

The header features the NASA EarthData logo on the left, followed by navigation links: Data Discovery, DAACs, Community, and Science Disciplines. The main banner displays the ORNL DAAC logo (Distributed Active Archive Center for Biogeochemical Dynamics) and the NASA logo on the right. Below the banner is a dark navigation bar with buttons for About Us, Get Data, Submit Data, Data Management, and Tools. A Sign in button is located in the top right corner.

[DAAC Home](#) > [Get Data](#) > [Field Campaigns](#) > [ABOVE](#) > Data Set Documentation

Pre-ABOVE: Arctic Vegetation Plots at Arrigetch Peaks, Alaska, 1978-1981

Get Data

Documentation Revision Date: 2016-12-09

Data Set Version: V1

Summary

This data set provides environmental and vegetation data collected between 1978 and 1981 from 439 study plots at Arrigetch Peaks research site, located in the Gates of the Arctic National Park and Preserve in the Endicott Mountains of the central Brooks Range, Alaska. Plots varied between 1 and 50 square meters in size and were located in 13 broad habitat types across the glaciated landscape. Environmental data include aspect, elevation, and cover of bare soil, rock, soil crust, and litter. Species data are described according to the Braun-Blanquet system. This product brings together for easy reference all the available information collected from the vegetation plots in the Arrigetch Peaks region of Alaska.

The data set includes 2 data files in *.csv format.

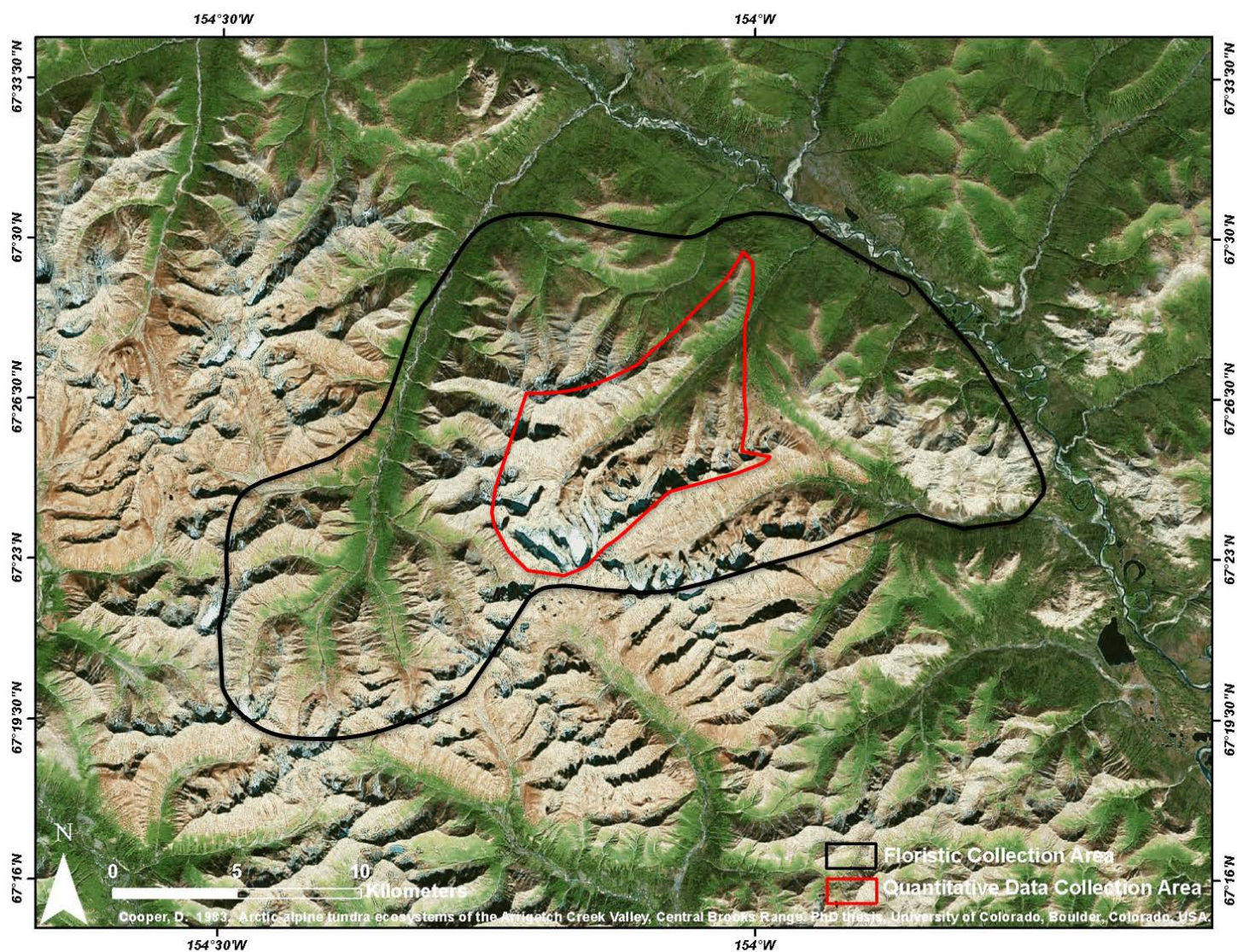


Figure 1. Extent of the Arrigetch Peaks study area mapped by D.J. Cooper

Citation

Cooper, D.J. 2016. Pre-ABOVE: Arctic Vegetation Plots at Arrigetch Peaks, Alaska, 1978-1981. ORNL DAAC, Oak Ridge, Tennessee, USA. <http://dx.doi.org/10.3334/ORNLDAAC/1358>

Table of Contents

1. [Data Set Overview](#)
2. [Data Characteristics](#)
3. [Application and Derivation](#)
4. [Quality Assessment](#)
5. [Data Acquisition, Materials, and Methods](#)
6. [Data Access](#)
7. [References](#)

1. Data Set Overview

This data set provides environmental and vegetation data collected between 1978 and 1981 from 439 study plots at Arrigetch Peaks research site, located in the Endicott Mountains of the central Brooks Range, Alaska. Plots varied between 1 and 50 square meters in size and were located in 13 broad habitat types across the glaciated landscape. Environmental data include aspect, elevation, and cover of bare soil, rock, soil crust, and litter. Species data are described according to the Braun-Blanquet system. This product brings together for easy reference all the available information collected from the plots in the Arrigetch Peaks region of Alaska. The Arrigetch Peaks are located in the Gates of the Arctic National Park and Preserve.

The Pre-ABOVE vegetation plot datasets were curated to create the Alaska Arctic Vegetation Archive (AVA-AK; Walker et al. 2016b, Walker 2013). The

AVA-AK is a regional database that is part of the larger Arctic Vegetation Archive (Walker 2016a, Walker et al. 2013, Walker and Reynolds 2011). The database contains vegetation plots from homogeneous plant communities with tables of cover or cover-abundance scores for all species, and accompanying environmental site data. Field data were collected using Braun-Blanquet, US National Vegetation Classification protocols, or comparable methods.

Project: Arctic-Boreal Vulnerability Experiment (ABOVE)

The [Arctic-Boreal Vulnerability Experiment](#) (ABOVE) is a NASA Terrestrial Ecology Program field campaign based in Alaska and western Canada between 2016 and 2021. Climate change in the Arctic and Boreal region is unfolding faster than anywhere else on Earth. ABOVE seeks a better understanding of the vulnerability and resilience of ecosystems and society to this changing environment.

Acknowledgements:

These data were obtained from the Alaska Arctic Geoecological Atlas (<http://agc.portal.gina.alaska.edu>), which provides access to existing Arctic vegetation plot and map data in support of the ABOVE campaign.

2. Data Characteristics

Spatial Coverage: plots at Arrigetch Peaks, central Brooks Range, Alaska

ABOVE Grid Location: Ah1v0.Bh0v3

Spatial Resolution: Point samples

Temporal Coverage: 19780101 - 19810430

Temporal Resolution: Each plot was sampled once

Site	Westernmost Longitude	Easternmost Longitude	Northernmost Latitude	Southernmost Latitude
Arrigetch Peaks, central Brooks Range, Alaska	-154.50	-154.217	67.55	67.267

Data File Information

The data set includes two data files in *.csv format -- *Arrigetch_Peaks_Environmental_Data* and *Arrigetch_Peaks_Species_Data*.

Table 1. Data files

Data File Name	Description
Arrigetch_Peaks_Environmental_Data.csv	Environmental characterization data for Arrigetch Peaks research plots
Arrigetch_Peaks_Species_Data.csv	Species cover data for Arrigetch Peaks research plots

Data Descriptions: The columns names, their units, and descriptions for each of the *.csv data files are listed below.

Table 2. Arrigetch_Peaks_Environmental_Data.csv

Column Name	Units	Description
FIELD_RELEVE_NUMBER		Plot number
TURBOVEG_ACCESSION_NUMBER		TURBOVEG plot number
PLANT_COMMUNITY_NAME		Primary vegetation types
ELEVATION	m	Elevation of the plots
ASPECT	deg	Aspect of the plots
SLOPE	deg	Slope of the plots
COVER_LITTER_LAYER	%	Percentage of litter layer cover in the plot
COVER_OPEN_WATER	%	Percentage of open water cover in the plot
COVER_ROCK	%	Percentage of rock cover in the plot
COVER_CRUST	%	Percentage of crust cover in the plot

COVER_BARE_SOIL	%	Percentage of bare soil cover in the plot
REMARKS		Field notes

Table 3. Arrigetch_Peaks_Species_Data.csv

Column Numbers	Column Name	Units	Description
1	PASL_TAXON_SCIENTIFIC_NAME_NO_AUTHORS		Current taxonomy according to the Panarctic Species List (PASL)
2	PASL_TAXON_SCIENTIFIC_NAME_WITH_AUTHORS		Current taxonomy according to the Panarctic Species List (PASL) including authors names
3	DATASET_TAXON		Dataset taxonomy
4 to 442	AUTHOR_PLOT_NUMBER (between 3 and 602)		Column headings are plot numbers recorded by Cooper (1983). The data values are Species Cover Classes (Braun-Blanquet cover-abundance scale): where r (rare), + (common, but less than 1% cover), 1 (1-5 percent), 2 (6 to 25%), 3 (25 to 50%), 4 (51 to 75%), 5 (76 to 100%).

3. Application and Derivation

Derived regional maps of these data will be used in regional models of fluxes of trace gases, water, and energy from tundra surfaces. In addition, a circumpolar vegetation classification resulting from these data sets would be highly desirable to extend the results to the entire arctic region.

4. Quality Assessment

No specific quality assessment information provided.

5. Data Acquisition, Materials, and Methods

The vegetation of Arrigetch Peaks was described and mapped by David J. Cooper for his PhD thesis (at University of Colorado) funded by the National Park Service. Located in the Endicott Mountains of the central Brooks Range, the vegetation of the Arrigetch Peaks is uniquely influenced by both latitude and altitude (Cooper 1986). A reconnaissance of the area was completed in 1976, while most of the data were collected between 1978-1980. The primary source documents for this data set are a PhD thesis (Cooper 1983) and a research paper (Cooper 1986).

Species Data

Both the author's determination and the current taxonomy according to the Panarctic Species List (PASL) are listed. Taxa are listed in alphabetical order according to the accepted PASL name. Species cover classes are in percentage. In one instance, taxa were lumped into a single taxon in the PASL: 1) *Cladonia stellaris* (*Cladonia stellaris* and *Cladonia aberrans*).

Species data are presented for 439 plots which include 5 orders, 10 alliances, and 49 associations that are described according to the Braun-Blanquet system (Westhoff and Maarel 1978). Plots were located in 13 broad habitat types including: aquatic wetlands (5 plots), wet tundra (17 plots), wet and late-lying mostly mossy snowbed communities (11 plots), moist to wet riparian shrublands and subalpine scrubland (59 plots), moist to wet alder shrublands (13 plots), moist to wet acidic dwarf-shrub tundra (58 plots), moist to dry low-shrub tundra on south-facing slopes (6 plots), moist nonacidic graminoid-dominated tundra (22 plots), dry graminoid and forb dominated communities (109 plots), dry acidic dwarf-shrub tundra (13 plots), dry dwarf-shrub snowbed communities (84 plots), dry to wet barrens, pioneering communities, crevice communities (28 plots), and other communities-Saxicolous lichen communities and moss communities on acidic rocks (17 plots).

Environmental Data

The plot numbers in the source data are the author's. Modifications to the source data include:

- due to the lack of location data, one latitude and longitude coordinate was entered for all the plots centered on the map provided in Cooper (1983),
- plant community names were either unpublished (Cooper 1983) or published (Cooper 1986) and documentation of any community changes are recorded in the 'Remarks' field,
- aspect was changed to nearest degree, and
- slope was entered as 0 where aspect was marked as -9999.

The size and shape of each plot was not standardized and plots were not permanently marked. Minimal areas of various communities were calculated using standard methods (Westhoff and Maarel 1978). Areas for communities dominated by cryptogams were 1 to 4 square meters, for grassy open communities plots were 16 to 36 square meters, and for communities with very widely scattered shrub coverage, plots were up to 50 square meters. Accurate geolocations for plots are not available, however a map of the study area (Cooper 1983) is presented in Figure 1. Environmental data collected include aspect, elevation, and cover of bare soil, rock, soil crust, and litter.

Data Source

This data set was provided by the GINA repository at <http://geobotanical.portal.gina.alaska.edu/catalogs/10177-alaska-arcticvegetation-archive-arrigetch-peaks>; access date 24 October 2016.

6. Data Access

These data are available through the Oak Ridge National Laboratory (ORNL) Distributed Active Archive Center (DAAC).

[Pre-ABOVE: Arctic Vegetation Plots at Arrigetch Peaks, Alaska, 1978-1981](#)

Contact for Data Center Access Information:

- E-mail: uso@daac.ornl.gov
- Telephone: +1 (865) 241-3952

7. References

Cooper, D. J. 1983. Arctic-alpine tundra ecosystems of the Arrigetch Creek valley, central Brooks Range, Alaska. PhD thesis, University of Colorado, USA.

Cooper, D. J. 1986. Arctic-alpine tundra vegetation of the Arrigetch Creek Valley, Brooks Range, Alaska. *Phytocoenologia* 14:467-555.

Westhoff V, E. Van Der Maarel. 1978. The Braun Blanquet approach. In Whittaker, R. H. (ed.), *Classification of Plant Communities*. The Hague: Junk, 297–399.



[Privacy Policy](#) | [Feedback](#) | [Help](#)



Home

About Us

Who We Are
Partners
User Working Group
Biogeochemical Dynamics
Data Citation Policy
News
Workshops

Get Data

Complete Data Set List
Search for Data
Field Campaigns
Validation
Regional/Global
Model Archive

Data Management

Plan
Manage
Archive
DAAC Curation
Submit Data

Tools

Data Search
Site Search
Search by DOI
WebGIS
SDAT
MODIS Land Subsets
THREDDS

Help

FAQs

Contact Us