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Plant community composition in the ARCSS grid at Barrow and Atqasuk, Alaska

This file contains meta-data for files:

- 2010 Barrow Atqasuk ARCSS Plant Community v1.txt
- 2012 Barrow Atqasuk ARCSS Plant Community v1.txt
- 2013 Barrow Atqasuk ARCSS Plant Community v1.txt
- 2014 Barrow Atqasuk ARCSS Plant Community v1.txt
- 2015 Barrow Atqasuk ARCSS Plant Community v1.txt
- 2016 Barrow Atqasuk ARCSS Plant Community v1.txt
- 2017 Barrow Atqasuk ARCSS Plant Community v1.txt
- 2018 Barrow Atqasuk ARCSS Plant Community v1.txt
- 2019 Barrow Atqasuk ARCSS Plant Community v1.txt
- 2021 Barrow ARCSS Plant Community v1.txt

These files contain data representing the plant community composition and structure of ARCSS grid plots at Utqiagvik (formerly Barrow) and Atqasuk in a text tab delimited format. The 2010, 2013, 2016, and 2019 data were collected on all plots that were not under water: 98 plots at Barrow and 88 plots at Atqasuk. The 2012, 2014, 2015, 2017, and 2018 data were only collected on a subset of 30 plots at Utqiagvik and 30 plots at Atqasuk, and the 2021 data were only collected on a subset of 30 plots at Utqiagvik.

GENERAL INFORMATION

PI/DATA CONTACT= Hollister, Robert D
FUNDING SOURCE AWARD # = NSF 0856516, 1432277, 1504224, 1836839
DATA COVERAGE = START: 2010; STOP: 20XX
PLATFORM/SITE = Utqiagvik, Alaska (71°19'N 156°37'W);
Atqasuk, Alaska (70°29'N 157°25'W)
INSTRUMENT = Point Frame with 100 points
DATA VERSION = 1.0, preliminary quality check only

CONTACT INFORMATION

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DATA COLLECTION

The data were gathered by placing a Point Frame over each plot and recording the plant species at each location. The height of the species was recorded relative to the ground at that location. The grids were spaced 7 cm apart and started at 3.5 cm from the edge of the square 70 cm frame.

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All hits and all the species that were encountered were recorded. Occasionally it was difficult to distinguish which species was on the ground because there were several intertwined individuals. Therefore preference was given to vascular plants, then lichens, and then mosses. Due to the limitations of field identification many species were lumped into larger taxa.

Caveats

The taxa provided are relatively robust, however given the difficulty of field identification during sampling we provide the secure taxon that we are confident in. Note that the field identification did lump bryophytes and lichens into relatively easily recognizable groups. Although the data were preliminarily quality checked for errors, the vast volume of the data collected clearly ensures that there are remaining errors.

DATA DETAILS

A listing of the taxon code, taxon name, and raw GenSpp code and name recorded in the field

strTaxon	strTaxonName	strGenSpp	strDataGenSppName
ACRMOS	Acrocarpous moss	ACRMOS	Acrocarpous moss
ALECOM	Alectoria complex	ALENIG	Alectoria nigricans
		ALEOCH	Alectoria ochroleuca
		CONDIV	Conicularia divergens
		CORDIV	Cornicularia divergens
ALGSPP	Algae species	ALGSPP	Algae species
ALOALP	Alopecurus alpinus	ALOALP	Alopecurus alpinus
ANDPOL	Andromeda polifolia	ANDPOL	Andromeda polifolia
ANEURA	Aneura	ANEPIN	Aneura pinguis
		ANEURA	Aneura species
ARCFUL	Arctophila fulva	ARCFUL	Arctophila fulva
ARCLAT	Arctagrostis latifolia	ARCLAT	Arctagrostis latifolia
AULACO	Aulacomnium	AULPAL	Aulacomnium palustre
		AULTUR	Aulacomnium turgidum
BARGRO	Bare ground	BARGRO	Bare ground
BARTRA	Bartramia	BARITH	Bartramia ithyphylla
BETNAN	Betula nana	BETNAN	Betula nana
BRACHY	Brachythecium	BRATUR	Brachythecium turgidum
BRYCAP	Bryum capillare	BRYCAP	Bryum capillare
BRYMNI	Bryum mniium complex	BRYMNI	Bryum mniium
		BRYSP	Bryum species
		CINLAT	Cinclidium latifolium
		PLAELL	Plagiomnium ellipticum
		POHCRU	Pohlia cruda
CALLIE	Calliergon	CALGIG	Calliergon giganteum
		CALLIE	Calliergon species
		CALSAR	Calliergon sarmentosum

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strTaxon	strTaxonName	strGenSpp	strDataGenSppName
CAMPYL	Campylium	CAMSTE	Campylium stellatum
CARAQU	Carex aquatilis complex	CARAQU	Carex aquatilis
		CARRAR	Carex rariflora
		CARROT	Carex rotundata
		CARSTA	Carex stans
		CARSUB	Carex subspathacea
CARBIG	Carex bigelowii	CARBIG	Carex bigelowii
CARPRA	Cardamine pratensis	CARPRA	Cardamine pratensis
CASTET	Cassiope tetragona	CASTET	Cassiope tetragona
CERAST	Cerastium	CERBEE	Cerastium beeringianum
CETCUC	Cetraria cucullata complex	CETCUC	Cetraria cucullata
		CETNIV	Cetraria nivalis
CETISL	Cetraria islandica complex	CETDEL	Cetraria delisei
		CETISL	Cetraria islandica
		CETLAE	Cetraria laevigata
		CETRIC	Cetraria richardsonii
CETUNI	Cetraria unidentified	CETSPP	Cetraria species
CHRTET	Chrysosplenium tetrandrum	CHRTET	Chrysosplenium tetrandrum
CLACOM	Cladonia complex	CLAAMA	Cladonia amaurocraea
		CLACOC	Cladonia coccifera
		CLACOR	Cladonia cornuta
		CLACRU	Cladonia crustose
		CLAGRA	Cladonia gracilis
		CLAMIT	Cladina mitis
		CLAPYX	Cladonia pyxidata
		CLASPP	Cladonia species
		CLASQU	Cladonia squasmosa
		CLAUNC	Cladonia uncialis
CLADINA	Cladina complex	CLARAN	Cladina rangiferina
COCOFF	Cochlearia officinalis	COCOFF	Cochlearia officinalis
CONOST	Conostomum	CONTET	Conostomum tetragonum
CRULIC	Crustose lichen	CRULIC	Crustose lichen
DACTYL	Dactylina	DACARC	Dactylina arctica
DICCOM	Dicranum complex	DICACU	Dicranum acutifolium
		DICCOM	Dicranum species
		DICELO	Dicranum elongatum
		DICNEL	Dicranella species
		DICRAN	Dicranella species
		DICSPA	Dicranum spadiceum
		DICSPP	Dicranum species
		DISCAP	Distichium capillaceum
		DISINC	Distichium inclinatum

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strTaxon	strTaxonName	strGenSpp	strDataGenSppName
DRALAC	Draba lactea	DRALAC	Draba lactea
DRAMIC	Draba micropetala	DRAMIC	Draba micropetala
DRECOM	Drepanocladus complex	DREBAD	Drepanocladus badius
		DREREV	Drepanocladus revolvens
		DREUNC	Drepanocladus uncinatus
DUPFIS	Dupontia fisheri	DUPFIS	Dupontia fisheri
		DUPPSI	Dupontia psilosantha
EMPNIG	Empetrum nigrum	EMPNIG	Empetrum nigrum
EQUIPM	Equipment	CORNER	Frame corner
ERIANG	Eriophorum angustifolium	ERIANG	Eriophorum angustifolium
		ERITRI	Eriophorum triste
ERIRUS	Eriophorum russeolum complex	ERIRUS	Eriophorum russeolum
ERIVAG	Eriophorum vaginatum	ERIVAG	Eriophorum vaginatum
FEATHE	Bird feather	FEATHE	Bird feather
FOXPOO	Fox poo	FOXPOO	Fox poop
FUNGIX	Fungi spp	MUSHRO	Mushroom
HIEALP	Hierochloe alpina	HIEALP	Hierochloe alpina
HYLOCO	Hylocomium	HYLSPL	Hylocomium splendens
JUNBIG	Juncus biglumis	JUNBIG	Juncus biglumis
LEALIV	Leafy liverwort	ANASAX	Anastrophyllum saxicola
		ANASPP	Anastrophyllum species
		ANASTR	Anastrophyllum species
		BLACRU	Black organic crust
		BLAGRO	Black ground
		BLETRI	Blepharostoma trichophyllum
		GYMINF	Gymnocolea inflata
		GYMNOM	Gymnomitrium Species
		GYMSPP	Gymnomitrium Species
		HEPATI	Hepatic leafy
		LEALIV	Leafy liverwort
		LIVLEA	Leafy liverwort
		LOPHOZ	Lophozia
LEDPAL	Ledum palustre	LEDPAL	Ledum palustre
LITTER	Leaf litter	LITTER	Leaf litter
LLOSER	Lloydia serotina	LLOSER	Lloydia serotina
LUZARC	Luzula arctica	LUZARC	Luzula arctica
LUZCON	Luzula confusa	LUZCON	Luzula confusa
LUZWAH	Luzula wahlenbergii	LUZWAH	Luzula wahlenbergii
MEESIA	Meesia	MEETRI	Meesia triquetra
MELAPE	Melandrium apetalum	MELAPE	Melandrium apetalum
ONCOPH	Oncophorus	ONCSPP	Oncophorus species

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strTaxon	strTaxonName	strGenSpp	strDataGenSppName
		ONCWAH	Oncophorus wahlenbergii
OXYDIG	Oxyria digyna	OXYDIG	Oxyria digyna
PARMEL	Parmelia complex	HYP SUB	Hypogymnia subobscura
		PAROMP	Parmelia omphalodes
PEDKAN	Pedicularis kanei	PEDKAN	Pedicularis kanei
PEDLAP	Pedicularis lapponica	PEDLAP	Pedicularis lapponica
PEDSUD	Pedicularis sudetica	PEDSUD	Pedicularis sudetica
PELCOM	Peltigera complex	LOBLIN	Lobaria linita
		PELAPH	Peltigera aphthosa
		PELCAN	Peltigera canina
		PELLEU	Peltigera leucophlebia
		PELMAL	Peltigera malacea
		PELRUF	Peltigera rufescens
		PELTIG	Peltigera species
		PELVEN	Peltigera venosa
PERUSA	Pertusariaceae complex	GRECRU	Grey organic crust
		OCHSPP	Ochrolechia species
		ORACRU	Orange crust
		PERSPP	Pertusaria species
		WHICRU	White organic crust
PETFRI	Petasites frigidus	PETFRI	Petasites frigidus
		PETHYP	Petasites hyperboreus
POACEA	Poaceae complex	CALHOL	Calamagrostis holmii
		FESBRA	Festuca brachyphylla
		HIEPAU	Hierochloe pauciflora
		POAARC	Poa arctica
		POAVIV	Poa viviparum
POITAG	Point frame tag	TAGTAG	Point frame tag
POLBIS	Polygonum bistorta	POLBIS	Polygonum bistorta
POLCOM	Polytrichum complex	POLALP	Polytrichum alpinum
		POLCOM	Polytrichum species
		POLJEN	Polytrichum jenseii
		POLPIL	Polytrichum piliferum
		POLSPP	Polytrichum species
		TIMAUS	Timmia austriaca
POLVIV	Polygonum viviparum	POLVIV	Polygonum viviparum
POOCAR	Caribou poo	CARPOO	Caribou poo
		POOCAR	Caribou poop
POOFOX	Fox poo	POOFOX	Fox poop
POOGOO	Goose poo	GOOPOO	Goose poop
POOLEM	Lemming poo	LEMPOO	Lemming poop
		POOLEM	Lemming poop

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strTaxon	strTaxonName	strGenSpp	strDataGenSppName
POOPTA	Ptarmigan poo	POOPTA	Ptarmigan poop
		PTAPOO	Ptarmigan poop
POTHYP	Potentilla hyparctica	POTHYP	Potentilla hyparctica
PSOHYP	Psoroma hypnorum	PSOHYP	Psoroma hypnorum
PTILID	Ptilidium	PTICIL	Ptilidium ciliare
PYRGRA	Pryola grandiflora	PYRGRA	Pyrola grandiflora
RACOMI	Racomitrium	RACLAN	Racomitrium lanuginosum
RANNIV	Ranunculus nivalis	RANNIV	Ranunculus nivalis
RANPAL	Ranunculus pallasii	RANPAL	Ranunculus pallasii
RANPYG	Ranunculus pygmaeus	RANPYG	Ranunculus pygmaeus
RHYTID	Rhytidium	RHYRUG	Rhytidium rugosum
RUBCHA	Rubus chamaemorus	RUBCHA	Rubus chamaemorus
SAEGLA	Saelania glaucescens	SAEGLA	Saelania glaucescens
SALPOL	Salix polaris	SALPLR	Salix polaris
SALPUL	Salix pulchra	SALPUL	Salix pulchra
SALROT	Salix rotundifolia	SALROT	Salix rotundifolia
SAXCER	Saxifraga cernua	SAXCER	Saxifraga cernua
SAXFOL	Saxifraga foliolosa	SAXFOL	Saxifraga foliolosa
SAXHIE	Saxifraga hieracifolia	SAXHIE	Saxifraga hieracifolia
SAXHIR	Saxifraga hirculus	SAXHIR	Saxifraga hirculus
SAXPUN	Saxifraga punctata	SAXPUN	Saxifraga punctata
SCAPAN	Scapania	SCAPAL	Scapania paludicola
SENATR	Senecio atropurpureus	SENATR	Senecio atropurpureus
SPHAER	Sphaerophorus	SPHFRA	Sphaerophorus fragilis
		SPHGLO	Sphaerophorus globosus
		SPOGLO	Sphaerophorus globosus
SPHAGN	Sphagnum	SPHCOM	Sphagnum compactum
		SPHIMB	Sphagnum imbricatum
		SPHSPP	Sphagnum moss
		SPHSQU	Sphagnum squarrosum
		SPHWAR	Sphagnum warnstorffii
STELLA	Stellaria	STEHUM	Stellaria humifusa
		STELAE	Stellaria laeta
STEREO	Stereocaulon	STEREO	Stereocaulon species
		STESPP	Stereocaulon species
STRARC	Sticta arctica	STRARC	Sticta arctica
THAMNO	Thamnia	THAMNO	Thamnia
		THASUB	Thamnia subuliformis
TOMENT	Tomenthypnum	TOMNIT	Tomenthypnum nitens
TRISPI	Trisetum spicatum	TRISPI	Trisetum spicatum
UNIBRY	Unidentified bryophyte	MOSSPP	Moss species
UNKNOW	Unknown plant	UNKNOW	Unknown plant

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strTaxon	strTaxonName	strGenSpp	strDataGenSppName
VACVIT	Vaccinium vitis-idaea	VACVIT	Vaccinium vitis-idaea
WATERO	Water	WATERO	Water

DATA FORMAT

The following prefixes have been used to designate data type.

str – indicates string (text) data

num – indicates numeric data

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, 2018, 2019, 2021)

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, 2018, 2019, 2021

COLUMN DESCRIPTIONS

strUTC - universal time constant (UTC)

year 4 (20XX)

month 2 (06-08)

day 2 (01-31)

strIdLo - the location of the recording

site 2 (BG=Barrow Grid, AG=Atqasuk Grid)

treatment 1 (C=Control)

plot 3 (Ex: F03)

strSite - site community

site 2 (see above)

numYear - the year of the recording

year 4 (20XX)

numJulian - Julian day of year

3 (001-365)

numMonth - month of the year

1 or 2 (1-12)

numNS - location of point along the North/South axis

numEW - location of point along the East/West axis

numHit - level of the hit

1 (1-7; most hits where only 1)

strType - type of hit

1 (A=Animal, F=Feces, G=Ground, H=Human, L=Litter,

N=Non vascular, U=Unknown, V=Vascular)

strBFun - broad functional type

4 (ALGA=Algae, BARE=Bare Ground, BRYO=Bryophyte, CHAM=Flux Chamber Base, DSHR=Woody deciduous, ESHR=Woody evergreen, FORB=Forb,

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FUNG=Fungus, GRAM=Graminoid, LICH=Lichen, LITT=Leaf Litter, MISS=Missing Data, PLTA=Plant Tag, POOP=Feces, POTA=Point Frame Tag, PROB=Probe)

strNFun - narrow functional group

4 (ACRO=Acrocarpous Moss, ALGA=Algae, BARE=Bare Ground, CAGR=Caespitose Graminoid, CHAM=Flux Chamber Base, CRUS=Crustose Lichen, CUFO=Cushion Forb, DESH=Deciduous Shrub, ERFO=Errect Forb, EVSH=Evergreen Shrub, FOLI=Foliose Lichen, FRUT=Fruticose Lichen, FUNG=Fungus, LEAF=Leafy liverwort, LITT=Leaf Litter, MAFO=Mat Forb, MISS=Missing Data, PLEU=Pleurocarpous Moss, PLTA=Plant Tag, POOP=Feces, POTA=Point Frame Tag, PROB=Probe, ROFO=Rossette Forb, SIGR=Single Graminoid, SPHA=Sphagnum Moss, THAL=Thalloid Liverwort, UNBR=Unidentified Bryophyte, UNGR=Unidentified Graminoid, UNLI=Unidentified Lichen)

strTaxon - taxon

6 (see listing above)

strStat - status

1 (A=Live, D=Dead, O=Other)

numHeight - height of the hit relative to the ground at that point (cm)

numGround - distance of the ground from the level point frame (cm)

NOTE

-999.9 - indicates missing data