

Permafrost soils and vegetation sampling protocol - Stockholm University ver. 03/06/2018

<b>Site name</b>		<b>Coordinates</b>		<b>Photographs / Camera</b>
				site pit
Date		observer(s)		

**General site description (sketch on following side)**

Depth	Depth Top	PF Table	Transient Layer	Water table	Drainage	Mudboils	Tussocks	Elevation	Slope (°)	Aspect	
Frozen AL	Permafrost	Form (even, wavy)	Layer -from-to	calculate as negative. Soil surface is +0!	(dry, moist, wet, waterlogged)	(non, few, a lot, active yes/little/no)	(non, few, a lot)				
<b>SOIL CLASSIFICATION:</b>										Max depth:	
Depth up - low	<b>HORIZON</b> Master, Suffix, Modifier If per Horizon, then sample all horizon		Texture sand/silt/clay	Notes – Horizon boundaries smooth/wavy/broken?			Munsell color	Colour and REDOX features Y/N	Roots Size: fine, medium, coarse	through, horizon bound, in cracks; few, common many	Not sampled COARSE FRAGMENTS in %
0-11	Oi1		peat	Example		Oi on Hummock	SYR 4/4 n		f/t/m	20 %'	

Sample description	Depth	Dimensions	Horizon	Texture	Notes (color/material)	CryoT/SynG / Buried (1/2/3)	Redox features??	roots #in/□ (th/R) #,cm)	vis. ice %	ice struc. (lens, vein, net, suspende d, ice wedge)
OL1/PP/RC/C14	0-5	0x0x0cm								

Example:

OL1	0-5	5x5x6	Oi	organics	very fibric peat	-	OM/no	f/t/m	0-	
pp	80-90		CF	Silty fine sand	Darkbrown with red mottles	CT2	Silt./red mottles	no	5 %'	poreice

**reason for max depth eq. pipe length, stone(s), bedrock:**

Contributors: Matthias Siewert - Niels Weiss - Juri Palmtag - Gustaf Hugelius - Peter Kuhry

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Site name/ Plot nr.	Coordinates	Photographs	
Date	Observer(s)		
Sketch and additional notes: <small>i.e. topography, microtopography, valley, depression, top of palsa, alas, frost boils, polygon position (center/rim/trough), etc..</small>			
<b>Landform (x or text) (sketch on next side):</b>		<b>Parent Material of pit chose from the following or describe:</b>	
Flat terrain	Moraine	Sphagnum peat Moss Parent Material P1:	
Yedoma	Talus	Sedge peat	
Fluvial (bed, terrace)	Fen (groundw.)	Mineral Yedoma Parent Material P2:	
Palsa	Bog (rainw.)	Fluvial (clay, sand, gravel) Moraine	
Hillslope (ridge/mid/ree)	Ice-wedge polygon (low/high) (center /rim/trough; sketch!!!)	Colluvial Bedrock (Type?) Parent Material P3:	
Alluvial fan		Notes:	
Aeolean deposit	Other:		
Lacustrine			
Sketch and additional notes: <small>i.e. topography, microtopography, valley, depression, top of palsa, alas, frost boils, polygon position (center/rim/trough), etc..</small>			
Make sketch for position in ice-wedge polygon!!!			
<b>Vegetation sampling</b>	percentage coverage from above with mass in mind on 1x1m basis		<b>Additional Notes</b> If trees or shrubs higher than 2m present, make additional notes on 5x5m or 10x10m basis.
Quadrat size (cm x cm)	Heights (cm)		
Plant functional Type	Rep1	Rep2	Rep3
Evergreen shrubs (eg. Cassiope, Ledum, Vaccinium, dryas. (Most berries))			
Deciduous shrubs (eg. Betula, Salix, Alnus )			
Sedges (Eriophorum, Carex) (triangular stem!)			
Grasses and rushes (round stem)			
Forbs (broad-leaved herbaceous non grass)			
Sphagnum Moss			
MOSSES (if present, record green and brown tissue heights/depths separately)			
Lichens			
Litter on/in vegetation			
Rock and stones			
Bare soil			
Water			

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Figure S1. Field sampling protocol