Plant density measurements in ITEX and ARCSS plots at Barrow and Atqasuk, Alaska

This file contains meta-data for files:

2011 Barrow Atqasuk ITEX ARCSS 1x5 v2.txt
2012 Barrow Atqasuk ITEX ARCSS 1x5 v2.txt
2013 Barrow Atqasuk ITEX ARCSS 1x5 v2.txt
2014 Barrow Atqasuk ITEX ARCSS 1x5 v2.txt
2015 Barrow Atqasuk ITEX ARCSS 1x5 v1.txt
2016 Barrow Atqasuk ITEX ARCSS 1x5 v2.txt
2017 Barrow Atqasuk ITEX ARCSS 1x5 v1.txt

These files contain data representing the plant cover and counts of individuals in 5, 10" by 10" square subplots at Barrow and Atqasuk in a text tab delimited format. The 5 subplots were established in existing plots. These include 96 ITEX plots and a subset of 30 ARCSS grid plots in Barrow and 96 ITEX plots and a subset of 30 ARCSS grid plots in Atqasuk. The data presented were collected from 2011-20XX.

GENERAL INFORMATION

PI/DATA CONTACT= Hollister, Robert D
FUNDING SOURCE AWARD # = NSF 0856516, 1432277, 1504224
DATA COVERAGE = START: 2011; STOP: 20XX
PLATFORM/SITE = Barrow, Alaska (71°19'N 156°37'W);
Atqasuk, Alaska (70°29'N 157°25'W)
INSTRUMENT = 10 cm x 50 cm grid with five 10cm x 10 cm squares
DATA VERSION = 1.0, preliminary quality check only

DATA COLLECTION

The data were gathered by establishing 5 10 cm by 10 cm squares in each plot. In each square careful counting was done to determine the number of live individuals for all vascular plants. Counts were also made of juvenile individuals, diseased individuals, standing dead individuals, inflorescences and eaten individuals. There is some variation in how individuals were counted, depending on the species; for shrubs and mat forbs counts were branch tips, for all other counts were rosettes, tillers or clearly defined individuals.

In addition to individual counts, cover assessment was done for each square. The cover estimates were done using the same protocols as the Barrow Atqasuk NIMS Plant Cover data. The number given for cover refers to an estimation of cover using the following scale:

1: 1-10% cover
2: 11-20% cover
3: 21-30% cover
4: 31-40% cover
5: 41-50% cover
6: 51-60% cover

7: 61-70% cover
8: 71-80% cover
9: 81-80% cover
10: 91-100% cover

The cover assessment data include non-vascular plants and non-living material (bare ground, feces, etc). All standing dead cover is represented with one measurement (STADEA, see Data Details), so that cover of a given species refers to live cover. Due to the limitations of field identification many species were lumped into larger taxa.

Caveats

Individual counts reflect only individuals that are rooted in a given square. However, during the 2011 sampling there were some instances where overhanging branches were counted. Cover data includes overhanging leaves and branches since this measurement is taken by looking down at the square.

Some caution may be used when counting the juvenile individuals. The 2012 sampling revealed that some of the juvenile individuals were labeled incorrectly in 2011. Where this was obvious the 2011 data was corrected.

The level of taxonomic detail varied over time for non-vascular plants. The species data for non-vascular plants should be used with caution, the taxon name identified below delineates groups that are easily distinguished in the field. Vascular plants identification should be correct to species (although some caution may be necessary when multiple species occur within an identified complex at a plot).

DATA DETAILS

A listing of the plants (and other) identified in the field organized by:
type (G-ground, L-litter, N-nonvascular, V-vascular, X-other)

strType	strGroup	strTaxon	strTaxonName	strGenSpp	strDataGenSppName
G	Bare ground	BARGRO	Bare ground	BARGRO	Bare ground
G	Bare Ground	BARGRO	Bare ground	ROCKXX	Rock
L	Leaf Litter	LITTER	Leaf litter	LITTER	Leaf litter
N	Algae	NOSTOC	Nostoc	NOSTOC	Nostoc spp
N	Fungus	FUNGIX	Fungi spp	MUSHRO	Mushroom
N	Acrocarpous moss	ACRMOS	Acrocarpous moss	ACRMOS	Acrocarpous moss
N	Acrocarpous moss	BRYMNI	Bryum mnium complex	POHCRU	Pohlia cruda
N	Acrocarpous moss	ONCOPH	Oncophorus	ONCWAH	Oncophorus wahlenbergii
N	Acrocarpous moss	POLCOM	Polytrichum complex	POLALP	Polytrichum alpinum
N	Acrocarpous moss	RACOMI	Racomitrium	RACLAN	Racomitrium lanuginosum
N	Pleurocarpous moss	DRECOM	Drepanocladus complex	DREBAD	Drepanocladus badius
N	Pleurocarpous moss	DRECOM	Drepanocladus complex	DREREV	Drepanocladus revolvens
N	Pleurocarpous moss	HYLOCO	Hylocomium	HYLSPL	Hylocomium splendens
N	Pleurocarpous moss	PLEMOS	Pleurocarpous moss	PLEMOS	Pleurocarpous moss

N	Sphagnum moss	SPHAGN	Sphagnum	SPHMOS	Sphagnum moss
N	Sphagnum moss	SPHAGN	Sphagnum	SPHSPP	Sphagnum moss
N	Leafy liverwort	LEALIV	Leafy liverwort	BLACRU	Black organic crust
N	Leafy liverwort	LEALIV	Leafy liverwort	BLAGRO	Black ground
N	Leafy liverwort	LEALIV	Leafy liverwort	LEALIV	Leafy liverwort
N	Leafy liverwort	LEALIV	Leafy liverwort	LEAMOS	Leafy liverwort
N	Leafy liverwort	PTILID	Ptilidium	PTICIL	Ptilidium ciliare
N	Thalloid liverwort	ANEURA	Aneura	ANEPIN	Aneura pinguis
N	Thalloid liverwort	THALIV	Thalloid liverwort	THALIV	Thalloid liverwort
N	Thalloid liverwort	THAMOS	Thallus moss	THAMOS	Thallus moss
N	Crustose lichen	CRULIC	Crustose lichen	CALSPP	Caloplaca species
N	Crustose lichen	CRULIC	Crustose lichen	CRULIC	Crustose lichen
N	Crustose lichen	PERUSA	Pertusariaceae complex	GRECRU	Grey organic crust
N	Crustose lichen	PERUSA	Pertusariaceae complex	OCHSPP	Ochrolechia species
N	Crustose lichen	PERUSA	Pertusariaceae complex	WHICRU	White organic crust
N	Crustose lichen	PSOHYP	Psoroma hypnorum	PSOHYP	Psoroma hypnorum
N	Foliose lichen	CETCUC	Cetraria cucullata complex	ASACHR	Asahinea chrysantha
N	Foliose lichen	CETCUC	Cetraria cucullata complex	CETCUC	Cetraria cucullata
N	Foliose lichen	CETCUC	Cetraria cucullata complex	CETNIV	Cetraria nivalis
N	Foliose lichen	CETISL	Cetraria islandica complex	CETDEL	Cetraria delisei
N	Foliose lichen	CETISL	Cetraria islandica complex	CETISL	Cetraria islandica
N	Foliose lichen	CETISL	Cetraria islandica complex	CETLAE	Cetraria laevigata
N	Foliose lichen	CETISL	Cetraria islandica complex	CETRIC	Cetraria richardsonii
N	Foliose lichen	CETUNI	Cetraria unidentified	CETSPP	Cetraria species
N	Foliose lichen	NEPSPP	Nephroma species	NEPSPP	Nephroma species
N	Foliose lichen	PARMEL	Parmelia complex	HYPRUG	Hypogymnia rugosa
N	Foliose lichen	PARMEL	Parmelia complex	HYPSUB	Hypogymnia subobscura
N	Foliose lichen	PARMEL	Parmelia complex	PAROMP	Parmelia omphalodes
N	Foliose lichen	PARMEL	Parmelia complex	PARSKU	Parmelia skultii
N	Foliose lichen	PELCOM	Peltigera complex	BROPEL	Brown peltigera
N	Foliose lichen	PELCOM	Peltigera complex	GREPEL	Grey peltigera
N	Foliose lichen	PELCOM	Peltigera complex	LOBLIN	Lobaria linita
N	Foliose lichen	PELCOM	Peltigera complex	PELAPH	Peltigera aphthosa
N	Foliose lichen	PELCOM	Peltigera complex	PELCAN	Peltigera canina
N	Foliose lichen	PELCOM	Peltigera complex	PELMAL	Peltigera malacea
N	Foliose lichen	PELCOM	Peltigera complex	PELRUF	Peltigera rufescens
N	Foliose lichen	STRARC	Sticta arctica	STRARC	Sticta arctica
N	Fruticose lichen	ALECOM	Alectoria complex	ALENIG	Alectoria nigricans
N	Fruticose lichen	ALECOM	Alectoria complex	ALEOCH	Alectoria ochroleuca
N	Fruticose lichen	ALECOM	Alectoria complex	CORDIV	Cornicularia divergens
N	Fruticose lichen	CLACOM	Cladonia complex	CLAAMA	Cladonia amaurocraea
N	Fruticose lichen	CLACOM	Cladonia complex	CLACOC	Cladonia coccifera
N	Fruticose lichen	CLACOM	Cladonia complex	CLACOR	Cladonia cornuta
N	Fruticose lichen	CLACOM	Cladonia complex	CLACRU	Cladonia crustose

N	Fruticose lichen	CLACOM	Cladonia complex	CLAGRA	Cladonia gracilis
N	Fruticose lichen	CLACOM	Cladonia complex	CLAMIT	Cladina mitis
N	Fruticose lichen	CLACOM	Cladonia complex	CLAPYX	Cladonia pyxidata
N	Fruticose lichen	CLACOM	Cladonia complex	CLASPP	Cladonia species
N	Fruticose lichen	CLACOM	Cladonia complex	CLASQU	Cladonia squasmosa
N	Fruticose lichen	CLACOM	Cladonia complex	CLAUNC	Cladonia uncialis
N	Fruticose lichen	CLADINA	Cladina complex	CLARAN	Cladina rangiferina
N	Fruticose lichen	DACTYL	Dactylina	DACARC	Dactylina arctica
N	Fruticose lichen	SIPHUL	Siphula	SIPCER	Siphula ceratites
N	Fruticose lichen	SPHAER	Sphaerophorus	SPOFRA	Sphaerophorus fragilis
N	Fruticose lichen	SPHAER	Sphaerophorus	SPOGLO	Sphaerophorus globosus
N	Fruticose lichen	STEREO	Stereocaulon	STEALP	Stereocaulon alpinum
N	Fruticose lichen	STEREO	Stereocaulon	STESPP	Stereocaulon species
N	Fruticose lichen	THAMNO	Thamnolia	THASUB	Thamnolia subuliformis
V	Deciduous Shrub	BETNAN	Betula nana	BETNAN	Betula nana
V	Deciduous Shrub	SALPHL	Salix phlebophylla	SALPHL	Salix phlebophylla
V	Deciduous Shrub	SALPOL	Salix polaris	SALPLR	Salix polaris
V	Deciduous Shrub	SALPUL	Salix pulchra	SALPUL	Salix pulchra
V	Deciduous Shrub	SALROT	Salix rotundifolia	SALROT	Salix rotundifolia
V	Evergreen Shrub	ANDPOL	Andromeda polifolia	ANDPOL	Andromeda polifolia
V	Evergreen Shrub	CASTET	Cassiope tetragona	CASTET	Cassiope tetragona
V	Evergreen Shrub	DIALAP	Diapensia lapponica	DIALAP	Diapensia lapponica
V	Evergreen Shrub	EMPNIG	Empetrum nigrum	EMPNIG	Empetrum nigrum
V	Evergreen Shrub	LEDPAL	Ledum palustre	LEDPAL	Ledum palustre
V	Evergreen Shrub	VACVIT	Vaccinium vitis-idaea	VACVIT	Vaccinium vitis-idaea
V	Forb	DRALAC	Draba lactea	DRALAC	Draba lactea
V	Forb	DRAMIC	Draba micropetala	DRAMIC	Draba micropetala
V	Forb	CARPRA	Cardamine pratensis	CARPRA	Cardamine pratensis
V	Forb	PAPHUL	Papaver hultenii	PAPHUL	Papaver hultenii
V	Forb	PETFRI	Petasites frigidus	PETFRI	Petasites frigidus
V	Forb	PETFRI	Petasites frigidus	PETHYP	Petasites hyperboreus
V	Forb	POLBIS	Polygonum bistorta	POLBIS	Polygonum bistorta
V	Forb	POLVIV	Polygonum viviparum	POLVIV	Polygonum viviparum
V	Forb	POTHYP	Potentilla hyparctica	POTHYP	Potentilla hyparctica
V	Forb	PYRGRA	Pryola grandiflora	PYRGRA	Pyrola grandiflora
V	Forb	RANNIV	Ranunculus nivalis	RANNIV	Ranunculus nivalis
V	Forb	RANPAL	Ranunculus pallasii	RANPAL	Ranunculus pallasii
V	Forb	RANPYG	Ranunculus pygmaeus	RANPYG	Ranunculus pygmaeus
V	Forb	RUBCHA	Rubus chamaemorus	RUBCHA	Rubus chamaemorus
V	Forb	SAXHIR	Saxifraga hirculus	SAXHIR	Saxifraga hirculus
V	Forb	SAXPUN	Saxifraga punctata	SAXPUN	Saxifraga punctata
V	Forb	SENATR	Senecio atropurpureus	SENATR	Senecio atropurpureus
V	Forb	CERAST	Cerastium	CERBEE	Cerastium beeringianum
V	Forb	MINOBT	Minuartia obtusiloba	MINOBT	Minuartia obtusiloba

V	Forb	STELLA	Stellaria	STEHUM	Stellaria humifusa
V	Forb	STELLA	Stellaria	STELAE	Stellaria laeta
V	Forb	ANTFRI	Antennaria friesiana	ANTFRI	Antennaria friesiana
V	Forb	CHRTET	Chrysosplenium tetrandrum	CHRTET	Chrysosplenium tetrandrur
V	Forb	COCOFF	Cochlearia officinalis	COCOFF	Cochlearia officinalis
V	Forb	OXYDIG	Oxyria digyna	OXYDIG	Oxyria digyna
V	Forb	PEDKAN	Pedicularis kanei	PEDKAN	Pedicularis kanei
V	Forb	PEDLAP	Pedicularis lapponica	PEDLAP	Pedicularis lapponica
V	Forb	PEDSUD	Pedicularis sudetica	PEDSUD	Pedicularis sudetica
V	Forb	SAXCER	Saxifraga cernua	SAXCER	Saxifraga cernua
V	Forb	SAXFOL	Saxifraga foliolosa	SAXFOL	Saxifraga foliolosa
V	Forb	SAXHIE	Saxifraga hieracifolia	SAXHIE	Saxifraga hieracifolia
V	Graminoid	LUZARC	Luzula arctica	LUZARC	Luzula arctica
V	Graminoid	LUZCON	Luzula confusa	LUZCON	Luzula confusa
V	Graminoid	LUZWAH	Luzula wahlenbergii	LUZWAH	Luzula wahlenbergii
V	Graminoid	ALOALP	Alopecurus alpinus	ALOALP	Alopecurus alpinus
V	Graminoid	ARCFUL	Arctophila fulva	ARCFUL	Arctophila fulva
V	Graminoid	ARCLAT	Arctagrostis latifolia	ARCLAT	Arctagrostis latifolia
V	Graminoid	CARAQU	Carex aquatilis complex	CARAQU	Carex aquatilis
V	Graminoid	CARAQU	Carex aquatilis complex	CARRAR	Carex rariflora
V	Graminoid	CARAQU	Carex aquatilis complex	CARROT	Carex rotundata
V	Graminoid	CARAQU	Carex aquatilis complex	CARSAX	Carex saxatilis
V	Graminoid	CARAQU	Carex aquatilis complex	CARSTA	Carex stans
V	Graminoid	CARAQU	Carex aquatilis complex	CARSUB	Carex subspathacea
V	Graminoid	CARBIG	Carex bigelowii	CARBIG	Carex bigelowii
V	Graminoid	DUPFIS	Dupontia fisheri	DUPFIS	Dupontia fisheri
V	Graminoid	DUPFIS	Dupontia fisheri	DUPPSI	Dupontia psilosantha
V	Graminoid	ERIANG	Eriophorum angustifolium	ERIANG	Eriophorum angustifolium
V	Graminoid	ERIANG	Eriophorum angustifolium	ERITRI	Eriophorum triste
V	Graminoid	ERIRUS	Eriophorum russeolum complex	ERIRUS	Eriophorum russeolum
V	Graminoid	ERIVAG	Eriophorum vaginatum	ERIVAG	Eriophorum vaginatum
V	Graminoid	HIEALP	Hierochloe alpina	HIEALP	Hierochloe alpina
V	Graminoid	JUNBIG	Juncus biglumis	JUNBIG	Juncus biglumis
V	Graminoid	POACEA	Poaceae complex	CALHOL	Calamagrostis holmii
V	Graminoid	POACEA	Poaceae complex	HIEPAU	Hierochloe pauciflora
V	Graminoid	POACEA	Poaceae complex	POAARC	Poa arctica
V	Graminoid	POACEA	Poaceae complex	POAVIV	Poa viviparum
V	Graminoid	TRISPI	Trisetum spicatum	TRISPI	Trisetum spicatum
X	Other	CHABAS	Flux chamber base	CHABAS	Chamber base
X	Other	FEATHE	Bird feather	FEATHE	Bird feather
X	Other	GLOVES	Gloves	GLOVES	Gloves
X	Other	PLATAG	Plant tag	CARPEN	Carex pen
X	Other	PLATAG	Plant tag	CASTAG	Cassiope tag

X	Other	PLATAG	Plant tag	SALPEN	Salix pen
x	Other	PLATAG	Plant tag	SALTAG	Salix tag
X	Other	POITAG	Point frame tag	TAGTAG	Point frame tag
X	Other	POOBIR	Bird poop	BIRPOO	Bird poop
X	Other	POOBIR	Bird poop	POOBIR	Bird poop
X	Other	POOCAR	Caribou poo	CARPOO	Cariboo poo
X	Other	POOCAR	Caribou poo	POOCAR	Caribou poop
X	Other	POOGOO	Goose poo	GOOPOO	Goose poop
X	Other	POOGOO	Goose poo	POOGOO	Goose poop
X	Other	POOLEM	Lemming poo	LEMPOO	Lemming poop
X	Other	POOLEM	Lemming poo	POOLEM	Lemming poop
X	Other	POOOWL	Owl pellet	OWLPEL	Owl pellet
X	Other	POOPTA	Ptarmigan poo	POOPTA	Ptarmigan poop
X	Other	STADEA	Standing dead plants	STADEA	Standing dead plants
X	Other	UNKNOW	Unknown plant	UNKNOW	Unknown plant
X	Other	WATERO	Water	WATERO	Water

DATA FORMAT

All string data within a column contain the same number of characters. The meaning of each character is defined at each position by stating the length of the identifier with a numeric and placing all the data codes used within parentheses directly after the numeric. For example:
strYear - year of recording 4(2010, 2012, 2013, 2014, 2015, 2016, 2017)
The above example describes a column that represents the year the data was recorded, it is string data that is always four characters in length and the only data codes used are 2010, 2012, 2013, 2014, 2015, 2016, 2017.
Numeric data have differing lengths based on data type.

COLUMN DESCRIPTIONS

strSite – location and community type
    Location 1(A=Atqasuk, B=Barrow)
    Community 1(D=Dry Heath, W=Wet Meadow, G=ARCSS grid)
strYear – year of sampling
    Year 4(2010, 2012, 2013, 2014, 2015)
strTreat – treatment type
    Treatment 1(C=Control, E=Open Top Chamber)
strIdLo2 – plot community, ID and location
    Location and Community 2(see above)
    Treatment 1(see above)
    Plot 3(1-Alphabetic, 2-Numeric)
strSubplot – sampling subplots
    1 (A-E)
strTaxon – Taxon code
    Code 6(see listing in previous section)
strGenSpp – Genus species code

Code 6(see listing in previous section)
numCover – cover estimate (see listing in previous section)
numLive – count of live individuals
numDead – count of dead individuals still standing
numJuv – count of juvenile individuals
numInflo – count of inflorescences
numDisease – count of diseased individuals
numEaten – count of eaten individuals

NOTE

0 may indicate no structure appeared
-999.9 indicates missing data