

Vegetation of the Upper Kuparuk River Region and Toolik Lake, Alaska

Donald A. Walker, Corinne A. Munger and Hilmar A. Maier

Alaska Geobotany Center, Institute of Arctic Biology, University of Alaska Fairbanks, AK 99775

Funded by: U.S. National Science Foundation grant no. OPP-9908-829

Suggested citation: Walker, D.A., C.A. Munger and H.A. Maier. 2007. Vegetation of the Upper Kuparuk River Region and Toolik Lake, Alaska (Scale 1:63,360 and 1:25,000). Institute of Arctic Biology, Biological Papers of the University of Alaska, No. 27.

Web site: <http://www.geobotany.uaf.edu/>, ISBN-13: xxx-x-xxxxxx-xx, ISBN-10: x-xxxxxx-xx

About the maps

This series of maps of the upper Kuparuk River region and Toolik Lake area shows the distribution of vegetation within the region. The maps are based on field surveys and aerial photographs taken during the summer months. The maps show the distribution of various plant communities, including moist graminoid tundras, wet graminoid tundras, and prostrate-shrub tundras. The maps also show the locations of rivers, streams, and lakes. The maps are intended to provide a detailed overview of the vegetation and landforms in the region.

The mapping process

Aerial photographs were used to map the terrain, and ground truthing was performed using digital cameras and GPS. The maps were created using a combination of satellite imagery and field observations. The vegetation was mapped using a variety of techniques, including visual interpretation of aerial photographs and ground truthing. The maps were then digitized and integrated into a GIS system for analysis and display.

All the maps were created using the same methodology, which involved collecting data from multiple sources and integrating them into a single map. The maps were then analyzed to identify patterns and trends in the vegetation and landforms.

Topography and Glacial Geology

The topographic maps show the elevation and slope of the terrain. The glacial geology maps show the presence and extent of glacial features, such as moraines and meltwater channels. The maps are intended to provide a detailed overview of the topography and glacial history of the region.

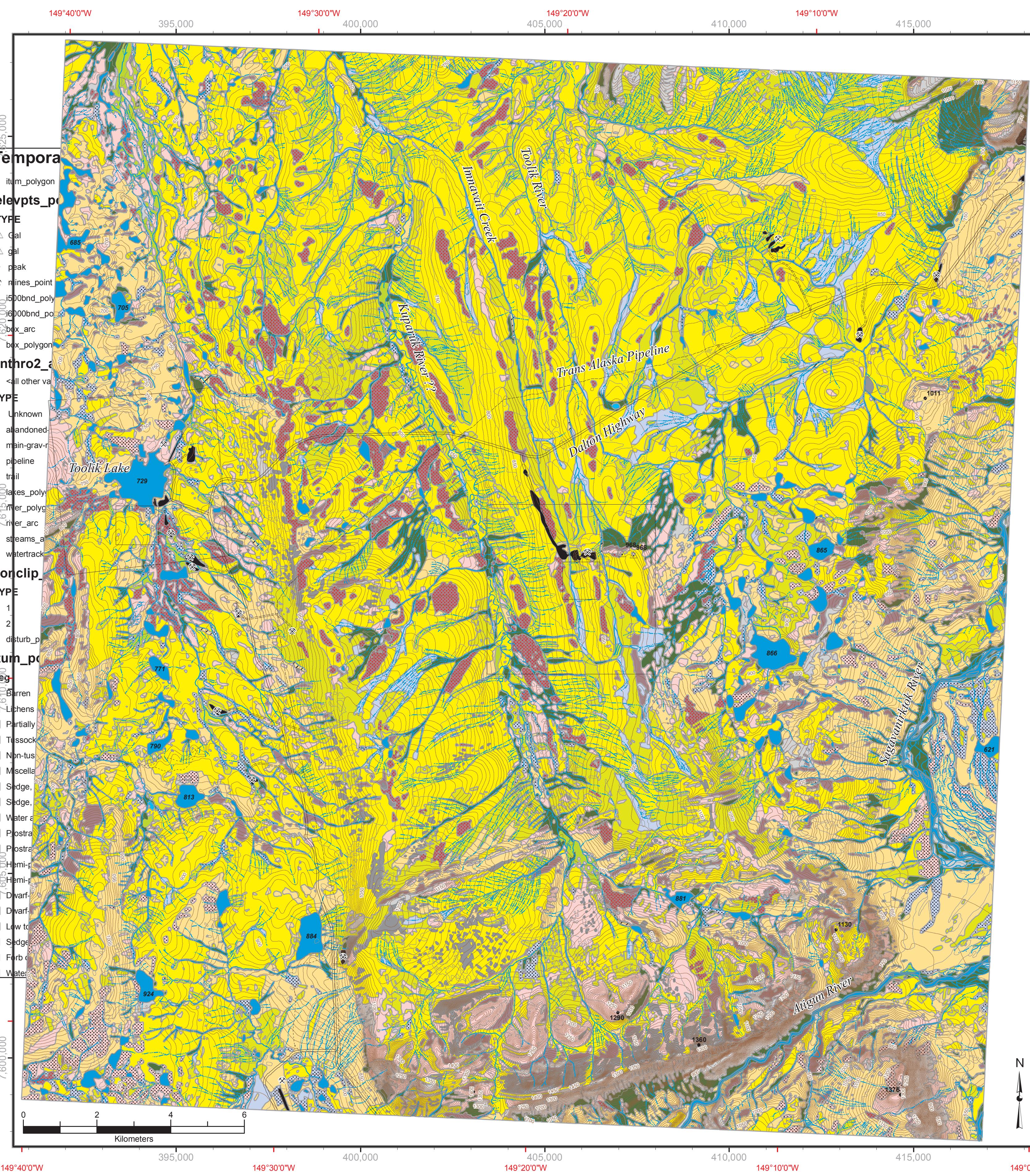
Surficial Geomorphology

The surficial geomorphology maps show the presence and extent of various landforms, such as talus slopes and alluvial fans. The maps are intended to provide a detailed overview of the surficial geomorphology of the region.

Vegetation

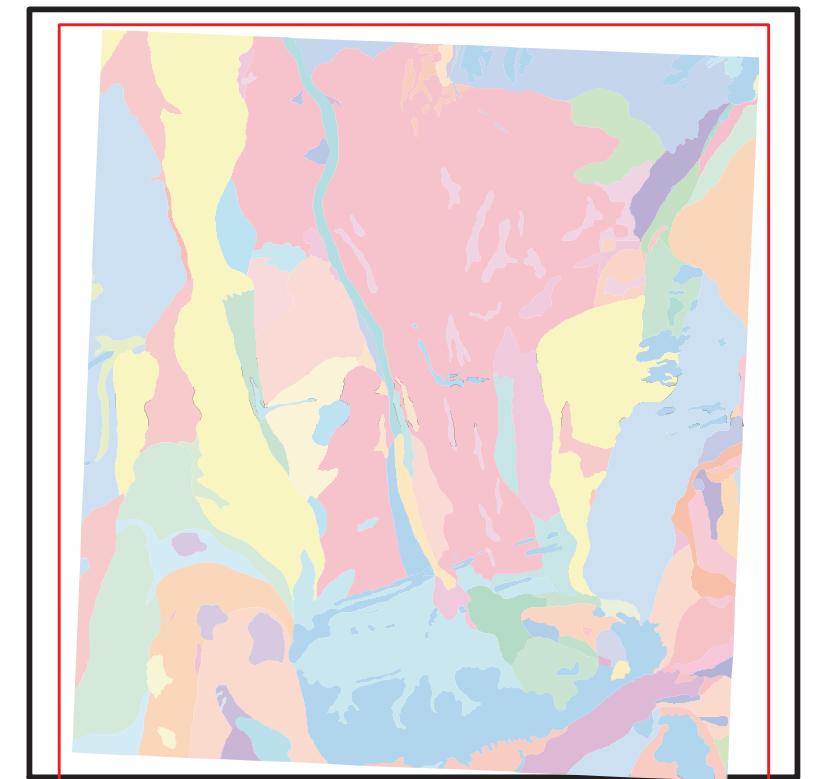
The vegetation maps show the distribution of various plant communities, including moist graminoid tundras, wet graminoid tundras, and prostrate-shrub tundras. The maps are intended to provide a detailed overview of the vegetation in the region.

Physiognomy	Plant communities (GIS codes)	Typical Microsites	Ha	% of Map
Barrens final size approx. 11x19				
□ Barr	Coastal grassy plains.	arr road's airstrips alpine.		
□ Shrubless rock	Carex nigricans-Rhizocarpon geographicum	rocky soil's scree		
□ Partially gr. tundra	Compositae with rock or soil or serpentine slopes. Carex nigra, Carex stans, Saxifraga oppositifolia-Saxifraga exschholzii-Epilobium latifolium-Cassiope caerulea	partial gr. tundra with rock or soil or serpentine slopes. Carex nigra, Carex stans, Saxifraga oppositifolia-Saxifraga exschholzii-Epilobium latifolium-Cassiope caerulea		
Moist graminoid tundras				
□ Mossy shrub	Ostendorfia coerulea Carex kobomugi Carex stans Carex sibirica	sic shrub stony soil's scree		
□ Open shrub	Eriophorum vaginatum-Sphagnum	shrub stony soil's scree		
□ Open grassy	Carex bigelowii-Dryas integrifolia-Carex bigelowii	open grassy		
□ Open water	Equisetum arvense	shallow water		
□ Open grassy	Eriophorum vaginatum-Tomentypnum nitens	open grassy		
□ Open grassy	Carex bigelowii-Dryas integrifolia-Cassiope tetragona-Carex bigelowii	open grassy		
Wet graminoid tundras and water				
□ Poor grass tundra	Carex kobomugi-Carex stans	poor grass tundra		
□ Poor grass tundra	Eriophorum angustifolium-Sphagnum	poor grass tundra		
□ Poor grass tundra	Eriophorum angustifolium-Carex chardorrhiza	poor grass tundra		
□ Poor grass tundra	Eriophorum caespitosum-Tomentypnum nitens	poor grass tundra		
Prostrate-shrub tundras				
□ Prostrate shrub	Dryas octopetala-Selaginella sibirica-Arctous alpina-Salix phlebophylla	prostrate shrub		
□ Prostrate shrub	Arcto-Nivea-Cladonia arbuscula-Stereocaulon tomentosum	prostrate shrub		
□ Prostrate shrub	Arcto-Nivea-Cladonia arbuscula-Stereocaulon tomentosum	prostrate shrub		
□ Prostrate shrub	Dryas integrifolia-Oxytropis nigrescens	prostrate shrub		
□ Prostrate shrub	Dryas integrifolia-Astragalus umbellatus	prostrate shrub		
□ Prostrate shrub	Cassiope tetragona-Carex microchaeta	prostrate shrub		
□ Prostrate shrub	Cassiope tetragona-Dryas integrifolia-Salix rotundifolia-Sanionia uncinata	prostrate shrub		
□ Prostrate shrub	Cassiope tetragona-Calamagrostis inexpressa	prostrate shrub		
□ Prostrate shrub	Betula nana-Hierochloe alpina	prostrate shrub		
Erect-shrub tundras				
□ Low shrub	Ostendorfia coerulea Carex stans	low shrub		
□ Low shrub	Betula nana-Eriophorum vaginatum	low shrub		
□ Low shrub	Betula nana-Rubus chamaemorus	low shrub		
□ Low shrub	Salix pulchra-Sphagnum	low shrub		
□ Low shrub	Salix pulchra-Eriophorum angustifolium	low shrub		
□ Low shrub	Salix pulchra-Calamagrostis canadensis	low shrub		
□ Low shrub	Salix pulchra-Hierochloe alpina	low shrub		
□ Low shrub	Salix alaxensis	low shrub		
□ Low shrub	Salix alaxensis	low shrub		
Totals : 75070				



Uncut Sheet: 28x40 48 pt Text
Cut Sheet: 25x39

4x4 map inset
Legend: Topography



Legend:
Glacial Geology



4x4 map inset

Legend:
Phytomass NDVI

Other Legend Items

- disturb_polygon
- lakes_polygon
- mines_point
- river_polygon
- anthro2_arc
- river_arc
- <all other values>
- Unknown
- abandoned-road
- main-grav-road
- pipeline
- trail
- TYPE
- 1
- 2

4x4 map inset