

For the convenience of the user, these Ordinal Scale tables have been copied from the appendix **Table C1-all plants (plot numbers begin with 24 and end with 185)**, of the Ebersole (1985) pdf provided with this data set as a companion file. The corresponding page numbers from the Ebersole pdf are included in the lower right of each image. These ordinal scales are used for variables in the data file Oumalik_Environmental_Data.csv. Refer also to the data set guide document: **Oumalik_Veg_Plots.pdf**.

APPENDIX C3				
ORDINAL SCALES*				
scale	site moisture	soil moisture	summer air temperature	snow
1	Very dry, little or no moisture within 10 cm of surface, exposed to strong winds	Very dry, no apparent moisture, no clumping	Very cold sites, high altitude with north-facing slopes	Little or no snow cover in winter, ridge top sites
2	Very dry, little moisture near surface, somewhat less exposed sites	Very dry, some moisture but doesn't clump	Cold sites, high altitude with moderate solar exposure, north-facing coastal plain sites or flat sites extreme arctic coast	Little snow cover in winter, exposed slopes
3	Dry, some moisture near the surface, very exposed	Dry, clumps but then crumbles	Cold sites, moderate altitudes, flat coastal plain sites	Slopes usually snow covered in winter
4	Dry, some moisture near the surface, somewhat less exposed sites	Dry, clumps and stays in a ball	Cool sites, flat surface in Arctic foothills	Slopes snow covered in winter, snowmelt by late May
5	Moist, top 10 cm continually moist to wet, moderately well-drained sites	Moist, binds, but can be taken apart	Moderate temperatures, south-facing slopes on Arctic Coastal Plain or high mountains	Shallow depressions, somewhat prolonged snow cover, melt by early June

ORDINAL SCALES (Continued)

scale	site moisture	soil moisture	summer air temperature	snow
6	Moist, top 10 cm near saturation, less well-drained sites	Moist, binds completely into gooey ball	Moderate temperatures, south-facing slope, Arctic Foothills	Snowpatches, snowmelt by late June or early July
7	Wet, continually saturated soil but no standing water	Wet, can squeeze some water out	Moderate temperatures, flat site at intermediate altitudes south of Brooks Range	Snowpatches, somewhat later snowmelt by late July
8	Wet, usually with standing water early in summer	Wet, can squeeze lots of water out	Warm temperatures, flat site, lower altitudes south of Brooks Range	Snowpatches, later snowmelt, early August
9	Very wet, usually with standing water late in summer	Very wet, totally saturated	Warm, south-facing slopes at intermediate altitudes in interior Alaska	Snowpatches, very late snowmelt, late August
0	Very wet, deep standing water year round	Very wet, soil taken from underwater	Warmest south-facing slopes at lower altitudes in interior Alaska	Snowpatches, very late snowmelt, sometimes may have snow cover all year

ORDINAL SCALES (Continued)

scale	surface Age	stability	cryoturbation	wind
1	Constant disturbance	Completely unstable. always moving (e.g., sand dunes)	0% of surface disturbed	Completely sheltered from the wind
2	Less than 1 year since severe disturbance	Annually unstable (e.g., avalanche slopes, river bars)	< 1%	Exposed to occasional very light (1-5 km/hr) winds
3	1-10 years	Periodically unstable (e.g., 50 year flood-plain)	1-2%	Very light winds common
4	10 to 100 years	Unstable. vegetation in patches on slope	2-5%	Occasional light (5-10 km/hr) winds
5	100 to 1000 years last disturbance during late Holocene	Unstable. vegetation in patches on flat	5-10%	Light winds common
6	1000 to 10 000 years last disturbance during early and mid-Holocene	Moderately stable. open vegetation on slope	10-15%	Occasional moderate (20-30 km/hr) winds

ORDINAL SCALES (Continued)

scale	surface age	stability	cryoturbation	wind
7	Old surface, last disturbance during late Wisconsin (10,000 yrs. B.P.)	Moderately stable, open vegetation on flat	15-25%	Moderate winds common
8	Old surface last disturbance during early Wisconsin (30,000 - 70,000 yrs. B.P.)	Stable surface, completely vegetated, moderate slope	25-50%	Occasional strong winds (40-60 km/hr), winds otherwise light
9	Very old surface, last disturbance during pre-Wisconsin time	Stable surface, completely vegetated, slight slope	50-75%	Strong winds common, winds otherwise moderate
10	Very old unglaciated surface	Very stable surfaces, completely vegetated, flat	75-100%	Strong winds common, occasional very strong (> 60 km/hr) winds

*These 8 scales are from Walker et al (1979), where they are given as modifications from Komarkova (1979).

ORDINAL SCALES (Continued)

scale	animal sign*	physical disturbance intensity
1	Small amount of sign	Undisturbed (for at least approximately 1000 years). Examples: upland surfaces unaffected by the thaw lake cycle, old drained lake basins.
2	Moderate amount of sign	Vegetation compressed but not killed; upper soil horizons essentially undisturbed. Examples: moderate foot traffic, single winter pass of a Rolligon.
3	Extensive sign	Vegetation compressed with some crushed or broken; upper soil horizons somewhat compressed. Examples: single summer pass of a Rolligon.
4		Vegetation crushed and broken with some destroyed; upper soil horizons compressed and/or somewhat churned. Examples: areas of Oumalik winter runway that were not bulldozed.
5		Much of vegetation destroyed and the remainder badly damaged; upper soil horizons strongly churned. Examples: multiple-pass vehicle trails.

ORDINAL SCALES (Continued)

scale	animal sign*	physical disturbance intensity
6		Vegetation completely destroyed; upper soil horizons completely disrupted so that new surface is mixture of organic material and mineral soil. Examples: mounds of bulldozed material, areas bulldozed and then smoothed.
7		All vegetation and organic matter removed leaving bare mineral soil. Examples: areas bulldozed down to mineral soil, frost boils, exposed mineral soil on eroding lake bluffs
*Animal sign includes burrows, grazing, browsing, trampling, and feces.		