dryainte 15 | polyvivi .5 sileacau .1 | oxy maydell 2 astr alpinus .2 | Sedges<br>careatro .2<br>Cottongrass<br>Rushes | | | | cetrniva .1 cetrile .1 stertome .1 thamsubu .2 | mosses 5 | 2 callings: Lapland longspurs | |
| 06_V049 | 04/08/2006 | 17W | 7917742 | 571560 | Upper Mary River near water sample HO-01 | | | | | | | | | | Wetland emergent plant community | | | | | | | ranu hyperboreas 0.2 | pleuropogon sabireii 3 | Sedges<br>Cottongrass<br>Rushes | | | | | | | |
| 06_V050 | 04/08/2006 | 17W | 7917814 | 571440 | Upper Mary River near water sample H1-01 | | | | | | 5 | | Wet | | in stream vegetation | | | | | | salireti 0.1 | oxydigy 0.5 melaapet 0.2 sileacau 0.1 ranuniva 0.5 | | Sedges<br>Cottongrass<br>Rushes | | | saxicaes 0.1 saxifoli 0.1 saihier 0.1 saxiniva 0.2 saxioppo 0.1 saxitenu 0.1 | | 15 | | |
| 06_V051 | 04/08/2006 | 17W | 7916502 | 565012 | Open Slope to E of Deposit 1 | | | | | | 2 | sw | mesic | | Thin veg cover only open slope, possibly not too long unglaciated. Dom are avens, poppies, purple kitsax | | 20 | 20 | 30 | saliarct 10 | salireti 0.5 dryainte 10 | oxyrdigy 10 ceraalpi 0.2 paparadi 5 | alopolpi 0.1 | Sedges<br>Cottongrass<br>Rushes<br>luzuconf 0.1 luzuniva 1 | | | saxicaes 0.1 saxicern 0.1 saxifoli 0.1 saxioppo 10 | cetrniva 0.1 stertome 0.1 thamsubu 0.1 glove 0.1 | asstd mosses 20 biol. crust 20 | | |
| 06_V052 | 04/08/2006 | 17W | 7916591 | 564924 | East end of the Mountain (Deposit 1) | | | | | | 5 | s | mesic | | boulder field with water seeping beneath vegetation between and on rocks | | | | | | | oxyrdigy 3 ceraalpi 0.1 papacorn 0.1 | calapurp 0.2 alopec alp 0.1 | Sedges<br>Cottongrass<br>Rushes | | | saxicern 0.1 saxiniva 0.1 saxioppo 0.1 | | cushion 0.4 | | |
| 06_V053 | 04/08/2006 | 17W | 7916308 | 564548 | East of the mountain on a lower slope | | | | | | 2 | s | wet-mesic | | Purple mountain saxifrage and sedge association sparse vegetation | | 10 | 25 | 45 | saliarct 15 | saliherb 0.1 salix dryainte 10 | oxyrdigy 5 ceraalpi 0.2 melaapet 0.1 minuartia 0.1 papacorn 0.2 paparadi 0.2 | alopecuris 0.1 | Sedges<br>careatro 15<br>Cottongrass<br>Rushes<br>luzuniva 0.1 | | | saxicaes 0.1 saxifoli 0.1 saxioppo 5 saxitenu 0.1 saxifraga 0.1 pedihirs 0.1 | cetrtile 0.1 | biol crust 45 | Scat: ptarmigan nearby | |
| 06_V054 | 04/08/2006 | 17W | 7916242 | 564101 | East slope of mountain, almost to the height of land north of Deposit 1 | | | | | | level | | | | poineer stage - sparse - tiny immature plants on saturated soil covered in boilogical crust Below blouder field. | | | 5 | 45 | | salix 0.2 | oxyrdigy 0.1 ceraalpi 1 papacorn 0.2 | calapurp 0.1 | Sedges<br>Cottongrass<br>Rushes<br>luzuniva 1 | | | saxicaes 0.1 saxicern 0.2 saxiniva 0.1 saxioppo 2 | cetrtile 0.1 | biol crust | Scats: Lemming Runs/Trails: Caribou | |
| 06_V131 | 09/08/2006 | 17W | 7912949 | 562121 | Mammal trapping area near proposed mine site. Small valley to W of road at trap #17. | | | | | | 5 | S | wet | | Riparian sedge and Rich. willow assn on hillside seep, some solifluction slope above plot. | | 25 | 50 | 10 | 1 saliarct; 15 salirich | 5 salireti; 1 casstetr; 5 dryainte | 0.1 pedicapi; 0.1 pedilana | | Sedges<br>35 careaqua; 15 careatro; 10 carememb; 5 carex sp.<br>Cottongrass<br>erioangu<br>Rushes | | | | 2 cetrniva | 1 cushion; 2 asstd mosses | | |
| 06_V133 | 09/08/2006 | 17W | 7912890 | 562138 | Mammal trapping area near proposed infrastructure. Ridge crest with small depression. (Trap 19) | | | | | | 10 | NW | mesic-dry | | Avens/heather/moss assn. on small slope | | 40 | 10 | 20 | 2 saliarct | 10 casstetr; 30 dryainte | 0.1 polyvivi; 0.1 pedicapi | | Sedges<br>0.1 carenard; 0.2 carescir; carex (rupestris)<br>Cottongrass<br>Rushes | | | 0.2 saxioppo | 5 cetrniva; 0.1 stertome; 0.1 thamsubu; 0.1 Alectoria | 15 racolanu | Mammal trap set here, not successful over 3 weeks. | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_V135 | 09/08/2006 | 17W | 7912809 | 562040 | Mammal trapping area by trap #23. Small valley between ridges | | | | | | 1 | N | mesic-dry | | Thin avens/ xeric sedge assn with some heather, some biol. crust. Heather increases as snow accumulation increases - very dry will have less. | | 35 | 15 | 20 | 0.5 saliarct | 15 casstetr; 20 dryainte | 0.1 toficocc; 0.1 polyvivi | | Sedges<br>15 carex (rupes.)<br>Cottongrass<br>Rushes<br>luzuconf | | | | | 20 racolanu; 5 other mosses | Trap set. | |
| 06_V137 | 09/08/2006 | 17W | 7912803 | 561943 | Infrastructure area/ mammal trap area (near, not at, trap #25), S of road | | | | | | 20 | SE | mesic-dry | | Dryas and curly sedge/moss veg on boulder slope with some grasses, fine, small, but not foa. | | 25 | 15 | 15 | 0.5 saliarct | 0.2 potevahl; 25 dryainte; casstetr (nearby) | 0.1 polyvivi | | Sedges<br>5 carenard; 0.5 carescir; 2 carex (rupestris)<br>Cottongrass<br>Rushes<br>0.5 luzuconf | | | 0.5 saxioppo | 5 cetrniva; 0.1 cladonia; 0.2 thamsubu | 15 racolanu; 0.5 other mosses | Sighting/heard; hare. Dens/Burrows; Lemming. | |
| 06_V139 | 09/08/2006 | 17W | 7912452 | 561995 | Top of small ridge in infrastructure area, with signs of raptor activity | | | | | | level and drops on sides | NW | mesic-dry | | Plot only, rest of ridge is relatively unvegetated. Thick growth of grasses, prickly saxifrage and avens on crest of ridge where raptors perch. | | 12 | 50 | 10 | 2 saliarct | 10 dryainte | 0.5 polyvivi; ceraalpi; 5 stellaria (longi) | | Sedges<br>Cottongrass<br>Rushes | | | | 1 cetrniva; 0.5 thamsubu; 2 Alectoria | 10 asstd. | Scats; hare (jaw(mandible)). | |
| 06_V141 | 09/08/2006 | 17W | 7912327 | 562566 | Infrastructure area/ mammal trap area (trap #10) to SW of deposit #1 | | | | | | 10 | SW | mesic-dry | | dryas/avens/sedge assn. on bouldery slope below sedge meadow. Sedges here are mixture of wet and dry species. Small wet areas in slope likely hold water earlier. | | 35 | 15 | 10 | 2 saliarct; 0.1 salirich (outside?); 2 salix (sp. arctophila) | 5 salireti; 5 vacculig; 5 casstetr; 20 dryainte | 0.1 toficocc; 0.1 polyvivi; 0.2 sileacau; 0.1 Stellaria; 0.1 pedicapi (rb); 0.1 pedihirs | | Sedges<br>3 careaqua; 1 careatro; 1 carememb; 5 carenard; 1 carescir; 5 carex (rapestris)<br>Cottongrass<br>Rushes<br>0.1 luzuniva | | | 0.5 saxioppo (fb) | 0.2 cetrniva; 0.2 cetrtile; 0.1 cladonia; 0.1 stertorne; 0.1 thamsubu; 0.2 Alectoria | 10 racolanu; 2 asstd mosses; 5 biol. crust | Scats; hare. Runs/trails; lemming. | |
| 06_V143 | 09/08/2006 | 17W | 7912474 | 562569 | Small pond in infrastructure area, near mammal trap #7 | | | | | | level | NW | wet | | Emergent assn. Emergent sedges in edge of small pond in cobble ridge complex. Mostly carex aquatilis with moss on ridges at pond edge. Most of the emerg. veg. is C. aquatilis. | | 20 | 25 | | 5 saliarct; 5 salirich (edge) | 5 salireti (edge); 2 casstetr; 5 dryainte | 1 polyvivi; 0.1 ceraalpi; 0.5 Stellaria; 0.5 pedicapi | | Sedges<br>25 careaqua (in water); 3 careatro; 2 carememb (edge)<br>Cottongrass<br>0.1 erioangu (more nearby)<br>Rushes | | | 0.5 saxihirc | 0.1 cetrniva; 0.1 thamsubu | 5 cushion (mosses); 15 pond algae; 10 pond mosses | Sighting/heard; pipits. Scats; hare. Heard; Lapland longspur. Runs/trails; lemming. | |
| 06_V145 | 09/08/2006 | 17W | 7912656 | 562903 | Near road infrastructure area, mammal trap area near trap. Bouldery slope above wetland. | | | | | | 22 | S then W | mesic | | Heather/avens assoc. on steep slope that prob. retains snow. Many old lemming burrows but no action. | | 60 | 10 | 5 | 1 salirich | 3 saliherb; 5 salireti; 40 casstetr; 15 dryainte | 5 oxyridgy; 1 polyvivi; 5 sileacau; 0.5 paparadi; 5 pyrogran; 1 pedicapi | | Sedges<br>0.5 carememb; 0.5 carenard; 0.2 carescir<br>Cottongrass<br>Rushes | | | 0.2 saxitric | 0.5 cetrniva; 0.1 cetrtile; 0.2 Cladina; 0.1 Cladonia; 1 stertorne; 0.5 thamsubu | 5 biol. crust | Hare. Lemming runs. | |
| 06_V147 | 09/08/2006 | 17W | 7912900 | 562439 | Small valley between road and deposit, traps 12/13 | | | | | | | | mesic-dry | | Snowbank assoc., or place where snow stays late. Sandy slope, possibly unstable for plants, with a diverse collection of species. | | 15 | 40 | 5 | 5 saliarct | 5 salireti; 1 potehypou; 2 potevahl; 5 casstetr; 0.5 dryainte | 15 oxyrdigy; 5 polyvivi; 5 ceraalpi; 0.5 melaaffi; 0.1 Minuartia; 15 sileacau; 0.2 Stellaria; 0.1 paparadi; 5 pedicapi | | Sedges<br>5 carenard; 5 carescir<br>Cottongrass<br>Rushes<br>10 luzuniva | | | 1 saxicern; 1 saxihier; 1 saxinivi; 1 saxitric | 5 cetrniva; 2 stertorne; 1 thamsubu; 0.1 glove | 0.1 very small mosses | Sighting/heard; many bumble bees visiting flowers. Arctic Fritillary. Caribou. Scats; goose. Heard; raven. Scats; hare. Runs/trails; lemming nest. | |
| 06_V149 | 09/08/2006 | 17W | 7913337 | 561490 | Infrastructure area/ mammal trapping area, near trap | | | | | | < 1 | NW | mesic-dry/dry? | | Thin mat of avens and xeric sedges on tundra between boulders, on gentle slope above small depression pond | | | | | 0.2 saliarct | 45 dryainte | 0.2 pedilana | | Sedges<br>5 careatro; 5 carenard; 10 carescir; 15 carex (rupestris)<br>Cottongrass<br>Rushes | | | 0.2 saxioppo | 0.2 cetrniva; 0.2 cetrtile; 0.1 thamsubu; 0.5 Alectoria | 0.1 small mosses; 0.2 biol. crust | | |
| 06_V150 | 10/08/2006 | 17W | 7934810 | 538553 | north rail route, stream bank(high) 28km NW of camp | | | | | | 3 | N | mesic | | avens herb(oxytropis maydelliana) | | 50 | 30 | 20 | | casstetr 20 dryainte 30 | | oxytmay 20 | Sedges<br>caremis 10 carex rupestris 5<br>Cottongrass<br>Rushes<br>luzuconf 1 | | | saxioppo 2 pedicapi 2 | cetrtile 1 | mosses 10 | scats: caribou | |
| 06_V151 | 09/08/2006 | 17W | 7913295 | 561461 | Area to W of road, near trap #28 | | | | | | > 1 | W | wet | | Small wetland, edge of small pond, with some standing water. Mostly a mixture of C. aquatilis and C. membranacea with some moss mounds. | | | | | 0.2 saliarct | | | | Sedges<br>70 careaqua; 10 carememb; 5 carex (sp., coll)<br>Cottongrass<br>Rushes<br>0.1 erioangu | | | | | 5 cushion | | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_V152 | 01/08/2006 | 17W | 7912329 | 562589 | Development area small mammal trap #7 | | | | | | 35 | S | mesic | | shrub (avens, heather) forb | | 70 | 10 | 10 | | casstetr 25 dryainte 40 | forbs 10 polyvivi 0.1 sileacau 2 | oxytmayd 2 | Sedges carex rectic 5<br>Cottongrass<br>Rushes luzuconf 2 | | | pyrogran 1 armemari 0.1 pedicapi 2 | | mosses 10 | sighting/heard: hare scats: hare, caribou dens/burrows: lemming | |
| 06_V153 | 09/08/2006 | 17W | 7913342 | 561149 | Below road in infrastructure area, above small pond, in bouldery inflow area | | | | | | | | wet-mesic | | Slope which receives drainage to small pond, slope is bouldery and area below is more bouldery, almost a boulder stream. | | 10 | 20 | 10 | | 5 saliherb; 5 salireti; 0.2 casstetr | 7 oxyrdigy; 5 polyvivi; 5 ceraalpi; 1 melaapet; 1 sileacau; 0.2 ranupygm (prost butt.) | | Sedges 2 careaqua; 2 carememb<br>Cottongrass<br>Rushes 1 luzuniva | | | 0.5 saxicaes; 5 saxicern; 1 saxihirc; 0.1 saxiniva; 2 saxioppo | | 5 mosses; 2 biol.crust | Scats; caribou. Scats; hare. | |
| 06_V154 | 01/08/2006 | 17W | 7912447 | 562646 | Between moutain and Mary River, mammal trap #8 | | | | | | 5 | N | dry | | Sparse vegetation - dry avens dominated | | 10 | 5 | 5 | | salix 1 dryainte 10 | sileacau 1 | | Sedges<br>Cottongrass<br>Rushes luzuconf 1 | | | saxioppo 2 saxitric 1 pedicapi 0.1 | | | sighting/heard: hare | |
| 06_V155 | 09/08/2006 | 17W | 7913366 | 560910 | Flat area to S of old camp, near mammal trap #39 | | | | | | level | | mesic-dry | | Thin veg. on gravel, flat area but plot loc. in small temp drainage channel that may follow a frost fissure. | | 45 | 35 | 20 | 5 saliarct | 40 dryainte | 1 toficocc; 0.1 polyvivi; 10 epillati; 0.5 pedicapi (small); 0.1 pedihirs; 0.1 pedilana | | Sedges 5 carenard; 0.5 carescir; 20 carex (rupestris)<br>Cottongrass<br>Rushes 1 luzuniva | | | 10 saxioppo | 5 cetniva; 0.5 Alectoria | 10 biol. crust | Caribou bone. | |
| 06_V156 | 01/08/2006 | 17W | 7912569 | 562819 | between mountain and Mary River, mammal trap #3 | | | | | | 2 | W | mesic | | avens sedge | | 30 | 30 | 15 | | salix 3 dryainte 30 | sileacau 2 | | Sedges<br>Cottongrass<br>Rushes luzuconf 25 | | | saxioppo 3 pedicapi 0.1 | lichens 10 | mosses 5 | scats: hare, caribou and ptarmigan sighting/heard: hare, st. weasel | |
| 06_V157 | 09/08/2006 | 17W | 7913354 | 560877 | Infrastructure area to W of road, flat area S of old camp | | | | | | level | | | | Thin, sparse veg. in tiny clumps or mats on gravel. | | 15 | 3 | 2 | | 15 dryainte | 0.1 sileacau | | Sedges 5 carenard; 3 carex (rupes)<br>Cottongrass<br>Rushes | | | 0.1 saxioppo | 0.2 cetrniva; 0.2 thamsubu; 1 Alectoria | small mats | Scats; hare. | |
| 06_V158 | 11/08/2006 | 17W | 7976405 | 503339 | Milne Inlet 82 km NW of Mary River Camp | | | | | | 0 | | dry | | avens herb(saxifrage) on exposed upper beach | | | | | | dryainte 20 | | oxytarct 5 | Sedges<br>Cottongrass<br>Rushes | | | saxioppo 5 saxitric 10 | | | | |
| 06_V159 | 09/08/2006 | 17W | 7913504 | 560727 | At road crossing of small stream infrast area, mammal trap area, small island on stream | | | | | | | | wet-mesic | | Thick sedges and rich willow and s. retic on small island in rocky stream flowing from W side of Dep. 1 | | 40 | 40 | 10 | salirich 20 | salireti 10 vacculig 5 casstetr 2 rhodlapp .5 dryainte 5 | polyvivi .5 | Oxyt mayd .1 pedicapi .1 | Sedges careaqua 20 careatro 5 carememb 10 carescir 5<br>Cottongrass erioangu 1<br>Rushes | | | | | str. mosses 10 | small char in stream | |
| 06_V161 | 09/08/2006 | 17W | 7913686 | 560471 | Infrastructure area, E of road, mammal trappin area, shoreline of small lake | | | | | | <1 | E | Wet | | Beach at end of small lake, with solfl. ridge at side of beach. Ridge is of moss with sedges and avens. Beach proper has sedges, few mosses, sid. lousewort | | 5 | 20 | 15 | saliarct 2 | salireti .2 dryainte 3 | toficocc .1 polyvivi .2 | Oxyt mayd .2 pedicapi 1 pedisude 2 | Sedges careaqua 10 carememb 5 carescir 5<br>Cottongrass<br>Rushes luzuniva 5 | | | | cetrniva .5 thamsubu .1 glove .2 | cushion .5 | caribou bone | |
| 06_V163 | 09/08/2006 | 17W | 7913921 | 559559 | infrastructure area S end of runway, against bane | | | | | | 40 | NW | wet-mesic | | Heather assn in lee of edge of lacustrine flat above small wetland | | 70 | 15 | 15 | saliarct 5 | salireti 15 casstetr 45 | oxyrdigy 10 polyvivi .2 sileacau 5 | oxyt mayd 10 pedicapi | Sedges carescir 5<br>Cottongrass<br>Rushes | | | saxihirc .5 saxitric 2 | cetrniva 1 thamsubu .1 | sm mosses 15 | Scats: hare | |
| 06_V185 | 12/08/2006 | 17W | 7914880 | 564886 | N rail rt, open slopes S of confluence, valley behind front ridge | | | | | | >1 | N | wet | | Sedge wetland behind ridge, small streams flow out of canyons and join sedges with moss mounds | | 10 | 40 | 5 | saliarct 2 | salireti 3 dryainte 5 | streambuttercup | | Sedges Carex sp (2-3)<br>Cottongrass<br>Rushes | | | | | cushion mosses | | |
| 06_V186 | 12/08/2006 | 17W | 7915006 | 564841 | foot of the mountain | | | | | | 20 | S | mesic | | boulder stream-veg between boulders very sparse | | 1 | 1 | 3 | | salix 0.3 casstetr 0.3 dryainte 0.3 | oxyrdigy 0.1 polyvivi 0.1 minuartia 0.1 | | Sedges<br>Cottongrass<br>Rushes | | | saxicern 0.1 saxioppo 0.5 | lichens 15 cetrilie 0.1 glove 0.1 | mosses 2 | scats: caribou and hare dens/burrows: lemming runs/trails: caribou | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_V188 | 12/08/2006 | 17W | 7915296 | 564886 | East foot/side of mountain 7km east of camp | | | | | | 5 | S | | | | | 40 | 15 | 30 | saliarct 5 | dryainte 35 | ceraalpi 0.1 | | Sedges sedges 5<br>Cottongrass<br>Rushes | | | saxioppo 5 | cetniva 2 cetrile 1 thamsubu 2 | racolanu 3 biol crust 15 | | |
| 06_V190 | 12/08/2006 | 17W | 7915466 | 565106 | one stream valley away east of mountain | | | | | | 5 | W | mesic | | recently glaciated-glacier 10m uphill pioneer community | | | 13 | 17 | | | oxyrdigy 2 ceraalpi 0.1 melaapet 0.1 minuartia 0.1 | | Sedges sedges 3<br>Cottongrass<br>Rushes luzuconf 0.1 | | | saxicern 2 saxioppo 5 | lichens 5 white foamy 4 | mosses 3 biol crust 10 | | |
| 06_V192 | 12/08/2006 | 17W | 7914739 | 565216 | South of mountain | | | | | | 5 | N | mesic | | sparse stony shrub(avens) sedge | | 30 | 10 | 30 | saliarct 5 | dryainte 25 | | | Sedges sedges 5<br>Cottongrass<br>Rushes luzuconf 1 | | | saxioppo 5 pedihirs 0.5 | cetniva 2 cetrile 3 thamsubu 3 | mosses 5 biol crust 15 | dens/burrows: lemming | |
| 06_V194 | 12/08/2006 | 17W | 7914577 | 565183 | South of mtn | | | | | | | | wet | | Stream(tiny) and surface flow between boulders moss dominant and herbs | | 5 | 15 | 40 | | salix 5 | melaapet 3 | poa 2 alopecuris 0.1 | Sedges sedges 5<br>Cottongrass<br>Rushes | | | saxicern 0.1 saxifoli 1 saxiniva 1 saxioppo 2 saxirivu 0.2 | | mosses 40 red moss 10 | | |
| 06_V196 | 14/08/2006 | 17W | 7913214 | 563487 | | | | | | | 10 | S | | | Shrub (avens heather) sedge | | 35 | 25 | 20 | | salireti 5 casstetr 15 dryainte 15 | oxyrdigy 5 polyvivi 0.1 | | Sedges sedges 20<br>Cottongrass<br>Rushes | | | | cetniva 5 cetrile 1 thamsubu 1 glove 3 | mosses 10 | | |
| 06_V198 | 14/08/2006 | 17W | 7913335 | 563915 | South foot of mountain | | | | | | | S | wet-mesic | | sedge moss herb | | 25 | 25 | 25 | | salireti 20 salix 2 casstetr 5 | polyvivi 5 sileacau 1 | oxytmayd 5 | Sedges sedges 10<br>Cottongrass<br>Rushes luzuconf 2 | | | pedicapi 2 | lichens 10 | mosses 20 | Trail/Runs: caribou | |
| 06_V202 | 14/08/2006 | 17W | 7916890 | 564051 | West slope of mountain | | | | | | | | Wet | | forbs - sparse | | | 12 | 3 | | | ceraalpi 1 melaapet 1 papacorn 2 paparadi 2 | alopecurs 1 | Sedges sedges 2 carex 2<br>Cottongrass<br>Rushes juncus 0.1 | | | saxicern 0.1 saxihirc 0.1 saxiniva 0.5 saxioppo 5 | | mosses 3 | | |
| 06_V204 | 14/08/2006 | 17W | 7916997 | 563957 | With slope of Mountain | | | | | | | | Wet | | | | 1 | 9 | 5 | saliarct 1 | | oxyrdigy 0.1 ceraalpi 0.1 | alopecuris 1 poa avctica 0.1 | Sedges sedges 2<br>Cottongrass<br>Rushes juncus 0.1 | | | saxicaes 0.1 saxiniva 1 saxioppo 5 | | sphagnum 5 | | |
| 06_V206 | 14/08/2006 | 17W | 7912307 | 561555 | Development area south of mountain | | | | | | 15 | N | dry | | sparse avens rock | | 12 | 3 | 20 | saliarct 2 | casstetr 2 dryanite 8 | | oxytmayd 0.1 | Sedges sedges 2<br>Cottongrass<br>Rushes | | | saxitric 0.1 | lichens 17 cetriniva 2 thamsubu 1 | mosses 3 | | |
| 06_V208 | 14/08/2006 | 17W | 7912210 | 561312 | development area | | | | | | 0 | | dry | | herbs - (sedge, saxitric) | | 3 | 7 | | | potevahl 0.1 dryainte 3 | | | Sedges sedges 4 carex 4<br>Cottongrass<br>Rushes | | | saxioppo 0.1 saxitric 3 | lichens 20 | | | |
| 06_V210 | 14/08/2006 | 17W | 7912478 | 561030 | development area | | | | | | 2 | S | Dry | | stunted shrub(avens) sedge | | 30 | 30 | 45 | | dryainte 30 | tofi 0.1 sileacau 3 | oxytmayd 1 | Sedges sedges 20<br>Cottongrass<br>Rushes | | | saxioppo 5 pedihirs 0.1 | cetniva 20 cetrile 2 thamsubu 1 | biol crust 15 | scat: caribou | |
| 06_V218 | 15/08/2006 | 17W | 7913476 | 563559 | S side of depos 1, near water line and pump on side of mtn. | | | | | | <1 | NW | dry | | Thin mats on gravel surface high centered polygons, ancient lacustrine terrace. Frost fissured have most ved tops an pretty base | | 30 | 5 | 5 | saliarct 2 | casstetr 15 dryainte 15 | | oxyt mayd .1 | Sedges carenard 5 Carex rupes 2<br>Cottongrass<br>Rushes | | | saxioppo 1 | cetnriva .5 cetrile .5 thamsubu .5 Alectoria 1 | few small mosses 2 | Sighting/heard: snow buntings (4birds) Scats: hare | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlfe notes | Archaeology notes |
| 06_V220 | 15/08/2006 | 17W | 7913600 | 563546 | Side of Dep. 1 below shoulder | | | | | | 20 | S | mesic | | Heather/avens on steep slope, fully veg among boulders | | 70 | 15 | | saliarct 5 | salireti 15 casstetr 40 dryainte 30 | oxyrdigy 2 polyvivi | oxyt mayd .1 pedicapi 5 | Sedges caremis 2 carememb (?) .1 carescir 2 Carex rupe 5 Cottongrass Rushes luzuconf 1 | | | | cetrniva 5 cetrtile .2 stertome .1 thamsubu .1 | mosses 15 | Scats: hare Sighting: small birds with white on tail pipits (3bathing in show from leak in waterline) | |
| 06_V221 | 12/08/2006 | 17W | 7914864 | 564879 | valley between dep 1 and 2 on proposed rd on conveyor system , slopes of dep 1 | | | | | | 10 | SE | wet | | seep on hillside with sedges | | 20 | 30 | 15 | saliarct 5 | salireti 10 dryainte 10 | oxyrdigy 2 polyvivi .1 melaapet 1 | | Sedges careatro 5 carememb 2 carescir 2 Carex 10 Cottongrass Rushes Juncun .2 | | | saxihirc .1 saxiniva .2 saxioppo 5 | | asstd 2 biol crust 15 | | |
| 06_V222 | 15/08/2006 | 17W | 7923756 | 563448 | E slope of mtn below deposit 1 in calcareous outcrops , m water lines to drills | | | | | | 30 | SE | mesic-dry | | Thin mats of avens and purple saxifrage amidst boulders and slabs of sandstone | | 30 | 10 | 5 | saliarct 2 | potevahl .1 dryainte 25 | polyvivi .1 astralp .1 | oxy mayd .1 | Sedges carenard 1 Carex rupes 5 Cottongrass Rushes | | | saxioppo 1 | cetrniva 1 stertome .1 thamsubu .2 Alectoria .5 | cushion 2 | scats: hare | |
| 06_V223 | 12/08/2006 | 17W | 7914970 | 564850 | Valley to S of Dep 1, near straem | | | | | | 10 | SE | mesic | | disturbed site due to natural causes, stream erosion and slippage | | 5 | 25 | 5 | saliarct 5 | salireti 5 | oxyrdigy 5 polyvivi 1 ceraalpi 1 melaapet .2 sileacau .1 paparadi 2 | poa 2 oxyt mayd .1 | Sedges caremis .1 Cottongrass Rushes luzuniva 2 | | | saxicaes 1 saxicern 2 saxioppo 5 | | small mosses 5 | snowy owl.. when landing. | |
| 06_V224 | 15/08/2006 | 17W | 7913758 | 563407 | Side of deposit below iron outcrop in scree slope | | | | | | 50 | | mesic-dry | | Mostly purple sax, sax tricus, some grasses, luzul, arctic willion. Thin splash of veg on steep slope of mostly iron ore, but iron ore has tumbled down over calcarous rock and sand/gravel when you move on the ore, the sand is there. | | | | | saliarct 5 | | ceraalpi arct 5 Minuartia .1 paparadi .5 | poa 2 | Sedges Cottongrass Rushes luzuniva 1 | | | saxicaes .2 saxicern .1 saxiniva .5 saxioppo 5 saxitric 10 | cetrniva .5 cetrtile .1 thamsubu .5 Alectoria .5 | racolanu 2 | | |
| 06_V225 | 12/08/2006 | 17W | 7915352 | 564900 | upper part of valley below dep 1 | | | | | | 10 | E | wet | | sedge assn on slope with boulder streams. Also mosses dryas on mounds, rocks pushing up under turf. | | | | | salirich 10 | salireti 10 dryainte 15 | polyvivi .2 ceraalpi 2 melaapet 2 | poa oxyt mayd 5 pedicapi .5 pedilana .2 | Sedges caremis 25 Cottongrass eriangu Rushes | | | saxihirc 2 saxioppo 5 | | asstd mosses 15 biol. crust 10 | run/trails: lemming sighting/heard: Lapland | |
| 06_V226 | 15/08/2006 | 17W | 7913863 | 563496 | Side of mtn below deposit | | | | | | 15 | S | mesic-dry | | Thin mat of veg. on exposed knob on side of mtn. Mostly Dryas but good showing of other species. sm gravel solifl lobes. | | | | | saliarct 1 | casstetr .2 dryainte 60 | polyvivi 5 paparadi .1 sm grass no fl. .1 | oxyt mayd .5 pedicapi .2 | Sedges caremis 2 carenard 1 Carex rupes 15 Cottongrass Rushes | | | saxioppo 5 | cetrniva .5 cetrtile .2 stertome .2 thamsubu .2 Alectoria .5 | brown moss 10 | Den/burrow: lemming | |
| 06_V227 | 12/08/2006 | 17W | 7915444 | 565122 | below ice field | | | | | | 15 | N | wet-mesic | | aven immediately below glacier (sm one), mostly rocks, sheet flow small plants. | | | | | | | oxyrdigy 2 Minuartia .1 sileacau .1 paparadi 2 | | Sedges Carex sp 2 Cottongrass Rushes luzuniva | | | saxicern 2 saxiniva .1 saxioppo 1 | stertome | mosses 2 biol. crust 15 | | |
| 06_V228 | 15/08/2006 | 17W | 7913653 | 563756 | Area below mtn. deposit 1, in open valley with stream | | | | | | 3 | SW | | | Moss assn. Thick layer of moss over boulders in stream valley with rooted veg. growing in moss | | 25 | 20 | 35 | saliarct 10 | salireti 15 | oxyrdigy 2 polyvivi .1 melaapet 2 | Alopecurus 1 Poa .5 | Sedges carememb 15 Cottongrass Rushes | | | saxihirc 5 saxiniva .1 saxioppo .5 | | sm mosses 25 cushion 10 | Sighting/heard: pipit calling, flying around | |
| 06_V229 | 12/08/2006 | 17W | 7914696 | 565246 | open slope across valley to E of dep 1 | | | | | | 5 | W | wet-mesic | | Tufts of Carex misandea on slope in space without boulders (most has boulders). Area between tufts is covered by biol. crust. | | 10 | 40 | 10 | saliarct 10 | salireti .5 casstetr 1 dryainte 5 | oxyrdigy .5 polyvivi 1 ceraalpi 2 melaapet .2 papacorn 1 | | Sedges caremis 30 Cottongrass Rushes luzuniva .5 Juncus .2 | | | saxihier .1 saxiniva 1 saxioppo 2 saxitenu .1 | cetrniva .5 cetrtile .5 stertome .1 thamsubu .2 glove 1 | biol. crust 25 | scats: caribou (old) | |
| 06_V230 | 15/08/2006 | 17W | 7913477 | 563959 | Slope below deposit 1 (to E), flat area above water supply | | | | | | 5 | W | wet | | Thick growth of S arctica sedges along and around a small stream. Base of moss with thick cover oc c. aquatilis, yellow march sax and s. arctica | | 20 | 50 | 70 | saliarct 20 | | ceraalpi .2 melaapt .5 | | Sedges careaqua 50 carememb 5 Cottongrass Rushes | | | | | str. mosses 70 | sighting/heard: pipits in area | |
| 06_V231 | 12/08/2006 | 17W | 7914596 | 565223 | slope opposite mine | | | | | | | | mesic | | Dryas and sedges on slope | | 31 | 15 | 30 | saliarct 5 | saliherb .5 salireti .2 casstetr 10 dryainte 15 | oxyrdigy 2 polyvivi 1 paparadi | poa .5 pedicapi .2 | Sedges caremis 10 Cottongrass Rushes luzuniva 2 Juncus biz .2 | | | saxicern 1 saxioppo 2 | cetrniva .5 cetrtile .1 stertome .2 thamsubu .1 | heather moss 10 biol. crust 10 other moss 10 | scats: hare | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_V232 | 15/08/2006 | 17W | 7913392 | 564092 | Slope opposite deposit 1 and across from water supply between 2 forks of mary river | | | | | | 7 | W | mesic-dry | | Thin cover of veg. on gravel and boulders | | | | | saliarct 15 | dryainte 35 | oxyrdigy .1 polyvivi .5 ceraalpi .2 sileacau 2 paparact 1 | pedicapi .5 pedihirs .1 | Sedges carenard 5 caresci 5 carex rupestris 20<br>Cottongrass<br>Rushes | | | | cetrniva .2 stertome 5 thamsubu .2 | | Scats: caribou (old); pipits | |
| 06_V234 | 15/08/2006 | 17W | 7913069 | 564286 | Steep slope above the miver river, downstream from the falls | | | | | | 50% | SW | mesic | | Naturally disturbed site. This plot was done in a landslide area, narrow slide down a steep slope to the river. There are large chunks of moss, rooted veg. and soil that have slid out of a concair depression. Variety of plants | | | | | saliarct 10 | salireti 20 | polyvivi B/C Stellaria longi B/C pyrogran .1 | Poa sp 5 oxyt mayd .2 | Sedges<br>Cottongrass<br>Rushes | | | | | mosses c=15 | pipits | |
| 06_V235 | 15/08/2006 | 17W | 7912936 | 563256 | Road to minesite, just below "rocky defile" | | | | | | 4 | SW | mesic | | Solid turf of avens, xeric sedges among large boulders | | | | | saliarct 10 | casstetr 15 dryainte 30 | oxyrdigy 5 polyvivi 2 | oxyt mayd 2 pedicapi 1 | Sedges carescir 5 Carex rupes 50<br>Cottongrass<br>Rushes | | | | cetrniva 2 Cladina 2 Cladonia .5 thamsubu .1 Alectoria 2 | racolanu 20 mosses 10 | Scats: hare and young hare | |
| 06_V236 | 15/08/2006 | 17W | 7913197 | 563967 | small stream below water supply for drills, in valley below ice pack/snowdrift | | | | | | level | | wet | | Lush veg. in small stream valley. Comb of riparian sedge and snowbank effect. Diverse grasses in stream channel mosses to sides | | | | | saliart 15 | salireti 10 | oxyrdigy 5 polyvivi .5 ceraalpi .2 melaapet .5 Stellaria 5 | Allopecurus 5 Arclagrostis 10 Poa 10 | Sedges careaqua 10 carememb 5<br>Cottongrass Carex coll 5<br>Rushes luzuniva 1 | | | saxicern 10 saxihier .5 saxihirc 10 saxiniva .5 saxuruvu .5 | | mosses 50 Bryum 10 | Scats: hare Nest and dens/burrow: lemming skull | |
| 06_V237 | 15/08/2006 | 17W | 7914541 | 559898 | Top of ridge between flat area/camp and deposit 1 at head of sm canyon that enters flat opposite old camp/air | | | | | | 5 | W | mesic-dry | | Thin veg. over rocks and gravel mostly avens, xeric sedges, herbs and lichens. Veg. is patchy and gravel sand are exposed in places. This place is subject to strong wind erosion | | 30 | 20 | 5 | saliarct .5 | dryainte 30 | | oxyt mayd .5 astr alpina 1 pedicapi 1 | Sedges carenard 10 carescir 2 Carex rupes 15<br>Cottongrass<br>Rushes | | | saxioppo .2 | cetrniva .5 cetrtile .1 stertome 2 thamsubu 1 Alectoria 2 sunburst 2 | small mosses .5 | | |
| 06_V238 | 15/08/2006 | 17W | 7914508 | 559627 | above top of small canyon opposite the dump | | | | | | 2 | N | mesic-dry | | Heather/avens and xeric sedges. Uniform cover of veg. c small depression in slope. | | | | | saliarct | casstetr 30 dryainte 25 | oxyrdigy 10 | oxy mayd 2 pedicapi .5 pedilana .5 | Sedges careatro mis 5 carescir 5 Carex rupes 10<br>Cottongrass<br>Rushes luzuniva 2 | | | | cetrniva 1 cetrtile 1 stertome .5 thamsubu .1 glove 1 | sm mosses 1 biol. crust 5 | scats: ptar (old), hare (old) | |
| 06_V243 | 14/08/2006 | 17w | 7913300 | 563448 | slope of dep. 1 below dep | | | | | | 5 | SW | mesic | | relatively lush veg. on boulders slope rich willow, avens raconiti moss, sedges and heather | | 35 | 15 | 30 | saliarct .5 salirich 20 | salireti 2 casstetr .5 dryainte 20 | | oxyt mayd 1 pedicapi .5 | Sedges caremis 2 carememb .2 carescir 5<br>Cottongrass<br>Rushes | | | | cetrniva 2 Cladina .5 Cladonia .2 thamsubu 1 glove .5 | racolanu 15 heather moss 5 other mosses 5 | caribou bone, chewed, fresh clumps of unidentifiable hair | |
| 06_V245 | 14/08/2006 | 17W | 7913459 | 563416 | hillside below dep.1 in small drainage area under rocky ridge | | | | | | 10 | S | wet mesic | | partly snowbank veg in protected corner on hillside | | | | | saliarct 5 | saliherb 15 salireti 25 casstetr 25 dryainte 5 | oxyrdigy 10 polyvivi 5 ceraalpi 1 melaapet .2 sileacau .5 Stellaria sp .2 | oxy mayd 2 grass 2 pedicapi 2 | Sedges caremis 2 carescir 5 Carex sp coll 5<br>Cottongrass<br>Rushes luzuniva 2 | | | saxicern .5 saxioppo .5 | cetrniva 2 cetrtile .2 stertome 1 thamsubu .1 | mosses 5 | Scats: hare, ptar | |
| 06_V247 | 14/08/2006 | 17W | 7916779 | 564051 | Upland to E of dep. 1 | | | | | | 2 | S | wet | saturated and hard to walk on | arean not long out from under ice. upland sax oppos/papaver assn, sparse veg., biol crust, diverse plants | | | | | saliarct 5 | | | poa .5 | Sedges<br>Cottongrass<br>Rushes luzuniva 10 juncus | | | saxicaes .5 saxicern 1 saxiniva 5 saxioppo 10 saxitric | cetrniva .2 stertome 5 | star moss | | |
| 06_V249 | 14/08/2006 | 17W | 7916979 | 563893 | top of second watershed, ridge to E of dep 1 | | | | | | 1 | NE | wet mesic | | crest of watershed. isol plants | | | | | | | oxyrdigy 1 ceraalpi 1 papacorn .5 paparadi .5 | | Sedges<br>Cottongrass<br>Rushes | | | saxicaes .5 saxicern 1 saxiniva 2 saxioppo 5 | | small mosses 5 | | |
| 06_V251 | 14/08/2006 | 17W | 7912303 | 561526 | feats to SW of dep 1 rail turn around a small pond in cobble ridge | | | | | | level | | wet | | riparian or pond edge, rich willows to 20cm at edge of pond small mounds with sedges solidified ridge at end o pond. moss mounds with heather and dryas | | 40 | 25 | 15 | saliarct 5 salirich 15 | salireti 15 casstetr 5 dryainte 10 | polyvivi .5 sileacau 10 armemari 2 | pedilana .1 | Sedges caremis 10 carebige 1 carememb 2 carescir 2<br>Cottongrass<br>Rushes | | | saxioppo 2 | cetrniva .5 cetrtile Cladina .5 stertome .2 thamsubu .2 | mosses 15 biol crust 15 | scats: caribou | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_V253 | 14/08/2006 | 17W | 7912196 | 561432 | possible train turn around | | | | | | 2 | NW | mesic-dry | | flat/slight slope terrace with frost fissures, plants growing in fissures | | | 20 | 10 | | | ceraalpi .2 | poa .1 | Sedges carex rupes 10<br>Cottongrass<br>Rushes | | | saxitric 15 | cetrniva .1 cetrtile .1 thamsubu .1 Alectoria .2 | sm mosses 5 | hare seat caribou upper max | |
| 06_V255 | 14/08/2006 | 17W | 7912450 | 560985 | train turn around | | | | | | 20 | W | wet mesic | | snowbank ass mon NW slope. mixture of species inc. willows, dryas, sedges, heather, below clear heather zone | | 35 | 20 | 15 | saliarct 5 | saliherb 10 salireti 10 casstetr 20 dryainte 10 | oxyrdigy 1 polyviv .5 sileacau 15 | pedicapi 10 pedilana .1 poa .2 | Sedges carememb 2 carescir 2<br>Cottongrass<br>Rushes luzuniva 2 | | | saxicern 2 saxihirc .2 saxitric .5 | cetrniva .5 Cladina 2 stertome .5 thamsubu .1 glove 10 | mosses 20 biol crust 10 | caribou trail | |
| 06_V257 | 14/08/2006 | 17W | 7917790 | 550513 | N of mary river camp, rd.rt near 1k with peninsula under rimrock, across valley from yellow sand ridge | | | | | | 3 | NE | | | odd assn: moss hummocks or tussocks with luzula hierchloe | | 5 | | | saliarct 2 salirich 2 | salireti 2 casstetr 1 dryainte 3 | ceraalpi .2 Stellaria 5 paparadi .2 | poa 2 | Sedges<br>Cottongrass<br>Rushes luzuconf | | | saxihier .2 saxiniva 1 | cetrniva 1 cetrtile .1 Cladina 10 Cladonia .1 stertome .1 thamsubu .1 Alectoria .5 | moss carpet 75 | scats: caribou, goose | |
| 06_VN 057 | 05/08/2006 | 17W | 7935517 | 526514 | Norh end of Lake north of airstrip adjacent to road | | | | | | flat | | dry | | thin mat of veg on gravelly slope sedge avens | | 25 | 50 | 5 | saliarct 5 | casstetr 3 dryainte 15 | | | Sedges careatro 20 carex 30<br>Cottongrass<br>Rushes | | | saxiaizo 10 saxioppo 2 pedilana 0.1 | cetrniva 2 cetrtile 2 thamsubu 0.5 | | funnel web spider | |
| 06_VN 174 | 11/08/2006 | 17W | 7966495 | 513149 | confluence of Philips creek and tributary 69 km NW of camp | | | | | | | | dry | | | | 17 | 3 | 30 | | dryainte 17 | | | Sedges cupertris 1<br>Cottongrass<br>Rushes | | | saxioppo 2 | thamsubu 5 | | | |
| 06_VN003 | 02/08/2006 | 17W | 7920330 | 549994 | Small lake about 10 k N of camp, E side, terrace above stream. | Avens/sedge association on lacustrine terrace | AS | | | | level | | dry | Gravelly soil with cobbles and boulders. Exposed open terrace with fines removed by wind. | Mostly a mixture of avens and curly sedge plus some additional sedges (collected). | | 7 | 2 | 2 | saliarct .1 Salix .1 (coll.) | potevahl .1 dryainte 7 | slieacau .2 saxioppo .1 | | Sedges carerupe 2 Carex sp. 1<br>Cottongrass<br>Rushes | | | | cetrniva .1 stertome .1 thamsubu .1 Alectoria .1 | asstd small mosses 2 | Scats: hare (old) | |
| 06_VN004 | 02/08/2006 | 17W | 7920327 | 550046 | Small lake about 10 k N of camp, E side, above small stream, near VN003. | Riparian association, plus avens/xeric sedge assn on lacustrine terrace | R | w | LT | | level | | wet-mesic | | Lower terrace above small stream, probably holds snow until late in summer. Lots of Richardson's willow, reticulated willow, sedges, a few grasses, and some forbs. Some standing water nearby, not in plot. Isolated boulder emerging from ground, vegetation on top. Some Dryas. | - | 80 | 5 | 10 | saliarct 05 salirich 50 | salireti 25 vacculig 05 casstetr 05 dryainte 01 | oxyrdigy .5 polyviv 1 Stellaria .5 epilat nearby pyrogram .2 Sagina ? .1 (lacks flowers) | oxytmayd .1 pedicapi .2 | Sedges careaqua 05 caremisa .2<br>Cottongrass erioangu .1 eriophorum .2 sgl fl, nt eriovagin ? .2 sgl fl, tussock<br>Rushes luzuniva .1 coll | | | saxihirc .2 | cetrniva .1 | asst'd moss 10 | pipits (seen and heard nearby) Scats: goose | |
| 06_VN005 | 02/08/2006 | 17W | 7920269 | 549980 | Small lake about 10 k N of camp, N side of small stream, below Plot 003 | Heather/dwarf shrub assn. | HT | c | LR | r | 20 | S | wet-mesic | Bedrock outcrops and fractured bedrock with vegetation between, also with lemming runs/burrows, etc. | Possible heather/dwarf shrub association with a variety of forbs and sedges. | - | 80 | 5 | | saliarct 5 | salireti 5 Salix sp. .1 casstetr 55 dryainte 15 | oxyrdigy 2 polyviv .5 sileacau .1 Stellaria .1 | oxytmayd 5 | Sedges caremisa .5 carescir 1<br>Cottongrass<br>Rushes luzuconf .1 grasses .2 Hierochloe .2 | | | saxioppo .2 pedicapi 2 | cetrniva 10 cetrtile .1 thamsubu .1 | asst'd mosses 5 | Scats: lemming Lemming nest, latrines, runs and burrows. No cuttings, do not think these are active in 2006. Arctic fritillary butterfly. | |
| 06_VN006 | 02/08/2006 | 17W | 7920333 | 549942 | Small lake about 10 k N of camp, NW side of rocky ridge where Plot VN003 is located. At base of W-facing slope. | Snowbank association | SB | | | | < 1 | W | wet | Felsenmeer at base of slope, with soil amidst rocks. | Clearly a snowbank community extending out about 2 m from base of slope. High diversity of species, blooming late. | - | 10 | 30 | 20 | | saliherb 10 casstetr 10 | oxyrdigy 10 ranupygm 15 | pedicapi .2 pedihirs .1 near | Sedges<br>Cottongrass<br>Rushes alopecurus alpinus .1 | | | saxicaes .1 saxicern 2 saxiniva .1 saxirivu 1 Saxifraga sp. .2 (young plants) | | asst'd mosses 20 | Scats: lemming (old) Lemming burrows, not currently active | |
| 06_VN007 | 02/08/2006 | 17W | 7927300.66 | 543985.74 | North rail route, to E of Deposit 4. | Dwarf shrubs (heather and avens) on upland with boulders, some of foliated sandstone. | HT | c | B | ax | level | | dry | Most loose soil has been blown away, leaving pebbles to boulders. | Thin vegetation, mostly heather and avens, on upland with boulders, some of foliated sandstone. | - | 30 | 10 | 10 | saliarct 1 | salireti 2 casstetr 15 dryainte 15 | polyviv .1 sileacau .2 | pedilana .1 oxytmayd 1 | Sedges carerupe 5 Carex sp. .1<br>Cottongrass<br>Rushes luzuconf .1 | | | saxioppo .5 | cetrniva 1 cetrtile 2 stertome 1 thamsubu .5 Alectoria 1 dactarct .1 | racolanu 5 sm. mosses .5 biol crust 1 | Scats: caribou (old) | |
| 06_VN008 | 02/08/2006 | 17W | 7927343.09 | 543859.55 | North rail route, to E of Deposit 4, small wetland to NW of plot 007. | Wetland, emergent sedge assn. in edge of small pond | S | e | | | level | | wet | Saturated soil | Emergent sedge association in edge of small pond, several sedge species in about 10-15 cm of water. One rock in plot has several plant species on it, but is atypical. | | 0.5 | 65 | 2 | saliarct .5 (on rock) | | melaapet .1 (on rock) | | Sedges careaqua 5 Carex sp. 40 (about 3 species, coll.)<br>Cottongrass<br>Rushes | | | saxihirc .1 | | mosses 2 (on rock) | Scats: goose Wolf spiders | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | Wildlife notes | Archaeology notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | | |
| 06_VN009 | 02/08/2006 | 17W | 7927381.35 | 543718.89 | North rail route, slope above small valley. | Heather and avens association on slope with embedded boulders and cobbles. | | | | | 5 | NE | mesic | Gravelly, cobbly substrate, well-drained, N-facing, may accumulate snow. | Thin heather and avens plus curly sedge and yellow oxytrope on slope. | - | 35 | 12 | 25 | saliarct 1 | casstetr 15 dryainte 20 | sileacau 1 | oxytmayd 5 | Sedges caremisa 5 carerupe 2 Cottongrass Rushes | | | saxioppo .1 | cetrniva 5 cetrlle .2 Cladonia .1 thamsubu .2 | racolaun 10 biol crust 10 | Scats: caribou (old). Lemming dens/burrows | |
| 06_VN010 | 02/08/2006 | 17W | 7933234.29 | 540271.92 | North rail route, open area to NE of Deposit 4. | Heather/avens/curly sedge assn. in area with many boulders and possibly calcareous bedrock. | | | | | < 2 | NW | dry | Scattered erratic boulders and slabs of sandstone, may be bedrock. | Thin layer of vegetation on rocky substrate on ridge crest. Mostly heather, avens, and curly sedge. Lots of yellow oxytrope in bloom. | - | 20 | 15 | 10 | saliarct .5 | salirebi 2 casstetr 10 dryainte 10 | | oxytmayd 10 pedicapi .1 | Sedges caremisa 5 carerupe 5 Cottongrass Rushes luzuniva 1 | | | saxioppo 1 | cetrniva .5 cetrlle .1 stertome .5 thamsubu .1 Alectoria sp. .2 | racolanu 5 | Scats: goose, caribou (old). Lemming dens/burrows. | |
| 06_VN011 | 02/08/2006 | 17W | 7933319.59 | 540135.49 | North rail route, open area to NE of Deposit 4, gentle N facing slope. | Wetland, moss and sedges | | | | | level | - | wet | Saturated, standing water, solifluction ridges. | Large open swale on gentle slope facing N, with standing water. Dense growth of sedges and mosses. | - | - | 40 | 30 | | | ceraarct .1 melaapet 1 | | Sedges Carex sp. 30 (likely Careaqua) Eriophorum .2 (sgl fl, non-tuss) Cottongrass Rushes | | | saxicern 2 saxifoli .2 saxihirc 2 | | asst'd mosses 30 | Scats: goose | |
| 06_VN012 | 02/08/2006 | 17W | 7933486.32 | 540127.11 | North rail route, open area to NE of Deposit 4, N-facing slope above bedrock outcrops. | Heather, avens, and xeric sedges on slope with boulders. | | | | | 5 | N | mesic | Many boulders, some sandstone bedrock outcrops, foliated/shattered. | Relatively rich vegetation on slight slope with lots of boulders, some sandstone bedrock. Heather, avens and curly sedge dominant. | | 30 | 15 | 10 | saliarct 3 | salirebi 5 casstetr 20 dryainte 10 | polyvivi .5 sileacau .5 | oxytmayd 2 | Sedges caremisa 2 carerupe 5 Cottongrass Rushes | | | saxioppo .1 Saxifraga sp. .1 (coll.) Likely Saxifraga rivalis, young plant. | cetrniva .2 cetrlle .1 stertome .2 thamsubu .5 dactarct .2 | racolanu 10 | Scats: goose | |
| 06_VN013 | 02/08/2006 | 17W | 7936868.06 | 536187.57 | North rail route, open area to NE of Deposit 4, esker to W of rail route in large open valley. | Esker complex, crest | EC | c | | | level, ridge crest | | dry | Cobbly crest of small esker system running S-N in wide valley. | Thin vegetation on crest of esker, mostly avens and Oxytropis arctobia, with some prickly saxifrage. | | 20 | 20 | 10 | | dryainte 20 | Minuartia sp. .1 | oxytnigr 15 (Oxytropis arctobia) oxytmayd 1 pedicapi .1 | Sedges Carex sp. 2 (prob. C. nardina) carerupe 2 Cottongrass Rushes | | | saxioppo .1 saxitric 5 | cetrniva .2 cetrlle .2 | asst'd small mosses 5 | Scats: hare, fox (small, but larger than weasel scats, twisted, hair incl.) "Bird stones" on top of this esker. | |
| 06_VN014 | 02/08/2006 | 17W | 7936923.8 | 536182.71 | North rail route, open area to NE of Deposit 4, esker to W of rail route in large open valley. | Disturbed site, enriched area, | EC | c | DS | bs | level | | dry | Cobbly crest of esker with some large stones, one of which is used as a perch for raptors. | Disturbed/enriched site, with lush growth of grasses, avens, and mouse-eared chickweed on small mound with base of mosses. Manuring effect plain. | | 20 | 30 | 20 | | dryainte 15 | ceraalpi 30 Minuartia 1 | | Sedges carerupe .2 Carex sp. .2 Cottongrass Grasses(coll) 15 Rushes | | | saxioppo .2 | cetrniva .2 cetrlle .2 thamsubu .1 Alectoria .1 | Mosses 10 | Scats: hare, weasel, fox Pellets of small raptor, mostly with lemming bones included (jaeger?)Do peregrines here ea lemmings? | |
| 06_VN015 | 02/08/2006 | 17W | 7937273.12 | 536112.53 | North rail route, open area to NE of Deposit 4, esker to W of rail route in large open valley, W side of esker, lee slope. | Esker complex, lee slope, snowbank association. | EC | s | SB | | 30 | NW | seas high, or mesic dry | Seasonally wet when snow is present/melting, then likely mesic-dry after snow is gone. | Snowbank association on NW (lee)-facing slope with considerable diversity: heather, avens, capitate lousewort, Oxytropis arctobia, prickly saxifrage. | | 20 | 30 | 5 | saliarct .5 | casstetr 5 dryainte 20 | polyvivi 2 | oxytnigr 2 (Oxytropis arctobia) some blooming pedicapi 5 (blooming) | Sedges Cottongrass Grasses: .5 Rushes | | | saxioppo .2 saxitric 1 | cetrniva 1 cetrlle .5 thamsubu .2 | mosses 5 | Lemming burrows and runs with scats, prob. active, on slope below plot. On lake to east of esker: long-tailed duck with single duckling. Juvenile shorebird, likely Baird's sandpiper. | |
| 06_VN016 | 02/08/2006 | 17W | 7937336.82 | 536114.57 | North rail route, open area to NE of Deposit 4, esker to W of rail route in large open valley, crest of esker. | | EC | c | DS | bs | level, crest | | dry | Most fines blown away, leaving only cobbles and boulders except where grass protects and holds sandy soil. | Disturbed site on top of esker, with clumps of grass, prickly saxifrage, and Cerastium. | | 10 | 70 | 10 | salirich 2 | dryainte 10 | ceraalpi 30 | | Sedges Cottongrass Grasses 20 Rushes | | | saxitric 30 | cetrniva .5 Cladonia .1 thamsubu .1 | | Glaucous gulls (sighting) Feathers: snowy owl, r-b merganser Scats: weasel, lemming Pellets: raptors (likely rough-legged hawk, perhaps snowy owl Lemming burrows | |
| 06_VN017 | 03/08/2006 | 17W | 7944640 | 523225 | N road route, Philip's Creek, near water sample site N1-53, slopes above river. | Avens/purple saxifrage on limestone slope | | | | | 5 | NW | dry | Wide valley with deep stream channel, stream flowing north, all limestone gravel slopes. | Scattered mats of avens and purple saxifrage on open exposed limestone slope, mostly gravel. Only a few plants. | | 10 | 2 | | saliarct 1 | dryainte 8 | | | Sedges Cottongrass Rushes | | | saxioppo 2 | | thamsubu .1 | Pacific loons, pair, flying upstream, calling. | |
| 06_VN018 | 03/08/2006 | 17W | 7948783 | 521830 | N road route, small side stream flowing into Philip's Creek, near water sample site N1-050. | Wetland, sedge assn on solifluction lobe. | | | | | 3 | N | wet | Rocky soil, lots of gravel, biological crust. Peat ridge at edges of lobe. Rocks moved with the lobe. | Sedges purple and yellow mountain saxifrage on solifluction lobe below hillside. Cryoturbation present. | | 10 | 40 | 30 | saliarct .2 | dryainte 10 | oxyrdigy .2 polyvivi .1 melaapet .1 Stellaria sp. .1 epillati .2 (nearby) | pedilana .2 | Sedges careaqua .1 caremisa 5 Carex sp. .2 Cottongrass Rushes | | | saxiaizo 15 (blooming) saxihirc .1 | | | Lapland longspurs, heard/seen, flying/calling. | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | Moisture | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | Wildlife notes | Archaeology notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | | |
| 06_VN019 | 03/08/2006 | 17W | 7964133 | 514990 | N road route, wide valley in graben, river right, floodplain of Philip's Creek, near water sample site _____. | Riparian, Richardson's willow and sedges. | R | | | | level | | wet-mesic | Seasonally inundated. | Richardson's willow and sedges with small moss mounds being colonized by heaths. | | 15 | 75 | 10 | saliarct 2 salirich 15 | salireti 2 Saliv sp. 1 casstetr 5 on mounds dryainte 10 on mounds | polyvivi .1 | pedicapi .5 pedisude 2 | Sedges careaqua 10 caremisa 10 Carex sp. 2 (coll) erioangu 2 Cottongrass Grass: 15 poss: arctlati Rushes | | | saxihirc .1 | cetrniva .1 cetrtile .1 thamsubu .1 dactarct .2 | moss mounds 10 | Scats: lemming (old); goose. | |
| 06_VN020 | 03/08/2006 | 17W | 7965307 | 515248 | N road route, W side of stream flowing into Philip's Creek from E, sample site _____. | Avens/ purple saxifrage/curly sedge association on level floodplain of creek. | | | | | level | | mesic-dry | Gravelly/sandy soil. | Sparse vegetation on level floodplain of side creek. Mostly consists of purple saxifrage, avens, curly sedge, yellow mountain saxifrage, and Cetraria tilesii. | | 10 | 30 | 10 | | casstetr .5 dryainte 10 | polyvivi.2 | oxytmayd 5 pedilana .1 | Sedges caremisa .1 Cottongrass Rushes | | | saxiaizo 10 saxioppo 5 | cetrniva 10 cetrtile 10 thamsubu 1 | Small mosses 2 | Scats: goose, caribou (old). Some caribou bones nearby. | |
| 06_VN021 | 03/08/2006 | 17W | 7966780 | 511840 | N road route, floodplain of Philip's Creek, near sample site ___ below high rimrock. | Thin heath tundra (heather, rhododendron, blueberry, and avens) on dry site near river and small side stream. | HT | | | | level | | mesic-dry | Dry site with large boulders. | Heath tundra with curly sedge, avens, and purple saxifrage around boulders, some large, on terrace above river. First appearance on North routes of Rhododendron lapponicum. | | 30 | 20 | 5 | | vacculig .5 casstetr 10 rhodlapp .2 dryainte 15 | toficocc .2 sileacau .1 | oxytmayd 2 oxytnig .5 (O. arctobia) pedicapi .1 | Sedges carerupe 20 Carex sp. .2 Cottongrass Rushes | | | saxioppo 5 | cetrniva .3 cetrtile .1 thamsubu .1 | racolanu 1 other mosses 2 | Scats: goose, caribou (old). Sighting/heard:Wolf spiders and Funnel web spider | |
| 06_VN022 | 03/08/2006 | 17W | 7966760 | 511958 | N road route, Philip's Creek, near water sample site ____, edge of river | Riparian association, sedges and Richardson's willow, moss substrate. | R | w | | | < 1 | NW | wet-mesic | Evidence of seasonal overflow, soil wet. | Riparian association in stream floodplain, mixture of several sedges plus Richardson's willow on a moss substrate. | | 55 | 40 | 40 under | saliarct .2 salirich 50 | salireti 15 casstetr 5 rhodlapp 10 toward slope dryainte 10 | polyvivi 10 | pedicapi .1 pedisude .2 | Sedges careaqua 5 Carex sp. 30 (2-3 sp., coll) Cottongrass erioangu 1 Eriophorum sp. 5 Rushes | | | saxihirc .1 saxioppo .2 | cetrniva .2 | asstd mosses 30 | Lemming burrows, runs. Prob. not active in 2006. | |
| 06_VN023 | 03/08/2006 | 17W | 7977152.32 | 505211.62 | N road/rail route, at Milne Inlet, small alluvial fan. | Avens and arctic willow on mud on alluvial fan. | | | | | 10 | E | mesic-dry | Dried mud, cracked, with vegetation limited to small depressions or frost fissures. | Sparse vegetation, mats of avens and arctic willows in depressions in alluvial fan near ocean shoreline. | | 30 | 5 | 5 | saliarct 20 | dryainte 10 | | | Sedges Carex sp. 5 (coll.) Cottongrass Rushes | | | | | Small mosses 5 | Many small clam shells weathering out of the mud. Caribou bot fly. | |
| 06_VN024 | 03/08/2006 | 17W | 7976726.64 | 505317.14 | Milne Inlet, E side of small stream in eastern side of proposed port site, where it reaches base level. | Mossy streambank and, possibly, snowbank. | M | s | SB | | < 1 | NW | wet-mesic | Soil likely saturated during most of growing season. | Ground covered with mosses, with scattered plants of arctic willow, reticulated willow, avens, and capitate lousewort. | | 30 | 30 | 30 | saliarct 15 | salireti 10 dryainte 15 | oxyrdigy 5 polyvivi .2 Stellaria sp. 10 | pedicapi 2 pedilana .1 oxytmayd .5 | Sedges Cottongrass Rushes | | | | cetrniva .1 thamsubu .1 | asst'd mosses 30 | Scats: hare | |
| 06_VN025 | 03/08/2006 | 17W | 7966557.27 | 515146.13 | N road route, Philip's Creek valley, 2 km S of confluence of rivers, beside long narrow lake. | Avens/curly sedge assn on dry terrace. | | | | | level | | dry | | Full vegetation cover on dry site, almost entirely mountain avens. | | 75 | 5 | 15 | | dryainte 75 | toficocc .1 polyvivi .1 sileacau 2 | pedicapi 1 | Sedges carerupe 5 Cottongrass Rushes | | | saxioppo 1 | cetrniva 5 cetrtile 2 thamsubu 3 | mosses 5 | Scats: goose, ptarmigan, hare. Sightings: Pacific loons on lake below plot. Lapland longspur foraging in area. | Storage cache located in frost fissure adjacent to plot. Simple cache, circle of boulders with covering boulders fallen into centre of circle. (See photos150,151,152.) |
| 06_VN026 | 03/08/2006 | 17W | 7966425.99 | 515309.23 | N rail route, about 2.5 km S of where it joins the road route. | Avens and Oxytropis nigrescens on calcareous substrate. | | | | | < 2 | NW | dry | Calcareous soil due to deterioration of sandstone boulders. | Thin veneer of avens and Oxytropis nigrescens (arctobia) on gravel and calcareous substrate. | | | | | | casstetr 5 dryainte 15 | oxytnigr 10 (O. arctobia) | | Sedges carerupe 15 Cottongrass Rushes | | | saxioppo .2 | cetrniva 5 thamsubu .5 | | Scats: Hare (old) Lemming burrows. Wolf spiders | |
| 06_VN027 | 03/08/2006 | 17W | 7963714.78 | 519246.04 | Side of main valley above rail route, just S of SM canyon in multi-coloured slopes | none | | | | | level | | none | Mostly sandstone boulders below Pelsonmeer slopes. Boulders are rounded faceted and many are fracturing in foliated layers. | Vegetation is very sparse and limited to areas between boulders, no mats over boulders. | | 3 | 2 | | | Salix sp. 1 dryainte 3 | | | Sedges Cares rupe 1.5 Cottongrass Rushes | | | saxuiooi .5 | | | None | |
| 06_VN028 | 03/08/2006 | 17W | 7963942.59 | 519316.14 | Canyon E of Phillips Creek Valley,valley bottom with stream | none | | | | | level | | wet-mesic | | Area adjacent to small stream in fault canyon mostly vegetated with sedges. Adjacent wet ditch - saxi cernua, saxifoliolosa, chrysosplenum tetra...purple bladder campion and saxihier nearby. | | 30 | | 40 | saliarct 10 salirich 1 | salireti 5 casstetr 5 dryainte 10 | polyvivi 1 Stellaria .5 ranunviv .5 | pedihirs 1 pedisude 1 | Sedges careaqua 30 carex sp 5 Cottongrass Rushes luzunival (prob) .1 | | | saxifoli .5 saxihirc .1 | stertome 5 brown ground lichen 1 | | Dens/burrows: lemming Scats: goose | |
| 06_VN029 | 03/08/2006 | 17W | 7957124.11 | 524823.12 | Slope to E of small stream, opposite coloured hills | | | | | | level | | dry | | Sedge and Avens association. Thin cover of carex rapestris and mountain avens with a few other sedges. Very exposed and dry. | | 1 | 45 | 10 | sakuarct .1 | dryainte 40 | toficocc .1 polyvivi .2 | oxytarct 2 oxytmayd 1 | Sedges carescir (?) 2 Cottongrass Rushes luzuconf .1 | | | saxioppo 2 | cetrniva 3 cetrtile .1 thamsubu .1 Alectoria .2 Whitecrusty .1 | moss .1 Biol. crust .5 | Scats: goose and hare | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_VN030 | 03/08/2006 | 17W | 7957132.04 | 524953.05 | N E rail route in valley above pond beside deep canyon to the east | | | | | | 10 | | wet | | sedge association - seep on gentlr slope | | 4 | | | salirich 2 | salireti 2 | 2% cover polyvivi 1 | pedisude .5 | Sedges 20% cover careaqua 10 carex sp. .2 (10?)<br>Cottongrass 15% cover eriangu 15 eriorus 2<br>Rushes | | | saxihirc .2 | | mosses 10 | Scats: goose | |
| 06_VN031 | 03/08/2006 | 17W | 7955255.54 | 527129.53 | Rail route (NE) S end of valley leading to Phillips Creek | | | | | | | | mesic-dry | sandstone bedrock | Thin layer of moss and heather and wood rushes on bedrock | | | | | | salireti 1 casstetr 15 dryainte .1 | sileacau .5 | | Sedges carex rupe .5<br>Cottongrass<br>Rushes luzula canbusa 1 | | | | cetrniva .1 cetrtile .1 | racolanu 25 | Scats: hare and wolf (hare bones in scat) Run/trails: caribou (fresh) | |
| 06_VN032 | 03/08/2006 | 17W | 7955015.85 | 527361.82 | Along rail route near bedrock (sandstone) outcrops | | | | | | ~ 1 | | mesic-dry | | Avens/sedge association. Mountain avens and curly sedge in flat terrace area below sandstone berock. | | 70 | 25 | 5 | | salireti 10 Salix sp. 10 dryainte 50 | oxyrdigy 5 polyvivi 1 sileacau 2 | Oxytmayd .5 | Sedges carescir 2<br>Cottongrass<br>Rushes | | | saxioppo .5 | cetrniva .5 cetrtile .1 | asstd mosses 2 biol. crust 5 | Scats: goose Run/trails: caribou (new) caribou bot fly puparium case | |
| 06_VN033 | 03/08/2006 | 17W | 7955015.4 | 527359.79 | Proposed rail route S end of valley leading to Phillips Creek | | | | | | 25 | SW | mesic | | lush growth on slope | | 90 | 5 | 5 | | salireti .1 Salix sp. 2 casstetr 80 dryainte 15 | oxyrdigy .2 sileacau .1 | pedicapi .5 oxymay 3 | Sedges careatro .1 carescia .1 carex re 3<br>Cottongrass<br>Rushes | | | saxioppo .1 | cetrniva 4 cetrtile .2 thamsubu .1 | mosses 5 | Den/burrows: lemming | |
| 06_VN055 | 05/08/2006 | 17W | 7930160 | 527506 | Airstrip at end of long lake, abandoned when? | | | | | | level | na | mesic-dry | fine sand has all been blown off leaving a fine gravel | Thin veg on old airstrip, last used in?? strip has been recolonized. | | 15 | 15 | 30 | saliarct 2 | saliherb 10 casstetr 7 | polyvivi 0.1 sileacau 10 | pea 0.1 mushrooms 0.1 | Sedges careatro 1<br>Cottongrass<br>Rushes luzuniva 3 | | | pedihirs 1 | cetrniva 0.1 thamsubu 0.1 | mosses57 biol crust 30 | | |
| 06_VN056 | 05/08/2006 | 17W | 7935320 | 526649 | N end of long lake, on dry slope | | | | | | 19 | NW | dry | | small isolated nats of avens on slope of gravel ridge | | 20 | 5 | 10 | | dryainte 20 | | | Sedges<br>Cottongrass<br>Rushes | | | saxioppo 5 pedicapi 0.1 pedilana 0.1 | cetrtile 1 | | | |
| 06_VN058 | 05/08/2006 | 17W | 7926742 | 529318 | Where rd crosses river to SE of green sedge plains with old airstrip at sand hills | | | | | | level | W | mesic | | Old Inuit composite not used for many years. Tent ring, small hearths and possibly a kayak rock | | 40 | 15 | 10 | saliarct 5 | salireti 5 casstetr 15 dryainte 25 | stellaria 15 | | Sedges careatro 1 carescir 5 carex 2<br>Cottongrass<br>Rushes | | | saxioppo 2 saxitric 0.1 pedicapi 0.5 | cetrtile 0.2 cetrniva 1 thamsubu 0.2 | mosses 15 | very old lemming nest scats: caribou in tent ring | 2 tent rings on this site, plus 2 possible hearths, rocks to which lines were tied possible kayak cradle, one end moved... tent ring has a defined sleeping platform. |
| 06_VN059 | 05/08/2006 | 17W | 7926581 | 529458 | road route-north, near river flowing west from rail route lake | | | | | | 20 | NW | dry, seasonally | | sand slope, probably holds snow | | 20 | 30 | 10 | | saliherb 10 potenive 10 dryainte 2 | oxyrdigy 10 ceraalpi 5 sileacau 5 stelleria 2 paparadi 0.5 | poa 0.5 | Sedges carex 5<br>Cottongrass<br>Rushes luzuconf 7 luzuniva 13 | | | saxihier 0.1 saxioppo 0.1 saxifraga 5 armemari 1 | cetrniva 5 cetrtile 6 stertome 0.1 thamsubu 0.5 alectoria 10 | mosses 15 | scats: lemming, plarmiga, goose | |
| 06_VN060 | 05/08/2006 | 17W | 7921266 | 534516 | Top of plateau southeast of karst topo area | | | | | | level | | dry | | Turfy veg cover on soil w many rocks embedded cassiop and racomit dom and curly sedge. | | 60 | 25 | 15 | | salireti 3 casstetr 20 dryainte 40 | oxyrdigy 0.1 polyvivi 0.1 ceraalp 0.1 sileacau 2 paparadi 0.1 | mushrooms 0.2 oxy. mayd 2 | Sedges careatro 0.1 carescr 0.2 carex 25<br>Cottongrass<br>Rushes luzuniva 5 | | | saxioppo 1 | cetrniva 1 cetrtile 0.2 stertome 1 thamsubu 0.5 | racolanu 10 mosses 2 | caribou bot pupariun??? scats: caribou | |
| 06_VN061 | 05/08/2006 | 17W | 7924730 | 543351 | North end of Lake | | | | | | 2 | W | mesic-dry | | patterned ground- vegetation in depressions between polygons | | 35 | 2 | 3 | | salix 0.5 casstetr 15 dryainte 20 | steeleria 0.2 | astralpi 0.5 oxytmayd 0.1 poa 0.1 grass 0.1 mushrooms 0.1 | Sedges small sedge 0.2 carex 0.2<br>Cottongrass<br>Rushes | | | pedicapi 0.2 | | | runs/trails: caribou | |
| 06_VN062 | 05/08/2006 | 17W | 7924684 | 543299 | Norht end of lake north of camp, large irregular lake with mountain to the north | | | | | | | SW | dry | | vegetation on gentle slope leading to lake dry slope - mos and herb covered - heather pacthes | | | | | | saliherb 5 salix 1 casstetr 10 | sileacau 2 stelleria 0.1 | hierochloe 1 poa 2 | Sedges<br>Cottongrass<br>Rushes luzuconf 10 | | | saxitric 1 pyrogran 30 | cetrniva 0.1 cetrtile 1 stertome 0.5 thamsubu 0.1 | racolanu 15 other 2 | scats: hare, goose, caribou trails/runs: caribou | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_VN102 | 07/08/2006 | 17W | 7943307 | 535638 | north proposed rail route | | | | | | 0 | | dry | | sparse - dryas dom - | | | | | | salix 2 potevahl 0.3 dryainte 15 | | | Sedges careaqua 0.1 carex 3<br>Cottongrass<br>Rushes | | | saxioppo 2 | | | sighting/heard: ampipits | |
| 06_VN103 | 07/08/2006 | 17W | 7943349 | 535654 | On rail route, alongside a long lake | | | | | | 5 | NW | | | Riparian community in sm. stream basin below hill. Richadson's willow, quens on rocks, sedges. | | 30 | 40 | 5 | 10% salirich | 10% salireti; 5% casstetr; 5% dryainte | 0.2% polyvivi; 0.2% pedicapi | | Sedges<br>5% careaqua; 5% careatro; 10% carescir; 2% carex (membranacea)<br>Cottongrass<br>5% erioangu<br>Rushes | | | | 0.1% cetnriva; 0.1% stertome; 0.1% thamsubu | 5% mixed mosses | Sighting/heard; pipits in area, chasing, calling (about 6 birds). | |
| 06_VN104 | 07/08/2006 | 17W | 7943458 | 535647 | north proposed rail route | | | | | | 0 | | wet | | wet snowbank community water table at surface | | | 50 | 50 | | | melaaffi 0.1 melaapet 0.1 ranupygm 0.1 | poa 5 | Sedges<br>carex 10<br>Cottongrass<br>Rushes | | | chrytetr 2 saxicern 5 saxiheir 0.1 saxihirc 2 | | mosses 50 | sighting/heard: ampipits, snowbunting | |
| 06_VN105 | 07/08/2006 | 17W | 7943506 | 535621 | stream below snowbank, rail route N of camp | | | | | | 2 | W | | | Sedge and grass assn on sm stream flowing below a snowbank. Shallow channel floored with sand, emergent veg and sedges at both sides. | | 5 | 75 | 2 | 2 saliarct; 5 salirich | 1 salireti; salix (arctophila) | 0.2 pedihirs | | Sedges<br>10 careaqua<br>Cottongrass<br>Rushes | | | 2 saxicern; 5 saxihirc | | 10 red moss | Sighting/heard; pipits (flying about, calling, est. 5 birds). Sighting heard; snow buntings (3 young birds, flying in rocky areas). | |
| 06_VN106 | 07/08/2006 | 17W | 7943711 | 535378 | north proposed rail route | | | | | | 0 | | dry | | bedrock community | | 8 | 4 | 8 | | casstetr 3 dryainte 5 | polyvivi 0.2 | oxytmay 0.1 carex 2 | Sedges<br>careatro 1 carex 1<br>Cottongrass<br>Rushes | | | | | mosses 8 | sighting/heard: raven | |
| 06_VN107 | 07/08/2006 | 17W | 7943742 | 535377 | Along E side of open valley | | | | | | 22 | N | wet-mesic | Wetland. | Thick sedge assn (non-tussock) on slope of ridge to E of rail line. Some salix rich but mostly sedges inc. arctic cotton. | | 25 | 65 | 10 | 5 saliarct; 20 salirich | 5 salireti; 2 dryainte | 0.1 polyvivi | | Sedges<br>10 careaqua; 25 careatro; 20 carex (membranacea)<br>Cottongrass<br>5 erioangu<br>Rushes | | | 0.1 saxihirc | | | Sighting/heard; raven | |
| 06_VN108 | 07/08/2006 | 17W | 7943924 | 535196 | | | | | | | | | mesic | | | | 25 | 20 | 10 | | casstetr 5 dryainte 20 | polyvivi 1 | oxytmayd 3 astralp mushroom 1 | Sedges<br>carex 15<br>Cottongrass<br>Rushes | | | saxioppo 2 | cetrniva 3 thamsubu 3 | racolanu 2 | | |
| 06_VN109 | 07/08/2006 | 17W | 7943950 | 535197 | side of hill on N rail rt., about 5 miles S of canyons | | | | | | > 1 | N | dry | | Thin mat of veg. on bouldery hillside, level area. Mostly avons, heather, retic willow with some purple saxitrage. | | 50 | 20 | 5 | 0.2 saliarct | 5 salireti; 10 casstetr; 50 dryainte | 0.2 polyvivi | | Sedges<br>0.5 careatro; 1 carenard; 1 carescir; carex rupestris<br>Cottongrass<br>Rushes | | | | cetrniva; thamsubu | 10 racolanu; 5 asstd mosses | | |
| 06_VN110 | 08/08/2006 | 17W | 7955860 | 520835 | beside north road route - 30 to 40km north | | | | | | flat | | wet-mesic | | shrub sedge mass | | 35 | 30 | 30 | saliarct 5 salirich 10 | dryainte 20 | oxyrdigy 0.2 polyvivi 0.2 sileacau 10 | | Sedges<br>careatro 15 carex 5<br>Cottongrass<br>Rushes | | | pedicapi 0.1 | lichens 10 | mosses 20 biol crust 10 | scats: hare | |
| 06_VN110A | 07/08/2006 | 17W | 7955836 | 520816 | | | | | | | | | | | | | | | | | | | | Sedges<br>Cottongrass<br>Rushes | | | | | | | |
| 06_VN111 | 08/08/2006 | 17W | 7955878 | 520799 | Small stream at break in ridge | | | | | | 8 | W | wet | | Small riparian willow community on slope. Very diverse. Mounds with heather, sedge, willows, etc. | | | | | 15 saliarct; salix sp. small pointed (olanifolia?) | 15 salireti; 10 salix sp. shiny (arctophila?) | 0.1 tofipusi; 1 oxyrdigy; 0.5 polyvivi; 0.1 melaapet; 1 pedicapi | | Sedges<br>5 careatro; 5 carememb<br>Cottongrass<br>Rushes<br>0.2 luzuniva | | | photos 354, 5 and 6 | | 5 cushion; 15 asstd mosses | Sighting/heard; lapland longspur (foraging nearby, photos 350-353). Sighting/heard; sm. passerine bird (nest near plot). | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_VN112 | 08/08/2006 | 17W | 7955914 | 520768 | north road route - 56km NW of camp | | | | | | 5 | NNW | | | shrub sedge | | 35 | 35 | 25 | | salix 5 casstetr 10 dryainte 20 | polyvivi 0.5 | oxytmayd 1 | Sedges careatro 5 carex 10<br>Cottongrass<br>Rushes | | | saxioppo 5 | lichens 10 cetnriva 5 white crusty 5 | mosses 10 | scats: caribou | |
| 06_VN113 | 08/08/2006 | 17W | 7959806 | 518901 | Haul route, on ridge, small pond | | | | | | level | | | | Emergent assn. in edge of small pond, some mounds, water depth to about 15 cm. | | dw 5 | 40 | 20 | | 2 salireti; 2 dryainte | 0.1 polyvivi; 0.2 pedisude | | Sedges 20 careaqua; 5 carememb; 5 carescir; 1 (coll) carex sp. dangly<br>Cottongrass 10 erioangu; 5 (coll) eriosche?<br>Rushes | | | | | 20 asstd mosses (mounds); 15 algae in water | Sighting/Heard; lapland longspurs | |
| 06_VN114 | 08/08/2006 | 17W | 7959781 | 518848 | north proposed road route - 60km NW of camp | | | | | | 20 | NW | mesic | | shrub - dryas heather shrub forb NW facing slope hummock well vegetated | | 50 | 25 | 25 | | casstetr 25 dryainte 25 | oxyrdigy 2 | oxytmayd 10 | Sedges carex 5<br>Cottongrass<br>Rushes luzuconf 5 | | | saxioppo 1 pedicapi 5 | lichens 15 cetnriva 5 cetrile 5 thamsubu 2 glove 1 | mosses 10 | dens/burrows: lemming | |
| 06_VN115 | 08/08/2006 | 17W | 7960015 | 518828 | Further N along haul route | | | | | | 80 | W | wet-mesic (seasonally, retains snow) | | Tiny cliff face/base assn., which also happens to face W, so collects snow. Diverse mixture. Dry mats of curly sedge overhang it, yet base is wet. Flowers blooming here, early Aug. | | 15 | 20 | 10 | 5 saliarct (face) | 10 salireti (base); 10 casstetr (base; bloom) | 5 oxyrdigy (base, bloom); 5 polyvivi (bloom); 2 cerealpi (face, bloom); 0.1 melaapet (base, bloom); 0.5 stellari (base, long); 1 ranuniva (base, bloom); 5 pedicapi (base); 0.1 pedilhir (base); 0.1 pedisude (base) | | Sedges 1 careatro (top); 2 carememb; 10 carescir; 10 carex (rupestris, top)<br>Cottongrass<br>Rushes | | | 0.2 saxicern (base); 0.1 saxihirc (base); 0.1 saxinivi (base); 5 saxioppo (face) | 1 cetniva; 2 cetrile; 1 cladina; 0.5 cladonia; 0.1 thamsubu | | | |
| 06_VN116 | 08/08/2006 | 17W | 7959950 | 518886 | north road route - 60km NW of camp | | | | | | 0 | | mesic-dry | | sparse veg on rocky ridge, avens dominated | | 25 | 20 | 20 | | casstetr 2 dryainte 25 | toficocc 0.5 | oxyt artobia 7 oxytmayd 3 | Sedges carex 10<br>Cottongrass<br>Rushes | | | saxioppo 5 | cetnriva 10 cetrile 5 thamsubu 0.1 white crusty 3 | | sighting/heard: loor | |
| 06_VN117 | 08/08/2006 | 17W | 7960015 | 518828 | Ridge S of conf. of 2 rivers, rail and road | | | | | | 5 | NW | dry | | Sparse mats of veg on rocky ridge, part bedrock and part sandstone felsensneer and euatics. Mostly avins and cur sedge and c. narclina. | | 15 | 10 | 2 | | 15 dryainte | | | Sedges 10 carex (rupes)<br>Cottongrass<br>Rushes | | | 0.2 saxioppo | 0.5 cetrile; 0.1 stertome; 0.5 thamsubu; 0.5 Alectoria | | Sighting/heard; sandhill crane (flying high, headed south up valley). Sighting/heard; longspurs | |
| 06_VN118 | 08/08/2006 | 17W | 7962330 | 517130 | north road route and proposed rail route confluence west side of valley, 63km NW of camp | | | | | | 2 | NNW | mesic | | avens heather herb | | 35 | 25 | 40 | saliarct 5 | casstetr 15 dryainte 15 | toficocc 3 | oxytmayd 5 | Sedges carex rupestris 10<br>Cottongrass<br>Rushes luzuconf 1 | | | saxioppo 10 pedicapi 1 | cetrniva 10 cetrile 3 thamsubu 2 | mosses 10 biol crust 10 | scat: caribou sighting/heard: sherane | |
| 06_VN119 | 08/08/2006 | 17W | 7962262 | 517120 | Ridge just S of confluence of 2 rivers, plus road and rail lines, slope toward listing rd. | | | | | | 12 | W | mesic-dry | | Relatively even mat of veg on open slope, facing NW. Mixture of avons, heather, purple saxifrage, etc. This slope is probably in the lee of the hill for prevailing winds so ? veg., snow, water, etc. | | 75 | 20 | 5 | 1 saliarct | 75 casstetr, 25 dryainte | 0.2 paparadi; 0.2 armemari; 1 pedicapi | | Sedges 0.1 carescir; 5 carex (rubestns)<br>Cottongrass<br>Rushes | | | 1 saxioppo | 5 cetrniva; 1 stertome; 0.5 thamsubu; 0.5 Alectoria | 5 asstd mosses | Scats; caribou (old) | |
| 06_VN120 | 08/08/2006 | 17W | 7962186 | 517101 | north road route - 63km north of camp | | | | | | | | wet-mesic | | shrub dominated flat - salix(heather, avens) | | 60 | 10 | 30 | salix 10 | salireti 15 casstetr 20 dryainte 20 | oxyrdigy 5 polyvivi 1 | | Sedges<br>Cottongrass<br>Rushes luzuconf 1 | | | saxioppo 5 | cetrniva 10 | mosses 20 | scats: hare | |
| 06_VN121 | 08/08/2006 | 17W | 7962167 | 517071 | To W of old rd., between road and river, N of a set of rapids (area) | | | | | | 5 | NW | wet-mesic | | Small wetland area with ridge solifluction, ridges perpendicular to flow. Some willows (S.rich) but mostly sedges | | 10 | 60 | 10 | 0.1 saliarct; 5 salirich (r) | 0.2 salireti (r); 5 dryainte (rb) | 0.2 pedicapi | | Sedges 10 careaqua (rb no flow); 30 careatro (rb); 5 carememb; 1 carescir; 10 carex sp.<br>Cottongrass 2 erioangu; 5 eriovagi (tuss, ?); 2 eroph-sge (n.tuss)<br>Rushes | | | 0.2 saxihirc | 1 cetrniva; 0.1 cladonia; 0.2 thamsubu; 0.1 glove | 15 moss mds.; 25 biol. crust | | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_VN122 | 08/08/2006 | 17W | 7962145 | 517052 | knob to with of road in rapids crest of small ridge with large pink granite stone | | | | | | | | | | Distrubed site - birdstone veg. sun a stone used by raptors and others. Place is littered with scats and pellets adn there is a road lush veg due to manuring. There is similar site about 40m south, but no distinct 'stone' The crest of the ridge bears scats and pellets and grasses. | | 30 | 15 | 5 | | saliarctophia 5 salixarctica 10 potehyparctica 10 dryainte 15 | polyvivi 0.1 cerasilp 0.5 melaaffi 0.1 melaapet 0.2 stelleria longipes 5 paparadi 1 | poa 15 | Sedges carex rupes 5<br>Cottongrass<br>Rushes luzuniva 1 | | | saxitric 15 | cetrniva 2 cetrile 2 alectoria 10 | cushion moss 0.2 | sighting/heard: lapland longspur scats: hare, raptor pellets, fox, caribou dens/burrows: lemming | |
| 06_VN123 | 08/08/2006 | 17W | 7965886 | 513408 | Confluence of 2 rivers below dark canyon, sedge plain | | | | | | level | N | wet-mesic | | Sedge assn. Thickly vegetated plain where small river joins Philips' Creek, sedges with some willows | | 15 | | 1 saliarct; 5 salirich | 5 salireti; 5 dryainte | | | Sedges 60 careaqua; 15 carememb<br>Cottongrass 10 eriovagi<br>Rushes | | | | 0.2 glove | 15 asstd mosses | Sighting/heard; wolf (was by edge of stream beside stake). Runs/trails; caribou. Dens/burrows; lemming. Sighting/heard; loon (heard) | |
| 06_VN124 | 08/08/2006 | 17W | 7965704 | 513487 | Confluence of Phillips Creek and north prop rail route creek. | | | | | | 30 | NNE | mesic-dry | | sandy slope - heather higher up - unstable lower down | | 50 | 30 | | | salix 10 potevahl 30 casstetr 30 dryainte 5 | forbs 25 sileacua 5 stellaria 2 paparadi 1 | oxytmayd 5 | Sedges sedges 5<br>Cottongrass<br>Rushes | | | saxioppo 5 armemari 1 pedicapi 3 | | | sighting/herd: wolf, loon | |
| 06_VN125 | 08/08/2006 | 17W | 7965776 | 513505 | Confluence of 2 rivers, south of 119 | | | | | | | | wet | | Even growth of sedges in polygon with raised edges. Carex aquatilis and sudetan lousewort. | | | 50 | | | | 5 pedisude | | Sedges 45 careaqua; sedge with dark pond hds. -with 123 coll<br>Cottongrass 1 erioangu<br>Rushes | | | | | | Runs/trails; caribou | |
| 06_VN126 | 08/08/2006 | 17W | 7965623 | 513465 | north road route 68km north west of camp | | | | | | | | dry | | avens-heather sparse short growth | | 50 | 15 | 20 | | vacculig 5 casstetr 20 dryainte 25 | | oxytarct 1 oxytmayd 1 | Sedges sedges 10 carex rupestris 10<br>Cottongrass<br>Rushes | | | saxioppo 2 pedicapi 2 | cetrniva 10 cetrile 0.1 thamsubu 3 pixie cup 0.1 | | scats: caribou dens/burrows: lemming | |
| 06_VN127 | 08/08/2006 | 17W | 7965776 | 513505 | Confl. of 2 rivers, adj. to plot 121, so same coord. | | | | | | level | N | wet-mesic | | Ridge (raised edge) of polygon. Mounds of moss with veg growing in moss. Dryas, several sedges, few salix rich, sudet louse. | | 25 | | 5 saliarct; 20 slairich | dryainte | 0.1 melaapet; 5 pedisude | | Sedges 70 careaqua; 0.5 careatro; 1 carescir; carex sp. (3) coll<br>Cottongrass<br>Rushes | | | 0.1 saxihirc | 0.1 cetrniva; 0.1 cetrile; 0.1 thamsubu | 60 mosses | Sighting/heard; 2 yellow-billed loons (flying, calling). Runs; lemming | |
| 06_VN128 | 10/08/2006 | 17W | 7949627 | 530682 | north proposed rail route, 45km NW of Mary River camp | | | | | | | | dry | | sparse exposed bouldery site | | 10 | 5 | 5 | | dryainte 10 | | | Sedges carex rupestris 5<br>Cottongrass<br>Rushes | | | saxioppo 3 | lichens 5 cetrile 1 | | | |
| 06_VN129 | 08/08/2006 | 17W | 7965636 | 513455 | Beach confl. | | | | | | 2 | W | dry | | Mats of veg on white sand | | | | | 5 saliarct | 20 dryainte | 0.1 oxyrdigy; 2 polyvivi; 10 sileacau; 0.1 paparadi; 0.1 armemari; 0.1 pedilana | | Sedges 0.1 careatro; carenard<br>Cottongrass<br>Rushes | | | 5 saxioppo | | | tracks; caribou (including yearling) | |
| 06_VN130 | 10/08/2006 | 17W | 7949469 | 530863 | north rail route 43km NW MAry River camp lip of canyon | | | | | | 2 | NW | dry | | bedrock community, lip of canyon | | 25 | 10 | 15 | | vacculig 3 casstetr 5 dryainte 20 | sileacua 1 paparadi 0.1 | carex 3 | Sedges carex rupestris 7<br>Cottongrass<br>Rushes | | | saxicaes 0.1 saxicern 0.1 | cetrniva 10 cetrile 5 thamsubu 2 | mosses 1 | scats: ptarmigan | |
| 06_VN132 | 10/08/2006 | 17W | 7949434 | 530894 | north proposed rail route - 43km NW of camp mid canyon | | | | | | 5 | SW | mesic | | shrub(heather) dominated | | 70 | 20 | 10 | saliarct 5 | salireti 5 casstetr 40 dryainte 20 | oxyrdigy 3 sileacua 2 | oxytmay 1 | Sedges carex 2<br>Cottongrass<br>Rushes | | | pedicapi 1 | cetrniva 1 glove lichen 2 | | scats: lemming, hare | |
| 06_VN134 | 10/08/2006 | 17W | 7967572 | 510610 | north proposed rail route 70 km NW of camp | | | | | | 2 | S | mesic | | shrub(aven, heather) sedge boulder | | 40 | 25 | 20 | | salireti 2 salix 2 vacculig 1 casstetr 20 dryainte 20 | saxioppo 2 pedicapi 0.5 | oxytmayd 1 | Sedges careatro 10 carex 10<br>Cottongrass erio 0.1<br>Rushes luzuconf 0.2 | | | | cetrniva 10 thamsubu 3 white crust 5 | biol crust 10 | scats: goose | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_VN136 | 10/08/2006 | 17W | 7967619 | 510510 | north proposed rail route 70km NW of camp | | | | | | 0 | | dry | | shrub(avens) sedge forb | | 20 | 25 | 25 | | dryainte 20 | sileacau 1 | oxytarto 7 oxytmayd 0.1 | Sedges carex rupestris 10 Cottongrass Rushes | | | saxioppo 5 | cetrniva 7 cetrile 7 | | | |
| 06_VN138 | 10/08/2006 | 17W | 7967772 | 510448 | proposed N rail route 20km NW of camp | | | | | | flat | | wet | | sedge meadow(Etland) seasonally flooded | | 30 | 50 | 20 | salirich 5 salix 3 | salireti 7 casstetr 5 dryainte 10 | | | Sedges sedges 50 careaqua 20 careatro 3 carex 20 Cottongrass Rushes | | | saxihirc 0.5 pedicapi 0.1 pedihirs 0.1 | | mosses 20 cushion 10 | | |
| 06_VN140 | 10/08/2006 | 17W | 7971076 | 506945 | Phillips creek valley, on proposed rail route 76km NW of camp | | | | | | | | mesic-dry | | shrub(aven) sedge/forb boulder | | 25 | 25 | 10 | | dryainte 25 | | oxytarct 15 oxytmayd 0.5 | Sedges carex rupestris 10 Cottongrass Rushes | | | saxioppo 1 | cetrniva 7 | | scats: hare, caribou | |
| 06_VN142 | 10/08/2006 | 17W | 7971110 | 506906 | proposed north rail route bouldery slope down toward phillips creek | | | | | | 25 | SW | mesic | | moss herb shrub (aven/heather) | | 20 | 15 | 20 | saliarct 2 | casstetr 5 dryainte 15 | | oxytmayd 1 | Sedges carex rupestris 5 Cottongrass Rushes | | | epillati 15 pedicapi 0.1 | cetrniva 5 cetrile 1 glove 2 | mosses 10 | | |
| 06_VN144 | 10/08/2006 | 17W | 7961548 | 520938 | north rail route 60km NW of camp | | | | | | 0 | | dry | | avens sedge - very dry and sparse exposed ridge top | | 20 | 20 | 10 | | | sileacau 2 | oxytarct 1 oxytmayd 0.5 | Sedges sedges 20 carex rupestris 15 Cottongrass Rushes | | | saxioppo 2 | cetrniva 5 cetrile 2 thamsubu 2 | | other(eggshell): goose | |
| 06_VN146 | 10/08/2006 | 17W | 7961562 | 521038 | stream valley N of north rail route 60km NW of camp | | | | | | 2 | NW | wet | | wet sedge meadow beside stream | | 2 | 86 | 2 | | salireti 2 | ceraalpi 0.1 melaapet 0.1 melaaffi 0.1 stellaria 5 | grass 10 | Sedges careaqua 20 carememb 10 Cottongrass Rushes | | | chrytetr 10 saxihirc 3 | | mosses 2 | | |
| 06_VN148 | 10/08/2006 | 17W | 7934956 | 538342 | north rail route - south end of lake 28km NW of camp | | | | | | 2 | SW | mesic | | heather avens moss | | 60 | 5 | 35 | saliarct 2 | casstetr 30 dryainte 25 | | oxytmayd 1 | Sedges caremis 2 Cottongrass Rushes | | | saxioppo 2 | cetrniva 5 cetrile 2 thamsubu 1 | racolanu 20 biol crust 10 | | |
| 06_VN160 | 11/08/2006 | 17W | 7976290 | 503470 | Milne Inlet | | | | | | 0 | | dry | | gravel beach with avens and saxifrage | | 10 | 10 | | | salix 0.5 dryainte 10 | | oxytarct 2 | Sedges carex rupestris 0.1 Cottongrass Rushes | | | saxioppo 8 | | | | |
| 06_VN162 | 11/08/2006 | 17W | 7974585 | 503766 | Milne Inlet | | | | | | 40 | N/NW | dry | | steep slope, sandy, facing Milne Inlet, lower slope forbs, upper slope shrubs | | 25 | 35 | | | salix 15 dryainte 10 | oxyrdigy 2 polyvivi 1 ceraalpi 1 melaaffi 1 minuarta 1 papacorn 1 | grass 1 | Sedges sedges 5 careatro 2 Cottongrass Rushes luzuconf 1 | | | saxicaes 10 saxicern 3 saxioppo 5 armemari 2 pedicapi 1 | | | | |
| 06_VN164 | 11/08/2006 | 17W | 7975938 | 502994 | Milne Inlet | | | | | | 0 | | dry | | shrub sedge flat dry(poor condition) | | 25 | 30 | 15 | | dryainte 25 | polyvivi 1 | oxytarct 5 oxytmayd 1 | Sedges sedges 15 Cottongrass Rushes | | | saxioppo 5 pedihirs 2 | cetrniva 5 cetriles 5 thamsubu 5 | | scats: goose | |
| 06_VN165 | 10/08/2006 | 17W | 7949572 | 530743 | | | | | | | 5 | W | mesic-dry | | Thin Dryas/curly sedg assn on slight slope on calcareous rock | | 20 | 50 | 10 | saliarct .1 | casstetr .2 dryainte 15 | toficocc .1 sileacau 5 | oxyt arctobia 2 oxytmayd .2 pedicapi .1 | Sedges careatro 3 carememb .1 carenard 15 carescir .2 Carex rupestris 30 Cottongrass Rushes luzuconf 1 | | | saxioppo 2 | cetrniva 2 cetrile 5 thamsubu 1 | | Scats: hare | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_VN166 | 11/08/2006 | 17W | 7975663 | 502702 | Milne | | | | | | 0 | | dry | | shrub sedge | | | | | | salix 1 dryainte 25 | | oxytmayd 2 | Sedges<br>Cottongrass<br>Rushes | | | saxioppo 20 pedilana 2 | cetrniva 10 cetrtile 5 thamsubu 5 | | scats: goose | |
| 06_VN167 | 10/08/2006 | 17W | 7949506 | 530835 | N rail route S of slot canyons on calcareous strata | | | | | | 3 | W | dry | | Isolated small patches of avens and ind. sm xeric sedges on gravel sub strate near canyon | | 5 | 5 | | | potevahl .1 dryainte 5 | | oxyt arct .1 near plot | Sedges<br>carenard 3 Carex rupestris 1<br>Cottongrass<br>Rushes | | | saxioppo 1 | cetrtile .1 | | Pipits abt 5 young birds flying together | |
| 06_VN168 | 11/08/2006 | 17W | 7974585 | 503766 | Just inland from Milne Inlet - on ridge | | | | | | | | dry | | sparse bouldery dry shrub(avens) sedge, exposed site | | 20 | 15 | 40 | | dryainte 20 | | oxytarct 5 | Sedges<br>rupestris 10<br>Cottongrass<br>Rushes | | | saxioppo 5 | lichen 40 | | dens/burrows: lemming - fresh digging in nearby gully | |
| 06_VN169 | 10/08/2006 | 17W | 7949425 | 530836 | N rail road, small canyon shattered bedrock edge of N side of canyon, canyon slope | | | | | | 45 | S | dry | | Thin avens/curly sedge assn on steep slope with heather and large fl. wintergreen in protected niches. | | 30 | 20 | 5 | | potehyp .1 potevahl .1 vacculig 2 casstetr 5 | oxyrdigy 1 sileacau 2 | oxyt mayd .1 | Sedges<br>carenard 5 Carex rupestris 15<br>Cottongrass<br>Rushes | | | saxicern .1 | cetrniva 2 cetrtile .1 brn lettuce lichen .1 | | pipits - calling, flying around Dens'burrows: lemming Caribou bone (tibia) | |
| 06_VN170 | 11/08/2006 | 17W | 7968481 | 509312 | north road route 73 km NW of camp | | | | | | | | wet-mesic | | seasonally flooded wetland - pond contiguouse wetland sedge | | 20 | 35 | 5 | | salireti 5 salix 10 dryainte 5 | | oxytmayd 0.1 | Sedges<br>sedges 25<br>Cottongrass erioangu 10<br>Rushes | | | | | mosses 5 | dens/burrows: lemming | |
| 06_VN171 | 10/08/2006 | 17W | 7967520 | 510632 | N rd/rail rt, N of confluence of rivers and routes, above small gorge in philips creek | | | | | | level | | wet | | Sedge assn. in small depression/swale to E of road mixture of Carex sedges and cottongrasses. | | 15 | 40 | 15 | salirich 10 | salireti .1 casstetr .2 dryainte 2 | polyvivi .5 | pedisude | Sedges<br>careaqua 10 careatro 2<br>Cottongrass erioangu 10<br>Rushes | | | saxihirc .1 | cetrniva .5 thamsubu .1 | moss mounds 15 | Scats: hare Caribou bones | |
| 06_VN172 | 11/08/2006 | 17W | 7968358 | 508865 | north road route - between river and road 73km NW of camp | | | | | | | | mesic | | shrub(aven, heather) moss | | 45 | 10 | 35 | | salix 1 casstetr 20 dryainte 25 | paparadi 0.1 | | Sedges<br>sedges 5<br>Cottongrass<br>Rushes<br>luzuconf 5 | | | saxitric 0.5 pedicapi 5 | cetrniva 5 | mosses 30 racolanu 20 | dens/burrows: lemming | |
| 06_VN173 | 10/08/2006 | 17W | 7967470 | 510527 | N rd/rail rt, near small gorges - to W of rd, area upstream | | | | | | | | mesic-dry | | Thin mats of avens, curly sedge, c. nardina and oxy arctobia on unstable hillside | | 55 | 10 | 5 | | casstetr 2 dryainte 45 | | pedicapi .2 oxyt mayd 2 oxytarctobia 5 | Sedges<br>carenard 3 caresch 5 Carex rupes 5<br>Cottongrass<br>Rushes | | | | cetrniva 3 cetrtile .2 thamsubu 1 Alectoria 1 | | Scats: hare, caribou (old) Sighting/heard: pipits | |
| 06_VN175 | 10/08/2006 | 17W | 7967599 | 510429 | Along N rd/rail rt | | | | | | depression | | wet-mesci | | Disturbed site, soil, pit, prob. done in 1970's ?? Mound o gravel to NW, pit goes to abt 6ft deep. Revegetated partially most sedges, growth in depr. is C. membranacc Grasses on S side. Mound above is vegetated with avens. | | 10 | 25 | 5 | saliarct 5 saliarch 2 | casstetr .5 dryainte 5 | polyvivi .1 sileacau .1 | oxyt mayd .1 Poa 2 Calam 2 | Sedges<br>carememb 20 Carex rupes 2<br>Cottongrass<br>Rushes | | | saxioppo .1 | | cushion .2 | | |
| 06_VN176 | 11/08/2006 | 17W | 7948336 | 522219 | north road route 50km NW of camp | | | | | | 0 | | wet | | cobble wet area - seasonally flooded sedge-shrub | | 30 | 20 | 10 | | salix 5 dryainte 15 | | calamagroskis 5 | Sedges<br>sedges 15<br>Cottongrass<br>Rushes | | | saxihric 3 saxioppo 3 epillati 0.1 pedicapi 1 | cetrniva 5 cetrtile 5 thamsubu 1 | | | |
| 06_VN177 | 10/08/2006 | 17W | 7967596 | 510425 | N rd/ rail rt, top of hill to W of rd. Disturbed site where someone sampled ddg mat | | | | | | mound | | dry | | Disturbed site. Mound of material removed from pit (plot 175) and left on the land. Has become colonized with avens, Draba alpina, salix arctiva, purple sax and oxy aratabia. - plants appear to get started in lee of rocks or grow alonside others, taking adv. of protection. Dryas can start anywhere, or may be growing from previous mats. | | 20 | 10 | | saliarct 5 | dryainte 15 | minuartia 1 | oxyt arctobia 5 | Sedges<br>Cottongrass<br>Rushes | | | saxioppo 2 | | | caribou tracks | |
| 06_VN178 | 11/08/2006 | 17W | 7939148 | 524804 | north road route | | | | | | 0 | | | | brokem up rock-cobble gravel | | 8 | 2 | | | salix 1 dryainte 7 | | | Sedges<br>Cottongrass<br>Rushes | | | saxioppo 2 | | | | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_VN179 | 10/08/2006 | 17W | 7971131 | 506938 | N rd/Rail rt by large cliffs, area upstream abt 25m S of Milne | | | | | | <10 | NW | wet mesic | | Riparian assn. on small temperature stream, mostly rich willow and Carex atrofulrea, but with mats of Dryas on mounds | | 65 | 35 | 5 | saliarct 5 salirich 40 | salireti .2 dryainte 20 | oxyrdigy 40 polyvivi 1 | pedicapi .5 pedihirs .1 | Sedges careatro 10 carecapi (carex sp 5) carememb (2-3) Carex rupestris 5 Cottongrass Rushes | | | | cetrniva .5 | | Scats: hare, ptar Den: lemming Trails:lemming | |
| 06_VN180 | 11/08/2006 | 17W | 7920110 | 536904 | north road route 22km W | | | | | | 2 | S | wet-mesic | | salix moss vegetation in layers | | 60 | 20 | 20 | salirich 20 | salireti 20 casstetr 20 dryainte 20 | polyvivi 0.1 sileacau 1 | calaporp 1 | Sedges sedges 30 careatrc 20 Cottongrass erioangu 1 Rushes luzuconf 1 | | | pedicapi 0.5 | cetrniva 1 | mosses 20 | scats: hare dens/burrow: lemming | |
| 06_VN181 | 10/08/2006 | 17W | 7971162 | 506917 | N rd/rail rt | | | | | | <1 | NW | mesic dry | | heath tundra? Baffin version. Blueberries and heather plu some Draba on shelf . Rhododendron present | | 80 | 5 | 5 | | salireti .1 vacculig 50 casstetr 15 rhodlapp 2 dryainte 20 | toficocc .1 tofipusi .1 | oxyt, mayd 3 | Sedges carescir 3 Carex rupes 2 Cottongrass Rushes | | | | cetrniva 2 stertome .1 thamsubu 1 Alectoria 1 | sm. mosses 1 | Scats: ptar, hare | |
| 06_VN183 | 10/08/2006 | 17W | 7961617 | 520789 | N rail rt S of confluence, oppos. slot canyons | | | | | | 12 | W | mesic dry | | Dryas/heather/blueberry assn on open slope with | | dw50 | 15 | 5 | | vacculig 5 casstetr 25 rhodlapp 5 dryainte 15 | | pedicapi .2 pedilana .1 oxyt arctobia 2 oxyt mayd 2 | Sedges carenard 5 carescir 3 Carex rupes 5 Cottongrass Rushes | | | | cetrniva 3 cetrile .1 thamsubu 1 Alectoria 1 | | Scats: hare lapland longopur (??) juvenille | |
| 06_VN185 | 10/08/2006 | 17W | 7961603 | 520999 | | | | | | | | | | | | | | | | | | | | Sedges Cottongrass Rushes | | | | | | | |
| 06_VN187 | 10/08/2006 | 17W | 7961473 | 521050 | N rail rt, near slot canyons, on rocky hillside facing E into small valley | | | | | | 12 | E | mesic | | Slope is composed of tumbled slabs. Veg is in mats between and on the slabs | | dw30 | 5 | 10 | saliarct 5 | casstetr 5 dryainte 25 | polyvivi .2 | oxyt mayd 2 oxyt arct .1 | Sedges carenard .2 Carex rupes 5 Cottongrass Rushes luzuniva .2 | | | saxioppo .2 saxitirc .5 | cetrniva 5 thamsubu .1 | racolanu 10 | Scats: hare hawk feather | |
| 06_VN189 | 10/08/2006 | 17W | 7935017 | 538447 | N rail rd rt where rd jogs around end of a lake, crossing a small stream | | | | | | 5 | NW | mesic | | Heath tundra on slope. Much Dryas and heather , salix retic and yellow oxytrope | | 70 | 20 | 10 | saliarct 2 | salireti 5 casstetr 30 | oxyrdigy 2 polyvivi .1 | pedicapi 1 pedilana .1 oxyt mayd 5 | Sedges dryainte 35 Cottongrass Rushes luzuniva .2 | | | | cetrniva 3 cetrile .1 stertome .5 thamsubu 1 | asstd mosses 5 | Scats: hare | |
| 06_VN191 | 10/08/2006 | 17W | 7934904 | 538530 | N rail rt, near end of long lake where road way jogs | | | | | | 5 | SW | mesic | | Thin cover of heather and dryas plus xeric sedges on gentle slope | | 55 | 30 | 10 | | vacculig 10 casstetr 15 dryainte 30 | polyvivi .5 sileacau .1 | pedicapi .2 oxyt mayd 1 astr. alpin .1 | Sedges carenard 10 carescir 10 Carex rupestris 10 Cottongrass Rushes | | | | cetrniva 2 stertome .2 thamsubu .1 Alectoria 2 | cushion 1 asstd mosses 2 racolanu 3 | Scats: hare | |
| 06_VN193 | 10/08/2006 | 17W | 7934714 | 538503 | n rail rt S of end of lake, area of S curve | | | | | | >1 | SW | dry | | Gravel knoll with little rooted veg. Rocks 70% covered wi lichens, but there's not much in the way of rooted plants | | | | | saliarct 2 | potevahl 2 dryainte 2 | | | Sedges carenard 1 Carex rupestris 1 Cottongrass Rushes | | | saxioppo 1 | cetrniva .2 cetrtile .1 thamsubu .1 Alectoria .5 | cushion moss .5 | Sighting/heard - pipits calling nearby | |
| 06_VN195 | 11/08/2006 | 17W | 7976456 | 503350 | Shore of Milne Inlet, above sheer bank, to E of small stream with junk | | | | | | 5 | N | mesci-dry | | Backshore veg (but w/o any halophytes) Mats of avens, oxytr, arctobia and salix arctica on mounds some moss and small sedges. | | 20 | 15 | 15 | saliarct 5 | dryainte 15 | polyvivi .2 | pedilana .2 oxyt arctobia 10 oxyt mayd .1 | Sedges Carex sp. not blooming .1 Cottongrass Rushes | | | saxioppo 2 | | blk scattered moss 15 | Flock of shorebirds passed (larger than Bairds' darker) about 9 Caribou bones along beach | |
| 06_VN197 | 11/08/2006 | 17W | 7976345 | 503467 | Milne Inlet, port site, terrace above beaches, at inshore edge of small freshwater depression | | | | | | level | N | wet-mesic | | Thin cover of sedges and a variety of other plants by a dark temp. pond/spring, prob. Sedges grow in clumps | | 5 | 65 | 10 | saliarct 10 | salireti 2 | oxyrdigy .2 polyvivi .5 Stellaria monantha .1 arnenaru 5 | pedicapi .2 | Sedges caremis 5 carenard prob. 5 Carex sp (abt 5) coll 25 Cottongrass Rushes luzuniva | | | saxihirc 1 saxioppo 1 | cetrniva .5 cetrtile .1 thamsubu .1 | mixed 5 biol. crust 15 | Scats: ptar, lemming | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_VN201 | 11/08/2006 | 17W | 7976068 | 502957 | Top of bank W if airstrip open area with frost fissures | | | | | | level | | mesic-dry | | Mats of veg. on gravel and sand flat. Mostly avens, xeric sedges, purple saxifrage | | dw25 | 25 | 10 | saliarct 5 | dryainte 20 | | pedicapi .1 pedilana .5 oxyt arct 3 | Sedges caremisandra 5 Carex rupes. 10<br>Cottongrass<br>Rushes | | | | cetrbuva .5 cetrtile .2 thamsubu .1 | asstd mosses small 10 | Scats: goose semi palm or ringed plovers 5 adults and 2 young and others in area | |
| 06_VN203 | 11/08/2006 | 17W | 7975719 | 502633 | Port site, Milne, E bank of Philips' Creek almost to the sea | | | | | | <1 | W | dry | | Thin mats of avens, oxytarctob, and purple sax on sandy bank of old river delta, not present delta xeric sedges | | 20 | 20 | 10 | | dryainte 20 | polyvivi .1 | pedilana oxyt mayd 1 oxyt arctobia 10 | Sedges Carex rupes 10<br>Cottongrass<br>Rushes | | | | cetrniva .1 | biol. crust 10 | Scats: ptar Sighting/heard: plovers (8birds), glaucous gulls | |
| 06_VN205 | 11/08/2006 | 17W | 7974545 | 503842 | Milne Inlet, port site, rd as it leaves the Inlet, terrace along E slope of valley | | | | | | level | | mesic dry | | Thin mat of avens, sax opp. and curly sedge on level | | 15 | 60 | 5 | | dryainte 10 | toficocc 1 | oxyt arctobia 1 oxyt mayd .2 | Sedges caremis .2 carebard no nardina 1 Carex rupestris 40<br>Cottongrass<br>Rushes | | | saxioppo 5 | cetrniva 3 cetrile2 stertome .2 thamsubu .5 | | Scats: caribou, hare, goose, ptar | |
| 06_VN207 | 11/08/2006 | 17W | 7968483 | 509231 | n rd rail rt opposite S end dark cliffs where river flows in from W | | | | | | 2 | SE | | | Avens/xeric sedge assn. Dry assn on ridge crest heavily with boulders almost a boulder field. Felsonmeer and erratics. Well drained but seasonally theres standing water | | 35 | 15 | 10 | saliarct 5 salirich 5 | salireti 5 vacculig 2 casstetr 5 dryainte 15 | oxyrdigy 1 polyvivi.2 sileacau 1 | pedilana | Sedges caremis 2 carenard 5 carescir 2 Carex rupesris 30<br>Cottongrass<br>Rushes | | | saxioppo | cetrniva cetrtile stertome thamsubu | | | hare, caribou antlers nearby (hunted not shed) |
| 06_VN209 | 11/08/2006 | 17W | 7968529 | 509206 | Crest of hill before last valley to N | | | | | | level | | mesic | | Disturbed site - man Recently used meat cache with caribou in it. Badly made or disturbed storage cache with caribou skeleton assc with cache. Bones in caches other spread aound. All bones are white so not recent use | | 60 | | | saliarct 10 | salireti 2 casstetr 5 dryainte 10 | oxyrdigy 2 polyvivi .5 Stellaria 1 | poa sp 10 poa sp2 10 oxyt mayd .1 | Sedges careatro mis .2 carenard .1 carescir .5 Carex rupes 5<br>Cottongrass<br>Rushes luzuniva 5 | | | saxioppo 2 | | mosses 15 | Scats: fox and wolf Dens/burrows: lemming | This use of stones for storage has affected the veg. around the cache. Its much richer, more mustards and grasses, etc. |
| 06_VN211 | 11/08/2006 | 17W | 7966457 | 513190 | About 2 km N of confluence of rivers and rd/rail | | | | | | <1 | N | mesic | | Even cover of veg on small depression. Heather/avens/moss, solid ground cover | | 90 | 10 | 5 | saliarct 5 salirich 10 | salireti 15 casstetr 50 dryainte 10 | toficocc .5 oxyrdigy 1 sileacau .5 | pedicapi .5 oxyt mayd .5 | Sedges caremis 5 carescir .1<br>Cottongrass<br>Rushes luzuniva 5 | | | saxioppo | cetrniva 2 cetrile .5 stertome 1 thamsubu 1 | mosses .5 | Scats: caribou, ptar, hare | |
| 06_VN212 | 14/08/2006 | 17W | 7917790 | 550540 | north road to Milne 8km NW of MAry River camp | | | | | | 10 | NE | Mesic | | shrub(heather) moss | | 70 | 20 | 10 | saliarct 10 | salireti 10 casstetr 30 dryainte 20 | oxyrdigy 0.1 polyvivi 0.1 | oxytmay 1 | Sedges sedges 20<br>Cottongrass<br>Rushes luzuconf 1 | | | saxioppo 5 pedicapi 0.1 pedihirs 0.1 | lichens 20 cetrniva 20 glove 2 | racolanu 10 | scats: caribou | |
| 06_VN213 | 11/08/2006 | 17 W | 7948328 | 522170 | N rd rt. where rd leaves | | | | | | level | NW | wet | | Thick growth of c. aquatilis on level above pond at edge moss mds with c. membrane | | | 70 | | | | | | Sedges careaqua 75<br>Cottongrass erioangu .1<br>Rushes | | | | | sm moss .1 algae 25 | | |
| 06_VN214 | 14/08/2006 | 17W | 7918108 | 550345 | north rd 8km NW of camp | | | | | | 25 | | mesic | | Distrubed community-vegetated bank of old road (~40 yrs) | | 40 | 10 | 10 | | dryainte 40 | | grass 1 | Sedges sedges 25 carex 2<br>Cottongrass<br>Rushes luzuconf 2 | | | saxitric 10 | cetrniva 7 | thamsubu 3 | scats: caribou dens/burrows: lemming | |
| 06_VN215 | 11/08/2006 | 17W | 7948335 | 522234 | n rd rt. | | | | | | level | NW | wet-mesic | | Frost boil with scattered plants in centre and thickly veg. rim | | | | | saliarct 5 salirich 2 | dryainte 5 | | | Sedges caremis 5 carememb 10 Carex sp (2-3) colli 5<br>Cottongrass eriosche (?) sgl nontus .2<br>Rushes juncus biglumis 2 | | | saxialzo 1 | cetrniva 2 cetrile 1 thamsubu .1 | | | |
| 06_VN216 | 14/08/2006 | 17W | 7922247 | 545341 | north rail route 15km NW of camp | | | | | | | | | | stony ridge top(1m wide) between 1m wide mossy gullies dw shrub dom | | 30 | 10 | 10 | | vacculig 10 casstetr 10 dryainte 10 | | oxytmayd 0.1 | Sedges sedges 5 carex 3<br>Cottongrass<br>Rushes luzuniva 1 | | | epillati 5 | cetrniva 5 thamsubu 0.1 | mosses 5 racolanu 3 | dens/burrows: lemming | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | Wildlife notes | Archaeology notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | | |
| 06_VN217 | 11/08/2006 | 17W | 7939175 | 524929 | N rd rt. just N of long lake with airstrip at S end | | | | | | 2 | NW | mesic-dry | | Boulder field. Limestone boulders which are rapidly foliating water flows thru in spring | | | | | saliarct 5 salirich 5 | | polyvivi .1 melaape .2 | | Sedges caremis 1 Cottongrass Rushes | | | | | asstd moss 20 | | |
| 06_VN219 | 01/08/2006 | 17W | 7920079 | 536401 | N rd rt as rd leaves the limestone plateau | | | | | | 7 | E | mesic dry | | avens, heather, xeric sedge assn on slope and in small depression by bedrock outcrop | | | | | saliarct 1 | salireti .2 casstetr 25 dryainte 20 | oxyrdigy .1 polyvivi .2 sileacau .1 | oxyt mayd .1 pedicapi .2 | Sedges caremis 5 carescir 10 Carex rupes 20 Cottongrass Rushes | | | saxioppo .2 | cetrniva 10 thamsubu .5 | racolanu 10 | sighting/heard: raves 2 flying by cliffs dens/burrow: lemming | |
| 06_VN259 | 14/08/2006 | 17W | 7918080 | 550361 | rd/rait rt near penisula lake on old rd | | | | | | | | wet mesic | | natural progression of plant community, completely covered with sedges and avens, lots of rich willow | | 30 | | | saliarct 10 salirich 20 salix arctophila 10 | salireti 5 | | poa 1 pedicapi 5 | Sedges careaqua 50 Carex 10 Cottongrass Rushes luzuconf .5 luzuniva 2 | | | | cetrniva .5 stertome .1 thamsubu .1 | | common loons | |
| 06_VN261 | 14/08/2006 | 17W | 7920004 | 546024 | slot canyons N of peninsula lake E of large round lake with mountain pergrine nest site | | | | | | | | mesic-dry | | pale sandstone cliffs with harder strata on top, forms shelters for birds. Veg sparse | | | | | saliarct | casstetr (dominant) | | poa | Sedges Cottongrass Rushes | | | saxutric | cetrniva Cladonia stertome thamsubu | racolanu | 3 chicks in nest one parent bird flying around duck wing | |
| 06_VN263c | 14/08/2006 | 17W | 7922228 | 545323 | where river enters large lake with mountain | | | | | | 1 | SE | mesic | | odd ice - laid forms, like snakes coiling within each other in depression - racon moss, heather, luzula, hierchloe, blueberries, dryas, yellow oxyt | | | | | saliarct 5 | vacculig 10 casstetr 10 dryainte 10 | | | Sedges Cottongrass Rushes luzuniva 2 | | | | cetrniva 5 cetrile .2 Cladina .1 cladonia 10 Alectoria | racolanu 60 | | |
| 06_VN268 | 17/08/2006 | 17W | 7915132 | 552587 | | | | | | | | | | | | | | | | | | | | Sedges Cottongrass Rushes | | | | | | | |
| 06_VN269 | 17/08/2006 | 17W | 7915389 | 552347 | along NE shore peninsula lake | | | | | | 10 | S | mesic | | heather moss assn. lots of lichen and hierchloe. empetrum nigrum | | | | | | | | | Sedges Cottongrass Rushes luzuconf 5 luzuniva .2 | | | | cetrniva 5 cetrile .1 Cladina 10 stertine 1 thamsubu .5 glove | racolanu 60 | scats: caribou | |
| 06_VN269A | 17/08/2006 | 17W | 7916436 | 551673 | N side of 3 lake chain by ascarpment about end of middle lake, hillside above lake | | | | | | 7 | w | dry | | mats of veg on exposed hill top, much evid of wind, erosion, blow outs fines removed | | | | | | potevahl dryainte 15 | minuartia .1 | | Sedges Carex rupes 5 Cottongrass Rushes luzuconf .1 | | | saxioppo 5 saxitric 2 | cetrniva .1 thamsubu .1 Alectoria 1 | mosses tiny 2 | sighting/heard: lapland, loons | |
| 06_VN270 | 17/08/2006 | 17W | 7915807 | 552008 | N side of first of 3 lakes along ecarp, oppos canyon terrace slope above lake shore | | | | | | 25 | SW | mesic | | heather moss assn, in sm valley (depression) onside of lake below terrace. mostly mats of heather surrounded by mixture of lichens | | 60 | 8 | 50 | | casstetr 60 | | poa .1 | Sedges Cottongrass Rushes luzuniva 2 | | | | cetrniva 10 Cladina 30 stertome 10 glove 5 | racolanu 25 mosses 10 | | |
| 06_VN271 | 17/08/2006 | 17W | 7915054 | 552677 | N rd rt as it descends to go along N shore of 3 lakes beneath escarpment | | | | | | | E | mesic-dry | | thin layer of veg. mostly heather blueberry dryas and mos on rocky | | | | | saliarct 2 | vacculig 40 casstetr 15 dryainte 15 | | oxyt mayd .2 pedicapi .1 poa .1 | Sedges Carex rupes .5 Cottongrass Rushes luzuconf .5 | | | | cetrniva 2 Cladina .2 Cladonia .1 stertome 5 thamsubu 1 Alectoria 10 | cushion .5 | den/burrow: lemming | |
| 06_VN272 | 17/08/2006 | 17W | 7915040 | 553075 | end of ridge N side of rd as it enters valley | | | | | | 50 | E | mesic dry | | thin veg on ledges between boulders mostly heather and lichens but some dryas plus grasses/rushes | | 30 | 32 | 7 | | saliherb 1 potepulchela .1 potehypearct .2 casstetr 20 dryainte 10 | oxyrdigy 1 Stellaria .5 ranuniva .1 | poa .5 | Sedges Cottongrass Rushes luzuniva 1 | | | saxitric | cetrniva 1 cetrile .2 Cladina .1 Cladonia 5 stertome 5 thamsubu .2 Alectoria .1 peltigera .1 | racolanu | scats: lemming, caribou sighting/heard: rough legged hawk flew over, pipits, lapland | |
| 06_VN273 | 17/08/2006 | 17W | 7914974 | 553498 | flat area between escarp valley camp | | | | | | level | | | | patchy veg on moss base, mush carex, some heather lots of willow | | | | | | saliherb 20 casstetr 15 | mertmari .1 | pedicapi .2 pedihirs .2 | Sedges careaqua 2 carememb 2 Cottongrass erioangu 5 Rushes luzuniva 2 | | | | cetrniva .5 Cladonia .2 stertome .5 thamsubu .1 | sm mosses 60 | scats: hare, goose sighting: sandhill cranes | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | Moisture | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | Wildlife notes | Archaeology notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | | |
| 06_VN274 | 17/08/2006 | 17W | 7914887 | 553807 | along N rd rt flat area NW of camp in road itself | | | | | | level | | mesic | | plot done in rd incl berm - disturbed site, clumps or mats of veg, plus biol crust on ground | | | | | saliarct 2 | saliherb 2 casstetr 15 dryainte 20 | sileacau 5 paparadi .1 armemari .5 | poa 1 | Sedges carenard 10 carex 5<br>Cottongrass<br>Rushes luzuconf | | | | cetrniva .2 stertome .2 thamsubu .5 | asst mosses 25 biol crust | | |
| 06_VN275 | 17/08/2006 | 17W | 7914951 | 554484 | sandy hills terrace to NE of camp lake, plot located in depression formed by frost fissures | | | | | | 7 | SW | wet mesic | | thick veg, in depression where 2 frost fissures joins protected from winds mosses underlie most | | | | | salirich 10 | salireti 20 vacculig 5 casstetr 60 | tofipusi .5 oxyrdigy 10 polyvivi .2 sileacau .2 Stellaria 1 armemari .3 | oxyt mayd .5 pedicapi .5 | Sedges carescir 5<br>Cottongrass<br>Rushes luzuniva | | | | cetrniva 2 cetrile .2 stertome 5 thamsubu .1 glove .5 | mosses 80 | scats: hare, goose den/burrows/nest: lemming | |
| 06_VN276 | 17/08/2006 | 17W | 7915029 | 554622 | rd rt to NE of camp lake | | | | | | | | mesic dry | | disturbed site - thick growth of grasses where road has slid a bit mostly grass with a few willows | | | | | saliarct 2 salirich 2 salix | vacculig 5 casstetr dryainte 5 | oxyrdigy 2 polyvivi 5 ceraalpi 10 melaaffi .1 Stellaria 2 paparadi .2 armemari .1 | pedicapi .1 poa 2 | Sedges carescir 5<br>Cottongrass<br>Rushes luzuconf .5 luzuniva .2 | | | | | | scats: hare | |
| 06_VN277 | 17/08/2006 | 17W | 7914705 | 554975 | along rd rt E of camp lake | | | | | | 2 | E | mesic | | heather/moss assn on gravel lacustrine terrace mostly racon with ass forbs | | | | | | vacculig 10 casstetr 50 dryainte 2 | oxyrdigy .2 ceraalpi .2 paparadi .5 | | Sedges Carex 5<br>Cottongrass<br>Rushes luzuconf 5 luzuniva .5 | | | | ctrniva .2 Cladonia .1 thamsubu .1 Alectoria .5 | racolanu 50 | scat: hare | |
| 06_VN278 | 17/08/2006 | 17W | 7914626 | 555694 | along rd rt by largest river | | | | | | 20 | SE | wet mesic | | riparian sedge assn at edge of stream channel in floodplain of small river | | | | | salirich 20 | salireti 15 dryainte 5 | toficocc .2 topifusi .1 oxyrdigy 1 polyvivi .5 ceraalpi .1 Stellaria .1 paparadi .1 pedicapi 2 pedilana .Sepillati 20 | pedicapi 2 pedilana .5 | Sedges carememb 5 Carex 10<br>Cottongrass erioangu 2<br>Rushes luzuniva .1 | | | | cetrniva .2 Cladonia .1 stertome 10 thamsubu .1 | mosses 25 | | |
| 06_VN279 | 17/08/2006 | 17W | 7914558 | 555711 | in floodplain of river near where rd crosses stream | | | | | | 5 | | wet mesic | | scattered plants amidst cobbles and boulders mostly rich willow with some grasses, sedged and mosses | | | | | salirich 20 | dryainte 2 | polyvivi .2 melaape .1 epillati 5 | | Sedges caremis .2 carememb .2<br>Cottongrass<br>Rushes juncus .1 | | | | | asstd 2 | | |
| 06_VN280 | 17/08/2006 | 17W | 7914567 | 555747 | floodplain of river near rd crossing centre of raised terrace | | | | | | 2 | | mesic-dry | | avens assn almost 100% avens// with unveg spaces between | | | | | saliarct .5 | dryainte 75 | | pedicapi 1 pedilana .2 | Sedges caremis 1 carescir .5<br>Cottongrass<br>Rushes | | | saxioopo .1 | cetrniva .5 | mosses .2 | scats: goose, hare den/burrows: lemming | |
| 06_VN282 | 17/08/2006 | 17W | 7914472 | 555729 | flood plain of river, edge of channel | | | | | | 20 | N | mesic | | Riparian - growth of willows along edge of bank with grasses between | | 50 | | | saliarct 5 salirich 50 | | polyvivi .5 | | Sedges carememb 2<br>Cottongrass<br>Rushes | | | saxicern .1 | | str. mosses 5 under willows 10 | scats: goose | |
| 06_VN340 | 20/08/2006 | 17W | 7914883 | 556017 | Lacust system to NW of camp along rd rt at edge of pond | | | | | | 5 | E | mesic dry | | Thin mat of dryas, heather and xeric sedges on sandy hil | | | | | heather 10 | vacculig 5 | | oxyt mayd .1 Pedicapi .1 | Sedges c. rupestris c. nardina<br>Cottongrass<br>Rushes | | | saxioppo .2 | | | red throated loon fishing in pond scats: hare | |
| 06_VN341 | 20/08/2006 | 17W | 7914992 | 556117 | Along N rd, abt 1k from camp on lac flats, terrace of hills | | | | | | <1 | SW | mesic dry | | mats of heather and blueberry surround by Raconit moss some dryas on higher spots. This is undulating terrain with sedges donminating on the lower sections and heather dominating on slopes, blueberry and avens on higher spots. | | | | | saliarct 10 | dryainte 5 vacculig 20 casstetr 15 | paparadi 3 armemari 2 toficocc 5 sileacau 2 | pedicapi .5 | Sedges carerupe10 carenard 10<br>Cottongrass<br>Rushes luzuconf 2 care scir 5 | | | | | mosses 5 | caribou scats | |
| 06_VN342 | 20/08/2006 | 17W | 7915192 | 556483 | slope of sandy hill to B of N rd rt, lacus. complex N of camp | | | | | | 12 | N | mesic dry | | Scattered clumps of veg on sandy hillside with much Luzula confusa, mats of dryas and arctic willow lichen cover thin | | | | | | dryainte 10 casstetr 2 saliherb .2 | oxyridigy 1 sileacau .5 Minuartia .1 | poa 1 | Sedges carenard .2<br>Cottongrass<br>Rushes | | | saxicorn .1 saxinivd .5 saxitric .5 saxicaes .2 | | biol. crust 5 | Caribou skull nearby Pipits passed, calling | |
| 06_VN343 | 20/08/2006 | 17W | 7915222 | 556551 | Lacus complex NW of camp N rd rt, in small stream valley | | | | | | 3 | N | wet | | Riparian assn of sedges and rich willow. Wet area with several sedges (mostly c. membranacea) under rich willow on moss hummocks | | | | | saliarct 5 salirich 20 | salireti 20 dryainte 5 | | poa 2 pedisude 2 | Sedges careaqua 5 carememb 15<br>Cottongrass erioangu 5<br>Rushes | | | | | mosses 40 | scats: lemming dens and burrown: lemming | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | Wildlife notes | Archaeology notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | | |
| 06_VN344 | 20/08/2006 | 17W | 7915159 | 556691 | Lacust complex to N of camp, near rd | | | | | | level | | mesic | | Relatively lush veg in juncture of 2 frost fissures. In bottom sedges and salix. On slopes, heather and Racomi higher Dryas and salix arctica and saxtric | | | | | saliarct | salireti vacculig casstetr 40 dryainte | toficocc 1 Stellaria .5 | oxyt mayd .1 pedicapi .2 | Sedges caremis 5 carememb 20 Cottongrass Rushes | | | | cetrniva .2 cetrtile .1 stertome .5 thamsubu .1 Alectoria .5 | mosses 2 racolanu 30 | scats, burrows and trails: lemming | |
| 06_VN345 | 20/08/2006 | 17W | 7915135 | 556789 | Lacustrine area to N of camp, level top with fain frost fissures polygons near 344 | | | | | | level | | dry | | Plants in frost fissures however faint. Only a few lichens on pebbles on gravel centre | | | | | saliarct .5 | casstetr 5 | ceraarct .1 paparadi .2 | poa 2 | Sedges Carex rupe 2 Cottongrass Rushes luzuconf 2 | | | saxioppo 1 saxitric 1 | stertome .5 thamsubu .5 Alectoria 10 | mosses 2 | Pipits in vicinity | |
| 06_VN346 | 20/08/2006 | 17W | 7915132 | 557061 | N rd rt across arm of camp 2km from camp in lacustric terrace | | | | | | dep 50 | N | wet mesic | | Riparian shoreline shrub (rare here) Fringe of rich willow at edge of depression overhanging small pond. Willows grow high out of bank and are pruned flat on top. Under willos, moss, saxif retic, Oxyr. figyma and leaf litter | | | | | saliarct 10 salirich | salireti 10 pohyp .2 casstetr 20 dryainte 10 | tofipusi .5 oxyrdigy 20 polyvivi .2 Stellaria .2 | poa 2 pedicapi .2 oxyt mayd 5 | Sedges carememb .2 carescir 1 Cottongrass Rushes luzuconf .2 luzuniva .5 | | | | cetrniva .1 stertome .5 thamsubu .1 | mosses 60 | red-th loon heard flying Pacific loon on camp lake nearby Lapland - sm flock passing lemming burrow | |
| 06_VN347 | 20/08/2006 | 17W | 7915395 | 557480 | Stream near road, lacus area N of camp, flows into camp lake three small conyon at snowdrift | | | | | | stream 10, plot 25 | N, SW | wet mesic | | Snowdrift assn, affected by snow that remains long into summer. Many plants blooming now. Thingly veg on unstable slopes, grasses, saxi, cernua, oxyria, and bistor on level part | | | | | saliarct 2 salirich 2 | salireti 5 | oxyrdigy 15 polyvivi 2 ceralarct 1 melapet .5 sileacau .5 Stellaria .2 ranuniva .2 ranupygm .1 paparadi 1 oppiliat .1 | poa 5 | Sedges carescir .5 Cottongrass Rushes luzuconf .1 | | | saxicaes 5 saxicern 10 saxihier 5 saxihirc 5 saxiniva .1 | | liverwort 2 biol crust 5 mosses 2 | Pipits feeding around snowbank | |
| 06_VN348 | 20/08/2006 | 17W | 7915356 | 557487 | Canyon, stream flowing into camp lake abt 1 km from camp | | | | | | 10 | NE | wet mesic | | Snowbank comm. Mat of oxyria digyma on slope with other species intermingled ind. draba and poppies | | | | | | | oxyrdigy 50 ceraalpi 5 ranuniva .1 ranupygm .1 | | Sedges Cottongrass Rushes | | | saxicaes .2 saxicern 2 saxiniva 1 saxioppo .5 saxirivu .5 | Peltigera 1 | sm. mosses 30 biol. crust 10 | scats: lemming and goose | |
| 06_VS063 | 06/08/2006 | 17W | 7910734 | 564282 | S. Rd route, where it enters valley | | | | | | level | | mesic-dry | | dryas, sax oppos, carex rupestris on gravel in high centre polygon, patterned ground | | 40 | 30 | 10 | saliarct 2 | casstetr 20 dryainte 20 | ceraalpi 2 sileacau 2 | oxytmayd 5 | Sedges carenard 5 carescir 5 carex 15 Cottongrass Rushes | | | armemari 0.2 | cetrniva 5 cetrtile 1 thamsubu 15 alectoria 1 | racolanu 5 asstd 3 | runs/trails: caribou, hare | |
| 06_VS064 | 06/08/2006 | 17W | 7910700 | 564251 | beside Mary River tributary at North end of Proposed rail alignment | | | | | | flat | | mesic | | avens - sedges bouldery flat area mushrooms | | 25 | 15 | 25 | | salix 5 casstetr 1 dryainte 20 | ceraalpi 0.1 | oxytmayd 0.1 carex 10 | Sedges carex 5 Cottongrass Rushes | | | saxioppo 2 epillati 1 pedisude 0.1 | lichens 15 cetrniva 10 cetrtile 3 thamsubu 0.5 | racolanu 10 | | |
| 06_VS065 | 06/08/2006 | 17W | 7910640 | 564274 | About 100m from plot 64 up small valley, really a large frost fissure | | | | | | | | wet-mesic | | plot done in frost crack in patterned ground relatively thick veg in frost crack, salix arctophila is the dominant shrub here, along with cassippe | | 50 | 20 | 30 | saliarct 2 salix 15 | salireti 5 casstetr 25 dryainte 5 | tofipusi 0.1 oxyrdigy 0.5 polyvivi 0.1 ceraalp 0.2 sileacau 2 stelleria 0.5 | poa 0.2 oxytmayd 3 | Sedges careatro 2 carescir 1 carex 1 Cottongrass Rushes luzuniva 2 | | | | cetrniva 2 cetrtile 1 thamsubu 0.5 brn lettice 5 | racolanu 40 | dens/burrows: lemming | |
| 06_VS066 | 06/08/2006 | 17W | 7910665 | 564251 | Mary River trib north end of south proposed rail route | | | | | | 45 | S | | | | | 40 | 10 | 30 | | salireti 5 casstetr 10 dryainte 20 | polyvivi 1 melaapet 0.1 | oxytmayd 3 | Sedges Cottongrass Rushes | | | saxicaes 5 | cetrniva 10 | racolanu 10 other moss 10 | dens/burrows: lemming runs/trails: caribou | |
| 06_VS067 | 06/08/2006 | 17W | 7910607 | 564348 | Further up with fork valley, in flat lacustrine terrace | | | | | | <2 | N | wet | | Mixture of sedges and rich willies in frost fissure in patterned ground. Association extends only about 15m from centre of crack before giving way to the more xeric assn. | | 35 | 20 | 10 | saliarct 5 salirich 30 | salireti 10 casstetr 15 dryainte 15 | oxyrdigy 0.5 polyvivi 0.2 | cula pupi 0.5 poa 0.2 | Sedges careatro 2 carescir 3 carex 3 Cottongrass Rushes luzuconf 0.5 | | | | cetrniva 1 cetrtile 0.2 stertome 0.1 thamsubu 0.1 glove 0.2 | | sighting/heard: lapland longop dens/burrows: lemming | |
| 06_VS068 | 06/08/2006 | 17W | 7910557 | 564355 | Mary River tributary at north end of south potential rail route - broad valley bottom | | | | | | flat | | mesic | | avens moss sedge mushrooms - small brown | | 25 | 10 | 30 | | dryainte 20 | | oxytmayd 1 | Sedges carex 7 Cottongrass Rushes luzuconf 1 | | | saxioppo 2 pedicapi 0.1 | cetrniva 10 cetrtile 2 | racolanu 25 | | |
| 06_VS069 | 06/08/2006 | 17W | 7910177 | 565329 | ~1m up valley(SE) from 068,067 - open slope of the N side of the valley, below high cliffs | | | | | | 25 | SW | mesic-dry | | Avens/sedge assn. on slope of the cliffs, forming a seperate ridge | | 35 | 25 | 15 | salix 0.2 | salireti 5 casstetr 0.1 | polyvivi 0.2 | oxytmayd 0.5 small brn mushroom 0.1 | Sedges careatro 2 carenard 15 carex 15 Cottongrass Rushes | | | saxioppo 0.1 | cetrniva 1 cetrtile 0.2 thamsubu 0.2 | | sighting/heard: peregrines | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | | Wildlife notes | Archaeology notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | | |
| 06_VS070 | 06/08/2006 | 17W | 7910133 | 565329 | beside small lake, mary river trib, possible south rail route | | | | | | 2 | SW | mesic | | | | 8 | 5 | 15 | | salirieti 5 casstetr 50 dryainte 25 | | oxytmayd 3 grass 3 pedi 0.1 | Sedges<br>Cottongrass<br>Rushes | | | saxioppo 1 pyrogran 0.1 pedicapi 0.1 | cetrniva 10 | | scats: goose sighting/heard: peregrin | |
| 06_VS071 | 06/08/2006 | 17W | 7910248 | 565596 | ridge in front of fault valley, oppos end of esker, below 2 snowbanks | | | | | | level | W | dry | | thin veg on knob above small sedge valley. below 2 snowbanks | | 15 | 15 | 15 | saliarct 2 | potevahl 0.1 dryainte 15 | | oxytmayd 0.1 | Sedges<br>carex 10<br>Cottongrass<br>Rushes<br>luzuconf 1 | | | saxioppo 2 saxitric 2 | cetrniva 2 cetrile 0.1 alectoria 5 | racolanu 5 | signs of some bird use of rocks but no pellets (too windy? veg. around rocks is slightly more lush | soapstone deposits - some evid. ofuse deposits are to the NE above, on the cliff and are extensive. About 0.5km to east, up the vally, theres a peninsula with many signms of old camps(and some not so old). People come here to collect soapstone |
| 06_VS072 | 06/08/2006 | 17W | 7910233 | 565575 | base of cliffs - mary river trib | | | | | | 20 | | mesic | | Avens - sparse veg rocky slope mushroom - brown | | 30 | 10 | 10 | | dryainte 30 | sileacau 1 | mxytmela 3 sedge 3 | Sedges<br>carex 5<br>Cottongrass<br>Rushes | | | saxioppo 1 | lichens 5 cetrniva 2 cetrtile 1 | mosses 5 | scats: hare nests: peregrine | |
| 06_VS073 | 06/08/2006 | 17W | 7904632 | 573026 | 2nd river to S of soapstone cliffs, S. side of river huge boulder fields | | | | | | level | | | | scattered plants on gravel surface, flat gravel surface of terraces | | | 4 | 1 | | | ceraalpi 0.1 | | Sedges<br>crupes 1 carex 2<br>Cottongrass<br>Rushes<br>luzuconf 0.2 | | | saxiniva 0.1 epillati 1 | cetrniva 0.2 cetrtile 0.1 alectoria 0.5 | sm mosses 0.2 | scats: hare | |
| 06_VS074 | 06/08/2006 | 17W | 7904697 | 573043 | proposed south rail route north of BigA lake on caribou trai | | | | | | flat | | dry | | moss heather strip of veg between boulder field and grav cobble flat caribou trail through middle | | 30 | 2 | 60 | | salix 1 casstetr 30 | oxyrdigy 0.1 melaaffi 0.1 sileacau 0.1 | poa 0.1 | Sedges<br>Cottongrass<br>Rushes<br>luzuconf 0.1 | | | | lichens 10 pixie cup 2 thamsubu 0.1 antler 5 | racolanu 50 | trail/runs: caribou | |
| 06_VS075 | 06/08/2006 | 17W | 7904668 | 573094 | boulder field above flat area (plot 071+07) | | | | | | 25 | SW | dry | | sparse bits of veg. clinging to slope, mostly areas where there are smaller stones | | 1 | | | saiarct 0.2 | dryainte 2 | sileacau 0.5 | grass 0.2 | Sedges<br>carenard 0.1<br>carescir 0.2<br>Cottongrass<br>Rushes | | | saxicern 0.1 saxioppo 0.5 saxitric 0.1 epillati 0.1 | cetrniva 0.1 cetrtile 0.1 cladina 0.2 cladonia 0.2 alectoria 0.1 | racolanu 5 asstd moss 0.2 | | |
| 06_VS077 | 06/08/2006 | 17W | 7904568 | 572988 | Hillside below flat spot | | | | | | 50 | W | mesic | | SNowbank assn on boulder hillside above lake many species, most still blooming | | 40 | 8 | 2 | salix arctophila 10 | saliherb 1 potenives 1 casstetr 20 | oxyrdigy 5 ceraalpi 5 stelleria 0.5 paparadi 0.1 | hierochloe 5 poa 1 taraxacum 1 oxytmayd 1 | Sedges<br>carenard 2 carex 1<br>Cottongrass<br>Rushes<br>luzuniva 1 | | | saxitric 2 | | | scats: hare sighting/heard: pipits dens/burrows: lemming | |
| 06_VS078 | 06/08/2006 | 17W | 7904501 | 572957 | North of Brig A, on south prop. rail route | | | | | | flat | | wet | | sedge moss shrub moist community | | 35 | 35 | 30 | | saliherb 5 salix 5 vacculig 5 casstetr 5 dryainte 15 | oxyrdigy 2 polyviv 1 | oxytrapos mayd 1 | Sedges<br>carebige 5 carex 20<br>Cottongrass<br>Rushes | | | saxicaes 1 saxioppo 2 epillati 1 | pale green foliose 2 | racolanu 15 other moss 10 | scats: caribou, hare | |
| 06_VS079 | 06/08/2006 | 17W | 7902186 | 578447 | Marshy area. height of land in graben between hills | | | | | | level, <1 | N | wet | | Wetland, non-tussock Flat area w/ sm stream entering from the E, small pools or ponds draining N | | 2 | 60 | 40 | saliarct 2 salirich 0.1 | | | grasses: red head 15 green head 20 | Sedges<br>careaqua 10<br>Cottongrass<br>erioangu 15<br>eriosche 10<br>Rushes | | | saxicern 2 saxifoli 3 pedisude | | asstd 10 stream dekris 30 | sact: goose dens/burrows: lemming runs/trails: lemming | |
| 06_VS080 | 06/08/2006 | 17W | 7902260 | 578473 | height of land between Mary river WS and A lake prop south rail route | | | | | | 2 | S | wet-mesic | | heather moss moist area | | 45 | 10 | 45 | | salix 5 casstetr 15 dryainte 10 | | hierochroe 5 grass 2 | Sedges<br>Cottongrass<br>Rushes<br>luzuconf 3 | | | | lichens 20 antler 5 | mosses 25 racolanu 20 grenn mosses 10 | | |
| 06_VS081 | 06/08/2006 | 17W | 7902245 | 578590 | Near height of land on N side Big A lake, Behind ridge of hills | | | | | | ~1 | N | wet-mesic | | unusual landform, veg. to edge of stream but no clear riparian ass. moss assn in watershed of sm boulder-paved stream. Some faint solifuction | | 25 | 25 | 50 | saliarct 20 | casstetr 5 | | poa 5 hierochloe 5 calamage pupur 5 | Sedges<br>careaqua 5<br>Cottongrass<br>Rushes<br>luzuniva 5 | | | | cetrniva 1 stertomel 5 thamsubu 1 peltigera 0.5 glove 0.5 | feather moss 50 | scats: hare and goose | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | Wildlife notes | Archaeology notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | | |
| 06_VS082 | 06/08/2006 | 17W | 7902227 | 578626 | catchment divide Mary River trib and Big H lake | | | | | | | | mesic | | sedge dom heather moss moist flat area - open | | 40 | 40 | 10 | | salix 5 casstetr 30 dryainte 5 | | hierochloe 2 | Sedges carex 35 Cottongrass Rushes | | | | lichens 5 antler 2 | mosses 5 | scats: fox dens/burrows: lemming | |
| 06_VS083 | 07/08/2006 | 17W | 7801179 | 594376 | Above port site at Steensby Inlet | | | | | | level | S | wet | | small stream with multiple channels running over terrace; plot includes channel and mounds | | 40 | 20 | 10 | shrubs tall 5 salirich 5 | salireti 10 vacculig 10 casstetr 10 dryainte 5 | polyvivi 0.2 | | Sedges careatro 2 carenard 0.2 carex 2 Cottongrass Rushes luzuconf 2 | | | epillati 0.2 | cetrniva 1 thamsubu 0.2 | asstd 8 | scats: goose sighting/heard: snow bunting, pipits | |
| 06_VS084 | 07/08/2006 | 17W | 7801179 | 594386 | on the south coast of Baffin-Steensby Inlet - near proposed port site | | | | | | 0 | | mesic | | avens-sedge with blueberries coastal site mushrooms - red | | 50 | 25 | 25 | | salireti 10 vacculig 10 casstetr 5 dryainte 25 | | | Sedges carex 20 Cottongrass Rushes | | | epillati 5 | lichens 15 cetrniva 10 | mosses 10 cushion 5 | | scats: goose |
| 06_VS085 | 07/08/2006 | 17W | 7801097 | 594394 | Slope above port site at steensby inlet, on terrace above sm. stream | | | | | | 15 | SW | | | Mats of avens to xeric sedges on lichened gravel slope s- amt of racomitrum lanuginosum | | 20 | 10 | 10 | saliarct 1 | dryainte 20 | minuartia 0.1 sileacau 1 | astrag. alpina 2 oxytmayd 0.1 | Sedges carenard 5 carex 5 Cottongrass Rushes | | | saxitric 0.1 epillati 0.5 | cetrniva 2 alectoria 8 | racolanu 5 | scats: goose, hare, caribou | |
| 06_VS086 | 07/08/2006 | 17W | 7801107 | 594387 | near south potential port site - steensby inlet | | | | | | 0 | | mesic | | bird perch/ rock type | | 10 | 55 | 20 | | dryainte 10 | ceraalpi 10 stellaris | grass 5 oxytmayd 1 astralpi 2 | Sedges carex 10 Cottongrass Rushes | | | saxicaes 25 | antler 2 | mosses 20 | scats: hare | |
| 06_VS087 | 07/08/2006 | 17W | 7800970 | 594357 | Steensby Inlet port site, small stream cascading down slope | | | | | | 18 | W | wet-mesic | | Riparian willow assn, on small stream. water cascades down over boulders and willows grow amidst the boulders and on the bank. Lots of blueberry plants on this slope | | 25 | 30 | 10 | | salireti 2 vacculig 20 casstetr 10 | oxyrdigy 10 polyvivi 0.1 sileacua 5 stelleria 0.1 | arctagrostis lat. 5 poa 5 hierochloe 2 oxytmayd 0.1 | Sedges careaqua 0.2 careatro 2 caremisandra 0.2 carescir 0.2 Cottongrass Rushes luzuniva 0.5 | | | saxifoli 0.1 saxioppo 2 epillati 5 pedicapi 1 | | cushion 2 asstd 1 | scats: hare | |
| 06_VS088 | 07/08/2006 | 17W | 7800931 | 594360 | Steensby inlet - proposed port site | | | | | | | | mesic | | blueberry sedge on the coast | | 60 | 20 | 20 | | salireti 10 vacculig 35 casstetrt 15 | polyvivi 0.1 | | Sedges carex 15 Cottongrass Rushes | | | epillati 5 pedicapi 0.1 | cetrniva 5 thamsubu 1 antler 5 | mosses 5 biol crust 10 | scats: goose, caribou sighting/heard: loon | |
| 06_VS089 | 07/08/2006 | 17W | 7800741 | 594233 | At port side south steensby inlet | | | | | | 5 | SW | | | Mats of veg. on gravel terrace above storm tide line, where small stream flows in. mostly dryas fireweed retic willow | | 50 | 30 | 10 | saliarct 5 | salireti 5 salix arctophila 5 dryainte 30 | polyvivi 0.1 ceraalp 5 melaapet 0.5 | astr. alpina 15 black cup fungus 0.1 brn mushrooms 5 | Sedges Cottongrass Rushes luzuniva 0.1 | | | saxioppo 1 epillati 40 pedicapi 0.5 | cetrniva 5 thamsubu 2 | asstd mosses 10 | sighting/heard: glaucous gulls, loon scats: caribou | |
| 06_VS091 | 07/08/2006 | 17W | 7814478 | 599531 | Valley at inersect o 2 proposal routes | | | | | | almost level | E | wet | | Sedge meadow(non tussock) at edge of small pond in boulder-littered basin. Moss mounds plus n-t sedges | | | 60 | 20 | | saliherb 20 | | | Sedges careaqua 60 Cottongrass erioangu 10 eriosche 5 eriovagi 0.5 Rushes | | | pedisude 0.2 | stertome 0.5 | asstd mosses 20 biol crust 5 | scats: goose, caribou sighting/heard: white wolves, hare | |
| 06_VS092 | 07/08/2006 | 17W | 7814508 | 599519 | south end of cockburn lake in lowland | | | | | | | | dry | | sparse veg with gravel showing between plants ledum-heather dom with boulders | | 30 | 10 | 10 | ledupalu 15 | salix 5 casstetr 10 | | diaplapp 8 | Sedges carex 2 Cottongrass Rushes | | | | cetrniva 5 | mosses 5 biol crust 20 | | |
| 06_VS093 | 07/08/2006 | 17W | 7814467 | 599594 | Larger marsh at rd junct(old& new proposed rds) | | | | | | <1 | S | wet | | cottongrass wetland with moss hummocks being colonized by heaths | | 2 | 15 | 15 | ledupalu 2 | saliherb 1 | | | Sedges careaqua 0.5 carescir 60 Cottongrass erioangu 40 salgla fir 20 Rushes | | | pedisude 0.5 | | | scats: goose sighting/heard: sandhill cranes | |
| 06_VS094 | 07/08/2006 | 17W | 7814467 | 599557 | south end of cockburn lake | | | | | | 0 | | wet-mesic | | gully community btwn polygon tops | | 30 | 10 | 50 | | casstetr 30 | | grasss 5 | Sedges Cottongrass Rushes lusuconf 5 | | | | | racolanu 50 | scats: caribou | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_VS095 | 07/08/2006 | 17W | 7820613 | 598057 | Cliff at S end of Cockburn Canyon, east side Ledge on lower part of cliff | | | | | | 12 | S | dry | | Mat of veg on low ledge on cliff, facing south. (prob exposed in winter) | | 15 | 30 | 5 | salix 10 | potehypa 2 potevahl 2 dryainte 5 | polyvivi 1 ceraalpi 2 | heirochloe 15 oxytmayd 5 | Sedges carescir 15<br>Cottongrass<br>Rushes luzuniva 0.2 | | | saxiniva 0.2 saxioppo 0.1 saxitric 1 | | racolanu 2 asstd 5 black cushion moss 0.2 | scats: hare | |
| 06_VS096 | 07/08/2006 | 17W | 7820565 | 598058 | south end of cockburn lake | | | | | | 2 | S | wet-mesic | | gentle south slope at cliff base, fully veg-thick blueberry/mass shrubs sedge groding out of moss | | 50 | 20 | 40 | | salix 5 vacculig 35 casstetr 10 | | hiprodae 5 carry rupestris 1 | Sedges carex 10<br>Cottongrass<br>Rushes luzuconf 0.1 | | | | | cushion 30 biol crust 10 | sighting/heard: falcon scats: goose runs/trail: caribou | |
| 06_VS097 | 07/08/2006 | 17W | 7820644 | 597960 | Entrance to Cockburn lake cliffs | | | | | | 12 | N | wet | | Tussock sedge assn at edge of valley/base of cliff. Mixture of cotton gr. tussock, moss betw and boul covered with moss + veg | | 20 | 30 | 30 | saliarct 15 ledupalu 0.5 | vacculig 2 casstetr 5 | | | Sedges careaqua 5<br>Cottongrass eriovagi 25<br>Rushes luzuniva 1 | | | pyrogran 1 | cetrniva 2 cetrtile 1 Cladonia 0.2 thamsubu 0.1 | mosses betw tuss 25 | scats: goose runs/trails: caribou | |
| 06_VS098 | 07/08/2006 | 17W | 7820692 | 597980 | south end of cockburn lake | | | | | | 2 | S | wet-mesic | | snowbank community salix herbacea dominated | | 60 | 2 | 30 | | saliherb 60 | oxyrdigy 0.5 polyvivi 0.1 ranuniva 1 | grass 20 | Sedges<br>Cottongrass<br>Rushes | | | | pisie cup 0.5 | cushion 30 | sacts: goose, fox, caribou, hare | |
| 06_VS099 | 07/08/2006 | 17W | 7820906 | 598101 | N side of cliffs at W end, base of cliffs, slope - at base of solif. lobe | | | | | | 20 | NE | Mesic | | Veg, on toe of solif. lobe, below sedge meadow, woody plants dominate, esp. willows, blueberry and heather. Heath tundra? In centre and on top (grasses) several species on top of lobe. | | ta 50; dw 30 | 10 | 5 | 15% salirich; 10% ledupalu | 5% salireti; 2% salix (sp. calli); 20% vacculig; 15% casstetr | 1% polyvivi; 5% pyrogran | | Sedges 0.1% carex<br>Cottongrass<br>Rushes 1% luzuniva | | | | 0.1% cetrniva; 0.1% cetrtile; 0.1% thamsubu | 5% asstd | scats; goose (feathers, Canadian goose). Fox seen in area as helicopter came to get us. | |
| 06_VS101 | 07/08/2006 | 17W | 7825263 | 587238 | Fuel cache, at Cockburn Lake, halfway up lake, N shore, on terrace above shoreline | | | | | | level | | dry | | Very sparse veg. on cobble crest of ridge. Much appears dry/dead. Racomitrium in depressions but not in plot. | | | 5 | 20 on rocks | | | 0.1% paparadi | | Sedges<br>Cottongrass<br>Rushes 2% luzuconf | | | | 5% alectoria | 1% blk moss | sighting/heard; caribou (antler, nearby not in plot). | |
| 06_VS228 | 19/08/2006 | 17W | 7887407 | 597265 | | | | | | | | | | | | | | | | | | | | Sedges<br>Cottongrass<br>Rushes | | | | | | | |
| 06_VS281A | 18/08/2006 | 17W | 7847759 | 606184 | | | | | | | | | | | | | | | | | | | | Sedges<br>Cottongrass<br>Rushes | | | | | | | |
| 06_VS282A | 18/08/2006 | 17W | 7847684 | 606169 | | | | | | | | | | | | | | | | | | | | Sedges<br>Cottongrass<br>Rushes | | | | | | | |
| 06_VS283 | 17/08/2006 | 17W | 7894082 | 595307 | S rd rt at large river flowing into Big A Lake | | | | | | 35 | S | mesic | | Thick mat of veg on slope above river mostly heather bluegrass, wintergreen, blueberries and some lichen | | | | | saliarct 5 | vacculig 25 casstetr 30 dryainte 15 | Stellaria 5 pyrogran 15 | poa 5 pedicapi | Sedges<br>Cottongrass<br>Rushes | | | | stertome glove 1 | mosses 10 | scats: goose den/burrows: lemming | |
| 06_VS283A | 18/08/2006 | 17W | 7847657 | 606174 | Site 4 PB map, W side of canyon above | | | | | | 15 | E | mesic | | Relatively thick mat of blueberry in drainage chaanel in rock slope, along with rich willow, S arctica, heather and Lab tea. | | | | | saliarct 2 salirich 15 ledupalu 5 | saliherb .5 vacculig 60 casstetr 10 | oxyrdigy 5 pyrogran 2 | pedihirs 1 | Sedges Carex 1<br>Cottongrass<br>Rushes luzuconf 2 luzuniva 2 | | | | cetrniva 2 Cladina 5 Cladonia .2 stertome .2 glove 1 | other mosses 15 racolanu 5 | scats: lemming Dens/burrows: lemming snow buntings (young) 4 birds | |
| 06_VS284 | 17/08/2006 | 17W | 7894092 | 595247 | top of hill above river flowing into Big A lake. Tent ring site with inukshuk and doss kayab rack | | | | | | 2 | NW | mesic-dry | | Tent ring of mod. old origin double ring veg. has recovered from "lush" phase and matches rest of area | | | | | saliarct 10 | dryainte 15 | ceraalpi .5 | | Sedges<br>Cottongrass<br>Rushes luzuconf .5 | | | saxitric 2 | cetrniva 5 Cladonia .2 stertome .2 thamsubu .2 | mosses 50 | hare bones den/burrow: lemming | |
| 06_VS284A | 18/08/2006 | 17W | 7842157 | 579066 | PB map, site10 at cliffs near ocean | | | | | | 3 | E | wet-mesic | | | | 20 | 10 | | saliarct 1 | salireti 1 casstetr 3 dryainte 15 | rhoduden 3 epillati 3 | pedicapi 1 | Sedges careaqua carescir Carex<br>Cottongrass<br>Rushes | | | saxioppo 5 | cetrniva thamsubu liver lichen | cushion 5 | Scats: goose | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_VS285 | 17/08/2006 | 17W | 7894369 | 595063 | top of gravel terrace to N of plot 284, toward dep 1 area. Plot straddles frost fissure | | | | | | | | | | almost no rooted veg on gravel high centre polygons, and veg limited to frost fissure | | | | | | casstetr 15 | | | Sedges<br>Cottongrass<br>Rushes<br>luzuconf 5 | | | | cetrniva .5 Cladina .1 stertome .2 thamsubu .1 Alectoria .5 | mosses 5 racolanu 25 | scats: caribou goose caribou bone | |
| 06_VS285A | 18/08/2006 | 17W | 7842165 | 579064 | site pb 10 where rd descends to the sea at the top of solif lobe on lobe face | | | | | | | | wet mesic | | Solifluct lobe about 15m above sea level on shelf at base of large cliffs. Dominant are grasses, c. scirpoiden, luzula and fireweed. Mosses on top, plus small depression coll water classic lobe | | | | | saliarct 5 | salireti 10 vacculig 5 casstetr 15 rhodlapp 10 dryainte 5 | oxyrdigy 1 polyvivi 2 ceraalpi 1 ranuniva .2 epillati 5 | poa 10 oxyt mayd 2 pedicapi 10 | Sedges<br>carescir 15 carex 10<br>Cottongrass<br>Rushes<br>luzuconf 2 luzuniva 1 | | | saxitric5 | cetrniva Peltigera .2 | asstd mosses 10 | scats: caribou, goose sighting/heard: small birds (pipits) | |
| 06_VS286 | 17/08/2006 | 17W | 7894617 | 595048 | on Srd rt turn to valley run with marg river | | | | | | | | mesic | | heather moss assn on boulder-strewn slope blueberry with lots moss | | 50 | | | saliarct 5 | vacculig 15 casstetr 15 dryainte 10 | | poa .2 | Sedges<br>careaqua 5 Carex 5<br>Cottongrass<br>Rushes<br>luzuconf 1 | | | | cetrniva 2 cetrile .2 Cladina 2 stertome 1 thamsubu 1 Alectoria 1 glove .2 | racolanu 30 | heard sandhill cr. nearby | |
| 06_VS286A | 18/08/2006 | 17W | 7842037 | 579352 | sleensby Inlet site 10 | | | | | | | | mesic | | | | | | | saliarct | rhodlapp 3 dryainte 10 | | pedicapi 1 | Sedges<br>Cottongrass<br>Rushes | | | | cetrniva | racolanu | scats: hare goose feather | |
| 06_VS287 | 17/08/2006 | 17W | 7893826 | 595398 | Ssid of river flowing into Big Lake, upland between main river creek flowing in | | | | | | 8 | S | mesic | | slope almost entirely covered by heather, blueberry, raconit moss with scattered hierchloe and poa | | | | | | vacculig 40 casstetr 40 | ceraalpi arct? Stellaria .1 | poa 1 | Sedges<br>Carex 5<br>Cottongrass<br>Rushes | | | | cetrniva .5 Cladonia 2 stertome 10 thamsubu .1 Peltigere .2 | | scat: goose | |
| 06_VS287A | 18/08/2006 | 17W | 7842601 | 579347 | site 10 PB, side of valley under cliffs open slope solifluct | | | | | | | | mesic | | Sedges on gentle slope, w avens, etc. Some solif fairly wet slope | | | | | saliarct 10 | dryainte 30 | polyvivi .2 ceraalpi .2 | oxyt mayd 5 | Sedges<br>Carex 70<br>Cottongrass<br>Rushes | | | | | moss 20 | Scats: goose Den/burrows: lemming heard birds, probably snow buntings | |
| 06_VS288 | 17/08/2006 | 17W | 7893729 | 595318 | further along rd rt at top of moss solif slope | | | | | | 5 | | W | | moss ridges on sand slope with sheet flow on rideges, mostly moss with arctic willow sudetan louse and small sedges | | | | | saliarct 15 | saliherb 2 | polyvivi .2 | pedicapi .5 pedisude 15 | Sedges<br>Carex 15<br>Cottongrass erioangu .5<br>Rushes | | | | | mosses 80 | scats: goose sandhill crane | |
| 06_VS288A | 18/08/2006 | 17W | 7834552 | 582286 | Steensby inlet site 9 on slope below cliffs | | | | | | | | mesic | | | | | | | saliarch 3 | rhodlapp dryainte 30 | | oxy may 1 | Sedges<br>Cottongrass<br>Rushes | | | | cetrniva | | | |
| 06_VS289 | 17/08/2006 | 17W | 7893528 | 595182 | further S along rd rt bank of small stream where geese have been loafing/feeding | | | | | | 25 | NE | mesic | | protected area along stream where geese have been loafing, molting | | | | | saliarct | vacculig 25 casstetr 25 | | poa 25 | Sedges<br>Cottongrass<br>Rushes | | | | | small mosses 5 | | goose feathers, scats, grazing damage to grass |
| 06_VS289A | 18/08/2006 | 17W | 7834526 | 582258 | site #9 (PB) on slope below cliffs | | | | | | 2 | W | mesic dry | | Thin mat of avens and blueberry on gravel slope rhododendron | | | | | saliarct 5 | vacculig 20 rhodlapp 10 dryainte 20 | | oxyt mayd .2 | Sedges<br>carenard 2<br>Cottongrass<br>Rushes | | | | cetrniva 1 thamsubu .5 | sm mosses 20 | many caribou trails along these slope Scats: hare and goose | |
| 06_VS290 | 17/08/2006 | 17W | 7893378 | 594982 | S rd rt top of hill to E of Big A lake, above small pond | | | | | | | | mesic dry | | fairly uniform plant cover -heather, blueberry, mosses and mealy lichen, also poa and luzula and hirochloe | | | | | saliarct 5 | vacculig 30 casstetr 25 dryainte 10 | | poa 2 | Sedges<br>Cottongrass<br>Rushes<br>luzuconf 5 | | | | cetrniva 1 Cladonia 5 stertome 10 thamsubu 1 glove .5 | other mosses 5 racolanu 35 | scats: goose, caribou den/burrows: lemming | |
| 06_VS290A | 18/08/2006 | 17W | 7834626 | 582391 | steenby inlet caribou trail site 9, slope below cliffs | | | | | | 7 | | mesic dry | | | | 60 | | | saliarct 5 ledupalu 10 | vacculig 20 casstetr 35 rhodlapp 5 dryainte 10 | | | Sedges<br>Cottongrass<br>Rushes | | | | cetrniva | | scats: hare caribou antlers | |
| 06_VS291 | 17/08/2006 | 17W | 7893002 | 594982 | rock on top of slight hill, possible bird stone | | | | | | 4 | S | mesic-dry | | boulders in middle of open plain with some enhanced plant growth, may be a birdstone, or may just collect wat and snow, near small pnd | | | | | saliarct 10 salirich 1 | vacculg 60 casstetr 40 | Stellaria | poa .2 | Sedges<br>Cottongrass<br>Rushes | | | saxicern .1 | cetrniva 5 Cladina 5 stertome 5 thamsubu .1 Peltigera .5 | mosses 25 | sightin/heard: raven scats: caribou, fox | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_VS291A | 18/08/2006 | 17W | 7834540 | 582357 | PB Loc 9 at base of cliff, out in drainage fan | | | | | | 2 | SW | wet | | Hummocks, appar of tussock origin separated by channels abt .5m wide, thru which water is flowing now. arct willow, sedges, blueberry, some grasses | | | | | saliarct 20 ledipalu 5 | vacculig 30 | | | Sedges carescir 10 Carex sp 25<br>Cottongrass eropvago 15<br>Rushes luzuniva .1 Juncus .1 | | | | | mosses 50 | scats: goose | |
| 06_VS292 | 18/08/2006 | 17W | 7819698 | 592221 | PB site 6 steensby inlet | | | | | | | | mesic | | | | 75 | | | saliarct 5 ledupalu 5 | vacculig 40 casstetr 1 rhodlapp 3 dryainte 10 | | | Sedges<br>Cottongrass<br>Rushes | | | | cetrniva thamsubu white | sphagum | scats: goose caribou antlers | |
| 06_VS293 | 18/08/2006 | 17W | 7819681 | 592242 | site 6 S rd rt, about half way between cliff and loke on uneven terrace | | | | | | 3 | SW | mesic dry | | Thin cover of veg on gravel between boulders, mostly blueberry, lab tea, heather, rhodo. Lots of moss. | | | | | saliarct 2 ledupalu | vacculig 40 casstetr 2 rhodlapp 10 | | oxyt mayd .2 | Sedges Carex 15<br>Cottongrass<br>Rushes luzuconf 2 | | | | cetrniva 2 Cladina .5 Cladonia .1 stertome .2 thamsubu .2 Alectoria 1 | racolanu 15 sm mosses5 | scats: caribou, hare, goose | |
| 06_VS294 | 18/08/2006 | 17W | 7819555 | 592410 | steensby inlet site 6 | | | | | | 15 | S (down) | mesic | | | | | | | saliarct 5 salirich 3 | vacculig 35 dryainte 5 | | | Sedges<br>Cottongrass<br>Rushes | | | | | sphagnum 15 suchion 5 | scats: goose | |
| 06_VS296 | 18/08/2006 | 17W | 7817226 | 595655 | steensby inlet site 7 | | | | | | | | | | | | | | | saliarct 1 | | | | Sedges sedges 5<br>Cottongrass<br>Rushes | | | | | mosses 85 | scats: goose caribou feathers and antlers | |
| 06_VS299 | 18/08/2006 | 17W | 7817218 | 595628 | site 7 (PB) at edge of lake near S end of Cockburn lake | | | | | | 1 | N | wet | | mossy lake shore disturbed. moss sm grass and arctic willow flats along shore of small lake. Goose loafing and moulting spot | | | | | saliarct 15 | SALIHERB 2 | | | Sedges<br>Cottongrass<br>Rushes | | | saxihhirc .2 | | moss 30 | | |
| 06_VS300 | 18/08/2006 | 17W | 7817064 | 595628 | steensby inlet site 7 edge of lake S end cockburn lake. | | | | | | level | | mesic dry | | | | 70 | | | saliarct 5 salirich 5 | salireti 5 vacculig 30 casstetr 20 dryainte 10 | | | Sedges<br>Cottongrass<br>Rushes luzuniva 3 | | | | cetrniva white crustq | sphagnum | | |
| 06_VS301 | 18/08/2006 | 17W | 7817110 | 595660 | site 7 (PB) on slope above shore | | | | | | 45 | NE | wet mesic | | vertical face of solif lobe with diverse veg, lots of lg fl winter green and salix arctica. Lab tea at bottom and heather all over | | | | | saliarct 15 salirich 5 ledupalu 5 | saliherb 5 salireti 2 vacculig 30 casstetr 35 Empet nigr .2 | pyrogran 15 | | Sedges Carex 10<br>Cottongrass<br>Rushes luzuconf 2 | | | | cetrniva.5 stertome5 Peltigera 5 | mosses 30 heather moss 10 | goose scats and feathers | |
| 06_VS302 | 18/08/2006 | 17W | 7831241 | 593959 | steensby inlet site 5 small lake where cross over rt curves to enter canyon | | | | | | 2 | NW (down) | dry | | | | | | | | casstetr 5 | | | Sedges<br>Cottongrass<br>Rushes luzuniva | | | | cetrniva Cladonia thamsubu | | scats: goose and caribou | |
| 06_VS304 | 18/08/2006 | 17W | 7831223 | 594074 | steensby inlet site 5 small lake where rt curves to enter canyon | | | | | | 18 | SE (down) | mesic | | | | | | | saliarct 5 | saliherb 5 casstetr 30 | | | Sedges<br>Cottongrass<br>Rushes | | | | cetrniva stertome | racolanu 30 cushion 10 | scats: goose | |
| 06_VS305 | 18/08/2006 | 17W | 7831178 | 594037 | location #5 (PB) at side of small round lake area side | | | | | | crest | | dry | | cobble crest of morainal (possibly) ridge not much besides lichen covered rocks. Hierchloe and moss lichen between stones, also luzula confusa | | | | | | casstetr .1 | epillati .2 | | Sedges<br>Cottongrass<br>Rushes | | | | certniva 1 Cladina .2 Cladonia 1 stertome .5 thamsubu .2 Alectoria .5 | racolanu 5 mosses between stones | scats: goose | |
| 06_VS306 | 18/08/2006 | 17W | 7851847 | 573902 | PB site 11 Steensby Inlet rt by Nina Bang lake | | | | | | 3 | NE (downward) | mesic dry | | | | | | | saliarct 3 ledupalu 3 | vacculig 15 casstetr 20 dryainte 20 | | pedicapi 1 | Sedges<br>Cottongrass<br>Rushes luzuconf 5 | | | | certniva Cladina thamsubu liver lichen | racolanu | sighting/heard: snow geese scats: goose | |
| 06_VS307 | 18/08/2006 | 17W | 7801299 | 594142 | site 5 in boulders above rapids | | | | | | 12 | S | mesic dry | | Thin mats of veg among boulders, blueberry, heather and hier. Least willow and moss beneath | | | | | | saliherb 20 vacculig 20 casstetr 10 | | | Sedges<br>Cottongrass<br>Rushes luzuconf 1 | | | | certniva .5 Cladina .2 Cladonia .1 stertome2 thamsubu .1 Alectoria.1 glove .5 | misc mosses 2 | scats: hare and wolf | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_VS308 | 18/08/2006 | 17W | 7852067 | 574154 | Steensby Inlet rt near Nina Bang Lake site 11 | | | | | | 2 | SW (downward) | mesic dry | | | | | | | saliarct 3 | vacculig 25 casstetr 10 dryainte 30 | | pedicapi 1 pedisude 1 oxyt mayd 1 | Sedges carescir 1 gr. blk sedge<br>Cottongrass<br>Rushes | | | | cetrniva | Sphagnum cushion | scats: goose | |
| 06_VS309 | 18/08/2006 | 17W | 7851886 | 573884 | site 11 PB, centre of open area, lots of geese near Nina Bang lake | | | | | | 2 | NE | wet mesic | | Relatively thick mat of heaths and sedges on boulders, some water | | | | | saliarct 15 salirich .1 | salireti 15 casstetr 10 dryainte 20 | sileacau 2 oxyrdigy 2 | pedicapi 5 pedihirs oxyt mayd 3 | Sedges carememb 10<br>Cottongrass erioangu 5<br>Rushes | | | saxioppo 2 | cetrniva .2 cetrtile .5 stertome .5 thamsubu .1 | racolanu 2 mosses 10 | scats: hare and geese (abt 150 flew over) | |
| 06_VS310 | 18/08/2006 | 17W | 7846476 | 573908 | PB site 11 above aufeis | | | | | | 12 | S (downward) | mesic | | | | | | | saliarct 3 | vacculig 30 casstetr 10 rhodlapp 3 dryainte 20 | | oxyt mayd 5 | Sedges Carex<br>Cottongrass<br>Rushes | | | | cetrniva | racolanu | scats: goose | Talu and game drive inuksuit above |
| 06_VS311 | 18/08/2006 | 17W | 7852054 | 574176 | site 11 small ridge above drainage to lake near Nina Bang lake | | | | | | 5 | SE | mesic | | Lush veg below ridge, heather, avens, plus sedges (nonxeric) | | | | | saliarct 10 salirich 1 | casstetr 25 dryainte 25 | | oxyt mayd .2 Poa .1 | Sedges carememb 5 carescor 5<br>Cottongrass<br>Rushes | | | | cetrniva .5 thamsubu .1 | sm mosses 5 racolanu 10 | trails/scats/dens: lemming | |
| 06_VS311A | 19/08/2006 | 17W | 7846437 | 573886 | PB Mae site 11 above aufeis | | | | | | 1 | N | wet | | Thick stand of sedges near small valley with distinct caribou trail. | | | | | salirich 1 | salireti 2 vacculig 1 casstetr 1 dryainte 5 | | pedisude 3 | Sedges careaqua 40 careatro 2 carememb 15 Carex 35<br>Cottongrass<br>Rushes | | | | cetrniva 2 Cladina .2 Cladonia .1 thamsubu .1 | racolanu 10 mosses 15 | small flock of pipits | |
| 06_VS312 | 19/08/2006 | 17W | 7846358 | 573963 | Site PB, site 10 where rd/rail descends to the sea | | | | | | 17 | NE(downward) | mesic | | | | | | | saliarct 5 ledupalu 20 | salireti 1 vacculig 25 casstetr 20 rhodlapp 1 dryainte 10 | | oxyt mayd 1 | Sedges<br>Cottongrass<br>Rushes luzuconf 1 | | | | cetrniva | racolanu 15 Sphagnum 1 | scats: caribou | |
| 06_VS313 | 19/08/2006 | 17W | 7846430 | 573904 | site 11 (PB map) S rd rt junction S of aufeis | | | | | | <1 | N | | | Disturbed area. Small gravel area with some frost fissures, plus small hearth and accom. Blk lichens around hearth | | | | | | | epillati .2 | | Sedges<br>Cottongrass<br>Rushes luzuconf 1 | | | saxiniva .5 saxopppo .1 saxitric 5 | cetrniva 2 thamsubu .1 Alectoria 5 | small mosses 10 | heard: red-th loon sighting/heard: lapland longspurs | |
| 06_VS313A | 19/08/2006 | 17W | 7846405 | 573948 | site 11 (PB map) below crest of hill | | | | | | 5 | S | wet mesic | | Even growth of blueberry,small sedges, retic. willow on slight slope to pond. Diverse solifluct ridges above. | | | | | saliarct 1 | salireti 10 vacculig 15 casstetr 10 dryainte 25 | | oxyt mayd .2 pedilana .1 | Sedges careatro misand 15 carescir 10 Carex 5<br>Cottongrass<br>Rushes luzuconf 1 luzuniva .1 | | | | cetrniva 10 stertome 1 thamsubu 1 | small mosses 10 | scats: goose and caribou heard: re-throated loons calling | |
| 06_VS313B | 19/08/2006 | 17W | 7843110 | 579096 | PB map site 10, top of slope to the sea, in poten rd route | | | | | | 2 | SW | mesic dry | | Individual mats of crowberry and raconitrium with some small mats of blueberry | | | | | | dryainte 15 vacculig 5 Carex 2 | | | Sedges<br>Cottongrass<br>Rushes | | | saxitric 2 | | small mosses 15 | scats: hare and goose | |
| 06_VS314 | 19/08/2006 | 17W | 7843240 | 578871 | PB site 10, slope where rd descends to sea | | | | | | 7 | E(downwards) | wet mesic | | | | | | | saliarct 3 | salireti 1 vacculig 10 casstetr 15 rhodlapp 5 dryainte 30 | | oxyt mayd 10 pedicapi 1 | Sedges carememb carescir<br>Cottongrass<br>Rushes | | | | cetrniva | racolanu 1 Sphagnum 3 cushion 3 | scats: goose | |
| 06_VS315 | 19/08/2006 | 17W | 7843281 | 578947 | Site 10, top of slope, below large boulder yield along rd | | | | | | 5 | SE | | | Mound of pushed up gravel/sand in midst of a large boulder field which fills most of the valley here. On this mound mats of racon moss with lots of lg flat wintergreen hieroch, and luzula. In boulders, drayas, blueberry and more moss | | 15 | 30 | 10 | | vacculig 5 casstetr 5 dryainte 5 | epillati 2 pyrogran 25 | oxyt mayd 5 | Sedges<br>Cottongrass<br>Rushes luzuconf .2 | | | | cetrniva 1 thamsubu .5 Alectoria 1 | small mosses 5 racolanu 10 | | |
| 06_VS315A | 19/08/2006 | 17W | 7857880 | 590693 | PB map site 13, middle of open terrain on poten rd route | | | | | | 3 | N | mesic dry | | boulder streams and stone circles in area | | 30 | 7 | 5 | heather 30 | Carex rupe 2 | | | Sedges<br>Cottongrass<br>Rushes luzu conf 5 | | | | pixy .1 stertome .5 worm .1 odd white raconit 5 | | scats: caribou, lemming, hare lemming nest (old) and burrows | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | Moisture | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | Wildlife notes | Archaeology notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | | |
| 06_VS316 | 19/08/2006 | 17W | 7843014 | 576951 | PB site 10 where rd goes to the sea | | | | | | 6 | | mesic | | | | | | | saliarct 3 salirich 5 | salireti 1 vacculig 40 casstetr 5 rhodlapp 5 dryainte 15 | | oxytmayd 3 pedicapi .1 | Sedges<br>Cottongrass<br>Rushes<br>luzuconf | | | | cetrniva Cladonia | Sphagnum cushion | scats: hare heard/sightin: goose | |
| 06_VS317 | 19/08/2006 | 17W | 7825108 | 597289 | Fuel cache at Cockburn lake | | | | | | 1 | SW | mesic dry | | Thin veg isolated plants or clumps, curly sedge, mosses, least willow | | | | | saliarct 2 | saliherb 25 vacculig 5 dryainte 5 casstetr 15 | | | Sedges<br>Carex rupe 2<br>Cottongrass<br>Rushes<br>luzuconf .2 | | | | stertorne 5 | racolanu 10 | scats: hare caribou antler | |
| 06_VS318 | 19/08/2006 | 17W | 7857817 | 590709 | PB map site 13, fork in S route site, open terrain, middle of area | | | | | | 17 | NE(downward) | mesic dry | | | | | | | | casstetr 15 | | | Sedges<br>Cottongrass<br>Rushes | | | | cetrniva Cladonia block liver lichen | cushion 5 racoplanu 5 | | |
| 06_VS319 | 19/08/2006 | 17W | 7857261 | 505826 | Site 3 PB map in open valley, above Cockburn canyon | | | | | | <1 | S | wet mesic | | Terrace along small stream that feeds river flowing into Cockburn Lake. Heather and sedges. | | | | | saliarct 10 | saliherb 10 salireti 15 vacculig 5 casstetr 40 dryainte 5 | | pedihirs .1 | Sedges<br>carememb 5<br>Cottongrass<br>sal headed cotton 2<br>Rushes | | | | cetrniva .1 Cladonia .1 thamsubu .1 Alectoria .1 | cushin | scats: goose | |
| 06_VS320 | 19/08/2006 | 17W | 7825238 | 597271 | Fuel cash down near Steensby Inlet | | | | | | 8 | S (downward) | mesic dry | | | | | | | saliarct 5 | vacculig 30 | | | Sedges<br>Cottongrass<br>Rushes<br>luzuniva | | | | cetrniva hair lichen | racolanu str. mosses | scats: hare caribou antler | |
| 06_VS323 | 19/08/2006 | 17W | 7857255 | 605763 | site 3 along small stream, above channel | | | | | | <1 | E | mesic | | Dryas and moss on boulders plus lg. Hr. wintergreen and arctic willow and cushion mosses | | | | | saliart 10 | dryainte 15 | | | Sedges<br>Carex green /blk 5<br>Cottongrass<br>Rushes<br>luzuconf 5 | | | saxitric 2 | cetrniva 5 Cladonia .5 Alectoria 10 | racolanu | | |
| 06_VS324 | 19/08/2006 | 17W | 7857268 | 605806 | site 3, open valley above Cockburn Canyon | | | | | | flat | | mesic | | | | | | | | dryainte 5 | | | Sedges<br>caremis<br>Cottongrass<br>Rushes<br>luzuconf | | | saxitric | cetrniva Cladonia hair lichen | racolanu 1 str.mosses | scats: caribou | |
| 06_VS325 | 19/08/2006 | 17W | 7874420 | 599338 | site 2 at east edge of 2 fairly lg lbs where stream enters | | | | | | <1 | W | wet | | Disturbed site mossy lake shore, tussock assn? Loafing area used by geese - feathers and scats. Tussocks and mounds moss around and under all. Veg is trampled or grazed | | | | | | saliherb 20 casstetr 20 | | | Sedges<br>Cottongrass eriovagi 40<br>Rushes | | | | glove .5 | mosses 15 | scats and feathers: lemmming and goose | |
| 06_VS326 | 19/08/2006 | 17W | 7874459 | 599335 | PB site 2, east edge of 2 fair sized lake, where stream enters | | | | | | flat | | dry | | | | | | | saliarct 10 | casstetr 30 | | poa | Sedges<br>Cottongrass<br>Rushes | | | | cetrniva hair lichen | racolanu cusion 15 | goose feather | |
| 06_VS327 | 19/08/2006 | 17W | 7887414 | 597282 | site 1 (pB) at intersect of several streams to SW of first valley | | | | | | level | | wet | | Sedge assn with rich willow and amidst sedges, dryas, rich vein willow and moss. | | | | | saliarct .5 salirich 15 | salireti 15 dryainte 10 | polyvivi .5 | pedicapi .2 pedihirs .1 | Sedges<br>careaqua 2<br>caremis 2<br>carememb 30<br>carescir 10<br>Cottongrass<br>erioangu 2<br>Rushes | | | saxioppo .2 | cetrniva .2 stertorne .2 thamsubu .1 | mosses 20 | caribou antler | |
| 06_VS329 | 19/08/2006 | 17W | 7887399 | 597289 | Site 1 PB Map at edge of small pond | | | | | | 2 | E | wet | | Lakeshore emergent assn, almost entirely a rather robust sedge, maybe C. aquatilis (coli.) but seems small | | | | | salirich 2 | | | pedisude 2 | Sedges<br>careaqua 85<br>Cottongrass<br>Eroopl. sp 5<br>Rushes | | | | | | | |
| 06_VS330 | 19/08/2006 | 17W | 7887415 | 597225 | PB map site 1, above Big A, Glacier Lake R | | | | | | | | | | | | | | | saliarct 10 | salireti 5 casstetr 15 dryainte 10 | tofipusi | | Sedges<br>carememb carescir<br>Carex<br>Cottongrass<br>Rushes | | | saxihirc | cetrniva hair lichen | str. mosses | scats and feather: goose | |

| Plot# | Date | Coordinates | | | Location | Plot represents | Vegetation Codes | | | | Slope | | | Soil notes | Veg. notes | Cover, % | | | | Species and % cover for each | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UTM zone | nothing | easting | | | 1 | Mod1 | 2 | Mod2 | % | Aspect | Moisture | | | Tree | Shrub | Herb | Moss/lich | Erect shrubs | Dwarf shrubs | Forbs | Legumes/ buttercups | Sedges/cottongrass/rushes | Grasses | Mustards | Saxifrages | Lichens | Mosses | Wildlife notes | Archaeology notes |
| 06_VS331 | 19/08/2006 | 17W | 7900289 | 585177 | Now site A at slope of hills where stream from Glacier Lake flows down | | | | | | 3 | W | mesic | | Snowdrift assn at base of terrace slope. Mostly clumps of heather, hierochloe on moss, some sm buttercups (not blooming). Lots of mealy lichen | | | | | | saliherb 2 casster 15 | ranuniva 1 paparadi .1 | poa 2 | Sedges<br>Cottongrass<br>Rushes luzuniva 1 | | | | cetrniva .2 Cladonia .5 stertome 15 thamsubu .5 | several mosses 80 | scats: goose and hare | |
| 06_VS332 | 19/08/2006 | 17W | 7900314 | 585237 | PB map site a above Big A lake where stream flows down from Glacier Lake | | | | | | 2 | SE (downward) | | | | | | | | | | | | Sedges carenard Carex<br>Cottongrass<br>Rushes luzuconf | | | | hair lichen | str. mosses | | |
| 06_VS334 | 19/08/2006 | 17W | 7900402 | 585283 | | | | | | | | | | | | | | | | | | | | Sedges<br>Cottongrass<br>Rushes | | | | | | | |
| 06V_N106 | 07/08/2006 | 17W | 7943711 | 535378 | | | | | | | | | | | | | | | | | | | | Sedges<br>Cottongrass<br>Rushes | | | | | | | |
| 06-VN057 | 05/08/2006 | 17W | 7935517 | 526514 | | | | | | | | | | | | | | | | | | | | Sedges<br>Cottongrass<br>Rushes | | | | | | | |
| 06-VN174 | 11/08/2006 | 17W | 7966495 | 513149 | | | | | | | | | | | | | | | | | | | | Sedges<br>Cottongrass<br>Rushes | | | | | | | |
| 06-VN199 | 11/08/2006 | 17W | 7976365 | 503110 | | | | | | | | | | | | | | | | | | | | Sedges<br>Cottongrass<br>Rushes | | | | | | | |
| 06VS090 | 07/08/2006 | 17W | 7800776 | 594218 | stennsby inlet rocky shore | | | | | | | | mesic | | plants between the rocks | | 8 | 4 | 3 | | salireti 1 salix 4 dryainte 3 | | oxytmayd 0.1 astraalpi 0.1 | Sedges careatro 0.5 carex 0.5<br>Cottongrass<br>Rushes | | | saxioppo 2 | cetrtile 1 | mosses 1 | | |
| 06-VS100 | 07/08/2006 | 17W | 7820413 | 598087 | south end of cockburn lake | | | | | | 2 | NW | mesic | | blueberry sedge | | 70 | 20 | 40 | ledupalu 2 | salix 10 vacculig 40 casstetr 20 | | | Sedges carex 20<br>Cottongrass<br>Rushes luzuconf 5 | | | | antler 10 | mosses 30 | scats: goose | |
| 06-VS295 | 18/08/2006 | 17W | 7819569 | 592441 | | | | | | | | | | | | | | | | | | | | Sedges<br>Cottongrass<br>Rushes | | | | | | | |
| 06-VS303 | 18/08/2006 | 17W | 7831137 | 593999 | | | | | | | | | | | | | | | | | | | | Sedges<br>Cottongrass<br>Rushes | | | | | | | |
| 08_VS092 | 07/08/2006 | 17W | 7814508 | 599519 | | | | | | | | | | | | | | | | | | | | Sedges<br>Cottongrass<br>Rushes | | | | | | | |
| 0c_V200 | 14/08/2006 | 17W | 7913338 | 563918 | | | | | | | | | | | | | | | | | | | | Sedges<br>Cottongrass<br>Rushes | | | | | | | |

**NOTES:**
1. A COMPLETE DATA SET IS CONTAINED IN THE OUTCROP DATABASE.

VEGETATION BASELINE STUDY REPORT
2007 VEGETATION PLOTS

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg plot # | Date | Location | Waypoint # PB GPS | Zone | UTM Eastings | Northings | Altitude meters | Veg Code 1 | Veg Code 2 | NOTES | Wildlife or archaeology |
| 07_V | 1 | 02-Aug-07 | | 299 | 17W | 558045 | 7914302 | 173 | | GF | Thin veg, forbs, on slope above stream with sedge wetland. Diverse collection of forbs. | |
| 07_VS | 2 | 03-Aug-07 | Big A Lake, Loon Is., north end of island, sand island w/low centre polygons, many nesting waterfowl. | 300 | 17W | 577367 | 7891996 | 177 | | | **W057**, low sedges and prostrate willows plus moss and moss mounds, red sand around ponds. | Canada geese, brood, long-tailed duck brood, r-t loons, caribou track in moss |
| 07_VS | 3 | 03-Aug-07 | Big A Lake, Loon Is. | 301 | 17W | 577576 | 7892076 | 133 | | | **W056**, possibly lichen veneer, mostly lichen and woodrush on sand, small mounds of Stereocaulon tomentosum, Empetrum nigrum nearby. | Snow goose and sandhill crane feathers |
| 07_VS | 4 | 03-Aug-07 | Big A Lake, Loon Is., S end of island | 302 | 17W | 580288 | 7890326 | 127 | HTb | | **Near W056**, mats of blueberry and crowberry above sand beach, some heather and avens. | Semipalmated plover, r-t loon w/young, snow goose feather. |
| 07_VS | 5 | 03-Aug-07 | Big A Lake, Loon Is., S end above shore | 303 | 17W | 580295 | 7890315 | 130 | HT b + c | | **Near W056**, blueberry and heather, mixed heath tundra. | R-t loon, snow and Canada goose feathers. |
| 07_VS | 6 | 03-Aug-07 | Mainland to S of Big A Lake, gently rolling hills w/old polygons, raised centres. Plot in centre of polygon. | 304 | 17W | 580418 | 7887656 | 304 | HT b + c | | **WHA plot, # unknown,** heath tundra, mixture of heather, blueberry, mosses and avens. | Per VB: Caribou use this area in spring, feeding on centres of polygons, as snow has blown off. Golden plovers seen and heard. |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg | Date | Location | Waypoint # | Zone | UTM | | Altitude | Veg Code | Veg Code | NOTES | Wildlife |
| | plot # | | | PB GPS | | Eastings | Northings | meters | 1 | 2 | | or archaeology |
| 07_VS | 7 | 03-Aug-07 | Mainland to S of Big A Lake, gently rolling hills w/old polygons, raised centres. Plot in fissure at side of polygons. | 307 | 17W | 580402 | 7887650 | 164 | Snt | | **WHA plot, # unknown,** small sedge wetland between raised centres of polygons. Moss mounds with avens on top, Carex membranacea, C. misandra, C. scirpoidea, shrubs of Salix richardsonii, some S. arctica, biological crust, yellow-green moss. | |
| 07_VS | 8 | 03-Aug-07 | Mainland to S of Big A Lake, valley between low hills with raised centre polygons by bedrock outcrop, two small ponds in valley. | 308 | 17W | 580784 | 7887989 | 137 | S nt + t | | **Near WHA plot, # unk.,** small valley with saturated soil, sedge assn. with tussocks and non-tussock sedges, Carex aquatilis, C. atrofusca, C. membranacea, Eriophorum angustifolium, E. vaginatum, Salix richardsonii, S. reticulata, Cassiope tetragona, assorted mosses. | Distinct caribou trails through this valley. |
| 07_VS | 9 | 03-Aug-07 | | 309 | 17W | 557519 | 7915132 | 170 | SB | Ms | | |
| 07_VS | 10 | 03-Aug-07 | | 311 | 17W | 557680 | 7915557 | 216 | Bax | HT c+r | | |
| 07_V | 11 | 03-Aug-07 | | 312 | 17W | 557831 | 7915597 | 207 | Snt | | | |
| 07_VS | 12 | 04-Aug-07 | Ridge to E of 1st valley south of Mary River, high elevation, relatively barren upland. Near Km 25 on rail route. | 313 | 17W | 573559 | 7908263 | 460 | Bax | Bps | **W066**, embedded boulders, some sandstone, some acidic rocks, veg between boulders, sparse, transition between purple saxifrage barrens and avens association, biological crust. | Active lemming area with fresh scats. |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg plot # | Date | Location | Waypoint # PB GPS | Zone | UTM Eastings | Northings | Altitude meters | Veg Code 1 | Veg Code 2 | NOTES | Wildlife or archaeology |
| 07_VS | 13 | 04-Aug-07 | Ridge to E of 1st valley south of Mary River, high elevation, relatively barren upland. Near Km 25 on rail route. Boulder field below Plot 07_VS012. | 315 | 17W | 573586 | 7908210 | 455 | Bps | LRb | **W067**,no visible soil, all boulders, mostly sandstone/limestone, some rounded erratics, acidic, gneiss, granites, basalts. Diverse association but few plants, Salix arctica, S. herbacea, Carex atrofusca, Luzula nivalis, Cerastium alpinum, Oxyria digyna, Melandrium apetalum, Saxifraga hieracifolia, S. nivalis, S. oppositifolia, S. caespitosa, Senecio congestus, Alopecurus alpinus, biological crust. | |
| 07_VS | 14 | 04-Aug-07 | | 320 | 17W | 578355 | 7896340 | 129 | | | Racomitrium moss assn | |
| 07_VS | 15 | 04-Aug-07 | | 322 | 17W | 586922 | 7893367 | 122 | Ms | GF | | |
| 07_VS | 16 | 04-Aug-07 | | 324 | 17W | 586923 | 7893358 | | Snt | | | |
| 07_VS | 17 | 04-Aug-07 | Lake to S of Big A Lake, south of lake on slope with caribou trails descending slope. | 326 | 17W | 588802 | 7869130 | | Snt | Rw | **W027**, Sedge slope with distinct caribou trails, though doubt it was used this year as trails contain vegetation. Open convex slope with sedges and riparian willow. | Per VB: early and late summer use potential by caribou, insect free, good view of any approaching predators. |
| 07_VS | 18 | 04-Aug-07 | Lake S. of Big A Lake, south of lake on slope with caribou trails descending slope. | 327 | 17W | 588812 | 7869152 | 275 | Snt | | **Near W027**, non-tussock sedge association with some grasses, Salix arctica, S. richardsonii, Dryas integrifolia, Carex aquatilis, C. misandra, C. membranacea, C. scirpoidea, Eriophorum scheuzerii, Arctagrostis latifolia, and assorted mosses. | Sandhill cranes, snow geese, shorebird calling. |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg plot # | Date | Location | Waypoint # PB GPS | Zone | UTM Eastings | Northings | Altitude meters | Veg Code 1 | Veg Code 2 | NOTES | Wildlife or archaeology |
| 07_VS | 19 | 04-Aug-07 | South rail route, approximately Km 85, boulder field area. | 328 | 17W | 593935 | 7867214 | 254 | LRb | | **Near WHA plot, # unk.,** gentle slope below an esker ridge. Lichen-rock association on boulders, small mats of vegetation, and lichens on boulders, 15% vegetated, including Cassiope tetragona, Luzula confusa, and lichens, including Cetraria nivalis, Alectoria sp., Cladonia sp., Stereocaulon tomentosum, and Thamnolia subuliformis, Racomitrium lanuginosum. Rocks 80% covered, map lichen, rock tripe, bloodspot, black crustose, sunburst, and a grey lichen with black apothecia. | Per VB: caribou observed earlier on this boulder field, loafing, possibly escaping bugs. |
| 07_VS | 19A | 04-Aug-07 | S. rail route, approx. Km 85, small gravel ridge above boulder field, bird stone surrounded by gravel. | 330 | 17W | 593916 | 7867157 | 266 | DSbs | Bax | **Near WHA plot, # unk.**, vegetation near and around a bird perching stone. Mixed woodrushes (Luzula confusa) and grasses (Trisetum spicatum), some forbs including Epilobium latifolium, Saxifraga tricuspidata, Sagina caespitosa, assorted lichens and mosses. | Possible tool-making site, we found several quartz chips on this small ridge, around the bird stones. |
| 07_VS | 20 | 04-Aug-07 | Cockburn River, about 10 km upstream from confluence and upper end of Cockburn Lake. Flat area below tilted bedrock hills. | 333 | 17W | 391233 | 7848351 | 141 | HT mixed | | **W043**, heath tundra, mixed including blueberry, heather, and Ledum palustre, also sedges, Carex aquatilis, Luzula confusa, and Trisetum sp. Lichens and mosses including Cladina mitis, Cladonia sp., and Racomitrium lanuginosum. | Caribou bones, possible wolf kill. |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg | Date | Location | Waypoint # | Zone | UTM | | Altitude | Veg Code | Veg Code | NOTES | Wildlife |
| | plot # | | | PB GPS | | Eastings | Northings | meters | 1 | 2 | | or archaeology |
| 07_VS | 21 | 04-Aug-07 | Cockburn River, about 10 km upstream from confluence and upper end of Cockburn Lake. Adjacent to 07_VS20, near small tributary stream. | 335 | 17W | 391115 | 7848384 | 139 | HT mixed | | **W043,** mixed heath tundra with Ledum, heather and blueberry. High percentage of Ledum (30%). | |
| 07_VS | 22 | 04-Aug-07 | Cockburn Lake, at rail crossing, W side of lake, lake level. | 336 | 17W | 607787 | 7841054 | 45 | HTr | LRb | **Probably near WHA plot, # unk,** mixture of sedges and willow, Racomitrium moss and lichens. Salix arctica, Vaccinium uliginosum, Carex aquatilis, Cerastium alpinum, Saxifraga tricuspidata, Trisetum sp., and lichens including Cetraria nivalis. | |
| 07_VS | 23 | 04-Aug-07 | Cockburn Lake, at rail crossing, W side of lake, top of terrace. | 337 | 17W | 607718 | 7841044 | 44 | HTc+b | GF | **Probably near WHA plot, # unk,** Heath tundra with heather, blueberry, avens, and Rhododendron, also Salix arctica, Silene acaulis, and Trisetum, plus Racomitrium lanuginosum. | |
| 07_VS | 24 | 04-Aug-07 | Cockburn Lake, upper slopes N of rail crossing. | 339 | 17W | 600191 | 7833726 | 88 | HTr | | **Near WHA plot, # unk**, blueberry-Racomitrium moss bouldery slope with Luzula confusa, Dryas integrifolia, Salix arctica, Pyrola grandiflora, and Oxytropis maydelliana. | |
| 07_VS | 25 | 04-Aug-07 | Cockburn Lake, E side, upper slopes. | 340 | 17W | 600251 | 7833731 | 77 | HTb | | **Near WHA plot, # unk,** mixed sedges and blueberry on exposed slope. | |
| 07_VS | 26 | 05-Aug-07 | Rowley River, mouth, at Steensby Inlet, sandy flats. | 347 | 17W | 394926 | 7796367 | 4 | Csb | Cg | **May be near WHA plot, # unk.,** mats of Honckenya peploides and Mertensia maritima plus Carex ursina on sand and gravel beach. | |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg plot # | Date | Location | Waypoint # PB GPS | Zone | UTM Eastings | Northings | Altitude meters | Veg Code 1 | Veg Code 2 | NOTES | Wildlife or archaeology |
| 07_VS | 27 | 05-Aug-07 | Rowley River, mouth, at Steensby Inlet, sand flats, near small salt pond. | 348 | 17W | 394911 | 7796286 | 6 | | | **Near WHA plot, # unk.,** thin carpet of goose grass (Pucinnellia sp.) with scattered plants of Stellaria humifusa. | Glaucous gull, sandhill crane |
| 07_VS | 28 | 05-Aug-07 | | 342 | 17W | 577623 | 7902826 | 198 | LRb | GF | | |
| 07_VS | 29 | 05-Aug-07 | | 343 | 17W | 576043 | 7903579 | 203 | Rw | Dssolif | | |
| 07_VS | 30 | 05-Aug-07 | | 344 | 17W | 576043 | 7903574 | 185 | | | | |
| 07_VS | 31 | 05-Aug-07 | South rail route, approximately Km 80, boulder field/flesenmeer area, between Ravn River and slope to Cockburn Lake. | 345 | 17W | 605917 | 7872685 | 248 | LRb or f | fs | **WHA plot, # unk**., felsenmeer with frost boils, very sparse vegetation amidst boulders and on frost boils, Cassiope tetragona, Luzula confusa, L. nivalis, Cetraria nivalis, Racomitrium lanuginosum. | |
| 07_VS | 32 | 05-Aug-07 | Steensby Inlet, port site, between camp and the sea. Embedded boulders and frost boils. | 346 | 17W | 594638 | 7800463 | 16 | Bax | DSfs | **WHA plot, # unk.,** mixed association of avens, xeric sedges, and assorted forbs, Dryas integrifolia, Salix arctica, Salix reticulata, Vaccinium uliginosum, Carex rupestris, C. scirpoidea, Astragalus alpina, Oxytropis maydelliana, Cetraria nivalis. | |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg plot # | Date | Location | Waypoint # PB GPS | Zone | UTM Eastings | Northings | Altitude meters | Veg Code 1 | Veg Code 2 | NOTES | Wildlife or archaeology |
| 07_VS | 33 | 05-Aug-07 | Rowley River, edge of basin at river mouth, transect from floodplain to shoreline. | 350 | 17W | 395237 | 7796587 | 6 | Cg | Cs, Csb | **Near WHA plot, # unk.**, bands (zones) of vegetation from sand flats to gravel beachline along side of river. Distinct zones of vegetation on sand, small gravel, mixed sand and gravel, gravel. Pucinnellia, Carex ursina, Honckenya, Armeria maritima, Cerastium alpinum, Astragalus alpinus, Epilobium latifolium, Salix arctica, Carex scirpoidea, Luzula confusa, Silene acaulis, Saxifraga rivularis, and Poa sp. | |
| 07_VS | 34 | 05-Aug-07 | Rowley River, edge of flats at river mouth. | 351 | 17W | 395268 | 7796622 | 15 | HTc | SB | **Near WHA plot, # unk.,** even growth of heather, Salix arctica,Ledum palustre, and moss with some Epilobium latifolium at top, Diapensia lapponica, some Dryas, Carex aquatilis, Luzula confusa, Saxifraga tricuspidata, Astragalus alpina, Oxytropis maydelliana, Empetrum nigrum, and assorted mosses. | |
| 07_VS | 35 | 05-Aug-07 | Rowley River, near mouth of river at Steensby Inlet, flat area bordered by gravel ridge. | 352 | 17 or 1 | 395305 | 7796627 | 2 | | | **Near WHA plot, # unk.,** Thin mat of heaths and other vegetation on flat area shoreward frm small gravel ridge. Heather, Salix arctica, star moss, blueberry, Astragalus arctica, and Dryas integrifolia, some Trisetum. | R-t loon, antler from killed caribou, not shed. |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg plot # | Date | Location | Waypoint # PB GPS | Zone | UTM Eastings | Northings | Altitude meters | Veg Code 1 | Veg Code 2 | NOTES | Wildlife or archaeology |
| 07_VS | 36 | 05-Aug-07 | Near Rowley River, small lake to west of river valley. Peaty soil by small lake/pond. | 354 | 17 or 1 | 392365 | 7801200 | 51 | Ms | DSgoose | **WHA plot, # unk.,** Mossy shoreline with heather, goosegrass (Pucinnellia sp.), Salix arctica, S. richardsonii, blueberry, Pyrola grandiflora, Peltigera, and assorted mosses (50%). | Fresh goose scats, feathers of snow and Canada geese. |
| 07_VS | 37 | 04-Aug-07 | Near Rowley River, small lake to west of river valley. Peaty soil by small lake/pond. | 356 | 17 or 1 | 392362 | 7801191 | 55 | Ms | DSgoose | **WHA plot, same as 07_VS036, # unk,** heavily damaged due to goose feeding, mossy lakeshore, but most veg. removed by geese. Salix arctica, S. herbacea, Carex aquatilis, Pucinnellia sp., Sphagnum moss, dark moss. | 2 r-t loons, pond nearby. Most plants removed by geese, snow and Canada goode feathers, fresh scats. |
| 07_VS | 37A | 05-Aug-07 | Rowley river, west side, near river mouth, sand cliffs above river, small ravine leading to floodplain. | 357 | 17 or 1 | 392474 | 7801123 | 47 | Rw | | **Near WHA plot, # unk.,** thick growth of moss and Richardson's willow in ravine, Salix arctica, S. richardsonii, S. reticulata, blueberry, avens, Oxyria digyna, Polygonum viviparum, Stellaria longipes, Epilobium latifolium, Pyrola grandiflora, Poa sp., Astragalus alpina, Oxytropis maydelliana, Peltigera, Racomitrium lanuginosum, assorted mosses. | |
| 07_VS | 38 | 05-Aug-07 | Aulasivik Peninsula, W of Tarijuaq Arm, near mouth of the Harder River, unnamed small peninsula. Near shore. | 359 | 17W | 559046 | 7814435 | -2 | Csf | | **Near wolf post area. WHA plot, # unk.,** goose-grass flats. Pucinnellia, Stellaria humifusa, stranded kelp. | Glaucous gull, many goose scats, feathers. |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg | Date | Location | Waypoint # | Zone | UTM | | Altitude | Veg Code | Veg Code | NOTES | Wildlife |
| | plot # | | | PB GPS | | Eastings | Northings | meters | 1 | 2 | | or archaeology |
| 07_VS | 39 | 05-Aug-07 | Aulasivik Peninsula, W of Tarijuaq Arm, near mouth of the Harder River, unnamed small peninsula. Near shore. | 360 | 17W | 559046 | 7814435 | -2 | Csf | | **At wolf post, WHA plot, # unk.,** sandy soil, wet area, exposure to salt water. Grassy area with some sedges (Carex atrofusca), Salix arctica, and yellow marsh saxifrage. Also Pucinnellia and Dupontia fisherii. | Fresh goose scats |
| 07_VS | 40 | 05-Aug-07 | Aulasivik Peninsula, W of Tarijuaq Arm, near mouth of the Harder River, unnamed small peninsula. Near shore. | 361 | 17W | 559076 | 7814453 | -2 | Csb | | **Near wolf post. WHA plot, # unk.,** area with sandstone slabs, fairly wet. Salix arctica flats, nothing here but S. arctica and a few tiny plants of Pucinnellia. | R-t loons nearby, shorebird calling. |
| | No plots, 41 - 49. | | | | | | | | | | | |
| 07_VS | 50 | 05-Aug-07 | Rail route, 1st valley S. of Mary River, glaciofluvial terrace. | 362 | 17W | 572443 | 7904613 | 161 | HTr | GF | Heather, Racomitrium moss, woodrushes | Common ringed plover |
| 07_VS | 51 | 05-Aug-07 | Rail route, 1st valley S. of Mary River, glaciofluvial terrace. | 363 | 17W | 572441 | 7904647 | 168 | HTr | GF | Heather and Racomitrium, Salix arctica, Luzula sp., Alopecurus alpinus, Pyrola grandiflora, mosses. | |
| 07_VS | 52 | 05-Aug-07 | | 364 | 17W | 571230 | 7905927 | 192 | | GF | | |
| 07_VS | 53 | 05-Aug-07 | | 365 | 17W | 571252 | 7905935 | 201 | Bax | GF | | |
| 07_VS | 54 | 05-Aug-07 | | 366 | 17W | 571365 | 7906060 | 202 | HTavens | GF | | |
| 07_VS | 55 | 05-Aug-07 | | 367 | 17W | 571367 | 7906078 | 218 | RW | VC | | |
| 07_VS | 56 | 05-Aug-07 | | 368 | 17W | 571424 | 7906086 | 213 | | VC | | |
| 07_VS | 56A | 05-Aug-07 | | 369 | 17W | 593217 | 7798330 | 166 | | | Island, avens on shelf above shore | |
| 07_VS | 57 | 05-Aug-07 | | 370 | 17W | 593177 | 7798355 | 10 | | | Island, avens on shelf above shore | |
| 07_VS | 58 | 05-Aug-07 | | 371 | 17W | 593137 | 7798325 | 3 | | | Island, Marine backshore upper beach | |
| 07_VS | 59 | 05-Aug-07 | | 372 | 17W | 593134 | 7798322 | 15 | | | Island, goosegrass | |
| 07_VS | 60 | 05-Aug-07 | | 373 | 17W | 593090 | 7798349 | 20 | | | island, Avens and willow | |
| 07_VS | 61 | 05-Aug-07 | | 374 | 17W | 593004 | 7798464 | 11 | Snt | DSsolif | island, small pond | |
| 07_VS | 62 | 05-Aug-07 | | 375 | 17W | 593105 | 7798441 | 10 | | | island, avens assoc hilltop | |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg | Date | Location | Waypoint # | Zone | UTM | | Altitude | Veg Code | Veg Code | NOTES | Wildlife |
| | plot # | | | PB GPS | | Eastings | Northings | meters | 1 | 2 | | or archaeology |
| 07_VS | 63 | 05-Aug-07 | | 379 | 17W | 598407 | 7817745 | 56 | SB | | rocky cliff base | |
| 07_VS | 64 | 05-Aug-07 | | 376 | 17W | 593113 | 7798479 | 7 | Snt | | island, small pond edge | |
| 07_VS | 65 | 05-Aug-07 | | 382 | 17W | 598091 | 7817702 | 76 | Rw | Mcb | cliff base | |
| 07_VS | 66 | 05-Aug-07 | | 376 | 17W | 598097 | 7817736 | 65 | SB | | cliff base | |
| 07_VS | 67 | 05-Aug-07 | | 384 | 17W | 598493 | 7816337 | 62 | | GF | low-center polygons | |
| 07_VS | 68 | 05-Aug-07 | | 380 | 17W | 598384 | 7817728 | 65 | Snt? | | sedges, Pyrola, least willow | |
| 07_VN | 69 | 07-Aug-07 | | 387 | 17W | 503032 | 7972507 | 159 | Bps | | carbonates, limited diversity | |
| 07_VS | 70 | 05-Aug-07 | | 381 | 17W | 598076 | 7817720 | 71 | | Mcb | avens, willow, moss, Poa | |
| 07_VN | 71 | 07-Aug-07 | | 388 | 17W | 502944 | 7972352 | 173 | SB | | carbonate ridge, top | |
| 07_VN | 71A | 07-Aug-07 | | 393 | 17W | 507300 | 7969605 | 98 | Bax | | carbonates, beneath talus slope | |
| 07_VN | 72 | 07-Aug-07 | | 391 | 17W | 507673 | 7970129 | 59 | Rw? | GF | GF, small esker in system | |
| 07_VS | 72A | 05-Aug-07 | | 383 | 17W | 598527 | 7816369 | 62 | HTc | GF | heather, moss, woodrush | |
| 07_VN | 73 | 07-Aug-07 | | 390 | 17W | 507630 | 7970188 | 65 | Bax | GF | steep side of esker in GF | |
| 07_VS | 74 | 07-Aug-07 | | 386 | 17W | 593519 | 7816351 | 68 | HTc | GF | Check coord, S rail route at Km 130 | |
| 07_VN | 75 | 07-Aug-07 | | 389 | 17W | 507631 | 7970175 | 38 | Bax | GF | esker in GF | |
| | No plot 76 | | | | | | | | | | | |
| 07_VN | 77 | 07-Aug-07 | | 392 | 17W | 507295 | 7969600 | 99 | | | avens, arctic willow and purple sax. | |
| 07_VN | 78 | 07-Aug-07 | | | 17W | 507380 | 7969576 | 102 | Snt | | sedges, avens and willow on slope | |
| 07_VN | 79 | 07-Aug-07 | | 399 | 17W | 527440 | 7932318 | 200 | Bax? | | carbonate ridge, avens, willow, sedge | |
| 07_VN | 80 | 07-Aug-07 | | 400 | 17W | 527401 | 7932321 | 164 | Ms | Snt | Epilobium arcticum | |
| 07_VN | 81 | 07-Aug-07 | | 398 | 17W | 507502 | 7969742 | 67 | Bax? | | carbonate ridge, avens, heather, sedge, lichens | |
| 07_VS | 82 | 06-Aug-07 | | 401 | 17W | 545937 | 7920053 | 161 | Bax? | LC | also heather and Hierochloe | |
| | | | | | | | | | | | | |
| | No plots 83-100 | | | | | | | | | | | |
| 07_VS | 101 | 08-Aug-07 | | 402 | 17W | 600046 | 7809857 | 73 | Snt | Mcb | adj to SB | |
| 07_VS | 102 | 08-Aug-07 | | 403 | 17W | 600053 | 7809858 | 74 | HTb | | | |
| 07_VS | 103 | 08-Aug-07 | | 404 | 17W | 599969 | 7809866 | 82 | | | | |
| 07_VS | 104 | 07-Aug-07 | | 406 | 17W | 600034 | 7809862 | 79 | SB? | | cliff ledge, mixed, Oxytmayd dominant | |
| 07_VS | 105 | 07-Aug-07 | | 405 | 17W | 600043 | 7809860 | 71 | | | cliff ledge, grass, moss, lichen | |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg | Date | Location | Waypoint # | Zone | UTM | | Altitude | Veg Code | Veg Code | NOTES | Wildlife |
| | plot # | | | PB GPS | | Eastings | Northings | meters | 1 | 2 | | or archaeology |
| 07_VS | 106 | 07-Aug-07 | | 407 | 17W | 600197 | 7809842 | 90 | HTb+c | | | |
| 07_VS | 107 | 07-Aug-07 | | 408 | 17W | 600188 | 7809843 | 71 | Snt, Ms | HTc | | |
| 07_VS | 108 | 08-Aug-07 | | 409 | 17W | 600233 | 7809840 | 87 | HT | Bax | | |
| 07_VS | 109 | 07-Aug-07 | | 410 | 17W | 600197 | 7810006 | 103 | | | Least willow and Racomitrium | |
| 07_VS | 110 | 08-Aug-07 | | 413 | 17W | 600168 | 7810020 | 91 | HTb+c | M | | |
| 07_VS | 111 | 08-Aug-07 | | 411 | 17W | 600195 | 7810009 | 94 | HTb | | | |
| 07_VS | 112 | 08-Aug-07 | | 414 | 17W | 598628 | 7818756 | 68 | LRb | GF | | |
| 07_VS | 113 | 07-Aug-07 | | 415 | 17W | 598609 | 7818712 | 59 | Snt | | river floodplain | |
| 07_VS | 114 | 08-Aug-07 | | 417 | 17W | 598688 | 7818725 | 71 | HTb | LRb | felsenmeer | |
| 07_VS | 115 | 09-Aug-07 | | 424 | 17W | 599380 | 7871321 | 223 | HTc | LRf | felsenmeer | |
| 07_VS | 116 | 08-Aug-07 | | 423 | 17W | 599322 | 7871291 | 222 | Snt | S-Mwm | signature plot check S-Mwm | |
| 07_VS | 117 | 08-Aug-07 | | 425 | 17W | 599393 | 7871303 | 225 | LRb | | signature plot: felsenmeer | |
| 07_VS | 118 | 08-Aug-07 | | 426 | 17W | 596955 | 7884037 | 201 | | | willow shrubland? | |
| 07_VS | 119 | 08-Aug-07 | | 427 | 17W | 596956 | 7884086 | 219 | HTr | | | |
| 07_VS | 120 | 09-Aug-07 | | 427 | 17W | 596956 | 7884086 | 219 | HTc | avens | Adjacent to Plot 119 | |
| 07_VS | 121 | 08-Aug-07 | | 428 | 17W | 597051 | 7883953 | 197 | Snt | avens | signature plot: | |
| 07_VS | 122 | 09-Aug-07 | | 430 | 17W | 591973 | 7895366 | 177 | HTc | avens | | |
| 07_VS | 123 | 09-Aug-07 | | 431 | 17W | 592276 | 7895354 | 154 | Snt | fs | mixed, on frost scars | |
| 07_VS | 124 | 09-Aug-07 | | 435 | 17W | 592114 | 7895359 | 173 | HTc | avens | | |
| 07_VS | 125 | 09-Aug-07 | | 434 | 17W | 592140 | 7895162 | 164 | HTc+r | DSi | | |
| 07_VS | 126 | 09-Aug-07 | | 436 | 17W | 566190 | 7908173 | 277 | Bax | | | |
| 07_VS | 127 | 09-Aug-07 | | 435 | 17W | 566198 | 7908131 | 277 | | | signature plot Bax on sandstone | |
| | No plots 128-129 | | | | | | | | | | | |
| 07_V | 130 | 09-Aug-07 | | 438 | 17W | 563622 | 7915251 | 665 | Bps | | Deposit 1 | |
| 07_V | 131 | 09-Aug-07 | | 437 | 17W | 563624 | 7915242 | 660 | LRr | | Deposit 1, on top | |
| 07_V | 132 | 09-Aug-07 | | 440 | 17W | 563516 | 7915405 | 646 | | | Deposit 1, sedge, moss, grass | |
| 07_V | 133 | 09-Aug-07 | | 439 | 17W | 563581 | 7915294 | 665 | Mcb? | | Deposit 1, moss on ore slope | |
| 07_V | 134 | 09-Aug-07 | | 441 | 17W | 563529 | 7915485 | 648 | Bps | | Deposit 1 area, poppy, moss | |
| 07_V | 135 | 09-Aug-07 | | 442 | 17W | 563569 | 7915506 | 647 | Bps | M | Deposit 1 moss, purple sax, luzula | |
| 07_V | 136 | 09-Aug-07 | | 443 | 17W | 563503 | 7915283 | 643 | | | Deposit 1, moss, luzula | |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg plot # | Date | Location | Waypoint # PB GPS | Zone | UTM Eastings | Northings | Altitude meters | Veg Code 1 | Veg Code 2 | NOTES | Wildlife or archaeology |
| 07_V | 137 | 09-Aug-07 | | 444 | 17W | 563514 | 7915276 | 648 | | | Deposit 1, poppy, luzula, oxyria | |
| | No plots 138 - 170 | | | | | | | | | | | |
| 07_VS | 170 | 10-Aug-07 | | 447 | 17W | 597850 | 7868934 | 217 | HTc | | | |
| 07_VS | 171 | 10-Aug-07 | | 445 | 17W | 597904 | 7868943 | 218 | Snt | M | "brown" signature, sedges, mosses, | |
| 07_VS | 172 | 10-Aug-07 | | 448 | 17W | 595914 | 7885805 | 202 | Bax | | | |
| 07_VS | 173 | 10-Aug-07 | | 449 | 17W | 595854 | 7885828 | 192 | | | willow shrublands | |
| 07_VS | 174 | 10-Aug-07 | | 451 | 17W | 592779 | 7892739 | 130 | HTc+b | | | |
| 07_VS | 175 | 10-Aug-07 | | 450 | 17W | 592850 | 7892782 | 132 | Rw | | river floodplain | |
| 07_VS | 176 | 10-Aug-07 | | 454 | 17W | 592770 | 7892761 | 137 | HTb+c | GF | avens | |
| 07_VS | 177 | 10-Aug-07 | | 452 | 17W | 592779 | 7892758 | 137 | DSn | GF | possible snowy owl nest mound | |
| 07_VS | 178 | 10-Aug-07 | | 455 | 17W | 592656 | 7892856 | 141 | S-Mwm? | GF | | |
| 07_VS | 179 | 10-Aug-07 | | 456 | 17W | 592699 | 7892862 | 136 | HTc+fs | | willow shrublands? | |
| 07_VS | 180 | 10-Aug-07 | | 470 | 17W | 583250 | 7900750 | 169 | LRb | | | |
| 07_VS | 180A | 10-Aug-07 | | 458 | 17W | 579570 | 7901837 | 171 | LRb | | | |
| 07_VS | 181 | 10-Aug-07 | | 459 | 17W | 579571 | 7901838 | 174 | LRb | | Luzula | |
| 07_VS | 182 | 10-Aug-07 | | 461 | 17W | 579706 | 7901821 | 179 | Snt | HT | GF | |
| 07_VS | 183 | 10-Aug-07 | | 460 | 17W | 579731 | 7901864 | 177 | Rw | | | |
| 07_VS | 184 | 10-Aug-07 | | 462 | 17W | 579715 | 7901763 | 168 | Ms | | | |
| 07_VS | 185 | 10-Aug-07 | | 463 | 17W | 579717 | 7901760 | 167 | Snt | | grasses also | |
| 07_VS | 186 | 10-Aug-07 | | 465 | 17W | 580008 | 7901648 | 174 | Rw | | | |
| 07_VS | 187 | 10-Aug-07 | | 464 | 17W | 580037 | 7901694 | 177 | Snt | GF | | |
| 07_VS | 188 | 10-Aug-07 | | 469 | 17W | 582942 | 7900721 | 174 | HTr | | | |
| 07_VS | 189 | 10-Aug-07 | | 468 | 17W | 582928 | 7900748 | 177 | Bax | GF | | |
| | No plot 190 | | | | | | | | | | | |
| 07_VS | 191 | 10-Aug-07 | | 472 | 17W | 583158 | 7900774 | 174 | Rw | Alluvial fan | riparian willow, with Salix arctica? | |
| 07_VS | 192 | 11-Aug-07 | | 473 | 17W | 594668 | 7800333 | 19 | LRr+b | | meat cache | |
| 07_VS | 193 | 11-Aug-07 | | 474 | 17W | 601912 | 7833422 | 40 | HTb+c | M | soil pit | |
| 07_VS | 194 | 11-Aug-07 | | 475 | 17W | 601981 | 7833427 | 43 | HTb+c+l | | also Dryas and mosses | |
| 07_VS | 195 | 11-Aug-07 | | 476 | 17W | 602044 | 7833395 | 57 | HTr | | soil pit | |
| 07_VS | 196 | 11-Aug-07 | | 477 | 17W | 602076 | 7833394 | 62 | HTc+b | LRb | Cockburn Lake, east side cliffs | |
| 07_VS | 197 | 11-Aug-07 | | 479 | 17W | 608446 | 7840406 | 47 | Bax | DSt | GF terrace; soil pit | |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg plot # | Date | Location | Waypoint # PB GPS | Zone | UTM Eastings | Northings | Altitude meters | Veg Code 1 | Veg Code 2 | NOTES | Wildlife or archaeology |
| 07_VS | 198 | 11-Aug-07 | | 480 | 17W | 608366 | 7840525 | 74 | | | NEW, grassy hill (kame?) | |
| 07_VS | 199 | 11-Aug-07 | | 481 | 17W | 608396 | 7840489 | 56 | HTb | | Cockburn Lake, east side, soil pit | |
| 07_VS | 200 | 11-Aug-07 | | 483 | 17W | 608488 | 7840422 | 49 | HTb | DSc | | |
| 07_VS | 201 | 12-Aug-07 | | 484 | 17W | 605547 | 7834977 | 202 | | | soil pit; NEW: forbs and heather? | |
| 07_VS | 202 | 12-Aug-07 | | 485 | 17W | 605590 | 7834906 | 219 | HTr | DSsolif | | |
| 07_VS | 203 | 12-Aug-07 | | 487 | 17W | 605578 | 7834877 | 223 | Mcb | SB | cliff ledges | |
| 07_VS | 204 | 12-Aug-07 | | 489 | 17W | 605524 | 7834968 | 193 | HTr | DSfs | | |
| 07_VS | 205 | 12-Aug-07 | | 490 | 17W | 601744 | 7832859 | 126 | Rw | HTc+b | | |
| 07_VS | 206 | 12-Aug-07 | | 492 | 17W | 601736 | 7832872 | 119 | Htmixed | | soil pit | |
| 07_VS | 207 | 12-Aug-07 | | 493 | 17W | 601825 | 7832815 | 128 | HTb | avens | hearth by large boulder | |
| 07_VS | 208 | 12-Aug-07 | | 496 | 17W | 592716 | 7892892 | 136 | Se | Ms | soil pit, nearby | |
| 07_VS | 209 | 12-Aug-07 | | 497 | 17W | 592669 | 7892964 | 140 | HTr | | | |
| 07_VS | 210 | 12-Aug-07 | | 498 | 17W | 592636 | 7892910 | 140 | HTr | | | |
| 07_VS | 211 | 12-Aug-07 | | 1 | 17W | 592636 | 7892906 | 140 | DSn | | grassy mound | |
| 07_VS | 212 | 12-Aug-07 | | 2 | 17W | 592707 | 7892812 | 139 | Snt | | soil pit | |
| 07_VS | 213 | 12-Aug-07 | | 3 | 17W | 579913 | 7890746 | 132 | HTb+c | Ms | low-centre polygon, margins | |
| 07_VS | 214 | 12-Aug-07 | | 5 | 17W | 579908 | 7890742 | 129 | Snt | Ms | low-centre polygon, centre | |
| 07_VS | 215 | 13-Aug-07 | | 7 | 17W | 594767 | 7800649 | 17 | HT mixed | | | |
| 07_VS | 216 | 13-Aug-07 | | 8 | 17W | 594752 | 7800579 | 16 | Bax | | soil pit | |
| 07_VS | 217 | 13-Aug-07 | | 9 | 17W | 594764 | 7800664 | 16 | Snt | Rw | possibly till veneer | |
| 07_VS | 218 | 13-Aug-07 | | 12 | 17W | 594762 | 7800628 | 17 | Snt | Rw | avens | |
| 07_VS | 219 | 12-Aug-07 | | 10 | 17W | 594710 | 7800806 | 26 | HT mixed | SB? | | |
| 07_VS | 220 | 13-Aug-07 | | 13 | 17W | 595382 | 7802703 | 30 | HTb | Tss | | |
| 07_VS | 221 | 13-Aug-07 | | 11 | 17W | 594624 | 7800905 | 33 | Tss? | | | |
| 07_VS | 222 | 13-Aug-07 | | 15 | 17W | 598533 | 7808081 | 30 | HTb | Bax | Possibly Tss | |
| 07_VS | 223 | 13-Aug-07 | | 14 | 17W | 595414 | 802741 | 34 | HTb | | | |
| 07_VS | 224 | 13-Aug-07 | | 26 | 17W | 598970 | 7814622 | 59 | HT | GF | | |
| 07_VS | 225 | 13-Aug-07 | | 15 | 17W | 595443 | 7802809 | 57 | | | NEW? Avens - Empetrum? | |
| | No plot 226 | | | | | | | | | | | |
| 07_VS | 227 | 13-Aug-07 | | 16 | 17W | 595470 | 7802842 | 69 | LRr | Dsi | Small talu, cache | |
| | No plot 228 | | | | 17W | | | | | | | |
| 07_VS | 229 | 13-Aug-07 | | 19 | 17W | 595360 | 7802640 | 39 | Snt | HTb | | |
| | | | | | | | | | | | | |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg plot # | Date | Location | Waypoint # PB GPS | Zone | UTM Eastings | Northings | Altitude meters | Veg Code 1 | Veg Code 2 | NOTES | Wildlife or archaeology |
| 07_VS | 231 | 13-Aug-07 | | 21 | 17W | 598684 | 7808169 | 24 | HTb+c | | Complex assn, great diversity. | |
| | No plot 232 | | | | | | | | | | | |
| 07_VS | 233 | 13-Aug-07 | | 22 | 17W | 598683 | 7808163 | 18 | Rw | HT b+c | | |
| | No plot 234 | | | | | | | | | | | |
| 07_VS | 235 | 13-Aug-07 | | 24 | 17W | 598673 | 7808101 | 20 | Rw | | | |
| | No plot 236 | | | | | | | | | | | |
| 07_VS | 237 | 13-Aug-07 | | 25 | 17W | 598518 | 7808076 | 23 | St | | | |
| | No plot 238 | | | | | | | | | | | |
| 07_VS | 239 | 13-Aug-07 | | 28 | 17W | 598926 | 7814598 | 57 | HT ledum | Lichen veneer | | |
| | No plot 240 | | | | | | | | | | | |
| 07_VS | 241 | 13-Aug-07 | | 30 | 17W | 598869 | 7814678 | 58 | | GF | Zones along small wetland | |
| 07_VN | 242 | 15-Aug-07 | | 39 | 17W | 504095 | 7973750 | 53 | | Bax | | |
| 07_VN | 243 | 15-Aug-07 | | 40 | 17W | 504244 | 7973777 | 58 | Bax | | | |
| 07_VN | 244 | 15-Aug-07 | | 41 | 17W | 504157 | 7973624 | 43 | Snt | GF | | |
| 07_VN | 245 | 15-Aug-07 | | | 17W | 504207 | 7973783 | 58 | Bax | Bps? | | |
| 07_VN | 246 | 15-Aug-07 | | 45 | 17W | 508304 | 7969538 | | Bax | | | |
| 07_VN | 247 | 15-Aug-07 | | 48 | 17W | 508326 | 7969686 | 70 | Rw | Ms | | |
| 07_VN | 248 | 15-Aug-07 | | 52 | 17W | 522409 | 7947121 | 142 | Bax | | sorted stone circles | |
| 07_VN | 249 | 15-Aug-07 | | 50 | 17W | 508306 | 7969820 | 80 | | | NEW? Equisetum assn? | |
| 07_VN | 250 | 15-Aug-07 | | 54 | 17W | 522415 | 7947239 | 160 | Bax | Snt | boulder with local effect | |
| 07_VN | 251 | 15-Aug-07 | | 55 | 17W | 527138 | 7932281 | 173 | Snt | DSr | revegetating road | |
| 07_VN | 252 | 15-Aug-07 | | 58 | 17W | 527338 | 7932301 | 189 | Ms | Rw/Snt | small streams: Epilobium arcticum | |
| 07_VN | 253 | 16-Aug-07 | | 60 | 17W | 528048 | 7926102 | 173 | Bax | GF | soil pit - show sand wedge in fissure | |
| 07_VN | 254 | 16-Aug-07 | | 62 | 17W | 528179 | 7926117 | 165 | SB | | profile of a ravine, different zones | |
| 07_VN | 255 | 16-Aug-07 | | 63 | 17W | 528302 | 7926279 | 151 | HTc | avens | | |
| 07_VN | 256 | 16-Aug-07 | | 65 | 17W | 528311 | 7926266 | 144 | Rss | GF | | |
| 07_VN | 257 | 16-Aug-07 | | 67 | 17W | 538471 | 7930688 | 226 | Bax | HT | sorted circles & stripes; soil pit | |
| 07_VN | 258 | 16-Aug-07 | | 68 | 17W | 538486 | 7920737 | 224 | Snt | Rw | | |
| 07_VN | 258A | 16-Aug-07 | | 69 | 17W | 538089 | 7920761 | 217 | Ms | | | |
| | | | | | | | | | | | | |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg plot # | Date | Location | Waypoint # PB GPS | Zone | UTM Eastings | Northings | Altitude meters | Veg Code 1 | Veg Code 2 | NOTES | Wildlife or archaeology |
| 07_VN | 259 | 16-Aug-07 | | 71 | 17W | 534671 | 7920397 | 266 | Bax | HTc | soil pit | |
| 07_VN | 260 | 16-Aug-07 | | 73 | 17W | 534746 | 7920441 | 273 | Snt | DSsolif | soil pit | |
| 07_VS | 263 | 17-Aug-07 | | 75 | 17W | 598543 | 7816990 | 60 | Tss? | GF | | |
| 07_VS | 264 | 17-Aug-07 | | 78 | 17W | 598541 | 7816991 | 63 | L veneer | | soil pit | |
| 07_VS | 265 | 17-Aug-07 | | 79 | 17W | 598722 | 7816752 | 59 | S-Mwm? | | hummocks, transitory stream | |
| 07_VS | 266 | 17-Aug-07 | | 80 | 17W | 598706 | 7816900 | 61 | HTr | | soil pit, cryoturbation | |
| 07_VS | 267 | 17-Aug-07 | | 82 | 17W | 598506 | 7819920 | 67 | HT b+c | GF | soil pit; underfit stream | |
| 07_VS | 268 | 17-Aug-07 | | 85 | 17W | 598515 | 7819916 | 73 | HTb | GF | island in stream. THICK vegetation. | |
| 07_VS | 269 | 17-Aug-06 | | 87 | 17W | 574906 | 7903790 | 180 | Snt | Rw | soil pit | |
| 07_VS | 270 | 18-Aug-06 | | 88 | 17W | 574940 | 7903788 | 177 | LRb | GF | | |
| 07_VS | 271 | 18-Aug-07 | | 89 | 17W | 606509 | 7847267 | 62 | HTb | LRb | talus/fragmental slope, soil pit | |
| 07_VS | 272 | 18-Aug-07 | | 91 | 17W | 606502 | 7847130 | 51 | HT mixed | LRb | soil pit, talus slope | |
| 07_VS | 273 | 18-Aug-07 | | 92 | 17W | 606563 | 7847103 | 32 | Snt | HT | soil pit, no S. rich. | |
| 07_VS | 274 | 18-Aug-07 | | 94 | 17W | 606911 | 7847756 | 49 | HT mixed | avens | | |
| 07_VS | 275 | 18-Aug-07 | | 95 | 17W | 606816 | 7847928 | 61 | HTr | | | |
| 07_VS | 275A | 18-Aug-07 | | 96 | 17W | 606906 | 7847625 | 49 | Rw | Rss | boulders beneath, side of river | |
| 07_VS | 276 | 18-Aug-07 | | 97 | 17W | 606581 | 7851184 | 164 | HT b+l | | | |
| 07_VS | 277 | 18-Aug-07 | | 98 | 17W | 606555 | 7851192 | 165 | Rw | Snt | boulders beneath, near river channel | |
| 07_VS | 278 | 18-Aug-07 | | 100 | 17W | 606556 | 7851251 | 163 | HTr | Bax | little soil, all boulders and cobbles | |
| 07_VS | 279 | 18-Aug-07 | | 101 | 17W | 606616 | 7851173 | 164 | St | HTb | all boulders under veg. | |
| 07_V | 280 | 14-Aug-07 | | 31 | 17W | 563730 | 7916561 | 582 | Bps | | east of Deposit 1; soil pit | |
| 07_V | 281 | 14-Aug-07 | | 33 | 17W | 563620 | 7915743 | 627 | Bps | | soil pit, stripes on slope, cryoturb | |
| 07_V | 282 | 14-Aug-07 | | 34 | 17W | 563717 | 7915697 | 625 | SB | Bps? | Deposit 1, scree, shelter | |
| 07_V | 283 | 14-Aug-07 | | 35 | 17W | 563506 | 7915284 | 640 | Luzula | | NEW? | |
| 07_V | 284 | 14-Aug-07 | | 36 | 17W | 563781 | 7913411 | 286 | Hierochloe/will | SB | NEW? soil pit, alluvium/wind? | |
| 07_V | 285 | 14-Aug-07 | | 37 | 17W | 563914 | 7913502 | 313 | Bax | HTc | slumpy | |
| 07_VS | 286 | 18-Aug-07 | | 102 | 17W | 606629 | 7851147 | 165 | LRb | | boulders at side of floodplain | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| Vegetation Plots, 2007 | | | | UTM coordinates are in 1983 datum, North American | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Prefix | Veg plot # | Date | Location | Waypoint # PB GPS | Zone | UTM Eastings | Northings | Altitude meters | Veg Code 1 | Veg Code 2 | NOTES | Wildlife or archaeology |
| 07_VS | 287 | 18-Aug-07 | | 104 | 17W | 605751 | 7857116 | 193 | Lichen veneer | | NEW; lichen layer on sand; soil pit | |
| 07_VS | 288 | 18-Aug-07 | | 105 | 17W | 605698 | 7857084 | 208 | Snt | HT + empetrum | alluvial channels | |
| 07_VS | 289 | 18-Aug-07 | | 106 | 17W | 605615 | 7857165 | 216 | Bax | | stony hillside | |
| 07_VS | 290 | 19-Aug-07 | | 107 | 17W | 592656 | 7802244 | 4 | Marine | | NEW: reddish grass, Matricaria, etc. | |
| 07_VS | 291 | 19-Aug-07 | | 110 | 17W | 592857 | 7802442 | 7 | HTc | Ms | old beach, below ice-push rdg, soil pit | |
| 07_VS | 292 | 19-Aug-07 | | 113 | 17W | 592852 | 7802595 | 10 | Bax | Lichen veneer | isostatic rebound beach, soil pit | |
| 07_VS | 293 | 19-Aug-07 | | 116 | 17W | 592922 | 7802657 | 9 | Rw | Snt | above lake, rocks pushing up | |
| 07_VS | 294 | 19-Aug-07 | | 117 | 17W | 592844 | 7802713 | 15 | HTc | Bax | soil pit, small mounds pushing up | |
| 07_VS | 295 | 19-Aug-07 | | 119 | 17W | 594263 | 7800965 | 19 | HT mixed | Bax | ice-push ridge, face of ridge | |
| 07_VS | 295A | 19-Aug-07 | | 120 | 17W | 594318 | 7800932 | 18 | Rw | HT + Ms | soil pit, alluvial channels, active, steps | |
| 07_VS | 296 | 19-Aug-07 | | 122 | 17W | 594402 | 7800814 | 11 | Bax | SB | odd, mixture, below ice-push ridge | |
| 07_VS | 297 | 19-Aug-07 | | 123 | 17W | 598561 | 7822133 | 48 | HTb | Snt | soil pit, alluvial fan, colluvium | |
| 07_VS | 298 | 19-Aug-07 | | 124 | 17W | 598570 | 7822107 | 58 | HTb | Ms | soil pit? Alluvial fan, wet | |
| 07_VS | 299 | 19-Aug-07 | | 125 | 17W | 598714 | 7822168 | 84 | SB | | alluvial fan up against cliff, diverse | |
| 07_VS | 300 | 19-Aug-07 | | 126 | 17W | 598647 | 7822109 | 69 | HT mixed | | soil pit, colluvial, till, no cryoturb | |
| 07_VS | 301 | 19-Aug-07 | | 128 | 17W | 598538 | 7822090 | 51 | Rw | | damp alluvial meadow, Rw with S. arctica | |
| 07_VS | 302 | 19-Aug-07 | | 129 | 17W | 598562 | 7822052 | 55 | grass/sedge | GF, DSt | NEW? caribou trail, many sedges, not wet | |
| 07_VS | 303 | 19-Aug-07 | | 130 | 17W | 598535 | 7822036 | 50 | LRb | GF | Hierochloe only | |
| 07_V | 303A | 22-Aug-07 | | 131 | 17W | 562925 | 7912685 | 230 | HTc | Bax | bouldery slope | |
| 07_V | 304 | 22-Aug-07 | | 133 | 17W | 562739 | 7912501 | 227 | HTr | ECs | lee slope | |
| 07_V | 305 | 22-Aug-07 | | 134 | 17W | 561729 | 7913180 | 205 | Bax | Snt | dolostone boulders frost-cracking | |
| 07_V | 306 | 22-Aug-07 | | 136 | 17W | 561080 | 7913480 | 196 | Bax | GF | | |
| 07_V | 307 | 22-Aug-07 | | 137 | 17W | 560978 | 7913180 | 189 | Bax | GF | cobble pavement | |
| 07_V | 308 | 22-Aug-07 | | 138 | 17W | 560792 | 7913306 | 186 | HTr | GF | near Sheardown Lake | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VS001 | 06-Aug-08 | 1 | 2 | 7799488 | 596235 | Near proposed airstrip, nr arch. Sites 226, 227 | | Sedges, cottongrass, moss hummocks, standing water | Snt | | | |
| 08-VS002 | 06-Aug-08 | 1 | 3 | 7799352 | 595998 | Near proposed airstrip, 200 m from sea | | Fox den, showing signs of recent use (today!) Grasses and forbs on knoll. | DSd | | | |
| 08-VS003 | 06-Aug-08 | 1 | 4 | 7799812 | 595630 | Near proposed airstrip, open valley at N end | | Dryas and xeric sedges with Racomitrium moss on gentle slope | Ba | | | |
| 08-VS004 | 07-Aug-08 | 1 | 13 | 7801437 | 594536 | Edge of pond, below rock outcrop | | Thin mat of heather, Labrador tea, Cetraria on bedrock | HT | DSi | Near cache on bedrock outcrop | |
| 08-VS005 | 07-Aug-08 | 1 | 15 | 7801524 | 594382 | In prop rail line, nr drill hole SRA2008-07 | | Mixture of heaths and sedges on gentle slope | HT | Snt | | |
| 08-VS006 | 07-Aug-08 | 1 | 17 | 7801776 | 594480 | In prop rail line, nr drill hole SRA2008-04 | | Sedgy area w hummocks colonized by heaths, lots of Carex atrofusca, C. misandra, C. aquatilis | Snt | HT | | |
| 08-VS007 | 7 Aug. 08 | 1 | 19 | 7801871 | 594603 | Near drill site RMS2008-05 on slope of polished bedrock hill to N of train turnaround | | Thin mat of heather, least willow, mosses, woodrush, and Salix arctica on polished bedrock slope with drainage. Snowbank area | SB | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VS008 | 07-Aug-08 | 1 | 22 | 7802180 | 594355 | Hillside below rounded rocky hill | | Lush, wet slope below rocky hill, much S. richardsonii, avens on hummocks, sedges, grasses, mastodon flower, and arctic fireweed | | | | |
| 08-VS009 | 07-Aug-08 | 1 | 23 | 7802372 | 593984 | Grassy hillside above chain of lakes | | Thick growth of Poa and Hierochloe on slope | Gs | | | |
| 08-VS010 | 07-Aug-08 | 1 | 26 | 7803103 | 593859 | Near Walrus Bay, at end of chain of lakes | | Riparian willow assn on boulders | Rw | | | |
| 08-VP01 | 07-Aug-08 | 1 | 27 | 7801096 | 594680 | Area of train turn around, against rocky outcrop, possible snowbank | a. Oxytropis maydelliana | Thin cover of heather, blueberry, ledum on gravel and hummocks | HT mixed | | | |
| | | | | | | | b. Cassiope tetragona | | | | | |
| | | | | | | | c. Vaccinium uliginosum | | | | | |
| 08-VP02 | 07-Aug-08 | 1 | 20 | 7802282 | 594562 | Area of train turnaround, near meat cache on hillside | a. Anthoxanthum alpina (?) | Grass clumps in and around cache | DSi | | Cache on end of small ridge | |
| | | | | | | | b. Salix arctica | | | | | |
| 08-VP03 | l7 Aug 08 | 1 | 25 | 7802643 | 593965 | Steep hillside above road (?) nr. larger lake near the sea | a. Cassiope tetragona | Thick growth of heather, Racomitrium lanuginosum, and arctic willow on slope | SB? | | | |
| | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | c. Oxytropis maydelliana | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP04 | 07-Aug-08 | 1 | 28 | 7803313 | 593628 | Hillside to west of lake connection to Walrus Bay | a. Poa sp. | Possible old fox den, grassy knob on top of ice-push ridge | DSd | DSi | Talu, small fish cache, other storage cache | |
| | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | | | | | | |
| 08-VP05 | 08-Aug-08 | 1 | 30 | 7800455 | 594001 | Steensby, port island, ridge on N side facing camp | a. Salix arctica | Thin mat of avens, prickly saxifrage, arctic willow on gravel, adjacent to small tent ring and cache. | Bax | | Small circle of stones on rock | |
| | | | | | | | b. Oxytropis maydelliana | | | | | |
| | | | | | | | | | | | | |
| 08-VP06 | 08-Aug-08 | 1 | 39 | 7800144 | 594172 | Steensby, port island, S side, opposite camp, on flat area on seaward edge of small pond | a. Salix arctica | Thick growth of grasses and sedges with arctic willow and mosses along edge of pond. | Snt | G | | |
| | | | | | | | b. Unknown small grass | | | | | |
| | | | | | | | | | | | | |
| 08-VP07 | 08-Aug-08 | 1 | 45 | 7799611 | 593707 | Steensby, port island, S side, inshore from separate island | a. Dryas integrifolia | Thin mat of avens, alpine milkvetch and reticulated willow on gravel below outcrop | Ba | | Talu nearby | |
| | | | | | | | b. Astragalus alpina | | | | | |
| | | | | | | | | | | | | |
| 08-VS011 | 08-Aug-08 | 1 | 32 | 7800294 | 594154 | Steensby, port island, across from camp, where bridge will hook to island | | Isolated clumps of Carex nardina, arctic willow, and avens on gravel/cobble surface | Ba | LR gravel | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VS012 | 08-Aug-08 | 1 | 34 | 7800200 | 594075 | Steensby, port island, to S of possible bridge on gentle cobble slope, old ice-push ridges | | Thin mat of avens, prickly saxifrage, and arctic willow on old cobble beach. Caribou bones | Ba | | | |
| 08-VS013 | 08-Aug-08 | 1 | 35 | 7800347 | 594049 | Steensby, port island, between 2 ridges, facing camp, ice push ridge with grass on top | | Minor snowbank assn, with plants growing in lee of small ridge. Many burrows, possibly lemmings,some appear active. | SB | DSd | Very active burrow system, possibly lemmings, or maybe weasel? | |
| 08-VS014 | 08-Aug-08 | 1 | 37 | 7800162 | 593911 | Steensby, port island, SE side by small pond | | Thin mat of avens on gravel between boulders | Bax | | | |
| 08-VS015 | 08-Aug-08 | 1 | 40 | 7800310 | 593895 | Steensby, port island, wide glaciofluvial terrace in centre of island across from camp | | Thin mat of avens and reticulated willow on dry gravel slope | Bax | | Broken egg, brown, speckled, poss shorebird. | |
| 08-VS016 | 08-Aug-08 | 1 | 44 | 7799784 | 593662 | Steensby, port island, by pond to S of proposed 2009 "laydown" area | | Even growth of grasses, sedges, and arctic willows on moss at pond edge | Snt | G | | |
| 08-VS017 | 08-Aug-08 | 1 | 47 | 7799919 | 593580 | Steensby, port island, by pond in centre of island | | Diverse vegetation on small hummocks, biological crust with reticulated willow, avens, arctic willow | | | Red-throated loon nesting on pond | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VS018 | 08-Aug-08 | 1 | 49 | 7799833 | 593557 | Steensby, port island, centre of island on dry ridge | | Patchy vegetation on cobbles and boulders with avens, blackish oxytrope and biological crust. | Ba | | | |
| | | | | | | | | | | | | |
| 08-VP08 | 09-Aug-08 | 1 | 51 | 7798413 | 592911 | Steensby, port island, far end of island above dock area | a. Salix arctica | Biological crust on soil, with scattered plants, including arctic willow, least willow, avens, moss campion, and purple saxifrage. | Ba | | Small caches. Flock of 8 sandpipers, semi-palmated plover, lemming sign | |
| | | | | | | | b. Saxifraga oppositifolia | | | | | |
| | | | | | | | | | | | | |
| 08-VP09 | 09-Aug-08 | 1 | 53 | 7798616 | 593098 | Steensby, port island, far end of island, by weather station | a. Salix arctica | Mat of avens, Racomitrium, lichens, and small sedges in small depression in bedrock outcrop. Some Hierochloe, some blackish crazyweed, dwarf fireweed. | Ba | | Small stone circle, maybe a hearth? Fresh lemming sign, semi-palmated plovers. | |
| | | | | | | | b. Carex scirpoidea (prob.) | | | | | |
| | | | | | | | | | | | | |
| 08-VP10 | 09-Aug-08 | 1 | 58 | 7800077 | 593344 | Steensby, port island, N side of island near laydown area, by low bedrock ridge | a.Cetraria nivalis | Lush growth of heather, avens, and Cetraria lichen | HTc | | Possible tool-making site. Good lemming sign, snow bunting, semi-palmated plovers | |
| | | | | | | | b. Cassiope tetragona | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VS019 | 09-Aug-08 | 1 | 55 | 7799841 | 593471 | Steensby, port island, middle of island. | | Gravel and bedrock, with thin mats of avens, and Racomitrium, arctic willow and purple saxifrage, also clumps of blackish oxytrope. | Ba | | | |
| | | | | | | | | | | | | |
| 08-VS020 | 09-Aug-08 | 1 | 57 | 7799892 | 593456 | Steensby, port island, N side, laydown area | | Heather association with avens, peas, Poa, in sheltered area below bedrock hillside | HTc | | Nesting red-throated loon, brood of long-tailed ducks, snow geese, snow buntings. | |
| | | | | | | | | | | | | |
| 08-VS021 | 09-Aug-08 | 1 | 60 | 7800215 | 593384 | Steensby, port island, N side, peninsula | | Mat of avens, arctic willow, reticulated willow, alpine milkvetch, on gravel shelf on peninsula | Ba | Dsi | Tent ring, caches or taluit nearby. Good lemming sign here.. | |
| | | | | | | | | | | | | |
| 08-VS022 | 10-Aug-08 | 1 | 61 | 7802282 | 596041 | Rail route, near proposed rail yard, small ridge to N of yard | | Mats of blueberry on cobbles and between boulders, with clumps of Hierochloe | HTb | LRb | "New" inukshuk and taluit | |
| | | | | | | | | | | | | |
| 08-VS023 | 10-Aug-08 | 1 | 63 | 7803282 | 596083 | Rail route, near proposed rail yard, on caribou trails along side of valley | | Snowbank area, sparse vegetation, rocks above are bare, so snow stays long. Low veg, heather, least willow, mosses, woodrushes. | SB | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP11 | 10-Aug-08 | 1 | 65 | 7803373 | 596102 | Rail route, ridge below proposed rail yard, near "new" inukshuk and taluit | a. Empetrum nigrum | Moss mounds with a diverse variety of plants on drainage slope, including blueberry, heather, arctic willow, woodrush, and least willow | HT | SB | | |
| | | | | | | | b. Vaccinium uliginosum | | | | | |
| | | | | | | | c. Cassiope tetragona | | | | | |
| | | | | | | | | | | | | |
| 08-VP12 | 10-Aug-08 | 1 | 66 | 7803221 | 595365 | Rail route, N side of prop rail yard, on small ridge above lake. | a. Vaccinium uliginosum | Blueberry, heather, arctic willow, Hierochloe, yellow oxytrope, Racomitrium, and Cetraria on rocky ridge. | HTb+c | | Small talu nearby | |
| | | | | | | | b. Oxytropis maydelliana | | | | | |
| | | | | | | | | | | | | |
| 08-VP13 | 10-Aug-08 | 1 | 67 | 7802746 | 595392 | Rail route, S side of prop rail yard, on solifluction slope below ridge | a. Vaccinium uliginosum | Diverse mat of blueberry, Aulicomium moss, heather, and arctic willow on shelf above sedge association | HTb+c | | Herring gulls with young in lake to E of site, defending young | |
| | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | | | | | | |
| 08-VP14 | 11-Aug-08 | 1 | 75 | 7802375 | 593908 | Infrastructure area, slope to N of admin building, against rocky hillside facing building site | a. Vaccinium uliginosum | Thin vegetation on slope with depressions and frost boils, with heather, blueberry, arctic willow, avens, Hierochloe, and woodrushes. | HTb+c | | Nearby, possible talu, inuksuit | |
| | | | | | | | b. Hierochloe sp. | | | | | |
| | | | | | | | c. Salix arctica | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP15 | 11-Aug-08 | 1 | 78 | 7801978 | 593743 | Infrastructure area, on bedrock ledges in small drainage seep above small (temporary?) pond | a. Vaccinium uliginosum | Relatively even growth of grasases and some sedgers in drainage swale. Thick blueberry along sides, some heather. | HTb | Gs | Brood of 8 rock ptarmigan in area above this site -- young are flying, but family is still together. | |
| | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | | | | | | |
| 08-VP16 | 11-Aug-08 | 1 | 80 | 7801880 | 594384 | Rounded bedrock hill above major junction of tracks and roads. | a. Cassiope tetragona | Edge of a snowbank association -- lots of heather, Oxyria digyna, moss; some Hierochloe and Alopecurus. Sedge association below. | SB | HTc | Well-defined caribou trail nearby. | |
| | | | | | | | b. Oxyria digyna | | | | | |
| | | | | | | | | | | | | |
| 08-VP17 | 11-Aug-08 | 1 | 82 | 7801219 | 594417 | Seaward from small lake where rail circle starts; where stream flows through solifluction ridge. | a. Salix arctica | Riparian willow assn plus sedge assn on boulder and turf ridge that partially dams a small stream below a bedrock ridge. Much blueberry, sedges, Richardson's willow, arctic willow, and Salix reticulata. | Rw | Snt | | |
| | | | | | | | b. Vaccinium uliginosum | | | | | |
| | | | | | | | | | | | | |
| 08-VS024 | 11-Aug-08 | 1 | 70 | 7802094 | 593952 | On site of proposed generator building, on top of hill. | | Thin mat of Carex nardina, avens, forbs, and heaths including heather and blueberry. | Bax | HTb+c | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VS025 | 11-Aug-08 | 1 | 72 | 7802176 | 593957 | N end of building ridge, on small shelf on N slope | | Thin mat of heather, arctic willow, with some moss, lots of Hierochloe and some Cetraria | HTc | | | |
| | | | | | | | | | | | | |
| 08-VP18 | 13-Aug-08 | 2 | 27 | 7800705 | 594850 | Steensby, hillside above 2008 camp, close to site where cars will be dumped | a. Vaccinium uliginosum | Mat of blueberry with scattered arctic willow, Hierochloe, mosses. | HTb | | | |
| | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | | | | | | |
| 08-VP19 | 13-Aug-08 | 2 | 30 | 7806571 | 598925 | At end of alignment of stones on rocks extending across valley to E of rail route | a. Vaccinium uliginosum | Embedded boulders, and thick mat of blueberry, heather, arctic willow on mounds and sedges in low areas. Some Labrador tea, Hierochloe, and woodrush. | HTb+c | | | |
| | | | | | | | b. Oxytropis maydelliana | | | | | |
| | | | | | | | | | | | | |
| 08-VP20 | 13-Aug-08 | 2 | 30 | 7806588 | 599167 | At edge of "island lake", above small beach opposite colony of nesting gulls. | a. Vaccinium uliginosum | Gravelly glacial rebound beach with thin mat of blueberry, heather in depressions, avens, arctic willow, and dwarf fireweed, with Rhododendron in the high spots. | HTb+c | Bax | Colony of nesting gulls on cliff about 200 m away; sandhill crane feathers, duck feathers, snow goose and Canada goose feathers. | |
| | | | | | | | b. Dryas integrifolia | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP21 | 13-Aug-08 | 2 | 32 | 7806539 | 598599 | At rail alignment, W side of rocky ridge, in general area of another alignment of stones. | a. Salix arctica | Small depression at edge of gravelly ridge, adjacent to boulder field, heather and racomitrium moss, with Hierochloe, blueberry, etc. | HTc | | | |
| | | | | | | | b. Racomitrium lanuginosum | | | | | |
| | | | | | | | c. Vaccinium uliginosum | | | | | |
| | | | | | | | | | | | | |
| 08-VP22 | 14-Aug-08 | 2 | 34 | 7913702 | 561034 | Infrastructure area, to SE of proposed admin building site, on lower hillside. | a. Carex scirpoidea | Slope below previous snowbank, in downwind area from infrastructure bldg site, or from Deposit 1. Mat of avens, sedges, arctic and net-veined willow. | Bax | | Glaucous gull, flying around and sitting on slope. | Colluvial till, sandy, acidic (pH 6 or so, few carbonates); below snowpatch, which adds moisture throughout the season, much buried organic material. |
| Soils 01 | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP23 | 14-Aug-08 | 2 | 37 | 7913246 | 561203 | Infrastructure area, sandstone slab hillside to S of current laydown area between rail and crusher area | a. Carex rupestris | Shattered sandstone slabs arranged to form almost a pavement, plus glacial erratics. Xeric sedges, Richardson's willow, avens, arctic willow, and yellow oxytrope on gentle slope. | Bax | Ws | | Terrace, cobbles and frost-heaved coarse fragments, ice-contact glacio-fluvial, turbated, no obvious patterned ground, mud-boil like features; likely a lot of heaving in fall. |
| Soils 02 | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | c. Dryas integrifolia | | | | | |
| | | | | | | | | | | | | |
| 08-VP24 | 14-Aug-08 | 2 | 41 | 7913199 | 560818 | Infrastructure area, near crusher and loading area, between crusher and shore of Sheardown Lake. | a. Cassiope tetragona | Possible late-lying snowbank, but not enough to warrant designation as such. Heather and Cetraria with some avens, small sedges, and yellow oxytrope. | HTc | | Glaucous gulls nesting on islands in Sheardown. Lemming sign. Parts of a seal skull and bones found near plot. How did a seal skeleton get to Sheardown Lake? | Pit on small bench, till, ice-contact, cobbly, "skeletal", fragmental, spaces filled with fines |
| Soils 03 | | | | | | | b. Cetraria nivalis | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-V026 | 14-Aug-08 | 2 | ?? | 7913697 | 560908 | Infrastructure area, on small knob to SE of proposed site of admin building, overlooking pond. Contains 2 "bird stones". | | Patches of Saxifraga tricuspidata, curly sedge, mats of avens, some Carex scirpoidea on very dry, exposed knoll with bird stone. Vegetation concentrated around stone. | Bax | DSbs | Raptor pellets with lemming skull and bones around bird stone. | |
| 08-V027 | 14-Aug-08 | 2 | 35 | 7913687 | 560918 | Infrastructure area, edge of pond just S of site of proposed admin building. | | Thick growth of sedges and scattered Richardson's willow on mossy ridge at edge of lake. | Ms | Snt + Rw | Lemming activity in area. | |
| 08-V028 | 14-Aug-08 | 2 | 39 | 7913188 | 561226 | Infrastructure area, at edge of train siding where cars may be loaded. | | Carpet of moss, somewhat mounded, with Carex membranacea and C. aquatilis, arctic cotton, reticulated willow, Richardson's willow and arctic willow. | Snt | Ms | | |
| 08-V029 | 14-Aug-08 | 2 | 40 | 7912960 | 561186 | Infrastructure area in rail turn on siding to loader. | | Closely spaced Richardson's willows on biological crust with stranded black algae, possibly previously flooded, much thrift. Willow shrubland? | Ws | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VS030 | 18-Aug-08 | 2 | 59 | 7841069 | 608066 | Cockburn Lake, small stream on E side, N of crossing. | | Thick growth of Richardson's willow along small stream which cascades down a steep talus slope. Under the willows, blueberry, Oxyria digyna, sedges, large-flowered wintergreen, reticulated willow, woodrush, and more. | Rw | | | |
| | | | | | | | | | | | | |
| 08-VP25 | 15-Aug-08 | 2 | 42 | 7913123 | 562873 | Deposit #1, near proposed location of secondary crusher, near drill hole MSI-2008-28. Selected a location for plot, toward the hill. | a. Salix richardsonii | Thick mat of sedges, cottongrass, arctic willow, and reticulated willow plus scattered Richardson's willows, some yellow oxytrope and blueberry. Beautiful little pond and stream flowing down from above. | Snt | Rw | | |
| No soil pit | | | | | | | b. Eriophorum angustifolium | | | | | |
| | | | | | | | c. Salix arctica | | | | | |
| | | | | | | | | | | | | |
| 08-VP26 | 15-Aug-08 | 2 | 44 | 7913125 | 562701 | Deposit #1, nr proposed loc of secondary crusher, plot located to west on terrace. | a. Racomitrium lanuginosum | Scattered plants of Carex misandra, heather in depressions, clumps of avens, blueberry on rocks, and some arctic and reticulated willow, also yellow oxytrope. | HTc+b | SB | | Colluviated till, sandy/bouldery, seepage, seep and overflow, not much soil. |
| Soils 04 | | | | | | | b. Carex misandra | | | | | |
| | | | | | | | c. Vaccinium uliginosum | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP27 | 15-Aug-08 | 2 | 45 | 7912843 | 562921 | Deposit #1, SW of prop admin building site, hopefully on slope in front of building | a. Dryas integrifolia | Avens and xeric sedges between many large boulders, almost a boulder field. | Bax | LRb | | borrow pit, glacio-fluvial or sandy till, turf and boulder surface, brunisol, alluviated, well-drained, but small wetlands in the area |
| Soils 05 | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | c. Racomitrium lanuginosum | | | | | |
| | | | | | | | | | | | | |
| 08-VP28 | 15-Aug-08 | 2 | 46 | 7912938 | 563177 | Deposit #1, nr drill hole MSI-2008-23, on hillside below crushers, hopefully. | a. Cassiope tetragona | Thick carpet of heather, moss, and lichens between large bedrock outcrops so may have some snow effect. | HTr | | | |
| No soil pit | | | | | | | b. Oxytropis maydelliana | | | | | |
| | | | | | | | c. Racomitrium lanuginosum | | | | | |
| | | | | | | | | | | | | |
| 08-VP29 | 15-Aug-08 | 2 | 47 | 7911980 | 562417 | Mary River, rail bridge crossing, N side of river, W side of where tracks approach. | a. Cassiope tetragona | Small depression in morainal ridge to W of rail crossing, about 100 m from bridge. Thick growth of heather, grey moss, avens, curly sedge, and arctic willow. | HTr | Bax | | till or outwash, lateral or end moraine fragments, flat-topped, turbated |
| Soils 06 | | | | | | | b. Racomitrium lanuginosum | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP30 | 15-Aug-08 | 2 | 48 | 7912100 | 562537 | Mary River, rail bridge crossing, N side of river, E side of where tracks approach. | a. Carex membranacea | Thick growth of sedges in small basin surrounded by morainal hills. Currently flooded. Carex aquatilis, C. membranacea, arctic willow, and Tofieldia coccinea. | Snt | | | |
| No soil pit | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | | | | | | |
| 08-VP31 | 16-Aug-08 | 2 | 49 | 7916699 | 563229 | Deposit 1, beyond deposit at N edge of planned waste rock stockpile, top of small hill, next to cairn. Near drill hole MWD-2008-01 | a. Alopecurus alpina | Scattered clumps of plants on very unstable and saturated soil, including purple saxifrage, Oxyria digyna, Saxifraga caespitosa, Saxifraga tricuspidata, Racomitrium moss, poppies, Cerastium alpinum, Poa, and other small grasses, a few small mosses. Great diversity, few individuals. | Bps | | | till area, soft, supersaturated; on hillock or small rise, no patterned ground here, but nearby, little organic matter in the soil, whole slope creeping, very stony, temperature at 20 cm is only + 1.8 C |
| Soils 07 | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | c. Racomitrium lanuginosum | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP32 | 16-Aug-08 | 2 | 50 | 7915176 | 561901 | Deposit 1, beyond deposit at W edge of planned waste rock storage area abt 100 m downslope from drill site MWD 2008-05 | a. Eriophorum angustifolium | Small sedge meadow in open slope with many boulders/embedded boulders. Mostly cottongrass, arctic willow, Carex aquatilis, and C. misandra. | Snt | | | saturated where plot is located, colluviated till with seepage, poorly drained, parts severely eroded by seepage, water table at 25 cm, no soil development |
| Soils 08 | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | c. Carex misandra | | | | | |
| | | | | | | | | | | | | |
| 08-VP33 | 16-Aug-08 | 2 | 51 | 7914358 | 561447 | Deposit 1, beyond SW edge o f planned waste rock area, at SW corner of affected area, near drill site MWD 2008-08. Sandstone boulders foliating. | a. Carex nardina | Continuous dry turf between boulders, with curly sedge, Carex nardina and avens dominating. Also, reticulated willow and Carex scirpoidea. | | | | colluviated till slope, sandstone fragments, fresh mud boils due to seepage, possibly old boils or circles, with mineral soil at surface in centre but 5-10 cm of organic soil at side, some cryoturbation |
| Soils 09 | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | c. Dryas integrifolia | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP34 | 17-Aug-08 | 2 | 52 | 7818335 | 598254 | Cockburn Lake area, south end, in glaciofluvial plain, near drill hole BH4 2008-160. Approx KM 125 | a. Vaccinium uliginosum | Level terrace between 2 small rivers, at lakeward end of bedrock ridge with morainal or outwash material all around. Base of cobbles with mats of blueberry, moss (Racomitrium), avens, large-pflowered wintergreen, and Empetrum. Some Hierochloe and Salix arctica. | HT b+m | | 4 sandhill cranes took off, lots of lemming sign, lots of cast caribou antlers. Near wolf trap. | |
| No soil pit | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | c. Empetrum nigrum | | | | | |
| | | | | | | | | | | | | |
| 08-VP35 | 17-Aug-08 | 2 | 53 | 7799937 | 595605 | Steensby Inlet, ridge to N of proposed airstrip ridge. | a. Salix arctica | Series of steps, cracks and niches in rocky bedrock ridge, which support a diverse flora, including: heather and Racomitrium, sedges in low areas, blueberry on rocks, mosses/lichens on dry faces, etc. | Mixed | | Gull, pipits passing | Small shelf on plucked bedrock surface, steep incline, much seepage through site and on rock faces, somewhat aeolian, fine soil deposited by wind from valley below, mixed with rock fragments from above, soil relatively warm. |
| Soils 10 | | | | | | | b. Empetrum nigrum | | | | | |
| | | | | | | | c. Vaccinium uliginosum | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP36 Soils 11 | 17-Aug-08 | 2 | 54 | 7799937 | 595605 | Steensby Inlet, valley to E of airstrip ridge, at W edge of valley above water lake. | a. Salix arctica | Diverse vegetation in valley running alongside the proposed airstrip ridge, in valley running NW/SE to water lake. Hummocks are heaths and moss over boulders or maybe ice-cored mounds, and part of plot is simply tundra over boulders. | HTb+c | Snt | Roughleg hawk across valley, or at least it sounds like a roughleg. Lemming runs, burrows, scats. Goose egg opened and eaten, in the entrance to a lemming hole. | Valley between 2 outcrops, seepage area, hummocky - stones, soil and moss hummocks, stone at side of soil pit affects permafrost layer; permafrost at shallow depth under moss hummocks, but drops off steeply outside hummock footprint |
| | | | | | | | b. Empetrum nigrum | | | | | |
| | | | | | | | c. Vaccinium uliginosum | | | | | |
| | | | | | | | | | | | | |
| 08-VP37 Soils 12 | 18-Aug-08 | 2 | 58 | 7840884 | 608101 | Cockburn Lake crossing, on E side, just N of crossing. | a. Vaccinium uliginosum | Lush, diverse plant association on slope with boulders, above small pond, below talus slope. Blueberry, avens, and arctic and reticulated willow are dominant. Heather in depressions, Oxyria in sheltered places under rocks, Racomitrium moss and Salix reticulata. Some elements of snowbank assn. | HTb+c | SB | Deeply worn caribou trail, fresh hare scats, loon passing in flight. | fluvial terrace below talus slope |
| | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | c.Oxyria digyna | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP38 | 18-Aug-08 | 2 | 60 | 7817561 | 598522 | Cockburn Lake, S end, where rail turns inland. | a. Salix richardsonii | This represents a plant association that is RARE on Baffin Island; the riparian shoreline shrub. Tallest willows yet seen on this project form a fringe along the shore of a small pond. Richardson's willow, with understory of large-flowered wintergreen, blueberry around outside. | Rss | SB | This association should be preserved. Located about 40 m from the wolf trap. Preserving both should be high priority. | Soil pit about 70 m away, on glaciofluvial surface, on glaciofluvial in vegetated area. |
| Soils 13 | | | | | | | b. Vaccinium uliginosum | | | | | |
| | | | | | | | c. Salix arctica | | | | | |
| | | | | | | | | | | | | |
| 08-VP39 | 19-Aug-08 | 2 | 61 | 7800850 | 595164 | Steensby port area, in rail turnaround to E of existing camp. | a.Vaccinium uliginosum | Valley is a mixture of shattered bedrock and sedge meadow, with a few drier spots. On moss mats, blueberry, heather, reticulated willow, arctic willow. Clumps of Hierochloe, small mats of avens, and Racomitrium moss close to the bedrock outcrops. | HTb+c | HTr | 4 ravens, flock of 20 Canada geese, 4 pipits | Till area in talus-covered bedrock outcrops, some wind-blown material. Till surface may have been previously washed. Above wet moss-turf hummock area. Fragmental. |
| Soils 14 | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP40 | 19-Aug-08 | 2 | 62 | 7801019 | 595408 | Steensby rail turnaround, E side of valley, on terrace to NW of rail | a. Salix arctica | Small slump area below small bedrock cliff, above sedge wetland. Mounds surrounded by sedges and grasses, generally appear to be "grassy". Mounds bear reticulated willow, Carex aquatilis, and Pedicularis capitata with Arctagrostis, blueberry, and Sudetan lousewort. | Gs | SB | Much lemming activity | Complex slump and solifluction about 50 m from rock face. Bedrock face with soil and veg. cover. Bouldered snout lobe below. Dormant circles and nets. Soil stratified, fine sand and silt. Bottom of pit is rock, likely acting as the permafrost table, there is an organic layer over the rock surface. Cryoturbation. |
| Soils 15 | | | | | | | b. Vaccinium uliginosum | | | | | |
| | | | | | | | | | | | | |
| 08-VP41 | 19-Aug-08 | 2 | 64 | 7800326 | 595268 | Steensby, along rail alignment, near place rail circles after cars are dumped, to W of rail. | a. Vaccinium uliginosum | Glacial rebound beach. Even turf of Carex rupestris, Carex scirpoidea, and Carex misandra with avens, reticulated willow, blueberry, and some arctic willow. | Bax | | | Glacial rebound area, sharp fragments, cobbles, coarse sand and fine gravel, layer of organic material over gravel. |
| Soils 16 | | | | | | | b. Carex rupestris | | | | | |
| | | | | | | | c. Salix arctica | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| | 19-Aug-08 | 2 | 65 | 7800441 | 595366 | Steensby, along rail alignment, where rail circles, in small valley to E of rail | a. Cassiope tetragona | Mats of heather and avens, turf of Carex rupestris, Carex misandra, and C. scirpoidea. | HTb | | ptarmigan feather | |
| 08-VP42 | | | | | | | b. Carex misandra | | | | | |
| No soil pit | | | | | | | c. Vaccinium uliginosum | | | | | |
| | | | | | | | | | | | | |
| 08-VP43 | 21-Aug-08 | 2 | 66 | 7799113 | 597216 | Steensby, near proposed airstrip, S side of strip | a. Salix arctica | Hummocks colonized by heaths, with sedges between hummocks. Blueberry, crowberry, heather, Labrador tea, Carex membranacea and cottongrass. | HT mixed | Snt | | |
| | | | | | | | b. Empetrum nigrum | | | | | |
| | | | | | | | | | | | | |
| 08-VP44 | 21-Aug-08 | 2 | 67 | 7799260 | 597141 | Steensby, near proposed airstrip, S side of strip | a. Cassiope tetragona | Terrace on side of bedrock ridge, small mounds colonized by heather, Labrador tea, blueberry, amidst flat embedded boulders. | HT mixed | | 2 ravens, pipits, flock of young snow buntings (at least 15 birds), feeding in area | |
| | | | | | | | b. Vaccinium uliginosum | | | | | |
| | | | | | | | | | | | | |
| 08-VP45 | 21-Aug-08 | 2 | 68 | 7803163 | 592950 | Steensby, Ikpikitujua, nr freight dock infrastructure | a. Cassiope tetragona | Mats of heather and avens on bouldery slope with scattered arctic willows and Hierochloe, some Cetraria, curly sedge, Salix reticulata, alpine milkvetch. | HTc | Bax | Snow geese (7 plus 2 blue form), feeding below ridge, flew off as we landed. | |
| | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP46 | 21-Aug-08 | 2 | 69 | 7803082 | 592797 | Steensby, Ikpikitujua, nr road to freight docks | a. Vaccinium uliginosum | Boulders pushing up under soil, mounds and embedded boulders. Mats of blueberry, avens, heather in depressions, scattered arctic willows, Salix reticulata, Carex membranacea, C. nardina, Carex scirpoidea.. | HTb+c | | Raven, and pipits | |
| | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | | | | | | |
| 08-VP47 | 21-Aug-08 | 2 | 70 | 7802797 | 592544 | Steensby, Ikpikitujua, nr freight docks | a. Salix arctica | Bouldery slope with some boulders pushing up thru slope. Heather in depressions, mats of avens, scattered arctic willows, moss around stones. | HTc | Bax | Probable golden plovers, juveniles, four birds flying around, saw two times. | |
| | | | | | | | b. Dryas integrifolia | | | | | |
| | | | | | | | | | | | | |
| 08-VP48 | 22-Aug-08 | 2 | 71 | 7811934 | 601081 | Rectangular lake at Km 135, north of rocky ridge to N of lake, on valley floor | a. Salix arctica | Cottongrass tussocks colonized by heaths, including heather, Labrador tea, blueberry. Lots of Sphagnum moss, heather in depressions between tussocks. | St | HTb+c | Pacific loons, pair, on lake to N, calling and interacting. Goose feeding damage to sedge tussocks. | |
| | | | | | | | b. Vaccinium uliginosum | | | | | |
| | | | | | | | | | | | | |
| 08-VP49 | 22-Aug-08 | 2 | 72 | 7812032 | 600828 | Rectangular lake at Km 135, N of rocky ridge, W of prev. plot. | a. Carex membranacea | Tussock association with heaths -- heather, Labrador tea, moss between tussocks with least willow, forming mats, Lab tea in moss | St | HTb+c | Sandhill cranes (3), across the GF plain, raven, goose feeding damage. | |
| | | | | | | | b. Eriophorum vaginatum | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VS031 | 22-Aug-08 | 2 | 73 | 7811850 | 601010 | Rectangular lake at Km 135, on rocky ridge, meat cache. | | Stone cache with caribou bones still present, though overgrown by moss. Lots of Poa and Hierochloe in and around the stones. Stellaria and arctic willow, heather below cache. | DSc | | Caribou bones in cache. Pipits moving through. | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 08-VP50 | 22-Aug-08 | 2 | 74 | 7799477 | 596315 | S side of airstrip | a. Cassiope tetragona | Bedrock ridge descending in steps to wetland. Thin mat of heather, Racomitrium, lichens, and small amts of avens on bedrock. Least willow in protected areas. | | | Tent rings nearby | |
| | | | | | | | b. Cetraria nivalis | | HTr | LRr | | |
| | | | | | | | c. Vaccinium uliginosum | | | | | |
| | | | | | | | | | | | | |
| 08-VP51 | 22-Aug-08 | 2 | 75 | 7799936 | 596346 | Steensby, NE side of airstrip, opposite first lake. | a. Salix arctica | Slope below bedrock ridge, lots of boulders and solifluction in area. Old cottongrass tussocks, mounds covered with heather, Empetrum, Labrador tea or Sphagnum/blueberry. Salix richardsonii and sedges, esp Carex misandra, 1n channels between mounds. | HT mixed | St | Roughlegged hawk, nesting, on opposite cliff, three young. | |
| | | | | | | | b. Vaccinium uliginosum | | | | | |
| | | | | | | | | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP52 | 23-Aug-08 | 2 | 76 | 7821010 | 598102 | Cockburn Lake, where rail turns inland, passing between rock knob and cliff, on the lakeward side of the curve, between rail and lakeshore. | a. Vaccinium uliginosum | Heath tundra on gentle slope with small frost boils. Blueberry, heather, large-flowered wintergreen, arctic willow, avens, and some Hierochloe. Racomitrium in low areas and around boulders. | HTc+b | HTr | | |
| | | | | | | | b. Salix arctica | | | | | |
| | | | | | | | | | | | | |
| 08-VP53 | 23-Aug-08 | 2 | 77 | 7847289 | 606606 | N end of upper Cockburn Lake where the Cockburn River flows into small separate lake, downstream from the confluence, toward rocky slope but still in floodplain. | a. Salix arctica | Currently a wetland with active stream flowing through rocks and hummocks. Nnot likely a permanent stream -- rocks under water have lichens on them. Mounds with sedges and heaths, densely covered. Some mounds appear to be of tussock origin, others of boulder origin. | Snt | HT mixed | Last year, this area was heavily affected by goose feeding, tussock sedges pulled apart, etc. This year, no evidence of feeding; just scats. | |
| | | | | | | | b. Vaccinium uliginosum | | | | | |
| | | | | | | | | | | | | |
| 08-VP54 | 23-Aug-08 | 2 | 78 | 7861001 | 603142 | Upper valley, before rail starts the decline into Cockburn valley, on gradual E-facing slope. Much water flowing through here at present, due to heavy rains. Snow cover 40%. | a. Eriophorum vaginatum | Cottongrass meadow on gentle slope, with heath-covered moss mounds, lots of arctic willow, heather, and least willow. Mounds are tufts of Eriphorum vaginatum, and between mounds, Carex aquatilis and C. membranacea. | Snt | | Lemming, small, spotted as we landed, running away. Pipits, 10-15 feeding in area, flying as flock. Heard semi-palmated plovers but did not see them. | |
| | | | | | | | b. Salix arctica | | | | | |

VEGETATION BASELINE STUDY REPORT
2008 VEGETATION PLOTS

| Plot # | Date | Unit | Wpt | Coordinates | | Located | Species sampled | Notes re plant association | Codes | | Notes | Soils data from Hugo Veldhuis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | northing | easting | | For plant tissue analysis | | 1 | 2 | Wildlife | Only for plots with soil pits. |
| 08-VP55 | 24-Aug-08 | 2 | 79 | 7900119 | 585513 | First valley S of Mary River, at Km 25, just S of the end of the "Trench", S side of small river. | a. Salix arctica | Embedded boulders, gentle slope above river valley with frost boils and some solifluction. Relatively thick mat of avens and Racomitrium with heather in depressions, scattered arctic willoes, Hierochloe and Luzula confusa. | Ba | HTr | Snowing hard, wet snow. | |
| | | | | | | | b. Racomitrium lanuginosum | | | | | |
| | | | | | | | | | | | | |
| 08-VP56 | 24-Aug-08 | 2 | 80 | 7899967 | 586397 | Same as above #55 but about 150 m W. | a. Salix arctica | Thin mat of avens, some blueberry, arctic willows, capitate lousewort, and some woolly lousewort. | Ba | HTb | Snowing harder, gave up and went home. | |
| | | | | | | | b. Dryas integrifolia | | | | | |

| | |
|---|---|
| | **Permanent monitoring plot** |
| | **Of special interest** |

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**VEGETATION BASELINE STUDY REPORT**
**BASELINE STATIONS FOR METALS IN SOIL AND VEGETATION**

Print Dec/29/10 11:54:33

| Plot # (1) | Original Sample Date | Unit | Coordinates | | Located | Species Sampled for Plant Tissue Analysis | Notes Regarding Plant Association | Codes | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Northing | Easting | | | | 1 | 2 | Esp. Wildlife |
| 08-VP01 | 07-Aug-08 | 1 | 7801096 | 594680 | Steensby Inlet | a. Oxytropis maydelliana<br>b. Cassiope tetragona<br>c. Vaccinium uliginosum | Thin cover of heather, blueberry, ledum on gravel and hummocks | HTmixed | | |
| 08-VP02 | 07-Aug-08 | 1 | 7802282 | 594562 | Steensby Inlet | a. Hierochloe alpina<br>b. Salix arctica | Grass clumps in and around cache | DSi | | Cache on end of small ridge |
| 08-VP03 | I7 Aug 08 | 1 | 7802643 | 593965 | Steensby Inlet-Ikipikitjua | a. Cassiope tetragona<br>b. Salix arctica<br>c. Oxytropis maydelliana | Thick growth of heather, Racomitrium lanuginosum, and arctic willow on slope | SB | | |
| 08-VP04 | 07-Aug-08 | 1 | 7803313 | 593628 | Steensby Inlet-Ikipikitjua | a. Poa sp.<br>b. Salix arctica | Possible old fox den, grassy knob on top of ice-push ridge | DSd | | Talu, small fish cache, other storage cache |
| 08-VP05 | 08-Aug-08 | 1 | 7800455 | 594001 | Steensby Inlet-Ikipikitjua | a. Salix arctica<br>b. Oxytropis maydelliana | Thin mat of avens, prickly saxifrage, arctic willow on gravel, adjacent to small tent ring and cache. | Bax | | Small circle of stones on rock |
| 08-VP06 | 08-Aug-08 | 1 | 7800144 | 594172 | Steensby Inlet | a. Salix arctica<br>b. Unknown small grass | Thick growth of grasses and sedges with arctic willow and mosses along edge of pond. | Snt | G | |
| 08-VP07 | 08-Aug-08 | 1 | 7799611 | 593707 | Steensby Inlet | a. Dryas integrifolia<br>b. Astragalus alpina | Thin mat of avens, alpine milkvetch and reticulated willow on gravel below outcrop | Ba | | Talu nearby |
| 08-VP08 | 09-Aug-08 | 1 | 7798413 | 592911 | Steensby Inlet | a. Salix arctica<br>b. Saxifraga oppositifolia | Biological crust on soil, with scattered plants, including arctic willow, least willow, avens, moss campion, and purple saxifrage. | Ba | | Small caches. Flock of 8 sandpipers, semi-palmated plover, lemming sign |
| 08-VP09 | 09-Aug-08 | 1 | 7798616 | 593098 | Steensby Inlet | a. Salix arctica<br>b. Carex scirpoidea (prob.) | Mat of avens, Racomitrium, lichens, and small sedges in small depression in bedrock outcrop. Some Hierochloe, some blackish crazyweed, dwarf fireweed. | Ba | | Small stone circle, maybe a hearth?? Fresh lemming sign, semi-palmated plovers. |
| 08-VP10 | 09-Aug-08 | 1 | 7800077 | 593344 | Steensby Inlet | a.Cetraria nivalis<br>b. Cassiope tetragona | Lush growth of heather, avens, and Cetraria lichen | HTc | | Possible tool-making site. Good lemming sign, snow bunting, semi-palmated plovers |
| 08-VP11 | 10-Aug-08 | 1 | 7803373 | 596102 | Steensby Inlet | a. Empetrum nigrum<br>b. Vaccinium uliginosum<br>c. Cassiope tetragona | Moss mounds with a diverse variety of plants on drainage slope, including blueberry, heather, arctic willow, woodrush, and least willow | HT | SB | |
| 08-VP12 | 10-Aug-08 | 1 | 7803221 | 595365 | Railway | a. Vaccinium uliginosum<br>b. Oxytropis maydelliana | Blueberry, heather, arctic willow, Hierochloe, yellow oxytrope, Racomitrium, and Cetraria on rocky ridge. | HTb+c | | Small talu on lg rock on end of ridge, old |
| 08-VP13 | 10-Aug-08 | 1 | 7802746 | 595392 | Steensby Inlet | a. Vaccinium uliginosum<br>b. Salix arctica | Diverse mat of blueberry, Aulicomium moss, heather, and arctic willow on shelf above sedge association | HTb+c | | Herring gulls with young in lake to E of site, defending young |
| 08-VP14 | 11-Aug-08 | 1 | 7802375 | 593908 | Mine Site | a. Vaccinium uliginosum<br>b. Hierochloe sp.<br>c. Salix arctica | Thin vegetation on slope with depressions and frost boils, with heather, blueberry, arctic willow, avens, Hierochloe, and woodrushes. | HTb+c | | Nearby, possible talu, inuksuit |
| 08-VP15 | 11-Aug-08 | 1 | 7801978 | 593743 | Steesnby Inlet | a. Vaccinium uliginosum<br>b. Salix arctica | Relatively even growth of grasases and some sedgers in drainage swale. Thick blueberry along sides, some heather. | HTb | Gs | Brood of 8 rock ptarmigan in area above this site -- young are flying, but family is still together. |
| 08-VP16 | 11-Aug-08 | 1 | 7801880 | 594384 | Steesnby Inlet | a. Cassiope tetragona<br>b. Oxyria digyna | Edge of a snowbank association -- lots of heather, Oxyria digyna, moss; some Hierochloe and Alopecurus. Sedge association below. | SB | HTc | Well-defined caribou trail nearby. |
| 08-VP17 | 11-Aug-08 | 1 | 7801219 | 594417 | Steesnby Inlet | a. Salix arctica<br>b. Vaccinium uliginosum | Riparian willow assn plus sedge assn on boulder and turf ridge that partially dams a small stream below a bedrock ridge. Much blueberry, sedges, Richardson's willow, arctic willow, and Salix reticulata. | Rw | Snt | |
| 08-VP18 | 13-Aug-08 | 2 | 7800705 | 594850 | Steesnby Inlet | a. Vaccinium uliginosum<br>b. Salix arctica | Mat of blueberry with scattered arctic willow, Hierochloe, mosses. | HTb | | |
| 08-VP19 | 13-Aug-08 | 2 | 7806571 | 598925 | Near Steesnby Inlet | a. Vaccinium uliginosum<br>b. Oxytropis maydelliana | Embedded boulders, and thick mat of blueberry, heather, arctic willow on mounds and sedges in low areas. Some Labrador tea, Hierochloe, and woodrush. | HTb+c | | |
| 08-VP20 | 13-Aug-08 | 2 | 7806588 | 599167 | Near Steesnby Inlet | a. Vaccinium uliginosum<br>b. Dryas integrifolia | Gravelly glacial rebound beach with thin mat of blueberry, heather in depressions, avens, arctic willow, and dwarf fireweed, with Rhododendronoin the high spots. | HTb+c | Bax | Colony of nesting gulls on cliff about 200 m away; sandhill crane feathers, duck feathers, snow goose and Canada goose feathers. |
| 08-VP21 | 13-Aug-08 | 2 | 7806539 | 598599 | Near Steesnby Inlet | a. Salix arctica<br>b. Racomitrium lanuginosum<br>c. Vaccinium uliginosum | Small depression at edge of gravelly ridge, adjacent to boulder field, heather and racomitrium moss, with Hierochloe, blueberry, etc. | HTc | | |
| 08-VP22 Soil pit 01 | 14-Aug-08 | 2 | 7913702 | 561034 | Milne Inlet | a. Carex scirpoidea<br>b. Salix arctica | Slope below previous snowbank, in downwind area from infrastructure bldg site, or from Deposit 1. Mat of avens, sedges, arctic and net-veined willow. | Bax | | Glaucous gull, flying around and sitting on slope. |
| 08-VP23 Soil pit 02 | 14-Aug-08 | 2 | 7913246 | 561203 | Milne Inlet | a. Carex rupestris<br>b. Salix arctica<br>c. Dryas integrifolia | Shattered sandstone slabs arranged to form almost a pavement, plus glacial erratics. Xeric sedges, Richardson's willow, avens, arctic willow, and yellow oxytrope on gentle slope. | Bax | Ws | |

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**VEGETATION BASELINE STUDY REPORT**
**BASELINE STATIONS FOR METALS IN SOIL AND VEGETATION**

Print Dec/29/10 11:54:33

| Plot # (1) | Original Sample Date | Unit | Coordinates | | Located | Species Sampled for Plant Tissue Analysis | Notes Regarding Plant Association | Codes | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Northing | Easting | | | | 1 | 2 | Esp. Wildlife |
| 08-VP24 Soil pit 03 | 14-Aug-08 | 2 | 7913199 | 560818 | Milne Inlet | a. Cassiope tetragona<br>b. Flaviocetraria nivalis | Possible late-lying snowbank, but not enough to warrant designation as such. Heather and Cetraria with some avens, small sedges, and yellow oxytrope. | HTc | | Glaucous gulls flying around, nesting on islands in Sheardown. Lemming sign. Parts of a seal skull and bones found near plot. How did a seal skeleton get to Sheardown Lake? |
| 08-VP25 No soil pit | 15-Aug-08 | 2 | 7913123 | 562873 | Deposit No. 1 | a. Salix richardsonii<br>b. Eriophorum angustifolium<br>c. Salix arctica | Thick mat of sedges, cottongrass, arctic willow, and reticulated willow plus scattered Richardson's willows, some yellow oxytrope and blueberry. Beautiful little pond and stream flowing down from above. | Snt | Rw | |
| 08-VP26 Soil pit 04 | 15-Aug-08 | 2 | 7913125 | 562701 | Deposit No. 1 | a. Racomitrium lanuginosum<br>b. Carex fuliginosa ssp. misandra<br>c. Vaccinium uliginosum | Scattered plants of Carex misandra, heather in depressions, clumps of avens, blueberry on rocks, and some arctic and reticulated willow, also yellow oxytrope. | HTc+b | SB | |
| 08-VP27 Soil pit 05 | 15-Aug-08 | 2 | 7912843 | 562921 | Deposit No. 1 | a. Dryas integrifolia<br>b. Salix arctica<br>c. Racomitrum lanuginosum | Avens and xeric sedges between many large boulders, almost a boulder field. | Bax | LRb | |
| 08-VP28 No soil pit | 15-Aug-08 | 2 | 7912938 | 563177 | Deposit No. 1 | a. Cassiope tetragona<br>b. Oxytropis maydelliana<br>c. Racomitrium lanuginosum | Thick carpet of heather, moss, and lichens between large bedrock outcrops so may have some snow effect. | HTr | | |
| 08-VP29 Soil pit 06 | 15-Aug-08 | 2 | 7911980 | 562417 | Mary River Rail Crossing | a. Cassiope tetragona<br>b. Racomitrium lanuginosum | Small depression in morainal ridge to W of rail crossing, about 100 m from bridge. Thick growth of heather, grey moss, avens, curly sedge, and arctic willow. | HTr | Bax | |
| 08-VP30 No soil pit | 15-Aug-08 | 2 | 7912100 | 562537 | Mary River Rail Crossing | a. Carex membranacea<br>b. Salix arctica | Thick growth of sedges in small basin surrounded by morainal hills. Currently flooded. Carex aquatilis, C. membranacea, arctic willow, and Tofieldia coccinea. | Snt | | |
| 08-VP31 Soil pit 07 | 16-Aug-08 | 2 | 7916699 | 563229 | Deposit No. 1 | a. Alopecurus alpina<br>b. Salix arctica<br>c. Racomitrium lanuginosum | Scattered clumps of plants on very unstable and saturated soil, including purple saxifrage, Oxyria digyna, Saxifraga caespitosa, Saxifraga tricuspidata, Racomitrium moss, poppies, Cerastium alpinum, Poa, and other small grasses, a few small mosses. Great diversity, few individuals. | Bps | | |
| 08-VP32 Soil pit 08 | 16-Aug-08 | 2 | 7915176 | 561901 | Deposit No. 1 | a. Eriophorum angustifolium<br>b. Salix arctica<br>c. Carex fuliginosa ssp. misandra | Small sedge meadow in open slope with many boulders/embedded boulders. Mostly cottongrass, arctic willow, Carex aquatilis, and C. misandra. | Snt | | |
| 08-VP33 Soil pit 09 | 16-Aug-08 | 2 | 7914358 | 561447 | Deposit No. 1 | a. Carex nardina<br>b. Salix arctica<br>c. Dryas integrifolia | Continuous dry turf between boulders, with curly sedge, Carex nardina and avens dominating. Also, reticulated willow and Carex scirpoidea. | Bax | | |
| 08-VP34 No soil pit | 17-Aug-08 | 2 | 7818335 | 598254 | Cockburn Lake Area | a. Vaccinium uliginosum<br>b. Salix arctica<br>c. Empetrum nigrum | Level terrace between 2 small rivers, at lakeward end of bedrock ridge with morainal or outwash material all around. Base of cobbles with mats of blueberry, moss (Racomitrium), avens, large-pflowered wintergreen, and Empetrum. Some Hierochloe and Salix arctica. | HT b+m | | 4 sandhill cranes took off, lots of lemming sign, lots of cast caribou antlers. Near wolf trap. |
| 08-VP35 Soil pit 10 | 17-Aug-08 | 2 | 7799937 | 595605 | Steensby Inlet Near Airstrip | a. Salix arctica<br>b. Empetrum nigrum<br>c. Vaccinium uliginosum | Series of steps, cracks and niches in rocky bedrock ridge, which support a diverse flora, including: heather and Racomitrium, sedges in low areas, blueberry on rocks, mosses/lichens on dry faces, etc. | Mixed | | Gull, pipits passing |
| 08-VP36 Soil pit 11 | 17-Aug-08 | 2 | 7799937 | 595605 | Steensby Inlet Near Airstrip | a. Salix arctica<br>b. Empetrum nigrum<br>c. Vaccinium uliginosum | Diverse vegetation in valley running alongside the proposed airstrip ridge, in valley running NW/SE to water lake. Hummocks are heaths and moss over boulders or maybe ice-cored mounds, and part of plot is simply tundra over boulders. | HTb+c | Snt | Roughleg hawk across valley. Lemming runs, burrows, scats. Goose egg opened and eaten, in the entrance to a lemming hole. |
| 08-VP37 Soil pit 12 | 18-Aug-08 | 2 | 7840884 | 608101 | Cockburn Lake | a. Vaccinium uliginosum<br>b. Salix arctica<br>c. Oxyria digyna | Lush, diverse plant association on slope with boulders, above small pond, below talus slope. Blueberry, avens, and arctic and reticulated willow are dominant. Heather in depressions, Oxyria in sheltered places under rocks, Racomitrium moss and Salix reticulata. Some elements of snowbank assn. | HTb+c | SB | Deeply worn caribou trail, fresh hare scats, loon passing in flight. |

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**VEGETATION BASELINE STUDY REPORT**
**BASELINE STATIONS FOR METALS IN SOIL AND VEGETATION**

Print Dec/29/10 11:54:33

| Plot # (1) | Original Sample Date | Unit | Coordinates | | Located | Species Sampled for Plant Tissue Analysis | Notes Regarding Plant Association | Codes | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Northing | Easting | | | | 1 | 2 | Esp. Wildlife |
| 08-VP38 Soil pit 13 | 18-Aug-08 | 2 | 7817561 | 598522 | Steensby Inlet | a. Salix richardsonii<br>b. Vaccinium uliginosum<br>c. Salix arctica | This represents a plant association that is RARE on Baffin Island; the riparian shoreline shrub. Tallest willows yet seen on this project form a fringe along the shore of a small pond. Richardson's willow, with understory of large-flowered wintergreen, blueberry around outside. | Rss | SB | This association should be preserved. A similar association is one of the tourism attractions in Katannilik Park near Kimmirut. Located about 40 m from the wolf trap. Preserving both should be high priority. |
| 08-VP39 Soil pit 14 | 19-Aug-08 | 2 | 7800850 | 595164 | Steensby Inlet | a.Vaccinium uliginosum<br>b. Salix arctica | Valley is a mixture of shattered bedrock and sedge meadow, with a few drier spots. On moss mats, blueberry, heather, reticulated willow, arctic willow. Clumps of Hierochloe, small mats of avens, and Racomitrium moss close to the bedrock outcrops. | HTb+c | HTr | 4 ravens, flock of 20 Canada geese, 4 pipits |
| 08-VP40 Soil pit 15 | 19-Aug-08 | 2 | 7801019 | 595408 | Steensby Inlet | a. Salix arctica<br>b. Vaccinium uliginosum | Small slump area below small bedrock cliff, above sedge wetland. Mounds surrounded by sedges and grasses, generally appear to be "grassy". Mounds bear reticulated willow, Carex aquatilis, and Pedicularis capitata with Arctagrostis, blueberry, and Sudetan lousewort. | Gs | SB | Much lemming activity |
| 08-VP41 Soil pit 16 | 19-Aug-08 | 2 | 7800326 | 595268 | Steensby Inlet | a. Vaccinium uliginosum<br>b. Carex rupestris<br>c. Salix arctica | Glacial rebound beach. Even turf of Carex rupestris, Carex scirpoidea, and Carex misandra with avens, reticulated willow, blueberry, and some arctic willow. | Bax | | |
| 08-VP42 No soil pit | 19-Aug-08 | 2 | 7800441 | 595366 | Steensby Inlet | a. Cassiope tetragona<br>b. Carex fuliginosa ssp. misandra<br>c. Vaccinium uliginosum | Mats of heather and avens, turf of Carex rupestris, Carex misandra, and C. scirpoidea. | HTb | | ptarmigan feather |
| 08-VP43 | 21-Aug-08 | 2 | 7799113 | 597216 | Steensby Inlet Near Airstrip | a. Salix arctica<br>b. Empetrum nigrum | Hummocks colonized by heaths, with sedges between hummocks. Blueberry, crowberry, heather, Labrador tea, Carex membranacea and cottongrass. | HTmixed | Snt | |
| 08-VP44 | 21-Aug-08 | 2 | 7799260 | 597141 | Steensby Inlet Near Airstrip | a. Cassiope tetragona<br>b. Vaccinium uliginosum | Terrace on side of bedrock ridge, small mounds colonized by heather, Labrador tea, blueberry, amidst flat embedded boulders. | HTmixed | | 2 ravens, pipits, flock of young snow buntings (at least 15 birds), feeding in area |
| 08-VP45 | 21-Aug-08 | 2 | 7803163 | 592950 | Steensby Inlet-Ikipikitjua | a. Cassiope tetragona<br>b. Salix arctica | Mats of heather and avens on bouldery slope with scattered arctic willows and Hierochloe, some Cetraria, curly sedge, Salix reticulata, alpine milkvetch. | HTc | Bax | Snow geese (7 plus 2 blue form), feeding below ridge, flew off as we landed. |
| 08-VP46 | 21-Aug-08 | 2 | 7803082 | 592797 | Steensby Inlet-Ikipikitjua | a. Vaccinium uliginosum<br>b. Salix arctica | Boulders pushing up under soil, mounds and embedded boulders. Mats of blueberry, avens, heather in depressions, scattered arctic willows, Salix reticulata, Carex membranacea, C. nardina, Carex scirpoidea.. | HTb+c | | Raven, and pipits |
| 08-VP47 | 21-Aug-08 | 2 | 7802797 | 592544 | Steensby Inlet-Ikipikitjua | a. Salix arctica<br>b. Dryas integrifolia | Bouldery slope with some boulders pushing up thru slope. Heather in depressions, mats of avens, scattered arctic willows, moss around stones. | HTc | Bax | Probable golden plovers, juveniles, four birds flying around, saw two times. |
| 08-VP48 | 22-Aug-08 | 2 | 7811934 | 601081 | Near Steesnby Inlet | a. Salix arctica<br>b. Vaccinium uliginosum | Cottongrass tussocks colonized by heaths, including heather, Labrador tea, blueberry. Lots of Sphagnum moss, heather in depressions between tussocks. | St | HTb+c | Pacific loons, pair, on lake to N, calling and interacting. Feeding damage to sedge tussocks by goose feeding. |
| 08-VP49 | 22-Aug-08 | 2 | 7812032 | 600828 | Near Steesnby Inlet | a. Carex membranacea<br>b. Eriophorum vaginatum | Tussock association with heaths -- heather, Labrador tea, moss between tussocks with least willow, forming mats, Lab tea in moss | St | HTb+c | Sandhill cranes (3), across the GF plain, raven, goose feeding damage. |
| 08-VP50 | 22-Aug-08 | 2 | 7799477 | 596315 | Steensby Inlet Near Airstrip | a. Cassiope tetragona<br>b. Flaviocetraria nivalis<br>c. Vaccinium uliginosum | Bedrock ridge descending in steps to wetland. Thin mat of heather, Racomitrium, lichens, and small amts of avens on bedrock. Least willow in protexted areas. | HTr | LRr | Tent rings nearby |
| 08-VP51 | 22-Aug-08 | 2 | 7799936 | 596346 | Steensby Inlet Near Airstrip | a. Salix arctica<br>b. Vaccinium uliginosum | Slope below bedrock ridge, lots of boulders and solifluction in area. Old cottongrass tussocks, mounds covered with heather, Empetrum, Labrador tea or Sphagnum/blueberry. Salix richardsonii and sedges, esp Carex misandra, 1n channels between mounds. | HTmixed | St | Roughlegged hawk, nesting, on opposite cliff, three young. |
| 08-VP52 | 23-Aug-08 | 2 | 7821010 | 598102 | Cockburn Lake | a. Vaccinium uliginosum<br>b. Salix arctica | Heath tundra on gentle slope with small frost boils. Blueberry, heather, large-flowered wintergreen, arctic willow, avens, and some Hierochloe. Racomitrium in low areas and around boulders. | HTc+b | HTr | |

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**VEGETATION BASELINE STUDY REPORT**
**BASELINE STATIONS FOR METALS IN SOIL AND VEGETATION**

Print Dec/29/10 11:54:33

| Plot # (1) | Original Sample Date | Unit | Coordinates | | Located | Species Sampled for Plant Tissue Analysis | Notes Regarding Plant Association | Codes | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Northing | Easting | | | | 1 | 2 | Esp. Wildlife |
| 08-VP53 | 23-Aug-08 | 2 | 7847289 | 606606 | Cockburn Lake | a. Salix arctica<br>b. Vaccinium uliginosum | Currently a wetland with active stream flowing through rocks and hummocks. Nnot likely a permanent stream -- rocks under water have lichens on them. Mounds with sedges and heaths, densely covered. Some mounds appear to be of tussock origin, others of boulder origin. | Snt | HT mixed | Last year, this area was heavily affected by goose feeding, tussock sedges pulled apart, etc. This year, no evidence of feeding; just scats. |
| 08-VP54 | 23-Aug-08 | 2 | 7861001 | 603142 | Valley West of Cockburn Lake | a. Eriophorum vaginatum<br>b. Salix arctica | Cottongrass meadow on gentle slope, with heath-covered moss mounds, lots of arctic willow, heather, and least willow. Mounds are tufts of Eriphorum vaginatum, and between mounds, Carex aquatilis and C. membranacea. | Snt | | Lemming, small, spotted as we landed, running away. Pipits, 10-15 feeding in area, flying as flock. Heard semi-palmated plovers but did not see them. |
| 08-VP55 | 24-Aug-08 | 2 | 7900119 | 585513 | Valley South of Mary River Rail Crossing | a. Salix arctica<br>b. Racomitrium lanuginosum | Embedded boulders, gentle slope above river valley with frost boils and some solifluction. Relatively thick mat of avens and Racomitrium with heather in depressions, scattered arctic willoes, Hierochloe and Luzula confusa. | Ba | HTr | Snowing hard, wet snow. |
| 08-VP56 | 24-Aug-08 | 2 | 7899967 | 586397 | Valley South of Mary River Rail Crossing | a. Salix arctica<br>b. Dryas integrifolia | Thin mat of avens, some blueberry, arctic willows, capitate lousewort, and some woolly lousewort. | Ba | HTb | Snowing harder, gave up and went home. |



**NOTES:**

1. SURFACE SOIL SAMPLES WERE COLLECTED FOR CHEMICAL ANALYSIS AT ALL THESE VEGETATION MONITORING PLOTS. PLOT NUMBERS WITH "SOIL PIT" NUMBERS ARE THOSE WITH ADDITIONAL SOIL PITS EXCAVATED FOR EVALUATION BY HUGO VELDHUIS, THE PROJECT TEAM SOIL SCIENTIST.

# APPENDIX C

## SAMPLE OF PLANT DATABASE

- Sample Entry from the Mary River Project Vegetation Plot Database, hosted by Outcrop Ltd.
- Access at: **http://npd.outcrop.com/vegetation.asp?code=Baffinland+Iron+Mines%2C+Mary+River+Project**

## Vegetation Baseline Data, Plot Information

Project Code: Baffinland Iron Mines, Mary River Project

Plot #: 07-VS101

Date (yy/mm/dd): 07/08/07

Team: PB, PQ

Location: South rail route, approx. Km 135, south of Cockburn Lake, in narrow ist

**Coordinates:**

| UTM Zone: | Lat./North: | Long./East.: | Elevation: |
|---|---|---|---|
| 17W | 7809857 | 600046 | 73 m |

**Photos:**

| Card: | Photo #'s: |
|---|---|
| 3 | 9 - 12 |

| Airphoto #: | Photo roll: | Frame #: | Scan #: |
|---|---|---|---|
| | | | |

Plot represents: Non-tussock sedge association at base of small cliff.

**Assn.Codes:**

#1 S Mod1. nt #2 M Mod2. cb TWA Code:

Mapping Code: S

Slope: level % Aspect:

Moisture: high Nutrients:

**Terrain:**

- ☐ Beach
- ☐ Terrace
- ☐ Plateau
- ☐ Valley Bottom
- ☑ Slope
- ☐ Delta
- ☐ Alluv Fan
- Flood Plain

**Microtopography:**

- ☐ Hummyocky
- ☐ Frost boils
- ☐ Solifluct
- ☐ Circles
- ☐ Bould strm
- ☐ Polygon
- ☐ Frost fiss
- Flat

- [ ] Flood Plain
- [ ] RidgeCrest
- [x] Cliff
- [x] Stream
- [ ] Flat
- [ ] Br. Outcrop
- [ ] Boulders
- [ ] Bould field
- [ ] Shattered br.

Substrate %:

| Organics: | Rocks: | Mineral soil: | Bedrock: | Water: |
|---|---|---|---|---|
| 95 | 0 | 0 | bedrock | 5 |

**% of surf covered:**

**Dist betw stones:**

**Type of stones:**

**% Sand:**

**% Gravel:**

**% Standing:** 0

**% Flowing:** 5

Soil Notes: Small seep at base of bedrock cliff, soil saturated.

Vegetation Notes: Thick growth of sedges, cottongrass and assorted grasses on small terrace below cliff, below small pool. Adjacent to snowbank association.

Cover %:

| Tree: | Shrub: | Herb: | Moss/lichen: |
|---|---|---|---|
| | 10 | 70 | 15 |

| Trees/erect shrubs : | Legumes & buttercups : | Lichens : | Mosses : | Rock lichens : |
|---|---|---|---|---|
| | | cetrniva .1<br>thamsubu .1<br>dactarct .1 | Sphagnum sp. 15<br>(red, under veg.)<br>Asst'd moss 10 | |

| Dwarf shrubs: | Sedges: | Cottongr: | Rushes: | Ferns, horsetails, clubmosses: |
|---|---|---|---|---|
| saliarct 10<br>ledupalu 5<br>saliherb 2<br>vacculig 10<br>casstetr 2 | careaqua 10<br>carememb 20<br>carebige 20<br>(C. bigelowii) | erioangu 2<br>eriovagi 5 | | |

| Forbs: | Mustards: | Saxifrages: | Composite: | Other: (fungi, etc.): |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| polyvivi .2 | | | | |

Wildlife Notes:

Scats: goose
Caribou skull found nearby, large bull, antlers recently shed.

| Note Item | Note Description | Sighting/Heard | Scats | Dens/Burrows | Runs/Trails | Nests | Other |
|---|---|---|---|---|---|---|---|
| | | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | |

Archaeology Notes:

# APPENDIX D

## SOIL STUDY SUMMARY REPORT

- Executive summary of report on the soils studies completed in 2007
  (full report is a stand-alone document)

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

# SOIL CLASSIFICATION PROJECT

## Climate and Soil Development

The processes of soil formation in the project area are for a large part controlled by low soil temperatures, low precipitation, and, to a lesser extent, by the presence of a permafrost table near the surface. Biological and chemical processes are generally slowed or completely stopped by low temperatures. On the other hand, physical processes may be stronger as a result of freeze-thaw cycles in spring and fall.

## Permafrost and Soil Classification

The Mary River Project area lies in the Northern Arctic Ecozone, and encompasses part of the Borden Peninsula Plateau, Melville Peninsula Plateau, and Baffin Island Uplands Ecoregions, as defined in the Ecological Land Classification for Canada (ELCWG). The cold climate has resulted in the formation of permafrost, which underlies the whole ecozone, and extends to several hundred metres below the surface. The depth to the permafrost table, usually referred to as the active layer or thaw layer, varies considerably, and is dependent on factors such as soil material, drainage, aspect, and vegetative cover.

Due to the variation in permafrost conditions not all soils within this area can be classified as permanently frozen soils (Cryosols) as defined in The Canadian System of Soil Classification (CSWG, 1998), even though the whole project area is underlain by permafrost. In the Canadian system, Cryosols are defined as soils that must have permafrost within 100 or 200 cm of the soil surface, depending on the degree of cryoturbation in the soil profile. Thus, for example, soils that have developed on well-drained sandy materials often are not strongly cryoturbated, and have a seasonal thaw layer extending well below 100 cm depth. These soils are not classified as Cryosolic soil, but are classified as Brunisolic soils, which are soils that show weak B horizon development.

## Soil Parent Materials

The soils have developed on a variety of parent materials, which have largely been mapped by the Geological Survey of Canada (GSC) as sandy and gravelly materials with significant large coarse fragment content. These sandy materials vary from glaciofluvial deposits, sediments deposited in pro-glacial lakes, to areas of sandy till. These materials are generally found as the dominant materials in valleys and as plains. In low-lying areas, where water remains at the surface or close to the surface, a thin (15-30 cm) fibric peat, which is derived for a large part from sedge roots, overlies mostly sandy materials, with or without large, coarse fragments at the surface.

Medium textured materials (loam, sandy loam), which usually contain significant amounts of gravel and large coarse fragments, are found on many valley slopes as till and colluviated till. These materials are also found as valley floors in the form of ground, lateral and end morains. In addition, extensive areas of the project south of Mary River Camp consist of thin bouldery and blocky till overlying non-carbonate bedrock (boulder fields), frost-shattered bedrock (felsenmeer), and areas of frost-heaved cobbles, stones and boulders.

Wind action has winnowed sand in many areas creating an armoured surface of gravels and cobbles (desert pavement). Wind has also deposited the sand as eolian veneers in other areas. Most of the eolian deposition is in the form of a thin cap, although deep deposition occurs on some lee slopes. The eolian sediments frequently have thin organic bands within the matrix, which mark former surfaces. Because these sediments usually consist of fine and very fine sand, permafrost is closer to the surface than in coarser sand deposits. Other sediments found in the project area include alluvial deposits along rivers and streams. These deposits range from stratified sand to gravels and boulders with varying amounts of finer materials.

North of camp the underlying bedrock consists of carbonate bedrock, which contributes coarse flagstones to the surface and soil matrix. The till in this area is calcareous, and generally has a finer texture than the non-calcareous till south of camp.

Where veneers of coarse fragments make up most of the surface and soil matrix, and finer soil materials are generally lacking, e.g. talus, scree, and upper parts of alluvial fans, the soils are classified as non-soils, although they will support pockets of vegetation in crevices and hollows.

Coarse sandy, gravely, and bouldery marine deposits are found close to the coast as relic marine beaches, foreshore materials, and as push ridges. Clayey marine deposits are also locally found inland.

Fine- to medium-textured soil materials are generally cryoturbated, and the soil surface exhibits varying types of patterned ground, while sandy deposits are characterized by weakly to strongly defined polygonal patterns.

**Soil Classification and Distribution**

The interactions between climate, soil materials, topography and the relative short time period that pedological processes have been active has resulted in soils which have only weak soil horizon formation. There is, with some exceptions, also a general lack of organic matter accumulation within the profile.

**Soil Studies**

The objective of the soil classification is to provide soil information to the vegetation project. The aim is to establish linkages between soils, vegetation and surficial materials. This information is required to allow extrapolation of data to areas not investigated, and map distribution of wildlife habitat in the project area.

**Data 2007**

Forty-five soils were investigated. The profiles of a number of soils were sampled, and samples were taken from selected soil horizons for other soils. Seventy-eight samples were taken. Fifty samples were analyzed for chemical and physical parameters.

# APPENDIX E1

## VEGETATION CLASSIFICATION SYSTEM

- Classification system for vegetation, to contribute to Ecological Land Classification System

**APPENDIX E1**

**BAFFINLAND IRON MINES CORPORATION**
**MARY RIVER PROJECT**

**VEGETATION BASELINE STUDY REPORT**

**VEGETATION CLASSIFICATION SYSTEM**

## SECTION 1.0 – INTRODUCTION AND DEFINITIONS

In order to be able to create an ecological land classification structure for the Mary River study area, it is necessary to understand the many plant associations that make up the vegetation of the area. In creating names for these, systems that have already been established for other projects in the eastern arctic were consulted, but the system developed for the Mary River Project includes additional associations. Each area studied has its own characteristics, and each has plant associations that may differ from those found even less than a hundred kilometres away.

In naming these associations, the use of scientific plant names in the name of the association has been avoided, unless the scientific name is in common usage. The Latinised names are simply too difficult to remember, as they usually mean nothing to non-botanists. It is also impossible to translate these into Inuktitut. A combination of general terms (gravel beaches, sedge associations, heath tundra, lichen-rock community on boulder field) were used, as well as terms that were used in other projects, as far as they apply. As in each project of this sort, there are some associations here that have not appeared in other projects so far studied.

In 2006, the main concentration was on the proposed north road and rail route, and on the area around Deposit #1, the proposed mine infrastructure area and Mary River Camp, and the port site at Milne Inlet. The 2007 work and report included information on the south rail route and port, and on part of the proposed south access road route. In addition, soils information on both routes was added. In 2008, gaps were addressed, additional soil studies were done, and permanent monitoring plots were established and data collected for each.

It is important to realize that the terminology used to label these associations is artificial – it is terminology created by man. It means nothing to the plants, and probably means little to Nunamiut (“people of the land”), as plant communities are not a way in which they view their land. However, knowing how much of an area is occupied by sedge associations or by lichen-rock associations is important to a mining company that will need to develop a remediation or reclamation plan for their site. So, there needs to be a set of terminology that works for the particular area being studied, and for the various audiences that will need to use it.

In this system, the term “**plant community**” has been used for general categories such as “coastal communities” or “wetlands” or “heath tundra”. These are usually large enough to be mappable. The term “**plant association**” has been used for subgroups, which in most cases are too small to map.

In some cases, terrain features create landforms that are easily visible from the air or on a good air photo, but which may include many different plant communities or associations. In some cases, it is convenient to group these into “**complexes**”, such as an “esker complex”, “glacio-fluvial/glacial outwash complex” or “canyon complex”.

Widely accepted common names have been used for the plants listed in this report. However, to make this document useful over a wider geographical area, it is also necessary to use the

scientific names of the plants. To keep it as short as possible, the scientific name is usually used the first time a plant appears in this document, and the common name used thereafter, unless there is a possibility of confusion, in which case the scientific name (or both common and scientific name) are used. Some plants, however, have no common names, in which case it has been necessary to use only the scientific name. Scientific names, common names, and recent synonyms appear in the plant species list (Appendix F).

A traditional knowledge component to the baseline work was started in the summer of 2007, with work with elders in Pond Inlet. The 2007 results are compiled into a separate report.

Where there is a list of several species in the same genus, the genus name is used first, and only the initial for that genus is used in the rest of the list (example: "*Salix herbacea*, *S. reticulata*, and *S. arctica"*).

All scientific names in the text are italicized, a common practice in the literature.

Scientific names (Latinized names given to an organism by specialists in that field) are valuable in that they permit recognition of a particular species on an international basis, by botanists and interested others around the world. However, they are not perfect.

Even the scientific names present a problem in that the system is constantly changing as specialists revise genera, resulting in changes to the taxonomy. Scientific names have been checked as of the spring of 2010, and changes noted in the text and in the species list. "Old" or "former" names, at least those used in the last 10 years are listed in the species list as "synonyms", appreviated "syn." Current taxonomy has been checked using the three most reliable databases, the International Taxonomic Information System (ITIS) (2010), the USDA PLANTS database (2010), and the online version of the Flora of the Arctic Archipelago (accessed online, June 2010). Even so, due to lags in updates of these databases, the information is not always the same, hence the retention of synonyms.

There have been a number of very recent changes to taxonomy of several grasses, for example, moving of the genus *Hierochloe* to *Anthoxanthum* and changes of *Alopecurus alpinus* to *Alopecurus magellanicus* (Consaul, L., personal communication, 2007). These have been modified to fit the taxonomy used in the new *Flora of the Canadian Arctic Archipelago* (Aiken, et.al. 2007).

As is described in the main report text under "Methods", the *Vascular Plants of the Continental Northwest Territories* (Porsild and Cody, 1980) was used as the main source of taxonomic information but much of the taxonomy is outdated. Nicholas Polunin's excellent *Botany of the Canadian Eastern Arctic, Part III, Vegetation and Ecology* covers the general area under consideration and was of great value in developing the classification system (Polunin, 1948). The vegetation classification system developed for Sirmilik National Park (Duclos, Levesque, et. al., 2006), was reviewed, as well as the earlier vegetation work done for this park when it was still known as North Baffin National Park (Zoltai, McCormick, and Scotter, 1983), and the baseline work done for Nanisivik Mine, located near Arctic Bay.

Identification was aided by the use of the online *Flora of the Canadian Arctic Archipelago* (various authors, principally Aiken, Dallwitz, Consaul, McJannet, et. al. (1999 onwards), Argus, McJannet and Dallwitz (Salicaceae, 1999 onwards), Gillett, Consaul, Aiken, and Dallwitz (Fabaceae, 1999 onwards), and Scott, Aiken, Boles, and Dallwitz (Ranunculaceae, 1999 onwards). We also used the CD-ROM version of this important work (Aiken, Dallwitz, et. al., 2007). Pertinent parts and photos were printed out and used to assist identification in the field.

Photo and mapping codes have been developed to facilitate identification of these units. These are usually a one- to two-letter code, with main groups being identified with capital letters, and sub-groups being assigned lower case “modifiers”, such as “S” for “sedge community” and “Snt” meaning “non-tussock sedge association”. These codes follow the name of each unit. They are used to identify photos and as a kind of shorthand on the data sheets.

Photos referenced in this report are included in **Appendix E2.** Plot numbers are coded by the year, and then the route, therefore: “07_VN045” means 2007, Vegetation, North route, Plot #45. Monitoring plots are identified by “VP” and a three digit number.

The local restrictive elements for plant associations include the amount of moisture available to plants, the chemical environment in which they live and substrate on which they occur, exposure to wind and desiccation, and particle size and texture of the soils. A separate account of soils information obtained during the summer of 2007 has been prepared, and an executive summary of this work is included as Appendix D of the Vegetation Baseline Study Report.

**PHOTO 1. Glaciofluvial landscape along north road and rail route. (Cover)**

## SECTION 2.0 - WETLANDS

### 2.1 SEDGE COMMUNITY S

**PHOTO 2. Sedge community in stream valley, aerial.**

This plant community consists of predominantly *Carex* sedges and/or cottongrasses (*Eriophorum* sp.) and some grasses (*Arctagrostis latifolia* and *Calamagrostis purpurascens*), located in areas with varying amounts of moisture, usually in basins or in areas where water drains down from one lake to another. Water depth usually does not exceed 15 cm except in areas with emergent vegetation.

Under the Circumpolar Arctic Vegetation Map system, the sedge associations in this part of the Arctic all fit into the vegetation unit called “W1. Sedge/grass, moss wetland”. On the CAV map, this unit is widespread south of the lake called Angajurjualuk and Nina Bang Lake. (*Arctic Geobotanical Atlas*, 2007)” In reference to the dominants in this unit, the CAVM website states: “Sedges, grasses, mosses, and forbs. Grasses are more important in Subzone B wetlands than in Subzone C. Elevated microsites have moist graminoid, prostrate dwarf shrub, forb, and moss tundra species (see also Unit G2).” (Subzone C is the bioclimate subzone for northern Baffin Island.) This community falls into Olthof’s “Wet Sedge” or “Wetlands” classification groups (Olthof, 2008)

In the sedge community, a shallow peaty layer (10 - 30 cm) is characteristic, largely composed of weakly decomposed roots, over a variety of parent materials, which in the project area are usually coarse sand or small gravels. This layer is usually saturated, and in the case of non-tussock associations, with a slow flow of water or standing water. Depth to permafrost is governed by the depth of the organic layer and moisture conditions, and is therefore quite variable under these communities.

#### 2.1.1 Emergent Association Se

**PHOTO 3. Plot 06_VN008**

An emergent association occurs in standing water at the edges of ponds, bays, edges of slow streams, where current is slow to nonexistent. Vegetation is rooted in water to about 30 cm depth.

The vegetation usually consists of sedges (*Carex aquatilis)*, cottongrass (*Eriophorum angustifolium)*, and the grasses *Dupontia fisherii*, and *Arctagrostis latifolia* in the shallower areas. The rather odd semaphore grass with floating leaves, *Pleuropogon sabineii,* occurs in standing water or slow areas of small streams.

#### 2.1.2 Non-tussock Sedge Association Snt

**PHOTO 4. Plot 06_VN011**

This association usually occurs in the centre of depressions or in the centre of a drainage swale. It usually receives a slow, but reliable flow of water throughout the growing season, and there may be standing water in some areas, especially if there is solifluction or a downward creep of the soil, forming small ridges or terraces which act as small dams. Usually there are few or no boulders, or the boulders are buried in peaty soil. The soil is usually saturated throughout the growing season.

Non-tussock Carex sedges, cottongrasses, and some grasses dominate this association. These include *Carex aquatilis, C. fuliginosa* ssp. *misandra, C. membranacea, Eriophorum angustifolium, Arctagrostis latifolia, Dupontia fisherii, Eriophorum scheuchzerii, Calamagrostis pupurescens,* and *Juncus biglumis*. Herbaceous non-grassy plants include Sudetan lousewort (*Pedicularis sudetica)* and yellow marsh saxifrage (*Saxifraga hirculus*). There may be varying amounts of moss, especially if there are solifluction ridges, but almost no lichens at all; it is simply too wet.

In places, these associations are mixed with moss associations, especially on lake shores. See "Mossy Shorelines".

In some sedge associations, especially those in glaciofluvial terraces, such as those near the Mary River Camp, in the stream valley just to the west of camp, an unusually diverse association has developed. This is a mixture of mosses and sedges along with a variety of other plants, including the mastodon plant (*Tephroseris palustris congesta*) and *Saxifraga foliolosa*. This association may be very small or linear, along the edge of the water, or on solifluction ridges.

### 2.1.3 Tussock Association St

**PHOTO 5. Plot 05_VS097**

At the edge of a drainage, where the water supply during the growing season is less reliable, non-tussock sedges are replaced by those that form tussocks (tight clumps of leaves with flowering stems among them). This association blends into the non-tussock association toward the centre of the drainage, and into either hummocks or heath tundra at the edges. This association was encountered at the side of a non-tussock sedge association near Cockburn Lake toward Steensby Inlet, but otherwise there is very little of this association on the areas studied for this project. However, it is common across the North. In Olthof's classification system, this is called "Tussock Graminoid Tundra" (Olthof, 2008).

Tussocks of *Eriophorum vaginatum* may be colonized by mosses and heath tundra species. Between the tussocks, non-tussock sedges may form a dense stand or can be sparsely distributed in a moss carpet.

The difference between the vegetation *on* the tussocks and that *between* the tussocks is distinct. On the drier microhabitat in the tops of the tussocks, there are species much more characteristic of dry tundra areas, like mountain avens (*Dryas integrifolia*), blueberry (*Vaccinium uliginosum*), and curly sedge (*Carex rupestris*). The areas between the tussocks is occupied by a wetland type flora, including sedges, rushes, Sudetan lousewort, and some mosses.

### 2.1.4 Sedge-moss Wet Meadow S-Mwm

**PHOTO 6. Aerial view of ponds and Sedge-moss wet meadow**
**PHOTO 7. Plot 05_VN017**
**PHOTO 8. Plot 06_VS291 Hummock**
**PHOTO 9. Plot 06_VS291 *Koenigia islandica***

The Sedge-moss wet meadow association occurs on patterned ground, which generally is located in flat areas in valley bottoms. Much water remains on the land here, often as standing water in polygons surrounded by raised ridges, called low-centre polygons. It can also occur in small depressions, or below gravel terraces where streams exit the gravel.

The mossy ridges are about 12 – 20 cm in height, and do not appear to be ice-cored near the surface. They are long moss mounds composed of a mixture of mosses including *Spaghnum* and *Aulacomnium*. Many rooted plants grow in the moss, including *Carex aquatilis,* the woodrush

*Luzula arctica (*formerly *Luzula nivalis)*, net-veined willow (*Salix reticulata*), least willow (*S. herbacea*), and sometimes Richardson's willow (*S. richardsonii)*. Several forbs are common here including Sudetan lousewort (*Pedicularis sudetica*) and yellow marsh saxifrage (*Saxifraga hirculus*). Blueberry (*Vaccinium uliginosum*) occasionally occurs on the sides and tops of the mounds.

The centres of the polygons, if not filled with standing water, are flat and sparsely vegetated, likely due to the fact that the soil is constantly saturated during the growing season. Non-tussock sedges grow here, including *Carex aquatilis* and *Carex fuliginosa* ssp. *misandra*. In the centres, in the drier spots, there is a greenish brown moss which lies flat to the ground, forming a thin cover. It is not cushiony, just a film. Other areas are often covered by a black "biological crust", usually a combination of algae and cyanobacteria.

Another form of this plant association occurs on hummocky wetland. Here mounds, possibly of tussock origin, are scattered through an area where water flows across the land in small channels. The hummock mounds are about 30 - 40 cm high, probably originating as tussocks of *Eriophorum vaginatum*, but now surrounded by mosses, and topped with grasses (*Arctagrostis latifolia*) and sedges (*Carex scirpoidea* and others). Blueberries and arctic willow (*Salix arctica*) grow abundantly on the sides of the mounds; mosses and slowly-flowing water fill the areas between mounds. Here, one of the few annual plants to be found in the Arctic, the tiny *Koenigia islandica,* was found.

## 2.2 MOSS COMMUNITIES M

There are a number of plant associations in which moss is clearly the dominant plant form, and in which the moss affects the microhabitat, mostly by retaining water, much like a sponge. In addition, the moss insulates the ground, and the active layer under moss ridges is often quite shallow. The top of the permafrost layer is closer to the surface where this insulation occurs – sometimes as shallow as 60 cm in August. These associations are usually small, often too small to be mappable, but are clearly different. Many species of vascular plants are associated with these communities, growing in the moss or surrounded by moss.

Because most of the moss associations are associated with or part of larger sedge communities, the soil generally is not different under the moss ridges or mounds, but reflects the general nature of the soils for the sedge community. In this area, these soils usually contain a peaty organic element over various parent materials, mostly coarse sands or fine gravels. Depth to permafrost is variable, and largely controlled by the insulating quality of the moss layer.

### 2.2.1 Mossy shorelines Ms

**PHOTO 10. Plot 06_V230, shoreline moss association in foreground**
**PHOTO 11. Plot 06_VN258**
**PHOTO 12. Plot 06_V045, moss association with mastodon flower**
**PHOTO 13. Mastodon flower, *Tephroseris palustris* ssp. *congesta***
**PHOTO 14. Golden saxifrage, *Chrysosplenium tetrandrum***
**PHOTO 15. *Saxifraga cespitosa***
**PHOTO 16. *Saxifraga foliolosa***

This association occurs along the shores of lakes, ponds, streams, or rivers, and is often associated with solifluction. This association is usually narrow, following the shoreline (Photo 10), and may grade into a sedge association. The moss carpet and mounds is composed of a great variety of mosses, including *Sphagnum, Drepanocladus*, and *Aulacomnium*.

The willows *Salix arctica* and *S. reticulata* are almost always present in these moss associations. *Salix richardsonii* and/or *S. herbacea* may occur in small numbers. *Carex aquatilis, C. membranacea, Alopecurus alpinus, Luzula arctica,* and *Poa* sp. are often present as well. In the wetter places, semaphore grass (*Pleuropogon sabinei*) may occur, and in drier spots, alpine holygrass (*Anthoxanthum monticola*). Forbs include mountain sorrel (*Oxyria digyna*), bistort (*Persicaria vivipara*), red bladder campion (*Silene uralensis* ssp. *arctica*) and Sudetan lousewort (*Pedicularis sudetica*). In the wetter associations, yellow marsh saxifrage (*Saxifraga hirculus*) and *Saxifraga foliolosa* can be common.

An unusually diverse example of this association occurs in the stream valley just to the west of the Mary River Camp (Photo 12, Plot 06-V045). This stream flows down through the glaciofluvial plain and is wide here, with many sedges and solifluction ridges. There is a thick stand of mastodon flower, rooted in thick moss, including a red *Bryum*. Also in this stand of moss are a number of grasses: *Calamagrostis purpurascens, Alopecurus magellanicus, Arctagrostis latifolia,* and *Pleuropogon sabinei*. In addition, there is a diverse group of plants including red bladder campion (*SIlene uralensis* ssp. *arctica*), star chickweed (*Stellaria longipes*), golden saxifrage (*Chrysosplenium tetrandrum*), bulblet saxifrage (*Saxifraga cernua*), *Saxifraga foliolosa*, yellow marsh saxifrage (*Saxifraga hirculus*), *Ranunculus hyperboreus*, and several small mustards (*Draba* sp.).

### 2.2.2 Mossy Cliff Bases Mcb

**PHOTO 17. Plot 06_VN115, *Eutrema edwardsii* in moss substrate.**
**PHOTO 18. Plot 07_VN252, moss association in calcareous area below cliffs.**
**PHOTO 19. Plot 07_VN252, *Epilobium arcticum* in moss.**

Mossy cliff base associations are not necessarily located along shorelines, but at the bases of cliffs or in areas near cliffs. Water flows down the face of the cliff and through crevices and collects at the base. Due to the reliable source of moisture, a moss association often develops here.

These are usually quite small, unmappable, and may also include elements of the snowbank association, as the same areas often retain snow long into the summer.

These moss associations are usually not as mounded as those at the edges of lakes or ponds, but are carpets of several species of moss. Arctic willow, least willow (*Salix herbacea*), large-flowered wintergreen (*Pyrola grandiflora*), *Stellaria longipes*, and *Eutrema edwardsii* often grow in the moss.

One of these moss associations occurs in plots 07_VN80 and 07_VN252 on the north road route. These plots are located downslope from the road near Km 56, where the road curves near a limestone cliff (Photo 18). In this moss association, a number of vascular plants occur, including *Salix reticulata* and *S. richardsonii*, *Carex aquatilis*, *C. membranacea*, and *C. fuliginosa* ssp. *misandra.* Yellow marsh saxifrage *(Saxifraga hirculus*), red bladder campion, and several Drabas also occur here, growing in the stream channel or in carpets of several different mosses including a red *Bryum.*

Also occurring here is the small arctic fireweed (*Epilobium arcticum*) (Photo 19). According to Porsild and Cody (1980), the arctic fireweed is rare. However, the range maps in Porsild and Cody (1980) reveal that it has been collected in Greenland and in the arctic archipelago, as well as around Hudson Bay. In McJannet, Argus, and Cody (1995), *Epilobium arcticum* was considered for rare status and rejected due to the fact that it is of widespread distribution across the Arctic. This species does not appear in any of the other publications on rare plants, nor is it on the COSEWIC or SARA lists. A return visit to the site was made in order to check further for

additional plants. More than eighty plants were found on the slope below the road. During the work in 2008 in the port infrastructure area near Steensby Inlet, we found another of these associations, again with about 80 plants of *Epilobium arcticum* (Plot 08-VS008).

## 2.3 WILLOW COMMUNITIES W or R

Richardson's willow (*Salix richardsonii*) is the dominant species in two different types of willow associations. These are so different that two different codes have been used to refer to these. Willow shrublands (coded "W"), occur on flat land near lakes and usually do not include any sort of channel. Riparian willow associations occur in stream channels or at the edges of ponds where their roots can easily access water throughout the growing season.

### 2.3.1 Willow shrublands Wsh

**PHOTO 20. Plot 07_VS123, example of willow shrubland, near pond**

Adjacent to many lakes, level areas support an association that seems intermediate between wetlands and riparian associations. There is no obvious flow of water, but the supply of water seems to be reliable throughout the summer. This allows the development of a rather open shrubland in which the Richardson's willow (*Salix richardsonii*) is dominant. The willow bushes average 20 – 40 cm in height and are rather evenly distributed through flat open swales between and around small lakes or ponds.

The understory in this association varies, likely due to the water supply. Sometimes aquatic sedges (*Carex aquatilis, C. membranacea*, and *C. bigelowii*) are the most common, and sometimes heath tundra species [including blueberry (*Vaccinium uliginosum*), heather (*Cassiope tetragona*), and, in the south, *Ledum palustre*] dominate.

Willow shrublands can be quite extensive, covering large areas of land, but for the most part, they are limited in size to parts of the watershed that accumulate water, but not so much that sedge associations can become established.

Based on experience in other parts of the arctic, the expectation was that the willow shrublands were important nesting areas for small birds. However, such appears not to be the case – in three summers of study, no bird nests were found in either the bushes or on the ground in any of these associations examined.

The soils in these associations are intermediate between the soils of the wetlands and those of the surrounding tills. They are moist to wet, but not saturated, and the cobble and boulder content is higher than in the sedge wetlands and less than on the surrounding hillsides. The permafrost table is commonly 100 cm (or deeper) from the surface.

### 2.3.2 Riparian willow association Rw

**PHOTO 21. Plot 07_VS200, Richardson's willow, *Salix richardsonii*, female plant**
**PHOTO 22. Plot 06_VN240, riparian willow in edge of sand hills**
**PHOTO 23. Plot 06_V159, riparian willow in stream channel**
**PHOTO 24. Plot 05_V055, riparian willow on steep hillside stream**
**PHOTO 25. Plot 08-VS30, riparian willow on stream at Cockburn Lake crossing**

The word "riparian" refers to streams or rivers and is used here to refer to plant associations that occur along the margins of streams or rivers. In the study area, these are invariably occupied by Richardson's willow, so fall under the general category of "Willow communities". Riparian

associations on the mainland of Nunavut are varied and diverse, but those in the north part of Baffin Island are relatively simple.

This association occurs along the edges of streams where they flow over the edges of terraces (Photo 22), or where the stream has downcut enough to meander slightly, forming a channel with a shoreline, and on small "islands" in the stream channel (Photo 23). A riparian association also occurs in patterned ground where the depressed margins of high-centred polygons act as drainage channels. There are excellent examples of this in the edge of the glaciofluvial terrace near the weather station at the Mary River Camp.

Along streams, the riparian willow association often occurs where the stream flows over boulders or where the substrate contains many boulders, as opposed to a flat valley bottom floored with sediments, which tends to support sedge associations. There is usually little soil, and the willows grow around and over the boulders and rocks. Depth to permafrost is commonly more than 100 cm.

The shrubby Richardson's willow (*Salix richardsonii*) (Photo 21) is dominant in these associations and is the most obvious plant. These may be as tall as 50 cm, but generally are about 30 cm, and may form a tight layer (Photos 22, Plot 06_VN240, and Photo 25, Plot 08-VS030). The ground cover under this willow "canopy" is affected by lack of sunlight, so few plants grow there. It is the only place where a distinct layer of leaf litter was found. White arctic heather (*Cassiope tetragona*), arctic willow (*Salix arctica*), and net-veined willow (*Salix reticulata*) occur under the Richardson's willow bushes, and show the effects of growing in the shade – they are taller and more spindly than when they grow in the open, exposed to the sun.

Mossy mounds in this association often are crowned by mountain avens or heather. Sedges such as *Carex aquatilis*, *Carex fuliginosa* ssp. *misandra* and *Eriophorum angustifolium* as well as yellow marsh saxifrage (*Saxifraga hirculus*) occur in the wet spots, along with Sudetan lousewort. Lichens are present, but sparse, and include *Flavocetraria nivalis*, worm lichen (*Thamnolia subuliformis*), and glove lichen (*Dactylina arctica*).

Due to the lack of tall shrubs (common on the mainland arctic) like dwarf birches and shrubby willows, the riparian associations in this area are not nearly as distinct nor as easy to see on air photos as those in the central barrenlands or in areas to the south where the shrubs are taller. The willow bushes are shorter and the grey colour of the leaves causes them to blend into the surrounding sedges.

### 2.3.3 Riparian Shoreline Shrub Rss

**PHOTO 26. Plot 05_V051, small dry pond near old Mary River camp**
**PHOTO 27. Plot 08-VP38, willow shoreline shrub near Cockburn Lake**
**PHOTO 28. Plot 08-VP38, Charley Uttak near willows to show scale**

The edges of some tundra ponds and lakes (and occasionally, streams) are quite steep, and sometimes support a very distinct willow association that has been termed "shoreline shrub". This type of association is quite common in the Lac de Gras area, but it is relatively rare in North Baffin.

Shoreline shrub occurs in some of the glaciofluvial complexes, at the edges of small ponds with steep or concave banks, where the pond or saturated soil below ensures a reliable source of water throughout the growing season. There is an excellent example of this association in a small almost dry pond near the old Mary River Camp (Photo 26, plot 05_V051). The soil immediately

beneath the willow bushes is quite dry, but roots penetrate down to soil at the base of the slope, where water ponds in the spring or during high rainfall.

Several other good examples of this association occur in the first long valley along the rail route south of where it crosses the Mary River. Another good example occurs about 3 km north of Mary River Camp (approx. Km 97 of the old tote road route), and at the edge of a small lake in the proposed borrow pit area on the north road route in the vicinity of Km 63.

Riparian shoreline shrub is characterized by relatively tall (up to 80 cm) Richardson's willow bushes that grow in a rough line along the top of a pond bank, trunks angled toward the water, or into the lee of the bank. Often, the tops of the willows are pruned flat by winter winds, so the row of bushes generally does not extend much above the top of the slope of the pond.

One of these riparian shoreline shrub associations is very unusual and has been recommended as the single example of a plant association that should be preserved if at all possible. In this association, the willows exceed 2.5 m in height, and the stand of willows extends for some 30 m along the edge of a small pond. An understory of blueberry (*Vaccinium uliginosum*) and large-flowered wintergreen (*Pyrola grandiflora*) covers the ground to the water's edge under these willows (Photos 27 and 28, plot 08-VP38). This stand of tall willows is located in a lateral moraine along cliffs at the edge of a glaciofluvial plain near the south end of Cockburn Lake. The willow trees are actually growing in the water of the pond, and are likely so large due to the protection accorded by the lateral moraine and the reliable water source. An illustrated memo (Burt, 2008) describes this association in detail.

Under these willows, the understory is quite varied, and in some cases, grades into a snowbank association as snow often accumulates in the lee of the banks. Net-veined willow and least willow may occur here, and white arctic heather is quite common, growing taller than out in the open. Mosses are present, but do not form a thick carpet. Lichens are present but not common. *Oxyria digyna* often occurs, with some abundance, as well as star chickweed (*Stellaria longipes*), *Pedicularis capitata*, alpine milkvetch (*Astragalus alpina)*, bistort (*Persicaria vivipara*) and *Potentilla hyparctica*. *Carex membranacea* and *C. scirpoidea* also occur here.

Because the riparian shoreline shrub association appears to be limited to glaciofluvial complexes, the soils are uniformly sandy, with varying amounts of gravel depending on the surrounding area. Depth to permafrost is usually greater than 100 cm.

## SECTION 3.0 - UPLANDS

### 3.1 HEATH TUNDRA COMMUNITY HT

On North Baffin, heath tundra plant associations are located on dry to moist slopes and relatively sheltered banks. Since the prevailing winds in winter are from the southeast here, these sheltered areas tend to be on the northwest-facing slopes, or on the leeward slopes of eskers. These are complex and diverse, with shrubs, sedges, grasses, rushes, forbs, many lichens, bryophytes, and fungi.

The Circumpolar Arctic Vegetation Map (*Arctic Geobotanical Atlas*, 2007) shows a high percentage of Vegetation Units P1 (Prostrate dwarf-shrub, herb tundra) and P2 (Prostrate/hemiprostrate dwarf-shrub tundra) in the areas around and east of Philip's Creek, and to the east of Deposit #1. This community fits into Olthof's dry graminoid prostrate dwarf shrub tundra, characterized by upland or well-drained tundra with grasses and small shrubby heath plants like blueberry and arctic heather (Olthof, 2008).

In this area, there are two subgroups of the heath tundra community: one that occurs on drier sites or sunny slopes, and the other that occurs on moister slopes, where the snow remains a bit longer.

Heath tundra occurs on well-drained glacial tills, on colluviated tills, on glaciofluvial complexes, and may occur on surfaces that have been cryoturbated (like areas with sorted circles and nets), on solifluction lobes, and in the trenches associated with high centre polygons. For the most part, the soils are coarse loamy to sandy. Permafrost in loamy soils is usually within 100 cm from the surface, but in sandy soils this depth commonly exceeds 100 cm.

#### 3.1.1 Blueberry heath association HTb

**PHOTO 29. Plot 08-VP18, hillside near proposed ore car dumping facility, Steensby**
**PHOTO 30. Plot 06_VN181**
**PHOTO 31. Plot 06_VN181, Lapland rosebay, *Rhododendron lapponicum***
**PHOTO 32. Plot 06_VN181, Blueberry fruits, *Vaccinium uliginosum***
**PHOTO 33. Mouse-eared chickweed, *Cerastium alpinum***

The blueberry heath association consists of low to prostrate shrubs, often amidst embedded glacial erratic boulders, on relatively gentle (and well-drained) slopes or terraces on the sides of open valleys. Blueberry (*Vaccinium uliginosum*) and white arctic heather (*Cassiope tetragona*) are dominant, and there are scattered prostrate shrubs of arctic willow, mats of mountain avens, and (often) Lapland rosebay (*Rhododendron lapponicum*). *Luzula arctica, L. confusa, Carex rupestris*, *C. scirpoidea,* and *Kobresia myosuroides* are scattered throughout this association. Grasses include *Poa arctica,* and sometimes alpine holygrass (*Anthoxanthum monticola*). Yellow crazyweed (*Oxytropis maydelliana*), mouse-ear chickweed (*Cerastium alpinum*), bistort (*Persicaria vivipara*), false asphodel (both *Tofieldia coccinea* and *T. pusilla*), and several species of *Draba* are often found in this association. South of the Baffinland project, Labrador tea (*Ledum palustre*) is often common.

At times, blueberry is almost the only species in this association, forming uniform mats along the hillsides above Cockburn Lake and on many of the glaciofluvial terraces. In good blueberry years, the production of berries is amazing – large berries in huge quantities.

The heath tundra association has a rich lichen flora, including much *Flavocetraria nivalis*, hair lichens (*Alectoria nigrescens* and *Alectoria ochroleuca*), *Cladonia*, worm lichen

(*Thamnolis subuliformis*) and grey mealy lichen (*Stereocaulon tomentosum*). Glove lichen (*Dactylina arctica*) and *Peltigera* sp. are often found in this association.

### 3.1.2 *Cassiope* heath association HTc

**PHOTO 34. Plot 08-VP24, *Cassiope* heath association near proposed bridge over the Mary River**
**PHOTO 35. White arctic heather, *Cassiope tetragona***

In some areas where there is sufficient shelter to ensure some snow cover into early July, a Cassiope-type heath tundra develops. Sometimes this is in a snowdrift in the lee of a ridge, and sometimes it is simply in a depression where a snowpatch seems to last a bit longer. The main point is that there is some amount of shelter to allow the snow to stay.

Usually, there is no blueberry in this association, and the number of species is fewer than in the heath tundra described above. Where the soil is not too wet, mountain avens occurs, along with *Salix arctica*. Generally, there are a higher percentage of lichens, and some *Salix reticulata*, which increases in areas where snow stays longer. The grasses *Alopecurus alpinus* and *Arctagrostis latifolia* occur here, as well as the woodrush (*Luzula confusa*) and a few sedges including the xeric sedge *Carex rupestris* and less xeric ones like *C. sciropoidea* and *C. fuliginosa* ssp. *misandra*. Yellow crazyweed is common, several saxifrages may be present, including purple mountain saxifrage (*Saxifraga oppositifolia*) and *Saxifraga nivalis*, and *Luzula arctica* may also occur, closer to long-lasting snowbanks. In the south, Labrador tea (*Ledum palustre*) is an important part of this association.

### 3.1.3 Mixed heath tundra HTm

**PHOTO 36. Plot 07_VS020, mixed heath with *Ledum palustre***
**PHOTO 37. Plot 07_VS201, mixed heath tundra on east side of Cockburn Lake**

Intermediate to the two associations above is another heath tundra association, which may or may not include either heather or blueberry, or may include both. This association seems to occur where there is less protection than for either of the other two heath tundra associations, and, on the southern routes, sometimes includes Labrador tea (*Ledum palustre*). Usually, the soil is well drained, often sandy, and the species diversity is high. (*Salix arctica*) is usually quite common in this association.

### 3.1.4 Heather – dry moss association HTr

**PHOTO 38. Plot 06_VN277, HTr on old road**
**PHOTO 39. Plot 06_V039, HTr association on esker slope**
**PHOTO 40. Plot 06_V263, HTr on gravel ridges**
**PHOTO 41. Plot 07_VS110, HTr**
**PHOTO 42. Plot 07_VS014, HTr with only *Racomitrium* on island**

This association is a dry association, as opposed to the wetter “moss communities”. It can have varying percentages of heather vs. racomitrium moss, but fits better with the heath tundra associations. The heather-dry moss association occurs on flat or gently sloping ground, often on gravels, sometimes on sandy soil, and dry slopes or shoulders of ridges. This may be similar to the “*Cassiope tetragona* – *Luzula* ssp. Dwarf Shrubland” association described in the Sirmilik National Park vegetation report (Duclos, Levesque, et.al., 2006).

This association is usually composed of low mounds or carpets of the grey moss, *Racomitrium lanuginosum*, and clumps of white arctic heather (*Cassiope tetragona*), with varying amounts of

woodrushes, *Luzula confusa* and *L. arctica. Salix herbacea, S. arctica,* and sometimes small amounts of blueberry (*Vaccinium uliginosum*) often accompany the moss and heather. Alpine holygrass (*Anthoxanthum monticola)* and bluegrass (*Poa* sp.), are often present. There are a few lichens, but not many.

This association (Photo 40, Plot 06_VN263) was also found on some strange glacial melt landforms which appear to be snaky ridges interwoven with each other. These are apparently glacial melt or "dead ice" landforms which originated in the retreat phase of glaciation. The depressions in these landforms are rich in moss, heather, and *Luzula arctica*, and the ridges between the landforms support a population of blueberries, mountain avens, and yellow oxytrope.

The heath tundra with racomitrium moss association is common on the south routes, especially in areas where depressions cause snowbanks to remain for a while in summer. (Photo 41, Plot 07_VS110)

Another variation of this association occurs on islands and peninsulas in large lakes (especially in Angajurjualuk Lake). In this variation, there is only *Racomitrium lanuginosum* moss, and few other species (Photo 42, Plot 07_VS014). The grey-green moss forms a cushiony carpet over tens of square meters, occurs on sandy soil, and is well-drained and usually quite dry. During rains, of course, it absorbs water and likely holds it more efficiently than vascular plant tundra.

## 3.2 SNOWBANK COMMUNITY SB

### 3.2.1 Snowbank association SB

**PHOTO 43. Plot 06_V147 SB on NW-facing slope, mammal trapping area**
**PHOTO 44. Plot 06_V147, fleabane, *Erigeron eriocephalus***
**PHOTO 45. Plot 06_VN199 SB at Milne Inlet, N-facing slope**
**PHOTO 46. Plot 06_VN199, mountain sorrel, *Oxyria digyna***
**PHOTO 47. Plot 06_VN347 SB in gorge with small icefield**
**PHOTO 48. Plot 08-VS013, SB on port island at Steensby, lemming activity**
**PHOTO 49. Plot 06_VN348, brooklet saxifrage, *Saxifraga rivularis***

Propelled by the prevailing southeast wind, snow drifts over any ridgelike irregularity in the surface of the land, and accumulates in the lee, creating a deep drift that remains long into the summer, sometimes until late August. This means that the growing season is much shorter than where the land is snow-free by late June. It also means that there is a reliable source of moisture from the melting snow, for much of the summer, affecting the area downslope from the drift. Diverse plant associations develops in these areas, also called "snowflush" associations by Porsild (1951) and "snow effect" by Polunin (1948).

There are a number of species that are found mostly in snowbank associations, and do not occur in dense growth patterns elsewhere, likely because they can tolerate the short growing season, but cannot compete with other plants out on the open tundra. These include the least willow (*Salix herbacea*), pygmy buttercup (*Ranunculus pygmaeus*), and the grey mealy lichen (*Stereocaulon tomentosum*).

Then, there are a number of species that do occur elsewhere but are frequently found in the snowbank associations, in densities greater than on the surrounding tundra. These include white arctic heather (*Cassiope tetragona*), mountain avens, *Carex fuliginosa* ssp. *misandra*, *Carex atrofusca. Alopecurus alpinus, Poa* sp., net-veined willow, *Luzula arctica*, *Oxyria digyna, Potentilla hyparctica*, large-flowered wintergreen (*Pyrola grandiflora*), and the sulphur buttercup (*Ranunculus sulphureus*).

Plants that are not as typical, but often present include dandelions (*Taraxacum* sp.), crowned lousewort (*Pedicularis capitata*), white bladder campion (*Silene involucrata*), *Saxifraga hirculus*, *Saxifraga nivalis, Minuartia* sp., *Potentilla vahliana*, bulblet saxifrage (*Saxifraga cernua*), pussytoes (*Antennaria* sp.), and fleabane (*Erigeron eriocephalus*). Lichens are not very common, but almost always include *Stereocaulon tomentosum, Thamnolia subuliformis*, glove lichen (*Dactylina arctica*), and sometimes *Cetraria tilesii*.

On the study area for this project, a variety of snowbank associations were found. Some are closely related to heath tundra (photo code SBh) in that there is a dense cover of *Cassiope tetragona, Salix reticulata*, and a high percentage of *Stereocaulon tomentosum* lichen, *Carex atrofusca*, and bluegrass (*Poa* sp.).

Or, there may be no heaths at all, but a rich combination of forbs (photo code SBf), including several composites, usually *Erigeron eriocephalus*, and dandelions (*Taraxacum officinale* and *T. phymatocarpum*), red bladder campion (*Silene uralensis ssp. arctica*), *Stellaria* sp., *Cerastium* sp., moss campion (*Silene acaulis*), and *Oxyria digyna*. These also usually have *Carex atrofusca* and *Poa* sp.

Snowbank associations are located where the terrain and prevailing winds cause a deep drift to develop, so are not associated with any particular soil type. Often there is considerable lemming activity associated with snowdrift associations, even in low lemming years (Photo 48).

## 3.3 MISCELLANEOUS

### 3.3.1 Shrub-sedge tundra Tss

**PHOTO 50. Plot 06_VN259 On old road route to Milne Inlet**
**PHOTO 51. Plot 06_V243 Tss amidst boulders**

This damp mixed tundra association occurs on gentle lower slopes and in open valleys. It is an intricate mixture of heaths and wetland species, and is often hummocky, due to frost action in the ground, or may show a considerable amount of frost scarring (frost boils, solifluction lobes, etc.). This association fits (more or less) into Olthof's Low shrub association, which consists of "moist erect low shrub <40 cm, forming more than 25% of the vegetated cover, consisting mainly of willow…remaining cover consists of graminoids and lichen, and may contain prostrate dwarf shrubs and bare soil".

The shrub component of this association is usually *Salix arctica*, growing in low bush form as well as prostrate. *Salix richardsonii* may also be present, but only as scattered plants. Dwarf shrubs include white arctic heather, blueberry, and mountain avens. Purple mountain saxifrage is almost always present, as well as several sedges, including *Carex membranacea* and *C. fuliginosa* ssp. *misandra*, cottongrasses (usually *Eriophorum angustifolium*), and grasses (*Arctagrostis latifolia* and *Anthoxanthum monticola*, sometimes *Poa* sp.). A variety of other species may be present, including yellow crazyweed, arctic lousewort (*Pedicularis langsdorffii* ssp. *arctica*), *Potentilla hyparctica*, *P. nivea*, and *Persicaria vivipara*.

Between the mounds and frost scars there are mosses, some cottongrasses (*Eriophorum scheuchzeri* or *E. vaginatum*), and wetland sedges (*Carex fuliginosa* ssp. *misandra, C. atrofusca, C. aquatilis*).

Some of the mounds may be of tussock origin, and may have remnants of the original cottongrass plant (usually *Eriophorum vaginatum*), or may be invaded by curly sedges (*Carex rupestris*), purple mountain saxifrage, net-veined willow, or least willow. There are few lichens in this association, and these are located only on the drier mounds.

### 3.3.2 Grassy slopes (Gsl)

**PHOTO 52. 07_VS198, grassy hillside looking north**
**PHOTO 53. 07_VS198, fragrant shield fern, *Dryopteris fragrans***

Only one good example of a true "grass" association was found. This is located on a steep kame on the east side of Cockburn Lake, just south of the narrows where the proposed rail line will cross the lake. It is a steep hillside just north of the planned road ascent to the top of the Cockburn cliffs.

This association occurs on very well-drained soils and consists of several species of grass, with some forbs and low arctic willows growing under the grasses. Locally, it is quite exposed, but may derive some protection from the prevailing winter winds out of the southeast, due to the higher cliffs immediately to the southeast.

Grass associations are relatively rare in the study area, but this is a good example. Tufts of *Poa glauca* and *Carex rupestris* likely stabilize the soil on this hillside. The well-drained soil favours the development of xeric species like *Saxifraga tricuspidata* and *Potentilla vahliana*. Dwarf fireweed (*Epilobium latifolium*), star chickweed (*Stellaria longipes*), alpine milkvetch (*Astragalus alpina*), a small mustard (*Draba* sp.) and yellow crazyweed (*Oxytropis maydelliana*) are present in small numbers. The fragrant shield fern (*Dryopteris fragrans*) is also present, growing in the shelter of the erratic boulders (Photo 53).

### 3.3.3 Dry slope with forbs Fsl

**PHOTO 54. Plot 07_V001, slope in valley to west of camp**

This association occurs on well-drained slopes with sandy soil. It is mostly located on valley slopes in glaciofluvial terraces. It is usually rather small and not generally mappable.

Woody plants and grasses are uncommon to absent in this association, but it is generally quite diverse, with many species, none seeming to clearly dominate. Species include mouse-ear chickweed, mountain sorrel, *Papaver radicatum*, *Luzula confusa*, purple mountain saxifrage, prickly saxifrage, *Saxifraga cernua*, *Saxifraga cespitosa*, *Potentilla nivea*, and tufted pearlwort (*Sagina caespitosa*). There are a few small mosses, and the soil is often covered with a black biological crust, composed of cyanobacteria and blue-green algae.

Only a few examples of this association were found. Most were on lee slopes, so there may be some slight snowbank effect here.

## 3.4 LICHEN-ROCK COMMUNITY LR

There is much exposed rock in the area, ranging from glacially polished bedrock to frost-shattered bedrock, to scree slopes and boulder fields. Then there is the fractured bedrock of the iron deposits themselves, some shattered by weathering, but most probably shattered by blasting.

This community, has been called "Barrens", and fits into the Circumpolar Arctic Vegetation Map Vegetation Unit entitled "B1. Cryptogam, herb barren" (*Arctic Geobotanical Atlas*, 2007). The text describes it as "dry to wet barren landscapes with very sparse, very low-growing plant cover. Scattered herbs, lichens, mosses, and liverworts….in Subzone C on some coarse-grained, often calcareous sediments….single layer of plants where they occur." And, "vascular plant cover is generally very sparse, mainly scattered individual plants often in crevices between stones or

small cryoturbated polygons. Sedges, dwarf shrubs, and peaty mires are normally absent." Vegetation Unit B1 is geographically located in the uplands just to the west of Philip's Creek, and the north road route, and at higher elevations throughout the study area.

However, the lichen-rock plant community is not limited to B1, but occurs throughout the study area, wherever rock is exposed at the surface and colonized by lichens and small rooted plants.

Generally there is very little exposed soil in this community, but frost action sometimes brings soil to the surface within a boulder or felsenmeer area, or surface creep deposits soil material over boulders, slabs of rock, or bedrock outcrops. The fine earth fraction is usually coarse loamy, and is almost always cryoturbated. Depth to permafrost varies with depth, texture and coarse fragment content of materials.

### 3.4.1 Lichen-rock bedrock LRr

**PHOTO 55. Plot 06_VN106, lichens and *Racomitrium* on acidic bedrock**
**PHOTO 56. Plot 07_VS227, lichen-rock on bedrock, south end of route**
**PHOTO 57. Plot 07_V131, crustose lichens on acidic bedrock**
**PHOTO 58. Plot 06_VN130, sandstone bedrock**
**PHOTO 59. Plot 07_V010, crustose lichens on calcareous bedrock**

Usually, bedrock exposures do not provide much foothold for rooted plants. On glacially polished bedrock, the bare rock is about 60% covered with crustose lichens. The species and the coverage vary based on the chemical composition of the rock. Also, on sandstone and other weakly cemented sedimentary rocks, wind and water erosion is so rapid that lichens may not have time to become established. As a result, the rock may have lichens only in areas protected from weathering. On calcareous rocks, coverage is often less than 40%. Olthof (2008) refers to this in his classification as "Sparsely vegetated bedrock".

On acidic rocks like basalt and granite, a very characteristic lichen flora occurs: map lichen (*Rhizocarpon geographicum*), sunburst lichen (*Arctoparmelia centrifuga*), rock tripe (*Umbilicaria* sp.), bloodspot lichen (*Ophioparma lapponica*), orange and black *Tremolecia atrata*, and a black hair lichen (likely *Pseudephebe pubescens*). (Photos 55, 56, 57.)

On calcareous rocks (limestone, sandstone, some shales), other lichens occur, including the bright orange jewel lichen (*Xanthoria elegans*), the white *Rhizocarpon chioneum,* and sometimes (possibly) an unusual variation of sunburst lichen (*Arctoparmelia centrifuga*) which lacks usnic acid and is grey instead of yellow-green (Photo 59.)

Rooted plants usually become established on polished bedrock as a result of seeds falling into cracks or areas where lichen mats have become established over cracks. Root growth plus frost wedging enlarges the cracks; more debris accumulates in the cracks; the leaves, stems and roots of plants help trap more dust and debris; and the decomposition of any dead plant matter adds nutrients. Saxifrages are well-adapted to utilizing cracks in the rocks, so polished bedrock outcrops often support growths of prickly saxifrage (*Saxifraga tricuspidata*), purple mountain saxifrage (*S. oppositifolia*), and spring saxifrage (*Saxifraga nivalis*). In places, mats of vegetation become established on top of the bedrock, including mats of mountain avens (*Dryas integrifoli*a), blueberry (*Vaccinium uliginosum*), snow cinquefoil (*Potentilla nivea*) and arctic cinquefoil (*P. hyparctica*).

### 3.4.2 Lichen-rock on scree or talus slopes LRs

**PHOTO 60. Scree slope near Plot 06_VN027**
**PHOTO 61. Plot 06_V224, scree slope on Deposit #1**
**PHOTO 62. Plot 06_V224 Mouse-ear chickweed, probably *Cerastium arcticum***

The terms “scree” and “talus” are used interchangeably.

Scree slopes develop where frost cracking has loosened material on a rock face. Water percolates into the cracks, expands with freezing, and gradually loosens chunks of rock. These slide down the face of the cliff and form a fan-shaped pile of stones. There are many examples of scree slopes in the project area, on all cliffs facing river valleys, and on most steep slopes. The most spectacular talus slopes in the study area are along the east side of Cockburn Lake just north of the proposed rail crossing.

Lichens already growing on the rock (before it falls from the cliff face) may be able to survive if their chunk of rock lands with the lichen surface toward the sun, but this is a very unstable surface, with rocks tumbling about as they move down the slope, and the orientation of the individual chunks changes constantly. Consequently, few lichens grow here.

In sheltered spots where the movement is not as rapid, mountain avens, arctic willow (*Salix arctica*), heather (*Cassiope tetragona*), woodrush (*Luzula confusa*), mouse-eared chickweed (*Cerastium alpinum* and *C. arcticum*) (Photo 62), and other plants may become established. As these rooted plants trap wind blown debris, other plants can gain a foothold, and mats of vegetation can develop.

### 3.4.3 Lichen rock on boulder fields LRb

**PHOTO 63. Near Plot 08-VP37, Cockburn Lake, E side near proposed crossing**
**PHOTO 64. Plot 06_VN217, on calcareous boulders**
**PHOTO 65. Near plot 06_VN217 vegetation mat on calcareous boulders**

Boulder fields, made up of ice- or water-rounded pebbles, cobbles, or boulders, occur frequently on both the north and south routes. These may be established by meltwater streams, or may be ice-laid, dropping out as morainal material as the ice sheet retreats. Esker crests often have a lichen-rock boulder field type of vegetation, sometimes due to the fact that smaller “fines” are removed by winds, leaving behind only the larger stones.

There is little rooted vegetation on most boulder fields, due to lack of soil. The rocks are about 30% covered with crustose lichens (map lichen, *Pseudephebe* sp., sunburst lichen, and more), with foliose lichens (*Cladonia* sp. and *Cladina* sp.) growing in sheltered areas amongst the boulders (Photo 63).

Perched mats of vegetation often develop on the boulder fields, and these usually include *Saxifraga tricuspidata, Potentilla nivea, Epilobium latifolium*, and others, sometimes in a moss base. Or, woody plants, usually small willows (*Salix arctica* and *S. richardsonii*), become established amidst the boulders (Photo 64).

Where the boulders are of sedimentary rock, limestone or sandstone, there may be few to no lichens on the boulders, due to the rapid weathering of the surface. Photo 65 shows the flakes weathering off the boulders.

### 3.4.4 Lichen-rock on felsenmeer LRf

**PHOTO 66. Plot 06_VN178, limestone felsenmeer along north "tote" road**
**PHOTO 67. Plot 06_VN280, *Xanthoria elegans***
**PHOTO 68. Felsenmeer and sedge associations from air, south rail route**
**PHOTO 69. Plot 07_VS117, acidic rock felsenmeer along proposed south rail route**

"Felsenmeer" is frost-shattered rock. It is not rounded or ice- or water-worn, but sharp-edged chunks of rock, or flat sheets of sedimentary rock, splitting along sedimentary layers. It can be acidic or basic rock, but most felsenmeer in the area north of the proposed minesite is calcareous rock, limestone, sandstone, or shale. This limestone or sandstone rock has sharp edges, and is actively continuing to disintegrate into smaller particles. Because there is a lot of foothold for plants, the vegetation on felsenmeer tends to be richer than that on boulder fields.

Because sedimentary rock is softer than most igneous rock, it erodes more easily, creating smaller particles and more opportunity for roots to become established. It is generally more heavily vegetated than igneous or metamorphic felsenmeer. Vegetation mostly occurs as tufts of vegetation between rocks, or as mats of vegetation on top of the felsenmeer.

In a few areas, the sedimentary felsenmeer has also been tumbled in water or in the ice, so it more closely resembles a boulder field in that the rocks are both rounded and frost-shattered (Photo 66).

The lichen flora on felsenmeer reflects the acidic or basic nature of the rocks, with orange jewel lichen (*Xanthoria elegans*) (Photo 67) and white *Rhizocarpon chioneum* on sandstone and limestone, and the usual map lichen, sunburst lichen, rock tripe, and other black and grey crustose lichens on acidic rocks.

Along the proposed south rail route, the large dark areas of tumbled and shattered rock that occur in the area between Km 65 and Km 80 are, for the most part, not boulder fields of transported materials, but felsenmeer, material that has been-frost shattered from the underlying bedrock (Photo 68). This is evident when this area is seen from the air; in places, the structure of the bedrock can still be seen, although shattering has occurred and is continuing.

Rooted plants include mats of mountain avens and purple mountain saxifrage with scattered individual plants of *Salix arctica*, and small Drabas. Yellow arctic bladderpod (*Lesquerella arctica*) occurs here, sparsely, especially on the calcareous felsenmeer.

### 3.4.5 Lichen-rock iron deposits LRi

**PHOTO 70. Plot 05_V010, crest of Deposit #1**
**PHOTO 71. Plot 05_V010, close-up**
**PHOTO 72. Plot 05_V011, Arctic poppy, *Papaver radicatum***
**PHOTO 73. Iron outcrop with lichens, near Plot 05_V006**

There are four large iron deposits in the area being studied; these are the reason for the development of the property. Due to time constraints, only Deposit #1 was visited, but the rest will be visited in 2008.

The deposits, especially Deposit #1, are large dark hills of heavy high grade iron ore, hematite, magnetite, specularite, banded iron formation, iron silicates and quartzite and greywacke. This is acid rock, and as such would fit into the Circumpolar Arctic Vegetation Map, Vegetation Units under "B3. Noncarbonate mountain complex" (*Arctic Geobotanical Atlas*, 2007). According to the

text description of this unit, this is usually a very dry tundra complex, and the vegetation changes with elevation, forming belts with vegetation that resembles biogeoclimatic subzones with similar climates. It is very complex, and Nuluugoak Mountain is not very large, so altitudinal bands are not being reconciled with latitudinal ones in this report.

The crest is highly fractured due not only to weathering, but also to blasting for samples. Fragments of rock bearing lichens were found on the crest of the mountain. These were mostly those species typical of acidic rocks -- map lichen (*Rhizocarpon geographicum*), rock tripe (*Umbilicaria* sp.), black hair lichen (*Alectoria nigrescens*), green hair lichen (*Alectoria ochroleuca*) and *Pseudephebe pubescens*. There were few rooted plants, but those included arctic poppies (*Papaver radicatum*), purple mountain saxifrage, *Cerastium arcticum*, *Saxifraga cernua*, and a few small plants of mountain sorrel (*Oxyria digyna)*.

The sides of the deposit are steep, fractured scree slopes, and the rocks are likely still moving, settling or creeping downhill. There are relatively few plants, including arctic willow, prickly saxifrage, purple mountain saxifrage, *Luzula arctica*, bluegrass (*Poa arctica*), *Cerastium arcticum*, and the grayish green racomitrium moss (*Racomitrium lanuginosum*).

There are places where carbonate limestones overlie or are adjacent to the iron deposit. These are highly frost-shattered, and reduced to scattered chunks or slabs. The plant association changes slightly on these; there are more plants, especially more mustards (*Draba* sp.), and grasses, like *Poa arctica* and *Calamagrostis purpurascens*.

In some places on the main iron deposits, the iron-rich rocks of the deposit have fractured and slid down over calcareous outcrops, producing a chemically confusing mix of substrates. Here, thin mats of mountain avens and purple mountain saxifrage cling to the steep slopes, and a variety of small plants are scattered over the gentler slopes, including curly sedge (*Carex rupestris*) and *Carex nardina, Salix arctica*, alpine milkvetch (*Astragalus alpina*), yellow crazyweed (*Oxytropis maydelliana*), and *Potentilla vahliana*.

### 3.4.6 Lichen Veneer **LRv**

**PHOTO 74. Plot 07_VS287, lichen veneer**
**PHOTO 75. Plot 07_VS287, close-up of lichens**
**PHOTO 76. Plot 07_VS287, hair lichens (*Alectoria* sp.)**

This interesting but very delicate association occurs on coarse sandy or gravelly sandy surfaces where fines have been removed by wind. The terrain is usually flat, and does not appear to be currently active in terms of wind erosion or cryoturbation, so a “veneer” of lichens has become established. Permafrost occurs at depths greater than 100 cm.

Lichens, including *Flavocetraria nivalis,* sunburst lichen *(Arctoparmelia centrifuga),* hair lichens (probably *Alectoria nigricans*), coral lichen (*Spaerophorus* sp.) and a grayish lichen that resembles sunburst lichen but may be a species of *Hypnogymnia*, are dominant.

There is little rooted vegetation, although close examination reveals some small plants, almost seedlings, scattered in the lichen. These may include mountain avens, arctic willow, or *Luzula confusa*.

## 3.5 BARRENS B

The descriptive term “barrens” has been used for plant associations that have more vegetation than the “lichen-rock” associations, yet are sparsely populated with plants. These associations fit into the Circumpolar Arctic Vegetation Map Vegetation Units B1 and P1 (*Arctic Geobotanical*

*Atlas*, 2007). Unit B1 is more completely described under “Lichen-Rock Communities” above. According to the text, “’Unit P1, Prostrate dwarf-shrub, herb tundra’ is dry tundra with patchy vegetation” in which “prostrate shrubs are dominant, with graminoids and forbs.” Vegetation Unit P1 is located in the area south-southeast of Milne Inlet, including the Philip’s Creek valley to the mountains forming the eastern side of the study area.

Olthof (2008) uses the term “Barren” as part of his “Non-vegetated” category. We have used it more as a term for lightly vegetated associations, referring to sparse vegetation on calcareous soil on the highlands to the west of the lower part of Philip’s Creek, and for the moist, sparsely-vegetated uplands to the northeast of Deposit #1.

### 3.5.1 Purple Mountain Saxifrage Barrens Bps

**PHOTO 77. Plot 06_V249, purple saxifrage barrens to east of Deposit #1**
**PHOTO 78. Plot 06_V249, closeup**
**PHOTO 79. Plot 06_VS054, purple mountain saxifrage, *Saxifraga oppositifolia***
**PHOTO 80. Plot 08-VP31, *Cerastium arcticum*, shoulder of Deposit 1**
**PHOTO 81. 05_V004, stream, sheet-flow**
**PHOTO 82. Purple saxifrage barrens below icecap**

Where the land appears to have recently emerged from under ice, the purple mountain saxifrage barrens occupies much of the land. This association is common on the uplands to the east of Deposit #1, and in the upper Mary River valley (Photo 77).

The land slopes gently to the stream valleys, and is partly covered with flat rocks. Stream channels have not had enough time to form, so there is a sheet flow across the land rather than water flowing in distinct channels (Photo 81).

Vegetation does not form a ground cover here, but occurs in isolated tufts, mats, and individual plants. Purple mountain saxifrage (*Saxifraga oppositifolia*) (Photo 79) is common, as are poppies (mostly *Papaver radicatum*, which now also includes the former *Papaver cornwallisensis*). *Luzula arctica* is fairly common, growing in small clumps, and *Juncus biglumis* and small plants of bluegrass (*Poa* sp., most not blooming) and *Alopecurus alpinus* are scattered across the slope. There are a few plants of the arctic willow (*Salix arctica*). Small mustards (*Draba alpina*, *D. lactea*, *Braya glabellas* ssp*. pupurascens*), small sandworts (*Minuartia rubella*, *M. rossii*) and mouse-eared chickweed (*Cerastium arcticum* and possibly *C. alpinum*) (Photo 80) also occur here, scattered over the slopes. The saxifrage family is well represented, with *Saxifraga cespitosa*, *S. cernua*, and *Saxifraga nivalis* in abundance. There are only a few lichens, including the grey mealy lichen (*Stereocaulon tomentosum*) and Iceland moss lichen (*Flavocetraria nivalis)*.

Where there are incipient streams, there are few vascular plants. Mosses tend to delineate the watercourse, and form thick cushions where there is a reliable flow of water.

It seems that every time this plant association was visited it was raining or had recently rained, and the ground was saturated. This may be the usual state, or may be due to local rains, but the ground is so saturated with water that it is difficult to walk across the slopes. One must step on rocks to avoid sinking into the ground, and the soil seems relatively unstable. This, the limited flora, small size of the plants, lack of stream channels, and proximity to an existing icecap indicates that this land may have been under ice in the recent past. Some of the earlier topographical maps of this part of Baffin Island indicate that the icecap feeding the Mary River was considerably larger even 20 years ago. It would be interesting to examine other early aerial photographs of the icecaps in this area to see how close the ice was to Nuluugoak Mountain (Deposit #1).

The soil under this association is often saturated, and has a fine to coarse loamy texture. Owing to the large amounts of fines (very fine sand and silt) in these soils, they tend to be liquefied by agitation, which greatly reduces their bearing capacity. Permafrost is generally present at depths less than 100 cm from the surface.

### 3.5.2 Forb barrens Bf

**PHOTO 83. Plot 07_V132, forb barrens on slopes of Deposit #1**
**PHOTO 84. Plot 07_V132, foxtail barley (*Alopecurus alpinus*)**

On the upper slopes of Deposit #1, and on the open slopes to the east of the deposit, between the deposit and the small icecap, another "barrens" association occurs. Purple mountain saxifrage is absent from this association, but all the other species are usually present. It may be that the *Saxifraga oppositifolia* simply has not grown large enough to be apparent yet, or there may be some factor inhibiting its growth.

The foxtail barley grass (*Alopecurus alpinus*) is common here, and is joined by *Juncus biglumis*, scurvy grass (*Cochlearia groenlandica*, formerly *Cochlearia officinalis*), and small amounts of *Saxifraga cernua*, *S. rivularis*, *Cardamine bellidifolia*, *Papaver radicatum*, and mastodon flower (*Tephroseris palustris* ssp. *congesta,* formerly *Senecio congestus*).

The soil in this area is usually saturated; almost liquefied. Drainage of excess water is by sheet flow rather than via a defined drainage system. It is in all aspects similar to the purple saxifrage barrens, and is not distinguishable from them when mapping. It is possible that the substrate in the forb barrens is slightly less stable than that of the purple mountain saxifrage barrens. Permafrost is generally present at less than 100 cm depth.

### 3.5.3 Luzula association Bl

**PHOTO 85. Plot 07_V136, *Luzula* association near Deposit #1**
**PHOTO 86. Plot 07_V283, close-up of *Luzula confusa* tufts**
**PHOTO 87. Plot 07_V137, *Draba corymbosa***

This association occurs high on the shoulder of Deposit #1 on a slope with much shattered bedrock, including but not limited to pieces of iron ore (Photo 85). There are many erratic boulders, some quite large. *Luzula confusa* is dominant, but *Luzula arctica* also occurs in lesser quantities. From a distance, this association looks like a grassy hillside, but closer examination reveals that what look like grasses are really woodrushes, causing the hillside to appear reddish tan in August (Photo 86). Other forbs are present, including arctic poppy (*Papaver radicatum*), mountain sorrel, mouse-ear chickweed (*Cerastium alpinum* and *C. arcticum*), alpine foxtail (*Alopecurus alpina*), and a small bluegrass (*Poa* sp.). A small saxifrage was common but could not be identified to species as it was not blooming. It is either *Saxifraga tenuis* or (more likely) *Saxifraga nivalis*, seedling plants. Bulblet saxifrage (*Saxifraga cernua*), *Saxifraga cespitosa*, and *S. foliolosa* are all present in small numbers, as are *Cardamine bellidifolia* and *Draba corymbosa (Photo 87)*. There are only a few lichens, but the grey mealy lichen (*Stereocaulon tomentosum*) is the most common. Mosses are also uncommon and quite small.

The soil in this area is sandy. Due to rainy weather, the general soil moisture condition is difficult to determine. The permafrost table is deeper than 100 cm.

### 3.5.4 Avens and xeric sedge association Bax

**PHOTO 88. Plot 08-VP05, avens/xeric sedges on port island in Steensby Inlet**
**PHOTO 89. Mountain avens, *Dryas integrifolia* flower**
**PHOTO 90. Plot 06_VS099, *Dryas* seedhead**
**PHOTO 91. Plot 05_V063, on slopes of Deposit #1**
**PHOTO 92. Plot 06_VN023, patches in depressions, Milne Inlet**
**PHOTO 93. Xeric sedge, *Carex nardina***
**PHOTO 94. Plot 06_VN201, Milne Inlet, marine glaciofluvial or marine terraces**
**PHOTO 95. Plot 07_VS060, avens association without xeric sedges (Ba)**

This very common plant association usually occurs on rounded hills and ridges at lower elevations, in places that are exposed to the wind, but less severe conditions than the above purple mountain saxifrage association. The avens – xeric sedge association is common on all glaciofluvial landforms throughout the project, from the proposed port island (Photo 88, Plot 08-VP05) to the plains to the southeast of Cockburn Lake, areas around Ravn River and Angajurjualuk Lake, as well as the terraces in the first valley south of the Mary River. On the "Tote Road", it also occurs on the flat surfaces of the lacustrine and glaciofluvial terraces along Philip's Creek and around the Mary River Camp, and on the marine terraces at Milne Inlet. It also may occur on sandy banks of modern river terraces, such as along the Mary River, and Philip's Creek, and where the patterned ground of the lacustrine terraces extends over the low hills in the lower Philip's Creek area to the south of Milne Inlet. The surface is mostly covered with weathered sandstone pebbles, sand, or weathered limestone, sometimes in flat slabs of varying sizes.

This association fits into the Circumpolar Arctic Vegetation Map (*Arctic Biogeobotanical Atlas*, 2007) system in the "P1. Prostrate dwarf-shrub, herb tundra". This is dry tundra with patchy vegetation, and prostrate shrubs such as mountain avens (*Dryas integrifolia*) and *Salix arctica* are characteristic, and lichens and mosses are common. On nonacidic (calcareous) soils, *Dryas integrifolia* and *Salix arctica* are dominant, and on acidic soils, *Luzula* and *Salix arctica* dominate. It fits into the Olthof (2008) classification under the "Prostrate dwarf shrub" category, which is "generally dry >50% vegetated cover consisting of prostrate dwarf shrubs and may contain < 10% lichen and moss".

As can be seen from the photos, there is a lot of variability in this association, and it is the most common association sampled on this project. The main species include mountain avens (*Dryas integrifolia*), purple mountain saxifrage, and two xeric sedges, *Carex nardina* and curly sedge (*C. rupestris*). The ground is generally only about 10% – 60% covered with vegetation, although there are instances where the avens and sedges create a dry carpet. Usually there are small mats of mountain avens, scattered plants of the purple mountain saxifrage, and scattered tufts of the two sedges. Arctic willow (*Salix arctica*) is present and locally common in this association, usually small prostrate plants. Small cushions of moss campion (*Silene acaulis*) and blackish crazyweed (*Oxytropis nigrescens ssp. arctobia*, formerly *O. arctobia*) and small plants of yellow crazyweed (*Oxytropis maydelliana*) and *Saxifraga cespitosa* may occur.

The soils in this area are coarse to fine loamy, and have formed on calcareous glacial till. Consequently, there are usually few lichens, but those that occur include *Flavocetraria nivalis* and worm lichen (*Thamnolia subuliformis*). On acidic soils, *Luzula confusa* and *Salix arctica* often become intermingled with the avens – xeric sedge association.

At the port site at Milne Inlet, there are marine and glacial marine sediments deposited during postglacial times. At the eastern side of the port site, these sediments are deepwater silts, and exhibit quite a lot of frost scarring due to cryoturbation. The avens – xeric sedge association vegetation is sparse, growing in the depressions between frost boils, and consists of almost

entirely of *Dryas integrifolia* and *Salix arctica* with only a few small mosses, and a few scattered sedges. (See Photo 92, Plot 06_VN023.)

Marine beach sediments form most of the terraces at the port site on Milne Inlet; these are mostly gravel and sand from 1- 5 m thick. Much of the flat surface of these marine terraces is covered with the avens – xeric sedge association. Photo 94 illustrates the variation of associations at Milne Inlet, avens – xeric sedge barrens in front and middle distance, and sedge communities with some moss in between.

Where there is more protection from the winds, and thus more moisture retained, this plant association grades into a heath association, with varying amounts of white arctic heather, net-veined willow, and sometimes blueberry.

On the south rail route, a variation of the avens-xeric sedge association occurs on dry, sandy soil which is exposed to wind (Photo 95, Plot 07_VS060). The island intended to serve as part of the port site at Steensby Inlet offers good examples of this sub-association. In this variation, there are few to no xeric sedges, and crowberry (*Empetrum nigrum*) seems (in places) to replace the xeric sedges, although its growth habit is quite different.

In general, this subgroup consists of mats of mountain avens and mats of crowberry, with few other species. It may be that the element of exposure and wind (and in the coastal areas, perhaps salt) does not permit the xeric sedges to develop, whereas the mats of avens or crowberry, once established, can expand. For photo coding purposes, Ba (without the “x”) has been used to designate this association.

## SECTION 4.0 – COASTAL COMMUNITIES

Based on the literature, there are a number of coastal plant associations to be expected in this general area, including sandy beaches, sandy backshore areas, salt marshes, and sand or silt flats, each with a fair amount of vegetation. During the 2005 and 2006 work, only sterile shores were found; and these had either bedrock or gravel beaches. However, in 2007, the studies were expanded to include parts of the Regional Study Area, and some of the expected associations were found in areas peripheral to the road or rail routes.

### 4.1 ROCKY SHORELINES CRS

**PHOTO 96. Bedrock and scree shoreline at Milne Inlet.**

These are bedrock exposures extending into the sea, with varying amounts of glacial polishing. There is a medium tidal range here, which means that the shoreline is exposed to sunlight and drying twice a day, and inundated in salt water twice a day. On the few areas examined, no rooted vegetation was found at all, only stranded small and large kelps, plus some dried marine algae.

Rocky shorelines occur at the eastern side of Milne Inlet, where the bedrock mountains reach the sea, and at the port site on Steensby Inlet.

### 4.2 GRAVEL SHORELINES Cgs

**PHOTO 97. Whale skull and gravel terrace, Milne Inlet.**
**PHOTO 98. Gravel/sand shoreline at Milne Inlet, from terrace.**

In some of the areas examined, gravel beaches extend into the sea, and the tide washes over these twice a day. Most gravel beaches were composed of pea gravel to fist-sized gravels, and supported absolutely no rooted vegetation. Stranded marine algae and kelps were commonly found.

At Milne Inlet, there is a sand and gravel beach at the present day sea level, washed by the tides. There is no rooted vegetation on this beach, but lots of vegetation on the top of the approximately 15 m bank which is about 25 m inshore from the present day tideline. (Photos 97 and 98.)

### 4.3 SANDY MARINE BACKSHORE Cs

**PHOTO 99. Plot 07_VS026, Rowley River mouth, Steensby Inlet**
**PHOTO 100. Seabeach sandwort (*Honckenya peploides*), inflated seed capsules**
**PHOTO 101. Seaside bluebells (*Mertensia maritima*)**

This association was expected but not found in 2006, but was found in 2007, in the mouth of the Rowley River, some 40 km to the east of the Steensby Inlet port site. It occurs in the flats at the river mouth, and includes coarse and fine sand. Some has been redistributed by wind and/or current into tiny dunes and water-sculpted ridges (Photo 99). This association may appear to occur on gravel, but closer examination reveals that wind has removed the “fines” from the top layer, and the plants are really growing in relatively fine sand. Some small examples of this association were also found on the island where the proposed port will be located, at Steensby Inlet.

There is little vegetation growing on the sand, and the predominant plants include mats of seabeach sandwort (*Honckenya peploides*) (Photo 100) and of seaside bluebells

(*Mertensia maritima*) (Photo 101). The seabeach sandwort produces inflated seed capsules that float, thus accomplishing their distribution via the marine currents. Occasionally, goose-grass (*Puccinellia* sp.) and scurvy-grass (*Cochlearia groenlandica*) will occur here. The tall blue-green beach rye (*Leymus mollis*) was expected, as it occurs around Hudson Bay and in Foxe Basin, but it was not found in the areas examined. According to the range maps in Porsild & Cody (1980), it occurs along both coasts, at Milne Inlet and Steensby Inlet.

### 4.3.1 Sandy marine backshore with snowbank association Cs-sb

**PHOTO 102. Plot 06_VN199, marine terrace shore at Milne Inlet**
**PHOTO 103. Thrift, *Armeria maritima***
**PHOTO 104. *Juncus biglumis***
**PHOTO 105. *Potentilla pulchella***
**PHOTO 106. *Saxifraga cernua* in backshore snowdrift association**
**PHOTO 107. Plot 06_VN347, *Saxifraga cernua* flower**
**PHOTO 108. Plot 07_VS033, at Rowley River, Steensby Inlet, zonation**

At Milne Inlet, part of the beach is gravel and part is sand. Behind the actively washed shoreline, there is a flat area of beach at the base of the steep edge of the marine terrace.

At one spot below the airstrip, the edge of the terrace creates a sheltered area in which snow accumulates, and this supports a rich snowbank association (Photo 102, plot 06_VN199) with a combination of sedges, *Luzula arctica, Juncus biglumis*, and small plants of bluejoint grass (*Calamagrostis pupurascens)*, a few small arctic willows, and a variety of other plants, most flowering in August. These include mountain sorrel, star chickweed, thrift, white bladder campion (*Silene involucrata*), red bladder campion (*Silene uralensis* ssp. *arctica*), bistort, and mouse ear chickweed (*Cerastium alpinum*) and chrysanthemum (*Hulteniella integrifolium,* formerly *Chrysanthemum,* and then, *Leucanthemum integrifolia*). Two cinquefoils occur here, *Potentilla pulchella*, and *P. hyparctica*. A little farther to the west, a variety of saxifrages, with bulblet saxifrage (*Saxifraga cernua*) form a very visible “stand” of plants along the base of the marine terrace. Other saxifrages include the tufted alpine saxifrage (*Saxifraga cespitosa*), yellow marsh saxifrage, spring saxifrage (*Saxifraga nivalis*), purple mountain saxifrage, and prickly saxifrage. There are only a few lichens, and a dark biological crust covers the part of the ground where flooding occurs frequently.

Another example of this association was found at the Rowley River, east of the proposed port site at Steensby Inlet (Photo 108, Plot 07_VS033). This site is a shallow bank exhibiting zonation from a sandy ridge down to goose-grass flats, and likely holds snow until late in July as most plants were blooming when observed in August. Dwarf fireweed and alpine milkvetch rims the top of the “bank” on a convex profile. Immediately below this is a concave profile with mats of seabeach sandwort, mouse-eared chickweed, *Saxifraga rivularis*, *Carex scirpoidea*, and thrift (*Armeria maritima*). The profile flattens out, into a zone with goose-grass (*Puccinellia* sp.), a light green band of *Carex ursina,* and *Stellaria humifusa (Photo 111)* scattered about in the goose-grass.

### 4.3.2 Damp sand and silt flats Cf

**PHOTO 109. Plot 07_VS027, sand/silt goose-grass association**
**PHOTO 110. Plot 07_VS027, goose-grass association close-up**
**PHOTO 111. Plot 07_VS027, *Stellaria humifusa***

Several marine associations are reported from the north end of Baffin Island (Polunin, 1948, and Duclos, Levesque, Gratton, and Bordelau, 2006), but these did not seem to be present in the local study area for this project.

During the summer of 2007, the assessment area was expanded and damp sand and silt flats were found at the mouth of the Rowley River (about 40 km east of the Steensby Inlet port site) and on a peninsula at the mouth of the Harder River (about 36 km to the northwest of the Steensby Inlet port site). These flats occur in the floodplain of the river, where the fresh water flows into the salt, and likely are flooded by storm tides (Photos 109 and 110, Plot 07_VS027).

The plant association on these flats consists of a mat of low goose-grass (*Puccinellia* sp.) with star chickweed (*Stellaria humifusa*) scattered through the mats. Small marine sedges (*Carex ursina,* or *C. maritima*) were expected on these flats, but were not found. *Carex ursina* was found in a similar association about .5 km upriver.

The presence of many fresh goose scats throughout the association, fresh goose tracks in wet sand in the area, and observation of flocks of snow geese leaving the flats area upon our approach indicates that this habitat is important to geese in the late summer.

This association was later found about 1 km west of the camp at the proposed port site at Steensby Inlet, near the old HTO camp. Its situation was similar except for the fact that it is located between the salt water and a small freshwater lake. In addition to the goose-grass and star chickweed, there was also a thick stand of the seaside chamomile (*Tripleurospermum maritimum* ssp. *phaeocephalum*, formerly *Matricaria ambigua*).

## SECTION 5.0 - COMPLEXES

There are several distinct terrain "complexes" in the area of the Mary River Project or the routes to the coasts. These are landforms, and have within each multiple plant associations due to the topography. Each is unique and distinct, and each has a different value to wildlife, so have been presented as composites of associations. They are not generally mappable as individual plant associations, but *are* mappable as "complexes".

Plots in these complexes are assigned a main code that refers to the complex and a secondary code that refers to the plant association in the complex, for example a non-tussock sedge meadow within the valley/canyon complex would be assigned **VC** (valley/canyon complex) plus **Snt** (sedge community, non-tussock association).

### 5.1 VALLEY COMPLEX VC

**PHOTO 112. Scree valley near Plot 06_VN028**
**PHOTO 113. Plot 06_VN028 valley complex, non-tussock sedge association**

Along the north road and rail routes, especially on the slopes above the glaciofluvial terraces, there are a number of narrow valleys or sheer-walled canyons. Some of these are on the east side of the large Philip's Creek valley, adjacent to the bedrock ridges that form the large valley wall (Photo 112, Plot 06_VN028). Other good examples of this complex are to be found in the first valley along the proposed rail route just south of the Mary River. Here, the main valley is floored with a glaciofluvial complex, but on the east side, against a sheer ridge, there is a narrow valley behind a lateral moraine, forming a typical valley complex.

These steep-walled valleys likely originated as lateral moraines. The wall against the main bedrock mountain is usually sheer rock, with little vegetation, sometimes exhibiting glacial polish. The ridges were originally lateral moraines, and in places are covered with scree or talus. This unstable substrate usually has little vegetation, although there are sometimes mats of lichens, heath tundra, or avens associations.

Streams flow through the bottoms of the valleys. In places, the stream meanders, and the wetter spots are occupied by pools, sedges, or moss associations, while the drier spots bear heath tundra or even an avens-xeric sedge association. Where there are boulders in the valley floor, riparian willow associations may occur, and in lee slopes, snowbank associations.

These valley complexes offered some of the best "sign" of lemmings encountered in three low-lemming summers, especially along the edges of wetlands and below snowbanks. A number of what might be called "active" nests and fresh scat piles were found, as well as one dead lemming, plus lemming skulls in raptor pellets, but no lemmings were seen.

### 5.2 LIMESTONE/SANDSTONE "SLOT" CANYON COMPLEX SC

**PHOTO 114. Limestone canyon with varied associations in bottom**
**PHOTO 115. Near Plot 06_VN169, canyon with sedges**
**PHOTO 116. Plot 06_VN169, avens-xeric sedge association on ledges**
**PHOTO 117. Near Plot 06_VN237, canyon near airstrip**

Another form of "canyon complex" are limestone or sandstone "slot" canyons, are eroded into relatively soft limestone or sandstone along the old tote road route, and along Philip's Creek north of the Mary River Project (Photo 115, near Plot 06_VN169). There are others along the Mary River to the southwest of the project.

The “slot canyons” in sedimentary rock may have originated as meltwater channels eroded during the retreat of the Wisconsin/Laurentide Ice Sheet. They have vertical walls, ledges, slopes, and (usually) streams passing through the bottom of the canyon. The depth of the canyon varies, but is usually approximately 4-9 meters. The stream varies from a distinct channel through bedrock with small cascades to canyon-floor sedge meadows.

The larger slot canyons provide ideal nesting habitat for raptors, including peregrine falcons and rough-legged hawks. The canyon bottoms provide sheltered places for lemmings and occasional shelter for migrating caribou.

More erosion-resistant cap-rock on the rims of the small canyons usually is occupied by a lichen-rock calcareous bedrock association. Ledges on the canyon walls are occupied by heath tundra or an avens and xeric sedge association (Photo 116, Plot 06_VN169), depending on the amount of moisture on the ledge, the accumulation of snow and the exposure. The canyon floor usually has a combination of heath tundra and sedge associations, as well as moss associations along stream edges and at the cliff bases (Photo 115). Snowbank communities develop against north-or northwest-facing cliffs. Riparian willow associations occur where the stream flows over boulders or fractured rock.

## 5.3 ESKER (OR RIDGE) COMPLEX EC

**PHOTO 118. Plot 06_VN013, view south along small esker**
**PHOTO 119. Plot 06_VN015, esker slope, snowbank association, lee of esker**
**PHOTO 120. Plot 06_VN015, blackish crazyweed, *Oxytropis nigrescens arctobia***
**PHOTO 121. Plot 06_VN016, enriched crest of esker**
**PHOTO 122. Plot 06_VN016, esker crest, nutrient-enriched, close-up**
**PHOTO 123. Plot 07_VS181, esker crest, cobble**

Eskers are sand, gravel and cobble ridges that originated as deposits from rivers issuing forth from the snouts of ice sheets or large glaciers, mostly during the retreat of the ice sheet or glacier. In the retreat phase of a continental ice sheet, meltwater from the top and sides of the ice sheet cuts channels into the ice and pours out of the front of the ice lobe, carrying much debris with it. This rock material ranges in size from large boulders to fine sand and rock flour, and the amount carried and deposited varies with the power of the current. As the bedrock is usually much harder than the ice, this stream erodes up into the ice, and deposits at the bottom of its channel. At certain velocities, this creates a sort of “streambed-in-reverse”, piled up across the land. If the water is too fast, all debris is carried away and out the front of the ice sheet to become outwash plain material. If it is too slow, the water just ponds and drops the debris in layers much like lacustrine deposits. If it is just right, an esker forms. As the ice sheet retreats, this former stream bottom is exposed as a meandering and branching ridge on the land.

The main difference between a lateral moraine and an esker is that the lateral moraine, being ice-laid, is not made up of stratified materials, but gravels, sands and rocks are all mixed up together. Lateral moraines are also usually located so close to bedrock mountain walls that weathering is impeded, and different plant communities have not had time to develop.

The materials in an esker are deposited by water (water-laid), so particles of the same size end up together (more or less). In a cross section of an esker it is usually possible to see layers of the same size particles. Some eskers are very large, some 10 to 20 meters high, and may extend for dozens of kilometers. Others are small, little more than a low pile of sand or cobbles on the land.

Drumlins are similar, but not elongated, and not as stratified. These are low, aligned hills created by the ice sheet overriding moraine deposits, and are not “sorted” or stratified, but are a mixture

of gravels, cobbles, sand, etc. Plant associations are similar on eskers and drumlins, and are more responsive to the exposure to wind and soil materials than to the how the landform is made.

There are a few eskers superimposed on glaciofluvial landforms in the Philip's Creek valley, and one relatively small esker along the previously proposed rail route (Photo 118, Plot 06_VN013). However, for vegetation analysis purposes, the vegetation on eskers can be very similar to that on drumlins or lateral moraines, etc., so all will be dealt with here.

Depending on their size, eskers (and related landforms) can be rather complex, with different types of crests, side branches, ponds and lakes surrounded by esker material. "Kettle" ponds likely originated as ice blocks trapped in the sediments. These ice blocks later melted and collapsed, filling with water and persisting as ponds. From the air, kettle ponds have a rather round shape, and are deep, showing up as dark water objects on aerial photos.

The soils on eskers are usually sandy to sandy-skeletal (gravel, cobbles), and are well to rapidly drained. Depth to permafrost is usually over 100 cm.

An esker interrupts the flow of the wind and causes snow to deposit in deep drifts on the downwind side or "lee side". These drifts persist long into the summer, and affect the vegetation drastically, creating a distinct snowbank association. Photo 118 (Plot 06_VN013) shows the dramatic difference between the windward and leeward sides of a small esker. The leeward side is to the right, and bears a snowbank association, shown in detail in Photo 119 (Plot 06_VN015), with *Oxytropis nigrescens* in bloom (Photo 120).

At the same time, the esker crest is exposed to the drying effects of the wind, plus all fine particles are removed, blown away in summer, leaving behind only those that are too heavy to be removed. Esker crest vegetation tends to be lichen-rock communities, except for certain areas which have been highly enriched by whitewash from birds or droppings of mammals (Photos 121 and 122), especially around perched boulders (called "bird stones") used by predators as lookout spots. (See "Disturbed sites, bird stones", 6.2.2.)

Lee slopes have a slightly different vegetation than windward slopes. The windward slopes may support an avens – xeric sedge association or a heath tundra association, while the leeward slopes are usually occupied by a heath tundra association, the *Cassiope* type, and the slopes of esker ponds may be occupied by a riparian shoreline shrub association, or, depending on their orientation, a snowbank association.

## 5.4 GLACIOFLUVIAL PLAIN COMPLEX GF

**PHOTO 124. Glaciofluvial complex, Mary River Camp.**
**PHOTO 125. Glaciofluvial complex, north road route.**
**PHOTO 126. Near 06_VN017, gravel plains.**
**PHOTO 127. Plot 06_VN340, avens-xeric sedge association**
**PHOTO 128. Plot 06_VN341, mat of blueberries, *Vaccinium uliginosum***
**PHOTO 129. Plot 06_VN 343, sedge associations in glaciofluvial terrace.**
**PHOTO 130. Kettle pond in glaciofluvial terrace, near south end of Cockburn Lake.**
**PHOTO 131. Low centre polygon ponds, solifluction ridges, sandy banks.**
**PHOTO 132. Marine terraces at Milne Inlet.**
**PHOTO 133. Plot 06_VN203, avens-xeric sedge association, marine terrace.**

The glaciofluvial plains and terraces and related landforms are the single most obvious landform along the entire study corridor. These were produced at the end of the Laurentide Glaciation by sediment-laden water pouring from the face of the retreating ice. The material that the water carried was derived from four sources: directly from fluvioglacial erosion of bedrock, from

previously deposited materials, from material held in and then released by melting glacial ice, and from materials at the edge of the glacier (Sugden and John, 1976)

Much of this water pooled in depressions, dropping most sediments, then overflowed or cut through whatever landform stopped its flow. In other places, the water slowed and meandered, dropping sediments in stream channels. Huge blocks of glacial ice, some carrying large amounts of rocks and sediments, floated on the pooled waters, dropping their loads as they melted. Still others became stranded, and the waters flowed around them, filling everything except where the iceberg rested. These ended up as kettle ponds in the terraces. Where tributary streams flowed in, alluvial fans were created as these streams dropped their loads. In other places, streams cut many interwoven channels in the deposits, creating deposits that slant toward whatever was “downstream” at the time.

The end result, today, are many deposits that look similar – flattish terraces in an open valley, mounded outwash hills, snaking eskers, rounded ponds that may be quite deep, alluvial fans overlying the terraces or pushing out into valley lakes, and modern rivers creating multiple shallow channels (“braided streams”).

Around the Mary River Camp (Photo 124), around the confluence of the Mary River with the stream that flows by Nuluugoak Mountain, in the flatlands between the Mary River Camp and Deposit #1, and along almost all of the road route to Milne Inlet, there are flattish terraces between bedrock hills (Photos 125 and 126, general photos of glaciofluvial plains). In places, there are braided floodplains, and alluvial fans. In others there are intertwined ridges and mounds characteristic of material laid down under a deteriorating ice surface. This is gravel and sand which was deposited behind, at, and in front of the ice margin. Much of it is patterned ground with frost fissures forming polygon shapes on the land. In places, limestone or sandstone bedrock is exposed mostly as frost-shattered felsenmeer, weathering in flat slabs, or shaped by erosion by wind or water.

Kettle ponds are common in some areas of the glaciofluvial complexes. These were established by stranded chunks of glacial ice which melted after the surrounding deposits were laid down, leaving a depression that filled with water, creating a pond (Photo 130). The vegetation that surrounds these ponds is controlled by the amount of water that is available to the plants and by the exposure to wind. The edges of the ponds are usually quite sterile, sandy beaches with little vegetation. There is very little emergent vegetation, because the ponds are too deep, with steep drop-offs. The slopes from the glaciofluvial plain down to the pond itself can be vegetated, and the type of vegetation here depends on whether the slope is a lee slope (facing northwest) or a windward slope (facing southeast). The lee slopes bear a snowbank association, and the windward slopes usually are occupied by mixed heath tundra or a dry forb association with *Potentilla nivea*, and sometimes pussytoes (*Antennaria* sp.).

On the glaciofluvial landforms, due to coarse soils and rapid drainage, little organic material is found on the surface, except in places where sedge associations have developed. In these locations, the sedge associations are either shallow basins or fans, or low-centre polygons with raised moss ridges at the margins (Photo 131). In places where there is high moisture in the soil, there is considerable frost scarring -- frost boils or solifluction ridges (Photo 134).

The modern river channel is lined with sandbars and sandy beaches, some of which are high and stable enough to develop a sparse or scattered plant cover.

At Milne Inlet, there are wide flat terraces, likely marine deposits exposed by isostatic rebound (rising of the land after being depressed by the weight of the ice sheet). Streams of varying sizes have cut channels through the terraces, some meandering and some establishing distinct alluvial

fans with multiple channels. The relief provided by these stream channels and their small floodplains allows a variety of plant associations to develop (Photo 132).

The glaciofluvial plains are complicated in that many factors control the landforms that develop. The vegetation on these landforms responds to several factors:

- Substrate – chemical composition, particle size, and type of underlying soil, outwash, till, or bedrock
- Amount of moisture that remains on the land during the growing season
- Exposure to erosion by wind or water
- Snow accumulation and duration during the summer
- Stability of the surface

The avens–xeric sedge association is the most common plant association on the glaciofluvial terrain, and is typically sparse, with scattered small mats or tufts of plants, prostrate or established between boulders and cobbles. Mountain avens is dominant, sometimes forming sizable mats, and xeric sedges, both curly sedge (*Carex rupestris*) and *Carex nardina*, are scattered between and amidst the mats, as are small grasses (mainly *Anthoxanthum monticola)*, and *Kobresia myosuroides* and woodrushes, *Luzula confusa* and *Luzula arctica* (on wetter sites). Small plants of the purple mountain saxifrage, and the peas, *Astragalus alpina* and *Oxytropis maydelliana*, are common.

This association also occupies the gravel and sandbars of the modern river, where mats of dwarf fireweed (*Epilobium latifolium*, now known as *Chamerion latifolium*), prostrate arctic willow, and cushion plants of the moss campion (*Silene acaulis*) as well as tufts of the pink thrift (*Armeria maritima*) and the small chrysanthemum (*Hulteniella integrifolium*), and, occasionally, woolly lousewort (*Pedicularis lanata* ssp *lanata*).

The marine terraces of the glaciofluvial complexes at Milne Inlet are similar to the inland terraces, just different in origin. These consist of a flat plain above the floodplain of Philip's Creek, with some small wetlands (sedge association, non-tussock), and a couple small creeks cutting through the floodplain. The marine terraces end abruptly above a modern beach, which is mostly gravel with some sand (Photo 132). Faint vegetation patterns (visible from the air) outline low isostatic rebound beaches.

In the non-tussock sedge associations here, a variety of sedges dominate, including *Carex fuliginosa* ssp. *misandra, Carex nardina* (drier areas), and about five other species, all growing in distinct clumps, but not forming tussocks. Also, there is *Luzula arctica* and the small, prostrate horsetail, *Equisetum variegatum*, along with small mats of net-veined willow and prostrate *Salix arctica*. Clumps of thrift, yellow marsh saxifrage, and purple mountain saxifrage, plus the small chrysanthemum and a few mountain sorrel and bistort plants complete the picture. A dark biological crust, which is a combination of algae, cyanobacteria, and very small lichens, covers open areas of the ground, which are probably seasonally flooded.

Most of the dry areas of the marine terraces are occupied by an avens - xeric sedge association (Photo 133), mostly a thin mat of vegetation with varying ground cover and percentages of *Dryas integrifolia* and *Carex rupestris*. In some areas, the blackish crazyweed (*Oxytropis nigrescens*) is present, along with *O. maydelliana, Persicaria vivipara, and woolly lousewort (Pedicularis lanata)*. Lichens and mosses are uncommon, although a biological crust may cover parts of the soil.

The avens-xeric sedge association often occurs on high-centred polygons in large areas of patterned ground. The domed shape of these polygons concentrates water at the edges of the polygon, as it drains into the frost fissures which border the polygons. Contraction of the soil in

these areas in winter forms cracks which fill with water in the spring. This water flows into underlying ice wedges, freezes, expands, and causes the fissure to widen (French, 1976). Because there is consistently more moisture in the fissures, the plant association occupying the fissure is quite different from that on the domed centre of the polygon. Occasionally, small ponds develop. On the glaciofluvial terraces on this study area, the fissures are usually occupied by a heath tundra association with much arctic heather, net-veined willow, racomitrium moss, sedges (*Carex fuliginosa* ssp. *misandra* and *C. membranacea*), and some *Salix arctica*. Deeper and wetter cracks may even support a riparian willow or sedge association.

## 5.5 MEGA-POLYGONS MP

**PHOTO 134. Mega-polygons, subdivided, south proposed rail route**

This complex is of somewhat mysterious origin, and covers huge areas of land. From the air, this landform looks domed and resembles a faint honeycomb. Fissures border flat to slightly convex areas, and hundreds upon hundreds of these polygons extend over large areas of uplands. It is located mostly on what is identified on the surficial geology maps for the area as “till veneer”. The term “mega-polygon” is adopted directly from the Geological Survey of Canada map 4950 (Little and Holme, 2006), and is explained as “area exhibits a hexagonal polygon network where polygon diameter ranges from 20 to 50 m.”

High-centre polygons can form in two different ways. Sometimes, freezing and thawing in a surface under dry conditions results in cracks forming much as they do in drying mud. In the springtime, freezing/thawing may allow water to flow into these cracks, where it forms an ice wedge. Over many years, this ice wedge may crack during spring freeze-thaw cycles, allowing more water to flow in and become part of the wedge, forcing the surface “plates” farther apart. Then, if these ice wedges are actively melting, the fissures may develop into shallow troughs that surround the cells (Rains, 2002). The melting ice wedges cause collapse of the surface over the wedge, and subsequent erosion rounds the contours of the polygon and in part fills in the trough. Water runs off the top of the polygon and collects in the trough, adding moisture to the system there.

This mega-polygon complex is occupied by several plant associations. The centres of the polygons are raised, slightly domed, and drier than the troughs. The centres are occupied by a heath tundra or avens association (depending on the local amount of moisture, snow level in winter, and exposure). Mountain avens is an important part of this association, as is arctic heather and blueberry, with mixed low willows, including *Salix arctica* and *S. reticulata*. The troughs between polygons provide a moist environment and are occupied by a sedge association, or an association more typical of the sedge-moss wet meadow association, but on a small scale. *Salix arctica, S. richardsonii, S. reticulata*, and even *S. herbacea* occur here, sometimes almost filling the trough. Mosses ranging from *Racomitrium* to *Sphagnum* form a substrate, or, in areas with sufficient moisture, sedges may occupy the trough.

In depressions or valleys in the mega-polygons, sedge associations are present. These are typical, a low percentage of tussock sedge association with *Eriophorum vaginatum* tussocks, and a high percentage of non-tussock sedge association, with aquatic sedges like *Carex aquatilis* and C. *membranacea*, plus non-tussock forming cottongrasses like *Eriophorum angustifolium* and *E. schwechzerii*.

The soils of these mega-polygon areas tend to be sandy to sandy-skeletal, often with a high percentage of gravel. In the small wetlands in the polygon complex, the soils are sandy, with an organic surface component.

Wildlife observations for this project have shown that caribou selectively use the high centre polygon areas in the springtime as the snow is thinner over these structures and disappears from them early, due to blowing and evaporation. This exposes the plants and the caribou do not have to dig as deeply to get at them.

## 5.6 CALCAREOUS TILL UPLANDS CT

**PHOTO 135. Plot 07_VN069, upland near Milne Inlet**
**PHOTO 136. Plot 07_VN071, snow-flush area in calcareous till**
**PHOTO 137. Plot 07_VN071, lemming scats**

The calcareous till uplands are located to the west of the road corridor, near the southwest corner of Milne Inlet (Photo 135). Under the Circumpolar Arctic Vegetation Map system, the calcareous till uplands in this part of the arctic fit into the vegetation unit called “B1. Cryptogam, herb barren”. On the CAV map, this unit is widespread to the west of Philip’s Creek, and forms the uplands to the west of the old tote road (*Arctic Geobotanical Atlas*, 2007). The CAVM website states: “Dry herb barrens composed of few scattered vascular plants….vascular plant cover is generally very sparse (< 2%), mainly scattered individual plants often in crevices between stones or small (< 50 cm diameter) cryoturbated polygons. Sedges, dwarf shrubs and peaty mires are normally absent.” “The most common vascular plants are cushion forbs, graminoids, lichens, mosses, liverworts, and cyanobacteria (biological crusts).”

On these uplands, the most common plant associations are forb or purple saxifrage barrens, avens associations and snowbank associations, which are fairly common, forming dark patches or streaks on the land, and composed mostly of mosses and biological crusts with a bit of heather (Photo 136). Generally, the vegetation is very sparse, located in the depressions between the small polygons, with scattered low prostrate arctic willows, mountain avens, curly sedge, and arctic poppies (*Papaver radicatum*). There may be a few small mustards, *Draba* sp., arctic bladderpod (*Lesquerella arctica*) and a few plants of purple mountain saxifrage. There are virtually no lichens, but small mosses do occur where there is sufficient moisture.

Where larger rocks provide some enhancement of the soil moisture due to runoff, mustards cluster in the cracks, along with mats of purple mountain saxifrage.

In the rare small wetland areas, there are a few sedges, including *Carex aquatilis* and *C. fuliginosa* ssp. *misandra*, plus *C. membranacea*. *Juncus biglumis* is present, as is *Salix arctica,* and in places, red bladder campion *(Silene uralensis* ssp. *arctica).*

Strangely enough, a small sedge area in the calcareous till uplands was where some of the very few signs of lemming activity were found, including fresh scats, well-trodden runs, and small cuttings of sedges (Photo 137).

## 5.7 COCKBURN LAKE CLIFF COMPLEX CLC

**PHOTO 138. Cockburn Lake, aerial view of east side, proposed rail crossing, from south**
**PHOTO 139. View south along cliffs near Plot 07_VS299**
**PHOTO 140. Plot 07_VS203, cliff ledges**
**PHOTO 141. Alluvial fan near Plot 07_VS297**
**PHOTO 142. Plot 07_VS204, heath tundra on boulder field**

In the Cockburn Lake area, the proposed rail route follows the lakeshore in a very restricted corridor, on the west side of the northern portion of the lake, crossing over to the east side and running along the base of high cliffs. The plant associations on the cliffs and slopes above the shore were examined closely, because there will be considerable disturbance in this area. The

area forms a complex typical of cliffs in the area. It is a mosaic of different substrates and habitats, sheer cliff faces, narrow ledges, tumbled scree without any vegetation, partially stabilized scree with mats of vegetation, small valleys with sedge and avens associations perched on the slopes, and a lower terrace along the lakeshore, which includes sedge communities, alluvial fans, flat terraces with avens associations, riparian associations along streams, and small outwash hills. The diverse substrates result in very different and distinct plant associations, some covering only a few square meters.

The sheer cliff faces support little plant life, but the ledges offer a better foothold (Photo 140), and a number of species grow there, including arctic willow, heather, avens, woodrushes, *Saxifraga tricuspidata*, and *S. foliolosa.* Dry ridge shoulders or till slopes support avens associations, some with curly sedge and some without. Unstable talus slopes are occupied mostly by crustose lichens, but in places where the scree is more stabilized, mats of *Racomitrium lanuginosum* moss and lichens with blueberry, heather, and alpine holygrass cling to the slopes.

Heath tundra associations are common, especially *Cassiope* heath tundra on the moist, more sheltered slopes, and blueberry heath tundra on the open slopes, especially where there is frost scarring. In 2007, the steep slopes of the east side of Cockburn Lake offered an incredibly rich blueberry crop, with huge berries.

Where streams flow off the uplands above the cliffs, small sedge meadows and narrow riparian willow associations slow the flow of water. Richardson's willow borders the streams where there are many boulders. Alluvial fans spread out at the base of the cliffs, mostly vegetated with sedges, narrow lines of riparian willow, and heath tundra in the dry areas (Photo 141).

At the foot of the cliffs, there is a terrace above the lakeshore. This varies in width from a less than a meter to a hundred meters or more. Some is colluvium, water-borne materials eroded off the uplands, but much is covered with heath tundra. Moraine ridges are crowned with lichen-rock associations on cobble crests (Photo 142), and thick riparian willow covers the ground in areas with abundant water and boulders.

## SECTION 6.0 – DISTURBED SITES DS

Disturbance of plant communities takes approximately three forms:

- Breaking of the plant cover on the soil due to physical disturbance
- Addition (or removal) of moisture (and environmental water-borne nutrients) to the system
- Addition of new nutrients in a form that can be utilized by plants

All of these result in changes on a scale commensurate with the size of the area disturbed or the amount of nutrients added or removed.

Gathering as much information on the species that colonize disturbed sites is very important, as these species may ultimately be utilized to colonize areas where the vegetation is disturbed by mining and related activities.

Some disturbances are caused by natural processes, some by animals, and some by man. These have all been included under "Section 6.0 – Disturbed Sites", rather than attempting to separate artificial from natural disturbances, as the effects on plant communities are similar.

### 6.1 GEOLOGIC PROCESSES (CAUSES)

A number of geological processes like mass wastage, permafrost-related changes like solifluction or frost boil development change the composition of the vegetation in limited areas. These are generally not mappable, but are worth noting because the species that come in on the disturbed areas may have value in reclamation of sites disturbed by activities related to the development of the Mary River Project.

#### 6.1.1 Solifluction DSsol

**PHOTO 143. Solifluction slope from air**
**PHOTO 144. Plot 06_VN018, small solifluction lobe**
**PHOTO 145. Plot 06_VN018, yellow mountain saxifrage, *Saxifraga aizoides*.**
**PHOTO 146. Plot 06_VN018, red bladder campion, *Silene uralensis* ssp. *arctica*.**
**PHOTO 147. Plot 06_VS285, solifluction lobe.**

Solifluction or gellifluction is the downslope movement of the active layer. This can occur on a larger scale where a whole slope is affected (Photo 143), or on a small scale where frost boils occur on a slope (Photo 144).

On a small scale, solifluction results in an upslope area where there are few or no plants, and a downslope lobe where plants are concentrated due to being pushed together as the moving soil collides with soil already in place.

Large scale solifluction can produce an undulating ridge roughly following the contours of the land across a slope. This ridge may be a few inches high or more than a meter high. Upslope, water may temporarily pool, and a sedge association may develop. At the face of the lobe, there is more water available, plus the plants are crowded together due to soil movement. Some solifluction lobes can easily be seen from the air. Depending on the amount of moisture available, some lobes are marked by the presence of willows (*Salix arctica, S. richardsonii, S. reticulata*, and/or *S. herbacea*), growing out of the face of the lobe. The lobe may be rich in boulders, also being pushed downslope by the pressure of the active layer above. It is often quite sedgy or grassy, due to the very active particle movement, which allows these to become established. Common sedges include *Carex scirpoidea, C. aquatilis,* and *C. fuliginosa* ssp. *misandra*, and

grasses include *Anthoxanthum monticola* and *Poa arctica*, as well as the woodrushes (both *Luzula confusa* and *L. arctica*).

A species which is apparently a new record for north Baffin was found in Plot 06_VN018 (and many other plots). This is the yellow mountain saxifrage, *Saxifraga aizoides* (Photo 145). In fact, *S. aizoides* is abundant along the north road corridor and on the infrastructure area for this project. It's not being listed for north Baffin is simply a reflection of the fact that the flora of North Baffin is still incompletely known.

Solifluction lobes are often inhabited by a diverse group of plants: blueberry, Lapland rosebay (*Rhododendron lapponicum*), mountain sorrel (*Oxyria digyna*), *Cerastium alpinum, Stellaria longipes*, the buttercups *Ranunculus nivalis* and *R. pedatifidus*, *Eutrema edwardsii*, *Pedicularis capitata*, and at least two legumes, *Astragalus alpina* and *Oxytropis maydelliana*. Red bladder campion often occurs in wet areas associated with the lobe (Photo 146). Lichens are uncommon in the lobe, and mosses are not common on the face of the lobe, but may be common below it.

Below the lobe face there is often a band of mountain avens, then heather (*Cassiope tetragona*) and often a mossy band as well. If the lobe is tall enough, a snowbank association may be present below the lobe. An example of a larger solifluction lobe is to be found in Plot 06_VS285 (Photo 147).

### 6.1.2 Landslides and thaw slumps DSls

**PHOTO 148. Plot 06_V234, landslide profile**
**PHOTO 149. Plot 06_V234, landslide from above**
**PHOTO 150. Plot 06_V234, landslide from below**
**PHOTO 151. Plot 06_V234, Star chickweed, *Stellaria longipes***
**PHOTO 152. Plot 06_VN276, grassy succession on slide from road**
**PHOTO 153. Aerial view of slide in south route near Ravn River**

Landslides and other forms of mass movement of material are fairly common in the study area. Most obvious are rock slides on steep slopes. These involve large quantities of material that slip from a steep slope or vertical face, producing fan-shaped talus slopes, often overriding the tundra at the base of the steep part of the mountain. These are slowly reclaimed by vegetation, but the plant communities remain in the category of "lichen-rock" for many decades.

Some are smaller, called "thaw slumps" (Hamblin, 1975). These are masses of the active layer sliding downhill in a single event, not slowly as in solifluction. These create small areas that undergo swift successional changes, in the process supporting a diverse group of plants that disappear after several decades as the surrounding vegetation again claims the land.

Human activities can certainly cause slumps and landslides. Removing weight from the foot of a slope (such as by the building of a road), or adding weight to the top of a slope (building pads, or a road in this position) can cause the relatively unstable active layer to slide downhill.

Several landslide areas were found, but one, near the Mary River falls, is a textbook example (Plot 06_VN234). It is only about 30 m in length, and occurs on a tundra slope. There is a classic slip face with little vegetation remaining and, at the toe of the slide, a debris flow mound which overlies vegetated tundra, and a trail of rocks down the rest of the slope. The mound at the toe of the slide is made up of chunks of vegetated tundra which have moved as units, and bare areas where new sand/gravel was exposed. See Photos 148 - 150, all 06_VN234.

Much of the vegetation on this landslide is vegetation that likely occupied this slope prior to slippage, it is a mixture of *Dryas integrifolia*, *Salix arctica, S. reticulata,* and mosses. Then, there is vegetation that has likely grown since the slide occurred, mostly in tufts on bare areas. This includes star chickweed (*Stellaria longipes*) (Photo 151), *Poa arctica*, *Luzula arctica*, bistort (*Persicaria vivipara*), yellow crazyweed (*Oxytropis maydelliana*), small *Woodsia* ferns, and a small amount of large-flowered wintergreen (*Pyrola grandiflora*).

In other areas, landslides acquire a different vegetation, likely due to local seed sources. A landslide (Photos 152 and 153), Plot 06-VN276) on the old road to Milne Inlet, northeast of "Camp Lake" offers a thick growth of grasses, including *Anthoxanthum monticola*, *Poa arctica*, and *Arctagrostis latifolia*, as well as the woodrushes *Luzula confusa* and *L. arctica*. The lush grasses delineate the slide area; on either side, there is much willow and blueberry, and relatively sparse grasses. However, under the grasses is a variety of woody plants and sedges, likely pre-dating the slide and carried down the hill by the mass movement. These include *Salix arctica* and *S. arctophila*, and the dwarf shrubs, *Vaccinium uliginosum*, *Cassiope tetragona*, and *Dryas integrifolia*. There are also a variety of forbs: *Oxyria digyna, Persicaria vivipara, Cerastium alpinum, Silene involucrata, Stellaria longipes*, arctic poppy (*Papaver radicatum*), *Armeria maritima, Pedicularis capitata, and Oxytropis maydelliana*. Mosses are common under the vegetation, likely also pre-dating the slide.

## 6.2 ANIMAL-CAUSED

Some "disturbed sites" are caused by animals, either by digging in the soil, wearing away the plant cover (caribou trails in areas where there are many caribou), or by deposition of nutrients.

### 6.2.1 Den Sites DSd

**PHOTO 154. Plot 08-VS013, lemming burrow, active, island in Steensby Inlet**
**PHOTO 155. Plot 05_VN002, lemming burrows, old**
**PHOTO 156. Plot 08-VS002, active burrow of arctic fox, Steensby Inlet**

Sites of animal burrows or dens are usually good examples of disturbed sites, because the inhabitants are constantly remodeling the burrow or creating new entrances nearby.

Baffin Island lacks the industrious arctic ground squirrel or "sik sik" that creates many thousands of burrows throughout the mainland arctic. Lemmings, short-tailed weasels, arctic foxes, tundra wolves, and the occasional polar bear are the only animals that construct dens in this part of the Arctic.

Burrows are generally similar in terms of the reaction of the plant communities, but vary in the amount of vegetation surrounding the disturbed soil. Often, the sites of dens or burrows of animals larger than lemmings are conspicuously marked with a dense growth of grasses, including *Arctagrostis latifolia*, and *Calamagrostis purpurascens*. Pussy-toes (*Antennaria friesiana*, formerly *A. eckmaniana*), *Stellaria longipes*, brooklet saxifrage (*Saxifraga rivularis*), and fleabane (*Erigeron uniflorus* ssp. *eriocephalus*) are also conspicuous on burrow systems.

Burrowing activity by lemmings can bring underlying material, such as sand, to the surface, covering the vegetation below the burrow. This sand fan offers new areas for plant colonization (Photo 154, 08-VS013). Otherwise the only sign of lemming burrows or runs are the trails through the vegetation, or holes in the peat or moss, or into a sandy bank.

Once a burrow is abandoned, erosion tends to fill in the hole and level the piles of loose sand or soil. Mosses may grow on the soil around the burrow (Photo155). It undergoes a fairly rapid transition back to its former plant association, changing dramatically over about 4–12 years.

Few active lemming burrows were found, likely because 2005 – 2007 were all low lemming years. Active lemming burrows (Photo 154) usually show recent digging, plus small grass leaf "cuttings" (bits of grass about 3 mm in length), nests of interwoven grasses, or nearby "lemming latrines" where many lemmings deposit their feces.

One active arctic fox burrow was found near Steensby Inlet (Photo 156), and a plot was done around the entrance (Plot 08-VS002). This was likely a den site in use over many years. There was abundant recent digging activity, and thick willows in the entrance of the burrow.

### 6.2.2 Raptor Perches or "Bird Stones" DSbs

**PHOTO 157. Plot 06_VN122, "bird stone" on top of esker.**
**PHOTO 158. Plot 06_VN122, raptor pellet with lemming bones**
**PHOTO 159. Near Plot 07_VS019A, "bird stone" with surrounding grasses**
**PHOTO 160. Plot 06_VS086, "bird stone" with vegetation**
**PHOTO 161. Plot 06_V139, "manuring effect" on top of ridge**

Raptors and predators often use stones on the tops of ridges as lookout sites, places to feed, or, in the case of mammals, as places to mark their territories. The animal activity, including deposition of "whitewash" from birds, remains of meals, pellets from raptors like rough-legged hawks or peregrine falcons, and urine and feces from passing foxes all contribute nutrients to the area around the stone (Photos 157 and 158). In his excellent book on the vegetation of the eastern Arctic, Polunin (1948) calls these "bird stones".

Plants quickly take advantage of these nutritional riches, and a lush "garden" grows up around the stone (Photo 159). On small or narrow ridges, there is even a "manuring" effect where nutrients from the deposits around the rock wash down the sides of the ridge, enriching the soil and enabling more plants to become established there (Photo 161).

In our studies many "bird stones" were found on esker crests, on ridges, above cliffs, and out on barren rebound strandlines, anywhere a predator could look out over its hunting area. Most have a lot of prickly saxifrage (*Saxifraga tricuspidata*), mountain avens, bluegrass (*Poa arctica*), star chickweed, bistort (*Persicaria vivipara*), and *Cerastium alpinum* or *C. arcticum*. Lichens are few in these areas, due to the fact that the stone and surroundings are usually exposed to the winds, but include *Flavocetraria nivalis*, worm lichen (*Thamnolia subuliformis*), and hair lichen (*Alectoria* sp.).

### 6.2.3 Snowy Owl Nest Mounds DSo

**PHOTO 162. Plot 07_VS177, nest mound near Ravn River**
**PHOTO 163. Plot 07_VS177, pellets at nest mound**

Scattered widely over the tundra are low mounds crowned with grasses and forbs. These may include a few rocks, but for the most part are distinguished from "bird stones" by lacking rocks; there are few with perching stones. These may be old nest mounds of snowy owls. (Photo 162, Plot 07_VS177.)

These are commonly cushions of mosses and grasses, places where the owls scrape out a shallow bowl in which the female lays the eggs, incubates, and raises the young owls. Nutrients deposited by the decaying mosses, plus nutrients added by the defecations of the incubating bird and the nestlings, create an enriched area around the nest.

Snowy owls undergo population fluctuations in sync with lemming population fluctuations. Since the last three years have been low lemming years, there are relatively few snowy owls in the area at present, so no recently built nests were found in the course of the study. Owl pellets with the bones of prey animals like lemmings can almost always be found at the edges of recently used mounds (Photo 163). The whitewash from generations of incubating owls has enriched the area on and around the mound, which results in a varied flora.

Snowy owl nest mounds are usually on the tops of esker hills or ridges, and are visible from long distances because of their crowns of tall grasses. These are generally a mixture of alpine holygrass (*Anthoxanthum monticola*), *Arctagrostis latifolia*, and *Poa* sp. A variety of dwarf shrubs, including arctic willow, mountain avens, and heather grow around the mound. Snow cinquefoil (*Potentilla nivea*), mustards (*Draba* sp., sometimes *Cardamine bellidifolia*, and prickly saxifrage add to the diversity. Star chickweed (*Stellaria longipes*), which often grows in the nutritionally-enriched areas around dens, and mouse-eared chickweed (*Cerastium alpinum*) are almost always present.

### 6.2.4 Bird Nesting Sites DSn

**PHOTO 164. Peregrine falcon nest site with three young.**
**PHOTO 165. Peregrine nest site with orange jewel lichen.**
**PHOTO 166. Jewel lichen, *Xanthoria elegans***
**PHOTO 167. Plot 07_VS225, sandhill crane nest**

Raptor, jaeger, or gull nesting sites are also enriched sites. By spending more time in the area, the birds enrich the vegetation by their feces, adding calcium, nitrogen compounds, and other nutrients. These sites vary, the nests of ravens and raptors are usually on cliff faces (Photos 164 and 165), while those of gulls are on steep slopes of islands, some cliff faces, and some on the tops of peninsulas or islands. There are differences in the amount of nutrients supplied, depending on the species and the location and substrate under the nest.

Traditional raptor nesting sites on cliff ledges usually are marked by conspicuous growths of the orange lichen, *Xanthoria elegans* (Photo 166), as well as cushions of racomitrium moss, clumps of *Potentilla nivea, Poa arctica*, and *Anthoxanthum monticola*. Heather (*Cassiope tetragona*) is often present, as well as tufts of *Draba glabella* and other mustards, *Stellaria longipes*, white bladder campion (*Silene involucrata*), pussytoes (*Antennaria friesiana*) and *Carex marina* (formerly *C. amblorhyncha*).

A rich plant association often develops around gull nests; the incubating gull typically defecates from the nest, enriching the surrounding area. Mosses, clumps of *Potentilla*, grasses such as *Poa* sp., *Arctagrostis*, and *Calamagrostis*, *Draba glabella*, brooklet saxifrage (*Saxifraga rivularis*) and scurvy grass (*Cochlearia groenlandica*) plus dandelions (*Taraxacum officinale* and *T. hyparcticum*) often develop around gull nests, to the extent that the nest is sometimes surrounded by lush vegetation.

Sandhill crane nest sites are usually located in lowlands, often wetland areas or on slopes overlooking the wetland (Photo 167, Plot 07_VS225). Crane nests vary a great deal in construction; there may be little more than a scrape on the ground, or nesting material may be added to make a mound in which the bird lays one to two white eggs. The area around a crane nest is also slightly enriched, due to fecal deposits by the incubating bird.

### 6.2.5 Goose Feeding Damage DSgoose

**PHOTO 168. Plot 07_VS273, goose feeding damage in sedges, upper Cockburn Lake**

Snow geese are a significant part of the wildlife of the project area, breeding and rearing their young throughout the area south of the mine site. On their breeding grounds, the snow geese feed on the roots and leaves of grasses, sedges, and other plants. Where there is no darkness in summer, these geese feed 24 hours a day, pulling many plants up, and exposing the roots. **"**Increasing populations, coupled with its primary foraging strategy of grubbing, is causing serious damage to its breeding and, in some areas, wintering habitats." (Mowbray, Cooke, and Ganter, 2000)

Throughout the southern part of the study area, there is plenty of evidence of damage caused by geese. Many areas with torn up tussock sedges, pieces pulled out and dropped (Photo 168, Plot 07_VS273), trampled and muddy edges of ponds, many with the vegetation cropped short or even pulled out, plus large quantities of goose scats attest to considerable pressure on the vegetation by geese.

The snow goose population in eastern North America is higher than at any time in the recorded history of the species, and biologists are concerned that a population of this size may not be sustainable. However, damage to the wetland environment around the Mary River Project will continue to occur, and probably will expand, unless external factors act to limit the snow goose population.

### 6.2.6 Caribou Trails DSt

**PHOTO 169. Plot 07_VS302, caribou trail along shore of Cockburn Lake**

In areas where there is heavy caribou traffic, trails are worn into the tundra, sometimes deeply incised into the land. Along these trails, there is addition of nutrients due to the quantity of feces deposited by migrating animals.

In this study area, we found caribou trails, but no areas with the sheer number of trails that are found in the Diavik Diamond Mine or Tahera's Jericho Diamond Mine areas or in the areas traversed by the Qamanuriaq herd near Rankin Inlet. There simply do not seem to be similar numbers of caribou passing through.

Migrating caribou affect the plant communities by wearing away the plants in multiple trails along the edges of lakes or through various landforms. In places, the plants and most of the soil is worn away, and bare rock is exposed. In others, the plant cover is simply removed due to abrasion from many feet.

Along heavily-used caribou trails, there are areas where the vegetation is significantly higher and lusher than where there is no trail. This is particularly true of sedge areas, where the sedges along the trails are taller or greener than those away from the trails. This is due to the deposition of nutrients from the feces of the caribou.

Even deeply-worn caribou trails, if not used for several years, will begin to change. The vegetation regenerates, growing in from the sides of the trail, or the lichens colonize the worn spots. For example, there are trails in the Meliadine Gold Project property near Rankin Inlet that are worn deeply into the tundra, yet now covered by lichens, or in sedge areas, full of young sedges, yet still recognizable as trails. These trails indicate former heavy use by caribou, but no use in recent years, corresponding almost exactly to the change in caribou migration in the 1950s that caused widespread starvations throughout the Keewatin (Burt, 1999).

On the Mary River Project, we found incised caribou trails along the northeastern side of the Tariujaq Arm of Steensby Inlet, southeast of Nina Bang Lake, and in the area around Cockburn Lake. In all cases, these trails showed little recent growth of lichens or vascular plants in the trails, so the conclusion can be drawn that these trails are in relatively recent use.

### 6.3 Human-Caused

Disturbances caused by human activities typically take two forms. First, there are disturbances that remove the plant cover on the land, and then there are those that enrich the soil. We found examples of those that remove plant cover from the land, but few of those that enrich. The greywater outflow from a camp creating an enriched sedge meadow is a good example of an "enriched site", but the one from the Mary River Camp goes into a highly porous glaciofluvial system, so does not hold water close to the surface and does not create a noticeably enriched sedge area.

Because human-caused disturbances of plant cover on the land are usually of considerable size, what happens to these areas naturally can teach us a lot regarding natural revegetation. Some or much of this information can be applied to reclamation.

#### 6.3.1 Old Road Systems, Airstrips DSr

**PHOTO 170. Building "tote road", 1960s (from Jones & Lonn, 1970)**
**PHOTO 171. Old "tote road" to Milne Inlet, aerial**
**PHOTO 172. Mary River Camp and airstrip, aerial**
**PHOTO 173. Plot 06_VN055 Old airstrip on north road route**
**PHOTO 174. Plot 06_VN055 Fleabane, *Erigeron uniflorus* ssp. *eriocephalus***
**PHOTO 175. Plot 06_VN259 Sedge association on old road.**
**PHOTO 176. Plot 06_VN269 Heather-dry moss association on old road**
**PHOTO 177. Plot 06_VN269 Crowberry, *Empetrum nigrum,* mat**
**PHOTO 178. *Antennaria* association on old road**
**PHOTO 179. Near Plot 06_VN269A Detail of *Antennaria* association**
**PHOTO 180. Near Plot 06_VN250 Old road with bloom of prickly saxifrage**
**PHOTO 181. *Saxifraga hieracifolia* plant for size**
**PHOTO 182. *Saxifraga hieracifolia* flowers**

There are a number of old road systems on the project, some of which are in current use or being maintained. However the "tote road" system, established in the mid-1960s, extends from the Mary River Camp to the coast at Milne Inlet (see Photo 170 and 171). Parts of this road have not been used since about the early 1980s, so it is a good laboratory for natural revegetation. Photos of the construction of this road, and of the original development of the Mary River property in *Pathfinders of the North* are of value in establishing a starting time for the alterations to the landscape (Jones and Lonn, 1970).

Three airstrips have been established in the past for this project. One, at the Mary River Camp (Photo 172), is in regular use, and has been maintained, so shows little revegetation, but another airstrip approximately 40 km northwest of camp has not been regularly used, so is partially revegetated. (Photo 173, Plot 06_VN055.)

Several plots were established on the airstrips and on the old road system, and the vegetation that has become established on the road was found to have little in common through the length of the road, but is related to adjacent road-side vegetation near the plots.
Information obtained from these plots will be very useful should there be a need for the development of a reclamation plan for the roads and infrastructure areas of this project. These

plots reveal two things: first, which species tend to come in first on a devegetated area, and, second, which species seem to prevail over a long period of time. Knowing which species are predominant in natural revegetation will indicate which native plant species could possibly be used for reclamation.

The old inland airstrip is constructed on sand, so revegetation is slow, due to the fact that sand is relatively unstable due to wind erosion. However, the berms along the sides are well-vegetated with many small scattered mosses, least willow, heather in the depressions, a few small grasses, (not blooming but probably *Poa* sp.), a few sedges (*Carex fuliginosa* ssp*. misandra*), and woodrush (*Luzula arctica*). Cushion plants of moss campion (*Silene acaulis*) are common, and there are a few plants of fleabane (*Erigeron uniflorus* ssp. *eriocephalus*). A black biological crust covers about 30% of the ground, and is composed of algae and small rushes.

In sedge associations (Photo 175, Plot 06_VN259) along the road, high percentages of *Carex aquatilis* and about three additional *Carex* species, including *C. fuliginosa* ssp. *misandra* were found. In addition, there are a number of small shrubs, mostly *Salix richardsonii*, and prostrate *S. arctica, S. arctophila* and *S. reticulata*, so this association would fit into the shrub-sedge tundra classification. *Equisetum arvense*, *Luzula confusa*, and *Luzula arctica* are present. Grasses are not common, but included *Poa arctica* and another unidentified grass. *Pedicularis capitata* and a few lichens (*Flavocetraria nivalis, Stereocaulon tomentosum,* and *Thamnolia subuliformis*) were also present.

Heath tundra associations along the road vary considerably based mostly on the amount of shelter or moisture, but one association that was studied in detail is in the road itself (Photo 176, 06_VN269). It consists of mats of heather and cushions of racomitrium moss, clumps of *Luzula confusa*, smaller amounts of *L. arctica, Anthoxanthum monticola*, and a small amount of the shining clubmoss (*Huperzia selago*). There is a well-developed lichen cover on the ground, including *Flavocetraria nivalis, Cetraria ericetorum, Vulpicida tilesii, Cladina mitis, Stereocaulon tomentosum*, and *Dactylina arctica*.

In this plot there were several mats of crowberry (*Empetrum nigrum*), most growing in the road itself, and one large mat off to the east side, close to the old tote road, all within about 25 m of each other (Photo 177, 06_VN269). It is interesting in that this is the *only* place that crowberry was encountered north of the Mary River Camp (there is a considerable amount of *Empetrum nigrum* on the south road and rail routes). There was nothing observably different about this place, so it *may* be that the crowberries were brought in via Inuit who were traveling north through this corridor, who happened to be carrying the berries with them for food.

Another area of this road, where the road rises from the lakeshore to run over a series of low sandy hills, is occupied by an odd association in which pussy-toes (*Antennaria friesiana*) is dominant, almost forming a carpet on the road surface (Photos 178 and 179). There are low mosses and xeric sedges (*Carex rupestris*), and a few patches of white arctic heather, but by far the most common plant is the *Antennaria*.

An extremely interesting stretch of the old “tote road” occurs to the south of the round lake and tundra pond area about 20 km north of the Mary River Camp. Here, the road descends a gentle slope into the flatlands around the lake (Photo 180). A rich and diverse vegetation has developed along this slope, associated with the roadbase. A snowbank probably remains here into late July, so this area was in bloom when studied in August. Prickly saxifrage, arctic poppies, *Saxifraga nivalis*, and Sudetan lousewort were all in bloom, but the most striking was the large number of plants of *Saxifraga hieracifolia* in bloom on the road surface (Photos 181 and 182). This showy saxifrage is not common elsewhere, but was abundant here.

Fortunately, we were able to study this stretch of road prior to its development as the Milne Inlet transport route for bulk sample ore. It was useful to be able to see a disturbed site to which we could assign an actual date range for disturbances.

### 6.3.2 Sampling Sites DSs

**PHOTO 183. Plot 06_VN175+177**
**PHOTO 184. Plot 06_VN175 solifluction**
**PHOTO 185. Plot 06_VN177 mound**
**PHOTO 186. Plot 06_VN177 *Draba alpina***
**PHOTO 187. Plot 06_VN177 *Salix arctica***

There are a number of old sampling sites in the area to the southwest of camp, along the north road route (and some new ones along the proposed rail route) that show disturbance of the ground. These are usually pits, dug to sample the underlying material for suitability as a road building material. Sometimes the material is replaced; but often it was not entirely replaced and the pit shows a shallow scrape and adjacent pile of soil and gravel or sand.

Plants take advantage of the increased moisture that pools in the shallow scrape, and of the nutrients exposed by the excavation and disturbance of the soil. The vegetation on these sites is different from that adjacent.

One of these sampling pit sites was found in the vicinity of the small gorge and waterfall on Philips' Creek (Photo 183, Plots 06_VN175 + 177). Here, there is a distinct pit with a small amount of standing water in the bottom, and sedges (*Carex aquatilis*) growing on the slopes above and in the water. The sides show small scale solifluction, mud slippage (Photo 184), and there is a limited amount of filamentous algae in the pool at the bottom. The mound deposited when the sample was taken provides a much drier habitat (Photo 185), so is occupied by low mats of *Saxifraga tricuspidata, Draba alpina* (Photo 186), and *Oxytropis nigrescens* ssp. *arctobia*, as well as prostrate *Salix arctica* (Photo 187). The mound is undergoing plant succession and in future years will be occupied by grasses, and later by vegetation similar to that around it.

### 6.3.3 Old Inuit Camps DSi

**PHOTO 188. Tent ring, heath tundra *Cassiope* association**
**PHOTO 189. Small hearth, heath tundra *Cassiope* association**
**PHOTO 190. Old camp at Milne Inlet**

Old Inuit camp sites are found all along the line of the old road; it appears that the route from Milne Inlet inland and down to Steensby Inlet has been a traditional travel route for Inuit. Along the way, there are archaeological sites, most often a simple tent ring (Photo 188) or small hearth of arranged stones (Photo 189).

Work on other projects has shown that the old campsites show the effects of increased nutrients on the vegetation, but this effect only lasts for about two to three decades. The exact duration of this effect on the vegetation is not known yet for north Baffin.

When people camp, they are usually accompanied by dogs, and the combined fecal material from people and dogs can significantly enrich the area, even if the people do not stay long. Also, in the past, almost all the paraphernalia carried along was biodegradable, or too precious to lose. Old skins and detritus from preparation of meat and clothing would be left behind, and in decaying, would enrich the soil. This enriched nutrient effect lasts only a few years.

While the nutrients are available, plants, including grasses (*Poa, Arctagrostis, Calamagrostis*, and, at the coast, *Leymus mollis*), mustards, star chickweed (*Stellaria longipes*) and mouse-ear chickweed (*Cerastium alpinum*) and fireweed (*Chamerion latifolium*) grow up around the camp, forming a lush stand. These remain until the excess nutrients are used up, and then are replaced by the normal vegetation for the area. As a result, there is a period of "greening" of the site, which fades away within a few years.

All of the sites examined (with the exception of two sites at Milne Inlet, probably still being used occasionally) were past this "bloom" stage. The vegetation was almost as it would have been without human use of the site, except for minor effects due to snow accumulation around the stones.

These sites will be further described in the archaeological work for this project, so are not identified by plot number in this report.

### 6.3.4 Inuit Caches and Carcasses DSc

**PHOTO 191. Plot 06_VN209 Old storage cache with caribou bones**
**PHOTO 192. Plot 06_VN209 Tufted grasses and sedges at cache**
**PHOTO 193. Plot 06_VN203 Whale vertebra with enriched vegetation**
**PHOTO 194. Whale bone showing snowdrift effect, Milne Inlet**
**PHOTO 195. Caribou antler and alpine holygrass, *Anthoxanthum monticola***

When hunting, Inuit often store caribou carcasses in stone "caches" on the land. These are simply stone containers which are built in advance and later used to store meat, or consist of stones stacked around a carcass to protect it from foxes, ravens, and gulls. Usually the caribou pieces are stored there during fall hunts, and left to be picked up later by snowmobile, after snow covers the land. These caches are often marked by placing the antlers of the caribou on top of the stones, which makes them easier to spot when covered by snow. Occasionally, a cache used for storage is forgotten and the meat inside decays or is fed upon by scavengers. The vegetation responds to the nutrient enrichment by becoming more diverse, and taller or greener.

One of these caches was found near the gorge and waterfall on Phillip's Creek, located on a ridge crest in a heath tundra area studded with glacial erratic boulders (Photos 191 and 192, 06_VN209). This cache had been made by placing stones in a semicircle against a larger rock, then stacking stones over the pieces of caribou stored in the cache. It had been opened, perhaps by a wolf or bear, and the bones were scattered about. Some decay had likely taken place, as the area was rich in grasses (*Poa* sp.), *Carex rupestris*, and several other sedges, including *C. nardina, C. fuliginosa* ssp. *misandra, C. scirpoidea*, and a lush growth of a tussock-forming cottongrass that was not blooming, likely *Eriophorum vaginatum*. Also present: *Oxyria digyna, bistort (Persicaria vivipara), Silene acaulis*, *Saxifraga oppositifolia,* woolly lousewort (*Pedicularis lanata*) and chrysanthemum (*Hulteniella integrifolium*). The heath tundra in the area is complex, with arctic heather (*Cassiope tetragona*) and blueberry (*Vaccinium uliginosum*), both *Salix arctic*a and *S. richardsonii*, plus *Salix reticulata* and is rich in lichens, including *Flavocetraria nivalis, C. tilesii, Stereocaulon tomentosum*, and *Thamnolia subuliformis*.

Sometimes, the presence of the nutrients that are derived from the decay of an animal will cause a denser vegetation to develop around the source of nutrients, such as around a whale vertebra in an old camp at Milne Inlet (Photo 193, 06_VN203). In some cases, the size of the animal remains also interrupts the flow of the wind, causing a snowdrift to develop, providing additional moisture in that particular small area. The addition of nutrients and possibly the snowdrift effect can be seen around a large piece of whale bone on the terraces at Milne Inlet (Photo 194). A lush growth of *Saxifraga tricuspidata* surrounds this piece of bone, likely left there by people who had

been camping nearby. Another example of this is an old antler with a lush growth of alpine holygrass, *Anthoxanthum monticola,* Photo 195.

The examples used in the categories and descriptions above are taken from the north road and at that time proposed rail route, the infrastructure area for the proposed mine, and from the south proposed rail and road routes. It is important to realize that, as more studies are done on additional sites such as the proposed hydro site, alternate port sites, or major changes to the routes, this classification may need to be expanded or modified.

## SECTION 7.0 – LITERATURE CITED


Aiken, S.G., M.J. Dallwitz, L.L. Consaul, C.L. McJannet, L.J. Gillespie, R.L. Boles, G.W. Argus, J.M. Gillett, P.J. Scott, R. Elven, M.C. LeBlanc, A.K. Brysting and H. Solstad (1999 onwards). *Flora of the Canadian Arctic Archipelago: Descriptions, Illustrations, Identification, and Information Retrieval.* Version: 29th April 2003. http://www.mun.ca/biology/delta/arcticf/'.

Aiken, S.G., M.J. Dallwitz, L.L. Consaul, C.L. McJannet, R.L. Boles, G.W. Argus, J.M. Gillett, P.J. Scott, R. Elven, M.C. LeBlanc, L.J. Gillespie, A.K. Brysting, H. Solstad, and J.G. Harris. 2007. *Flora of the Canadian Arctic Archipelago*: *Descriptions, Illustrations, Identification, and Information Retrieval.* CD-ROM published by National Research Council Canada and Canadian Museum of Nature, Ottawa, ON.

Aiken, S.G., L.L. Consaul, and M.J. Dallwitz. 1995 onwards. *Poaceae of the Canadian Arctic Archipelago*: Descriptions, Illustrations, Identification, and Information Retrieval. Version: 10th December 2001. http://www.mun.ca/biology/delta/arcticf/'.

*Arctic Geobotanical Atlas*. 2007. Alaska Geobotany Centre.
bsite: www.arcticatlas.org (accessed 20 Feb. 2007). Institute of Arctic Biology, University of Alaska Fairbanks, Alaska.

Argus, G.W., C.L. McJannet and M.J. Dallwitz (1999 onwards). '*Salicaceae of the Canadian Arctic Archipelago*: Descriptions, Illustrations, Identification, and Information Retrieval.' Version: 2nd November 2000. http://http://www.mun.ca/biology/delta/arcticf/.

Burt, Page M. 2008. Unusual willow thicket along proposed rail alignment south of Cockburn Lake. Knight Piésold Memo, File NB102-181/11-A.01, Sept. 26, 2008.

Burt, Page M. 2002. *Vegetation Baseline Studies Report, 2002. Meadowbank Gold Project, Cumberland Resources.* Outcrop Nunavut, Iqaluit, NU and Yellowknife, NT

Burt, Page M. 1999. *Final Report, 1998 Vegetation Baseline Studies, WMC International Ltd., Meliadine West Gold Project.* Prepared for WMC International Ltd. by Outcrop Nunavut, Rankin Inlet.

Consaul, L. 2007. Upcoming changes in taxonomy regarding *Hierochloe* and *Alopecurus*. Personal communication by email, November, 2007. (See notes in species list.)

Duclos, I., Lévesque, E., Gratton, D. and Bordelau, P.A. 2006. *Vegetation mapping of Bylot Island and Sirmilik National Park: Final report.* Unpublished report, Parks Canada, Iqaluit, Nunavut. 101pp.

Environment Canada. 2007. *Ecological Land Classification System.* A National Ecological Framework for Canada. State of the Environment Infobase. Accessed March 10, 2007 at http://www.ec.gc.ca/soer-ree/English/Framework/default.cfm

French, H.M. 1976. *The Periglacial Environment.* Longman, New York & London.

Gillett, J.M., L.L. Consaul, S.G. Aiken and M.J. Dallwitz (1999 onwards). '*Fabaceae of the Canadian Arctic Archipelago:* Descriptions, Illustrations, Identification, and Information Retrieval.' Version: 15th November 2000. http://http://www.mun.ca/biology/delta/arcticf/.

Jones, L.F. and G. Lonn. 1970. *Pathfinders of the North.* Pitt Publishing Co., Ltd., Toronto, ON. (Especially Chapter entitled "Baffin Bonanza", authored by Murray Watts. Photos of the Mary River area in this book are of historic interest for this project.)

Miller, G.H., Briner, J.P., Frechette, B., and A.S. Dyke. 2003. *Holocene glaciation and climate history of Baffin Island, Arctic Canada*. Paper No. 55-9 presented at Warm Times, Cold Times: Holocene Climate Variability in the North Atlantic Region. Geological Society of America, XVI INQUA Congress, Session No. 55. July 28, 2003.

Mowbray, T. B., Cooke, F., and B. Ganter. 2000 . Snow Goose (Chen caerulescens), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/514

Olthof, I., Latifovic, R. and Pouliot, D., 2008. Circa-2000 Northern Land Cover of Canada. Earth Sciences Sector, Canada Centre for Remote Sensing, Natural Resources Canada, Ottawa.

Polunin, N. 1948. *Botany of the Canadian Eastern Arctic. Part III. Vegetation and Ecology.* Bulletin 104, Biological Series No. 32. National Museum of Canada, Ottawa.

Porsild, A.E. 1951. *Plant life in the Arctic.* Canadian Geographic Journal. Reprint, 1951. National Museum of Canada. Ottawa, ON.

Porsild, A.E. 1980. *Vascular Plants of the Continental Northwest Territories*. National Museum of Canada, Ottawa, ON.

Porsild, A.E. 1957. *Illustrated flora of the Canadian Arctic Archipelago*. National Museum of Natural Sciences, National Museums of Canada. Bulletin No. 146. Ottawa, Ontario, Canada.

Sugden, D.E. and B.S. John. 1976. *Glaciers and Landscape*. Edward Arnold, division of Hodder & Stoughton, London.

Scott, P.J., Aiken, S.G., Boles, R.L., and Dallwitz, M.J. (1999 onwards). '*Ranunculaceae of the Canadian Arctic Archipelago*: Descriptions, Illustrations, Identification, and Information Retrieval.' Version: 6th November 2000. http://www.mun.ca/biology/delta/arcticf/.

Zoltai, S.C., McCormick, K.J. and Scotter, G.W. 1983. *A natural resource survey of Bylot Island and adjacent Baffin Island, Northwest Territories.* Parks Canada, Ottawa, Ontario, Canada.