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Arctic Vegetation Plots, Imnavait Creek, Alaska, 1984-1985

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Documentation Revision Date: 2018-05-03

Data Set Version: 1

Summary

This dataset provides environmental, soil, and vegetation data collected during the periods of August 1984 and August-September 1985 from 84 study plots at the Imnavait Creek research site. Imnavait Creek is located in a shallow basin at the foothills of the central Brooks Range. Data includes the baseline plot information for vegetation, soils, and site factors for the study plots subjectively located in 14 plant communities that occur in 19 broad habitat types across the glaciated landscape. Specific attributes include: dominant vegetation species, cover, indices, and biomass pools; soil chemistry, physical characteristics, moisture, and organic matter. This product brings together for easy reference all the available information collected from the plots that has been used for the classification, mapping, and analysis of geo-botanical factors in the Imnavait Creek region and across Alaska.

The dataset includes four data files in *.csv format and four companion files in *.pdf format

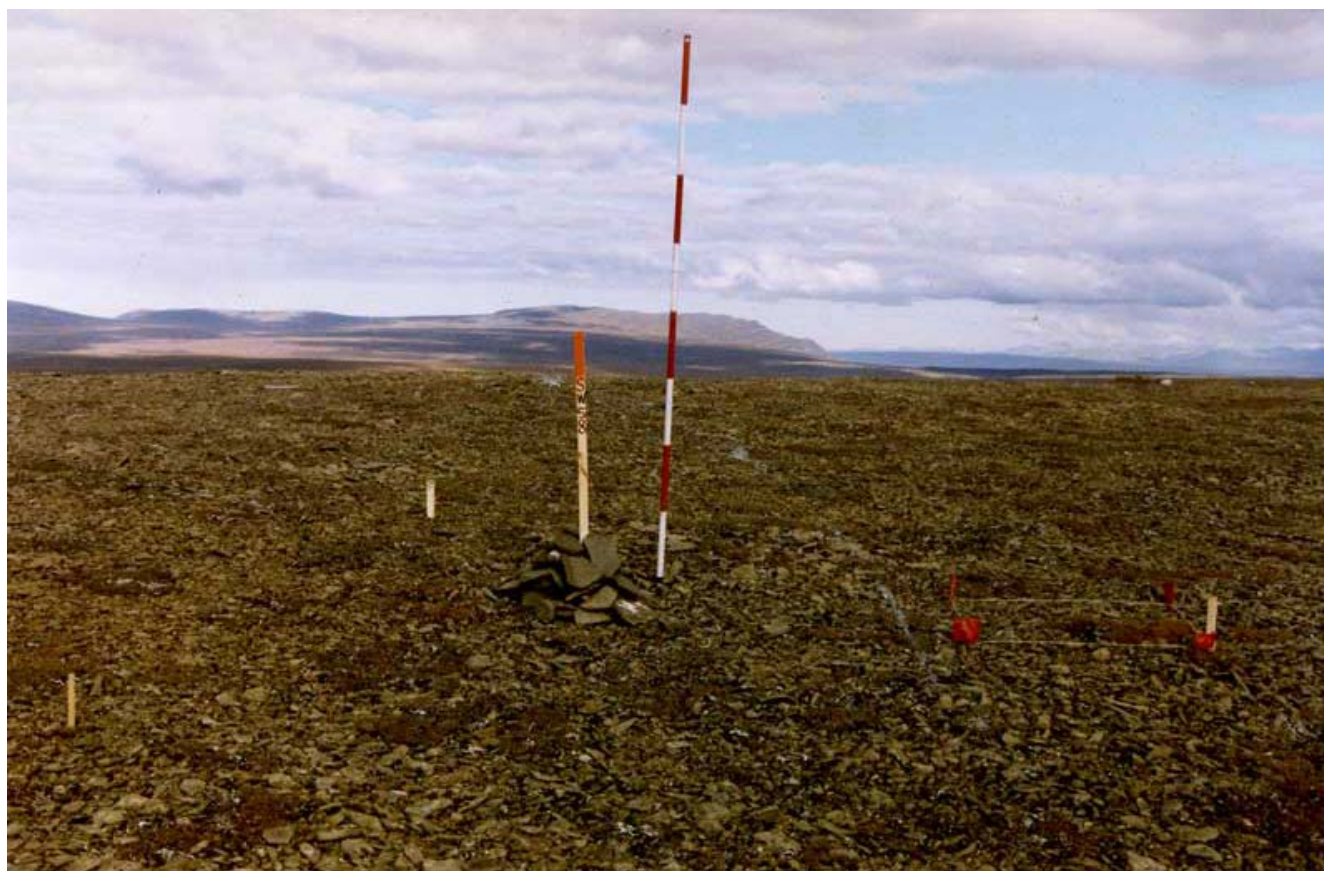


Figure 1: Imnavait Creek Permanent Vegetation Plot Layout at Plot SW-58.

Citation

Walker, D.A. 2018. Arctic Vegetation Plots, Imnavait Creek, Alaska, 1984-1985. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1356>

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1. Data Set Overview

This dataset is a summary of environmental, soil, and vegetation information collected from 84 study plots near Imnavait Creek, Alaska. Imnavait Creek is situated in a shallow basin at the foothills of the central Brooks Range and the Imnavait Creek vegetation area is located near the center of the Upper Kuparuk River region and encloses a 22-km² area northeast of Toolik Lake, close to the southern foothills of northern Alaska. The Dalton Highway and the trans-Alaska pipeline both pass nearby. Imnavait Creek was chosen as a study site as it provides a good representation of the southern foothills of the Brooks Range, a glaciated region characterized by rolling tundra plains interspersed with hills, knobs and low ridges. Data includes the baseline plot information for vegetation, soils, and site factors for the study plots subjectively located in 14 plant communities that occur in 19 broad habitat types across the glaciated landscape. Specific attributes include: dominant vegetation species, cover, indices, and biomass pools; soil chemistry, physical characteristics, moisture, and organic matter. This product brings together for easy reference all the available information collected from the plots that has been used for the classification, mapping, and analysis of geo-botanical factors in the Imnavait Creek region and across Alaska.

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 is a NASA Terrestrial Ecology Program field campaign that will take place 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 files were edited by Donald A. Walker, Amy L. Breen and Lisa A. Druckenmiller at the University of Alaska Fairbanks' Alaska Geobotany Center and obtained via the Arctic Geocological Atlas (<http://arcticatlas.geobotany.org/>), which provides access to existing Arctic vegetation plot and map data in support of the ABOVE campaign.

2. Data Characteristics

Spatial Coverage: Imnavait Creek, Alaska

ABOVE Grid Location: Ah1v0.Bh2v3

Spatial Resolution: Point samples

Temporal Coverage: 19840801 to 19850901

Temporal Resolution: Each plot was sampled once.

Study Area: (All latitude and longitude given in decimal degrees)

Site	Westernmost Longitude	Easternmost Longitude	Northernmost Latitude	Southernmost Latitude
Imnavait Creek, Alaska	-149.325283	-149.23	68.625	68.6

Data File Information: There are four data files with this dataset in comma-separated (.csv) format.

Table 1. Data and companion files

Data File Name	Description
Imnavait_Creek_Soil_Data.csv	Soil characterization data for Imnavait Creek research plots
Imnavait_Creek_Species_Data.csv	Species cover data for Imnavait Creek research plots
Imnavait_Creek_Environmental_Data.csv	Comprehensive set of environmental characterization data for Imnavait Creek research plots including the descriptive site factors. Most measurement data have been processed to provide values at a common 10 cm depth. This measurement comparability facilitates analysis of geo-botanical relationships across Alaska.
Imnavait_Creek_Spectral_Biomass_Data.csv	NDVI, LAI, iPAR and above ground biomass data for the Imnavait Creek Research plots

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

Table 2. Imnavait_Creek_Soil_Data.csv

Column Name	Units	Description
PLOT_NO		Plot number where the soil sample was collected
HORIZON		Soil horizon
DEPTH	CM	Depth of the soil layer. [Watch out -- opening this *.csv in Excel may cause some DEPTH values to be interpreted as dates. Import DEPTH as 'text'.]
WET_COLOR	MUNSELL	Color of wet soil in the soil sample following Munsell System of Color Notation
ORGANIC_MATTER	%	Percentage of organic matter in the soil sample
COARSE_GRAVEL	%	Percentage of coarse gravel in the soil sample
FINE_GRAVEL	%	Percentage of fine gravel in the soil sample
SAND	%	Percentage of sand in the soil sample
SILT	%	Percentage of silt in the soil sample
CLAY	%	Percentage of clay in the soil sample
TEXTURE		Texture of the soil in the soil sample
HYGROSCOPIC_MOISTURE	%	Hygroscopic moisture of the soil sample
BULK_DENSITY	G/CC	Bulk density of the soil sample
SOIL_PH		PH of the soil sample
CA_NH4OAC_EXTRACT	MEQ/100G	Extractable Ca in the soil sample
CA_NH4OAC_EXTRACT	MCG/G	Extractable Ca in the soil sample
MG_NH4OAC_EXTRACT	MEQ/100G	Extractable Mg in the soil sample
MG_NH4OAC_EXTRACT	MCG/G	Extractable Mg in the soil sample
K_NH4OAC_EXTRACT	MEQ/100G	Extractable K in the soil sample

K_NH4OAC_EXTRACT	MCG/G	Extractable K in the soil sample
NO3_KCL_EXTRACT	MCG/G	Extractable NO3 in the soil sample

Table 3. Imnavait_Creek_Spectral_Biomass_Data.csv

Column Name	Units	Description
SITE		Site Name
REPLICATE_SAMPLE		Combination of plot number and microsite
PLOT_NUMBER		Plot Number
MICROSITE_WITHIN_PLOT		Microsite description of the plots
PHYSISCAL_CATEGORY		Physiographic category code
PHYSICAL_CATEGORY_NAME		Physiographic category name
ACIDIC_NONACIDIC		Description of acidic/non-acidic
ALLIANCE_CODE		Vegetation alliance code
ALLIANCE_NAME		Vegetation alliance name
ASSOCIATION_CODE		Vegetation association code
ASSOCIATION_NAME		Vegetation association name
SUBASSOCIATION_CODE		Vegetation sub-association code
SUBASSOCIATION_NAME		Vegetation sub-association name
RED_BAND	%	Red/visible band
NIR_BAND	%	Near-infrared
SAVI		Soil adjusted vegetation index
NDVI		Normalized difference vegetation index
2ND_DERIV_AT_695NM		2nd Derivative at 695NM
2ND_DERIV_AT_743NM		2nd Derivative at 743 NM
TRANSMITTED	%	Percentage of transmitted radiation
IPAR	%	Percentage of incidental photosynthetically active radiation
0_58K_LAI		0.58K Leaf Area Index
0_65K_LAI		0.65K Leaf Area Index
0_61K_LAI		0.61K Leaf Area Index
MEAN_LAI		Average leaf area index
PLOT_AVERAGE_LAI		Average leaf area index for the plot
PLOT_AVERAGE_NDVI		Average NDVI for the plot
LIVE_GRAMINOID	G/SQUARE METER	Amount of live graminoid
DEAD_GRAMINOID	G/SQUARE METER	Amount of dead graminoid
LIVE_FORB	G/SQUARE METER	Amount of live forb
DEAD_FORB	G/SQUARE METER	Amount of dead forb
LIVE_DECIDUOUS_SHRUB	G/SQUARE METER	Amount of live deciduous shrub
DEAD_DECIDUOUS_SHRUB	G/SQUARE METER	Amount of dead deciduous shrub
WOODY_DECIDUOUS_SHRUB	G/SQUARE METER	Amount of woody deciduous shrub

LIVE_EVERGREEN_SHRUB	G/SQUARE METER	Amount of live evergreen shrub
DEAD_EVERGREEN_SHRUB	G/SQUARE METER	Amount of dead evergreen shrub
WOODY_EVERGREEN_SHRUB	G/SQUARE METER	Amount of woody evergreen shrub
SPHAGNUM	G/SQUARE METER	Amount of sphagnum
OTHER_MOSS	G/SQUARE METER	Amount of other types of moss
LICHENS	G/SQUARE METER	Amount of lichens
MISCELLANEOUS_DEAD	G/SQUARE METER	
ALGAE	G/SQUARE METER	Amount of algae
LIVE_EQUISETUM	G/SQUARE METER	Amount of live equisetum
DEAD_EQUISETUM	G/SQUARE METER	Amount of dead equisetum
AQUATIC_MOSS	G/SQUARE METER	Amount of aquatic moss
TOTAL_BIOMASS	G/SQUARE METER	Amount of total biomass
GREEN_BIOMASS_INCLUDING_LICHENS	G/SQUARE METER	Amount of green biomass including lichens
GREEN_BIOMASS_WITHOUT_LICHENS	G/SQUARE METER	Amount of green biomass excluding lichens

Table 4. Imnavait_Creek_Environmental_Data.csv

Note: Coded and scalar variables are followed by a description column (e.g., LANDFORM and LANDFORM_DESC). See the companion file *Imnavait_Creek_Env_Legend.pdf* for a complete list of coded and scalar variables and their descriptions.

Column Name	Units	Description
FIELD_PLOT_NUMBER		Field plot number
PLANT_COMMUNITY_NAME		Primary vegetation types
MICROSITE		Detailed description of microsite within the plots
DATE_SAMPLED	YYYYMMDD	Sampling date
LATITUDE	Decimal degrees	Latitude of the center of the plots
LONGITUDE	Decimal degrees	Longitude of the center of the plots
LANDFORM		Landform of the plots
LANDFORM_DESC		Description of landforms of the plots
TERRAIN_UNIT		Glacial geology of the plots
TERRAIN_UNIT_DESC		Description of glacial geology of the plots
SLOPE	Degrees	Slope of the plots
ASPECT	Degrees	Aspect of the plots
EXPOSURE		Exposure of the plots
EXPOSURE_DESC		Description of the exposure of the plots
SURFACE_FORM		Surficial geomorphology of the plots
SURFACE_FORM_DESC		Description of surficial geomorphology of the plots
MICROSITE_CODE		Microsite of the plots
MICROSITE_DESC		Description of microsite of the plots
COVER_OF_MICROSITE	%	Percentage of microsite cover in the plot
SITE_MOISTURE		Site moisture of the plots

SITE_MOISTURE_DESC		Description of the site moisture of the plots
ESTIMATED_SNOW_DURATION		Estimated snow duration within the plots
ESTIMATED_SNOW_DURATION_DESC		Description of estimated snow duration within the plots
SNOW_DEPTH	CM	Depth of snow within the plots
STABILITY		Stability of the plots
STABILITY_DESC		Description of stability of the plots
CRYOTURBATION	%	Cryoturbation within the plots
MICRORELIEF_HEIGHT	CM	Microrelief height of the plots
TUSSOCK_THAW_DEPTH	CM	Depth to Tussock permafrost of the plots
INTER_TUSSOCK_THAW_DEPTH	CM	Depth to Inter-Tussock permafrost of the plots
BARE_SOIL_COVER	%	Percentage of bare soil cover in the plot
ROCK_COVER	%	Percentage of rock cover in the plot
SOIL_TYPE		Soil units in the plot
SOIL_TYPE_DESC		Description of the soil units within the plot
SOIL_MOISTURE		Soil moisture content within the plots
SOIL_MOISTURE_DESC		Description of the soil moisture content within the plots
LOW_SHRUB_COVER	%	Percentage of low shrub cover in the plot
DWARF_SHRUB_COVER	%	Percentage of dwarf shrub cover in the plot
MEAN_SHRUB_HEIGHT	CM	Average shrub height within the plot in the plot
TUSSOCK_GRAMINOID_COVER	%	Percentage of Tussock graminoid cover in the plot
NON_TUSSOCK_GRAMINOID_COVER	%	Percentage of Non-Tussock graminoid cover in the plot
FORB_COVER	%	Percentage of forb cover in the plot
LICHEN_COVER	%	Percentage of lichen cover in the plot
BRYOPHYTE_COVER	%	Percentage of bryophyte cover in the plot
HORSETAIL_COVER	%	Percentage of horsetail cover in the plot
DISTURBANCE_HUMAN		Disturbance by humans
DISTURBANCE_HUMAN_DESC		Description of disturbance by humans
DISTURBANCE_FOX		Disturbance by fox
DISTURBANCE_FOX_DESC		Description of disturbance by fox
DISTURBANCE_BEAR		Disturbance by bear
DISTURBANCE_BEAR_DESC		Description of disturbance by bear
DISTURBANCE_CARIBOU		Disturbance by caribou
DISTURBANCE_CARIBOU_DESC		Description of disturbance by caribou
DISTURBANCE_SQUIRREL		Disturbance by squirrel
DISTURBANCE_SQUIRREL_DESC		Description of disturbance by squirrel
DISTURBANCE_LEMMING_VOLE		Disturbance by lemming vole
DISTURBANCE_LEMMING_VOLE_DESC		Description of disturbance by lemming vole
DISTURBANCE_MOOSE		Disturbance by moose
DISTURBANCE_MOOSE_DESC		Description of disturbance by moose

DISTURBANCE_BIRD		Disturbance by bird
DISTURBANCE_BIRD_DESC		Description of disturbance by bird
DISTURBANCE_INSECT		Disturbance by insect
DISTURBANCE_INSECT_DESC		Description of disturbance by insect
SOIL_ORGANIC_DEPTH	CM	Depth of soil organic matter
HORIZON_AT_10_CM		Soil horizon at 10 cm depth
WET_COLOR_AT_10_CM	MUNSELL	Color of wet soil at 10 cm depth following Munsell System of Color Notation
ORGANIC_MATTER_AT_10_CM	%	Soil organic matter at 10 cm depth
COARSE_GRAVEL_AT_10_CM	%	Percentage of coarse gravel in the soil at 10 cm depth
FINE_GRAVEL_AT_10_CM	%	Percentage of fine gravel in the soil at 10 cm depth
SAND_AT_10_CM	%	Percentage of sand in the soil at 10 cm depth
SILT_AT_10_CM	%	Percentage of silt in the soil at 10 cm depth
CLAY_AT_10_CM	%	Percentage of clay in the soil at 10 cm depth
TEXTURE_AT_10_CM		Soil texture at the top of the mineral horizon
SOIL_TEXTURE_TOP_MINERAL_HORIZON		Soil texture at 10 cm depth
HYGROSCOPIC_MOISTURE_AT_10_CM		Hygroscopic moisture at 10 cm depth
BULK_DENSITY_AT_10_CM	G/CC	Bulk density of the soil at 10 cm depth
SOIL_PH_AT_10_CM		PH of the soil at 10 cm depth
SOIL_PH_AT_TOP_MINERAL_HORIZON		Soil pH at the top of the mineral horizon
CA_NH4OAC_EXTRACT_AT_10_CM	MEQ/100G	Extractable Ca in the soil at 10 cm depth
CA_NH4OAC_EXTRACT_AT_10_CM	MCG/G	Extractable Ca in the soil at 10 cm depth
MG_NH4OAC_EXTRACT_AT_10_CM	MEQ/100G	Extractable Mg in the soil at 10 cm depth
MG_NH4OAC_EXTRACT_AT_10_CM	MCG/G	Extractable Mg in the soil at 10 cm depth
K_NH4OAC_EXTRACT_AT_10_CM	MEQ/100G	Extractable K in the soil at 10 cm depth
K_NH4OAC_EXTRACT_AT_10_CM	MCG/G	Extractable K in the soil at 10 cm depth
NO3_KCL_EXTRACT_AT_10_CM	MCG/G	Extractable NO3 in the soil at 10 cm depth
PLOT_SIZE		Size of each plot
PLOT_SHAPE		Shape of each plots
REMARKS		Remarks

Table 5. Imnavait_Creek_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_AUTHOR(S)		Current Taxonomy according to the Panarctic Species List (PASL) including authors names
3	DATASET_TAXON		Dataset taxonomy
4 to 87	SW01 to SW73		Column headings are all 84 plot numbers. The data values are Species Cover Classes (Braun-Blanquet cover-abundance scale): where r (rare), + (common, but less than 1 percent cover), 1 (1-5 percent), 2 (6 to 25 percent), 3 (25 to 50 percent), 4 (51 to 75 percent), 5 (76 to 100

percent).

Companion Files: There are four companion files with this dataset in .pdf format.

Table 6. Companion files

File name	Description
Imnavait_Creek_Veg_Plots_Report_Walker_1987.pdf	Plot data report (Walker et al., 1987)
Imnavait_Creek_Plot_Photos.pdf	This file contains landscape, plot, and soil photos of the Imnavait Creek vegetation plots.
Imnavait_Creek_Legend.pdf	This file contains the legend for the environmental parameters of the Imnavait Creek vegetation plots.
USFWS_Bioreport_Arctic_Wetland_Soil_Veg_WalkerM_1989.pdf	Summary report of all the data collected, methods of collection, maps/plots etc. for the 84 study plots at the Imnavait Creek research site (Walker et al., 1989)

3. Application and Derivation

These data bring together for easy reference all the available information collected from the plots and has been used for the classification, mapping and analysis of the environmental controls in the Imnavait Creek region. Derived regional maps of these data will be used in regional models of fluxes of trace gases, water, and energy from tundra surfaces and provides useful input to several phases of the R4D (Response, Resistance, Resilience and Recovery from Disturbance) research including the landscape ecology, slope modeling, and the primary productivity studies. In addition, a circumpolar vegetation classification resulting from these datasets 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

Imnavait Creek is situated in a shallow basin at the foothills of the central Brooks Range and the Imnavait Creek vegetation area is located near the center of the Upper Kuparuk River region and encloses a 22-km² area northeast of Toolik Lake, close to the southern foothills of northern Alaska. The Dalton Highway and the trans-Alaska pipeline both pass nearby. The hills near Imnavait Creek rise less than 100 m from the valley bottoms to the crests, and are elongated in SSE to NNW trending ridges. The west-facing aspects of these ridges are much gentler and longer than the east-facing aspects; in fact, over 60% of the terrain has NW/SW-facing aspects. Most hill crests have till at the surface, providing rocky mineral substrate for plant communities, whereas hill slopes and valley bottoms are generally smoothly eroded and covered by colluvium and shallow peat deposits. Imnavait Creek was chosen as a study site as it provides a good representation of the southern foothills of the Brooks Range, a glaciated region characterized by rolling tundra plains interspersed with hills, knobs and low ridges. Data includes the baseline plot information for vegetation, soils, and site factors for the study plots subjectively located in 14 plant communities that occur in 19 broad habitat types across the glaciated landscape.

The eighty-four plots at the Imnavait Creek research site at the foothills of the central Brooks Range (shown in Figure 2) were subjectively located in 14 plant communities and 19 broad habitat types including:

- dry sandstone outcrops (6 plots),
- glacial boulder fields (2 plots),
- dry rocky till (5 plots), hill slope nonsorted stripes (5 plots),
- frost scars on stripes (5),
- areas between nonsorted stripes (3 plots),
- hill slopes between with solifluction (5 plots),
- snowbeds (10 plots),
- water tracks (7 plots),
- margins of water tracks (2 plots),
- hill slopes between water tracks, (12 plots),
- west frost scars (3 plots),
- hummocks and strangs in wet meadows of colluvial basins (3 plots),
- wet tundra between strangs in colluvial basins (6 plots),
- palsas (2 plots),
- stream margins (4 plots),
- stream channels (2 plots),
- and beaded-stream ponds (3 plots)

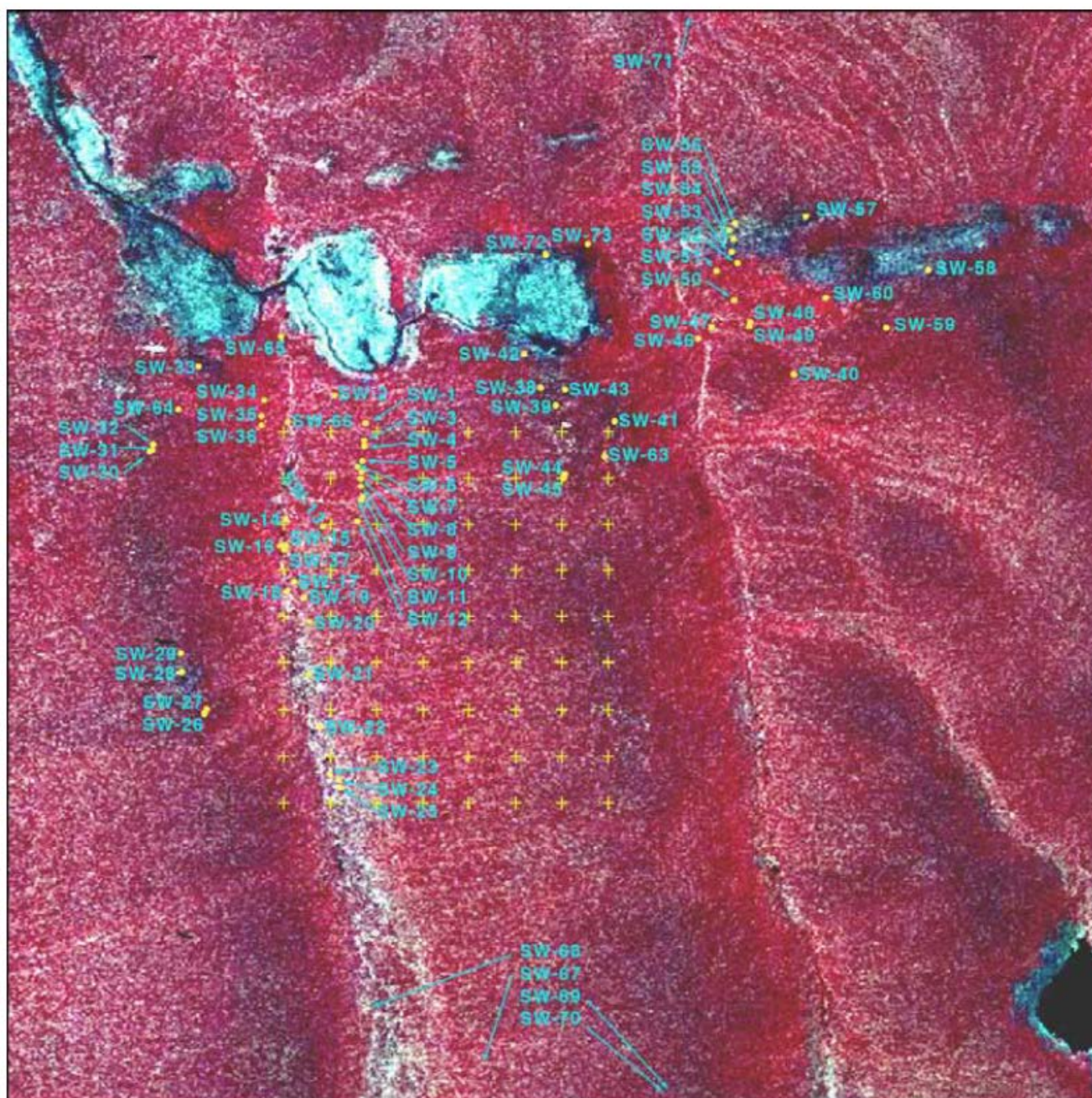


Figure 2. Location map of the 84 Imnavait Creek Permanent Vegetation Plots.

Vegetation Plot Sampling

A formal relevé sampling of the designated plots was done during the period August 1-10, 1984 and August 17-September 4, 1985 to sample the diversity of vegetation types of the region. Each plot was marked with a 1.3 m high wooden lathe in the center of the plot and three short stakes on the perimeter of the plot. An aluminum identification tag was attached to the center stake. The plots had no fixed size in order to obtain a complete species list, however the size of the plots were estimated and are included within these data. For more details see *Imnavait_Creek_Veg_Plots_Report_Walker_1987.pdf*

Sampling of the plots included:

1. Taking photographs of the general site (Figure 1), close-up of vegetation (Figure 3), and close-up of the soil profile (Figure 4). Photos are provided in *Imnavait_Creek_Veg_Plots_Report_Walker_1987.pdf* and *Imnavait_Creek_Plot_Photos.pdf*. Within each permanent plot, a smaller 1-m² photo-plot was marked for periodic close-up photos to record long-term changes due to mortality, recruitment, disturbance, or climate changes. This plot was marked with four wire flags and string around the perimeter of the plot.
2. Measuring site factors listed in Table 3 plus measurements of thaw depth, estimates of cover of bare soil, rocks, the height of vegetation and the major plant growth forms as summarized in Table 4
3. Field sampling of soils where soil pits were dug adjacent to the plots and described and classified according to the U.S. soil taxonomy [Walker et al., 1987]. Soil samples were collected from each horizon and air dried in the laboratory. Bulk density and soil moisture samples were taken from the sides of the soil pits or from large solid plugs for the wet soils using a 240-ml soil can.
4. Laboratory analysis of soil samples included routine analysis on all samples [pH (saturated paste); electric current; NO₃-N, (KCL extract); P, K, Zn,

Fe, Cu, Mn, (NH_4HCO_3 -DPTA extract); lime estimate, texture estimate (by hand); organic matter (Walkley-Black or ash method); and Sodium Adsorption Ratio]. Selected samples were analyzed for percent sand, percent silt and percent clay; and Ca, Mg, Na, K (NH_4OAc extract).

5. Estimating vegetation cover using the Braun-Blanquet cover-abundance scale (r = rare; + = common but less than 1 % cover; 1 = 1-5%; 2 = 6-25%; 3 = 25-50%; 4 = 51-75%; 5 = 76-100%). Plant communities were determined and sample plots were marked with stakes. The area surrounding each plot marker was searched until no new species in the plant community being sampled were encountered. Cover abundance values are relatively broad subjective classes, and were determined by estimating cover within the general area of the stake. Voucher collections were made for all vascular plants, bryophytes, and lichens occurring in the relevé.

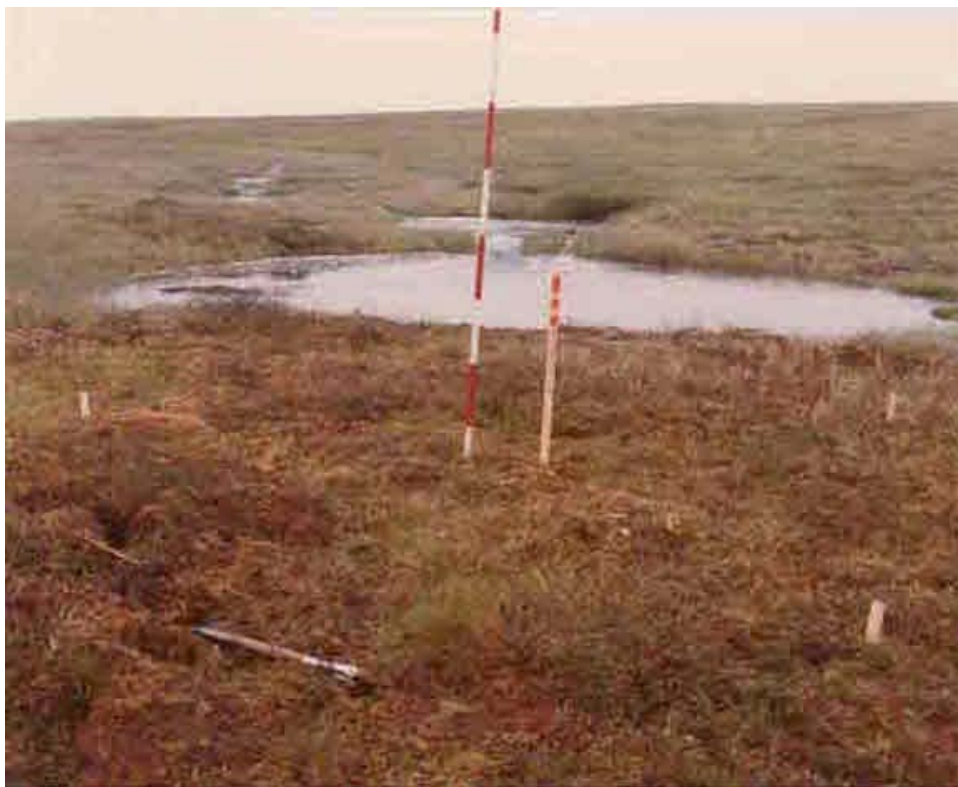


Figure 3: Vegetation at one of the Imnavait Creek permanent plots (Plot SW-15).



Figure 4: Soil profile at one of the Imnavait Creek permanent plots (Plot SW-47).

Spectral and Biomass Data

NDVI, LAI, iPAR, and above ground biomass measurements were collected for the Imnavait Creek permanent vegetation plots. The results were published in Shippert et al. (1995) and Walker et al. (1995).

Overall 3 random replicates were sampled at each plot between 25 July and 10 August 1993. These measurements are named by the suffix A, B, or C added to the plot ID.

- The NDVI data are derived from field spectroscopy carried out with a ASD PS-II portable field spectrometer. The NDVI values were calculated from reflectances at wavelengths corresponding to the Landsat TM red band (630-690 nm) and the near-infrared band (760-900 nm).
- The LAI was measured with a PCA-2000 plant canopy analyzer by LI-COR Inc.
- iPAR was measured with a LI-1000-line quantum sensor by LI-COR Inc.
- Total biomass was measured by collecting all above-ground organic material at each sample site within a 50x20 cm wire frame centered over the site of reflectance, LAI and iPAR measurements.

Note that the Spectral and Biomass - Imnavait Creek Plot (IMN) numbers correspond to the Imnavait Creek plot numbers established by Walker whose field numbers begin with SW.

6. Data Access

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

[Arctic Vegetation Plots, Imnavait Creek, Alaska, 1984-1985](https://daac.ornl.gov/ABOVE/guides/Imnavait_Creek_Veg_Plots.html)

Contact for Data Center Access Information:

- E-mail: uso@daac.ornl.gov

- Telephone: +1 (865) 241-3952

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