

# 2016 Moses Prairie Burn



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November 2016

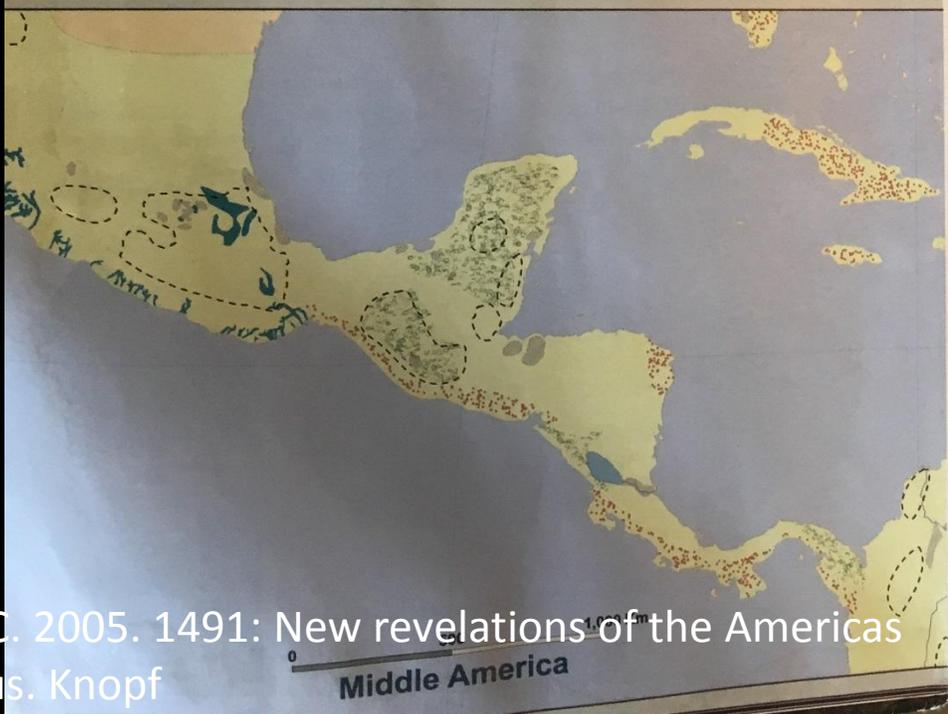
Eon	Era	Period	Epoch	Development of Plants and Animals	Relative Time Span of Eras		
Phanerozoic	Cenozoic	Quaternary	Holocene	0.01	Humans develop	Cenozoic	
			Pleistocene	1.8			Mesozoic
		Tertiary	Pliocene	5.3	"Age of Mammals"	Paleozoic	
			Miocene	23.8			
			Oligocene	33.7			
			Eocene	54.8			
			Paleocene	65.0			Extinction of dinosaurs and many other species
	Mesozoic	Cretaceous		"Age of Reptiles"			
		Jurassic	144			First flowering plants	
		Triassic	206			First birds	
	Paleozoic	Carboniferous	Permian	248	"Age of Amphibians"	Precambrian	
			Mississippian	290			Extinction of trilobites and many other marine animals
		Devonian	Pennsylvanian	323	"Age of Fishes"		First reptiles
			Mississippian	354			Large coal swamps
		Silurian	Devonian	417	"Age of Invertebrates"		Amphibians abundant
			Silurian	443			First insect fossils
		Ordovician	Ordovician	490			Fishes dominant
			Cambrian	546			First land plants
	Proterozoic	Archean	Collectively called Precambrian, comprises about 88% of the geologic time scale		First fishes		
			Trilobites dominant				
			First organisms with shells				
Hadean	Hadean			First multicelled organisms			
				First one-celled organisms			
				Origin of Earth			

- 14,000 years ago was Last Glacial Maximum
- >10,000 years ago people are on Olympic Peninsula
- 4,000 years ago, trees, including cedar become abundant
  - Big cedar trees for longhouses, canoes, etc.
  - Burning began to keep prairies open for hunting and gathering

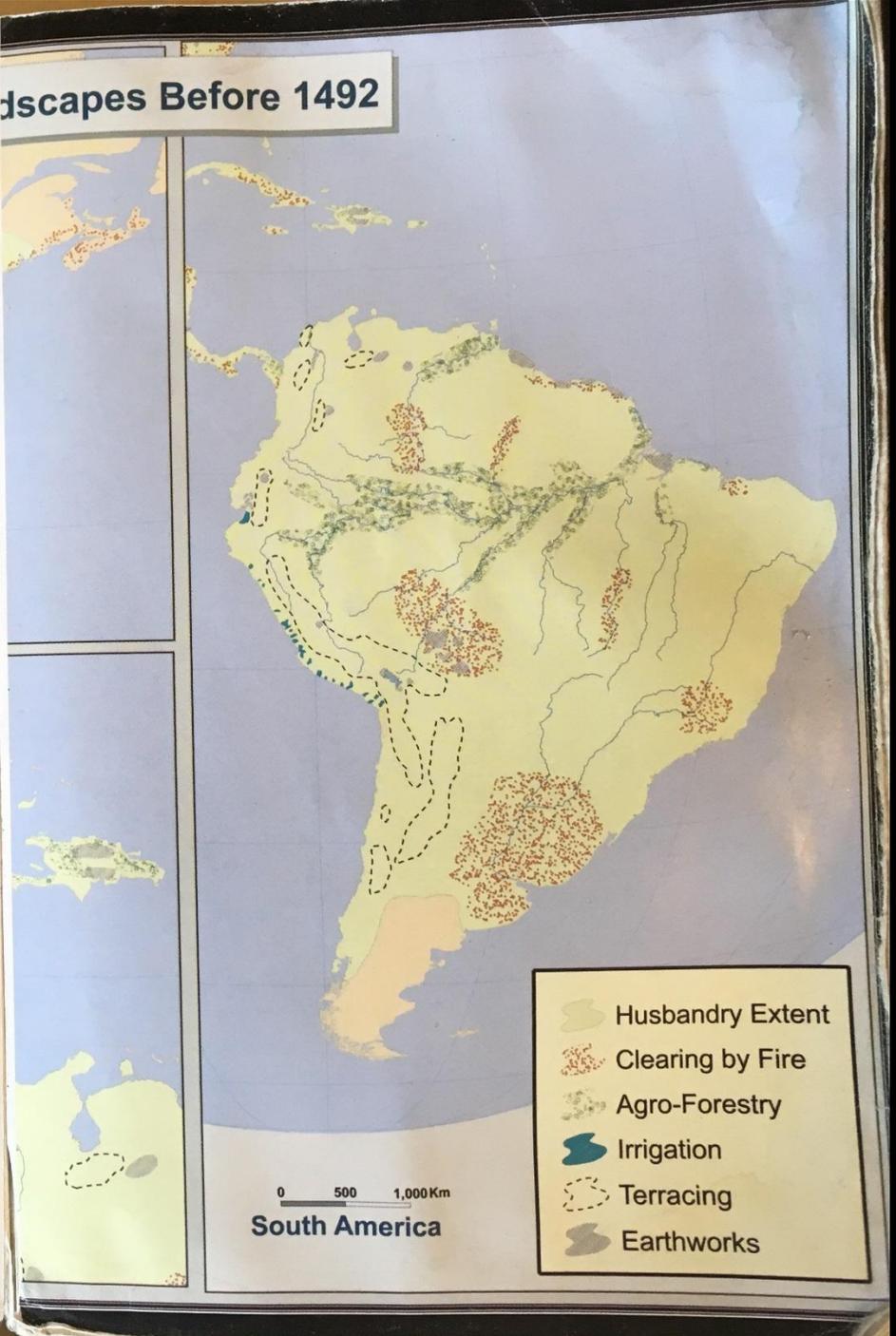
# Humanized Landscapes Before 1492



Northern America



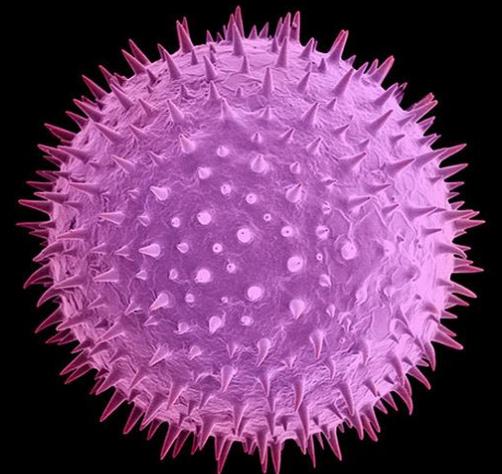
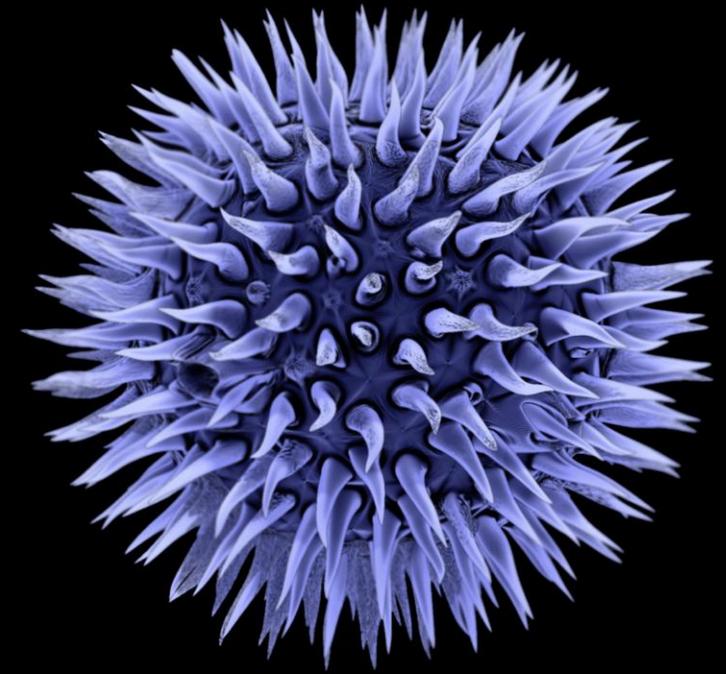
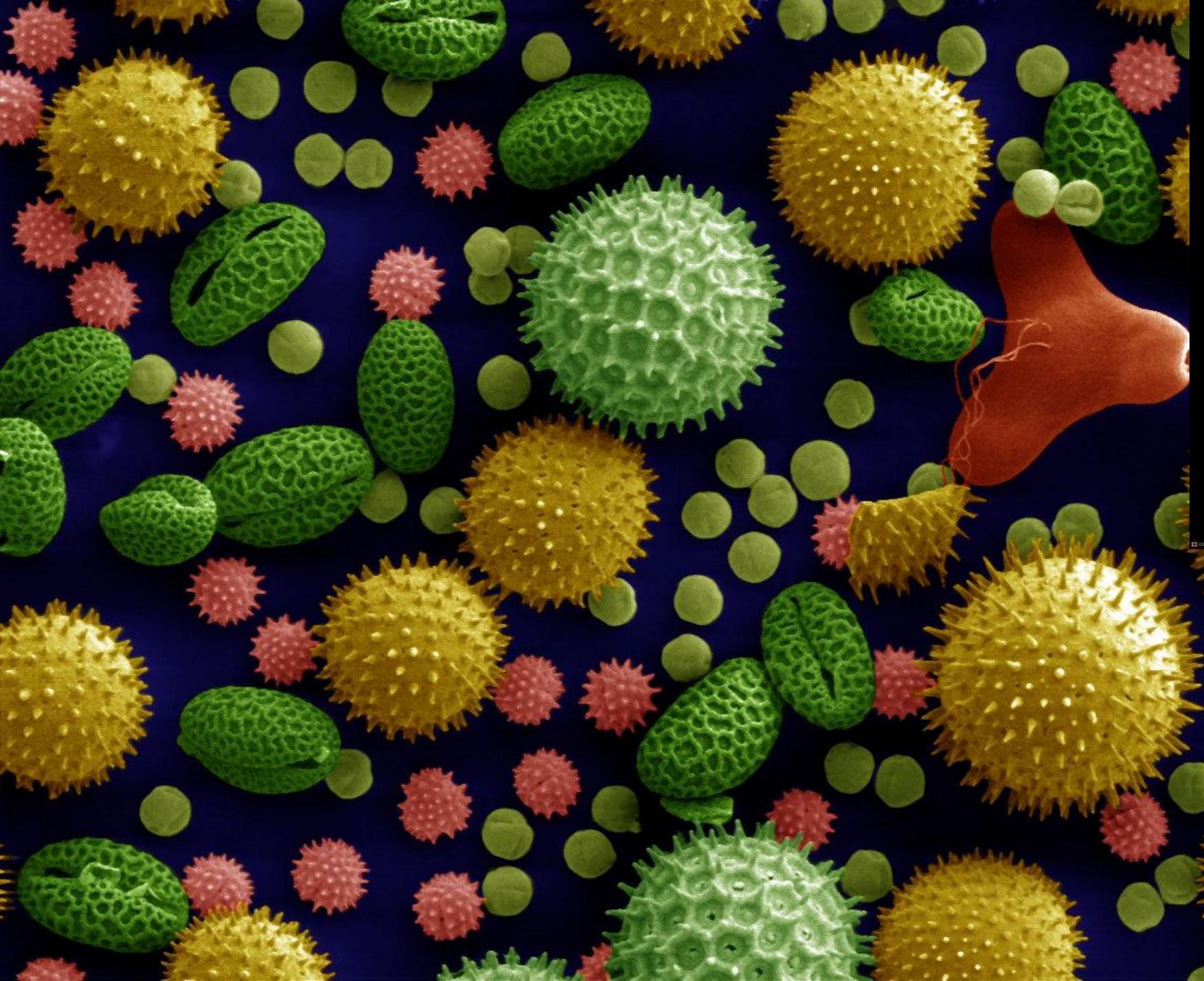
Middle America



South America

- Husbandry Extent
- Clearing by Fire
- Agro-Forestry
- Irrigation
- Terracing
- Earthworks

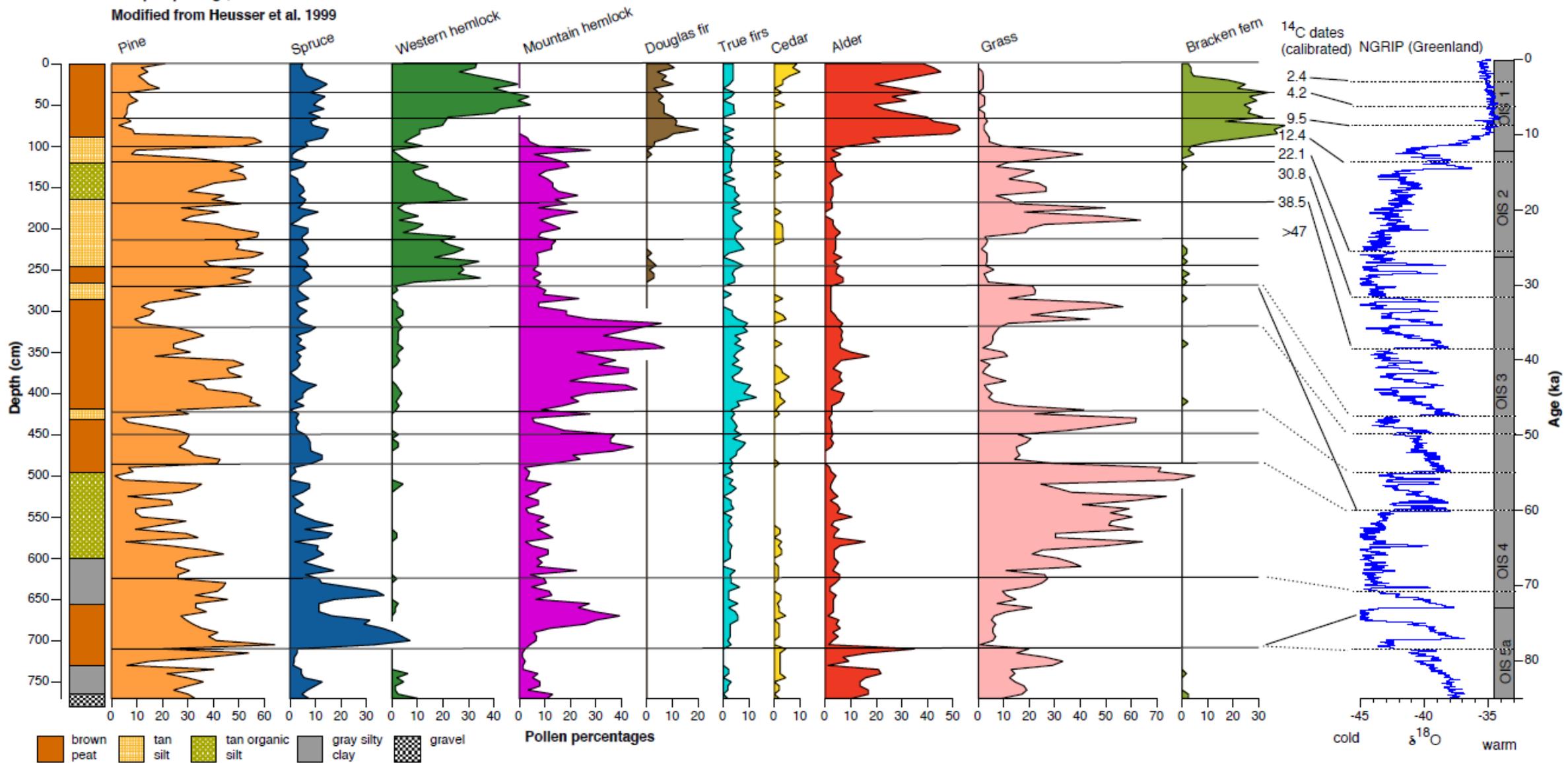
Mann, Charles C. 2005. 1491: New revelations of the Americas before Columbus. Knopf



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**Humtulpis Bog (core H1C)**  
 Modified from Heusser et al. 1999

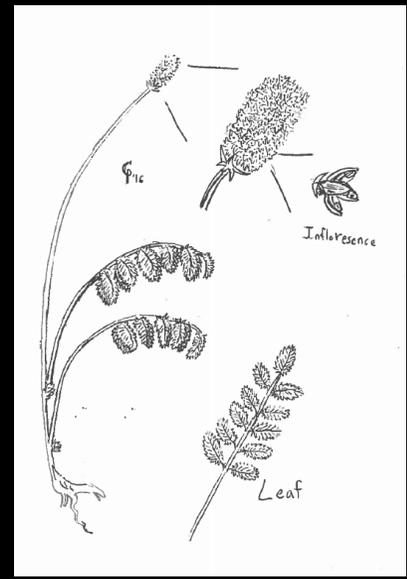
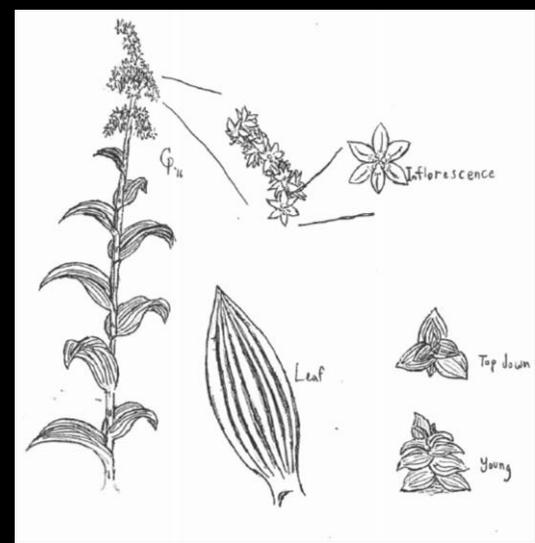


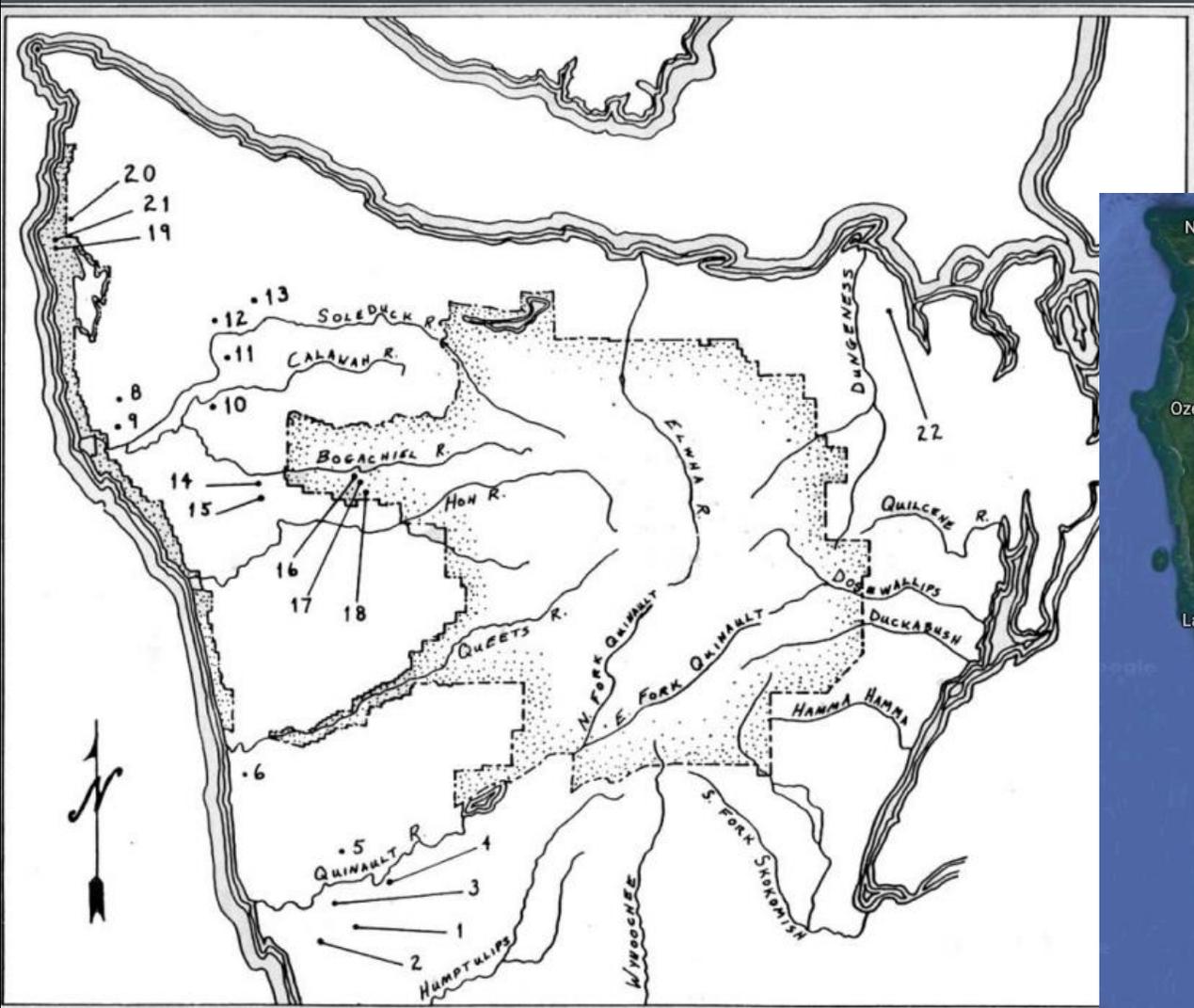


*Erigeron pectinatus* var. *thompsonii*  
Thompson's manzanita desert

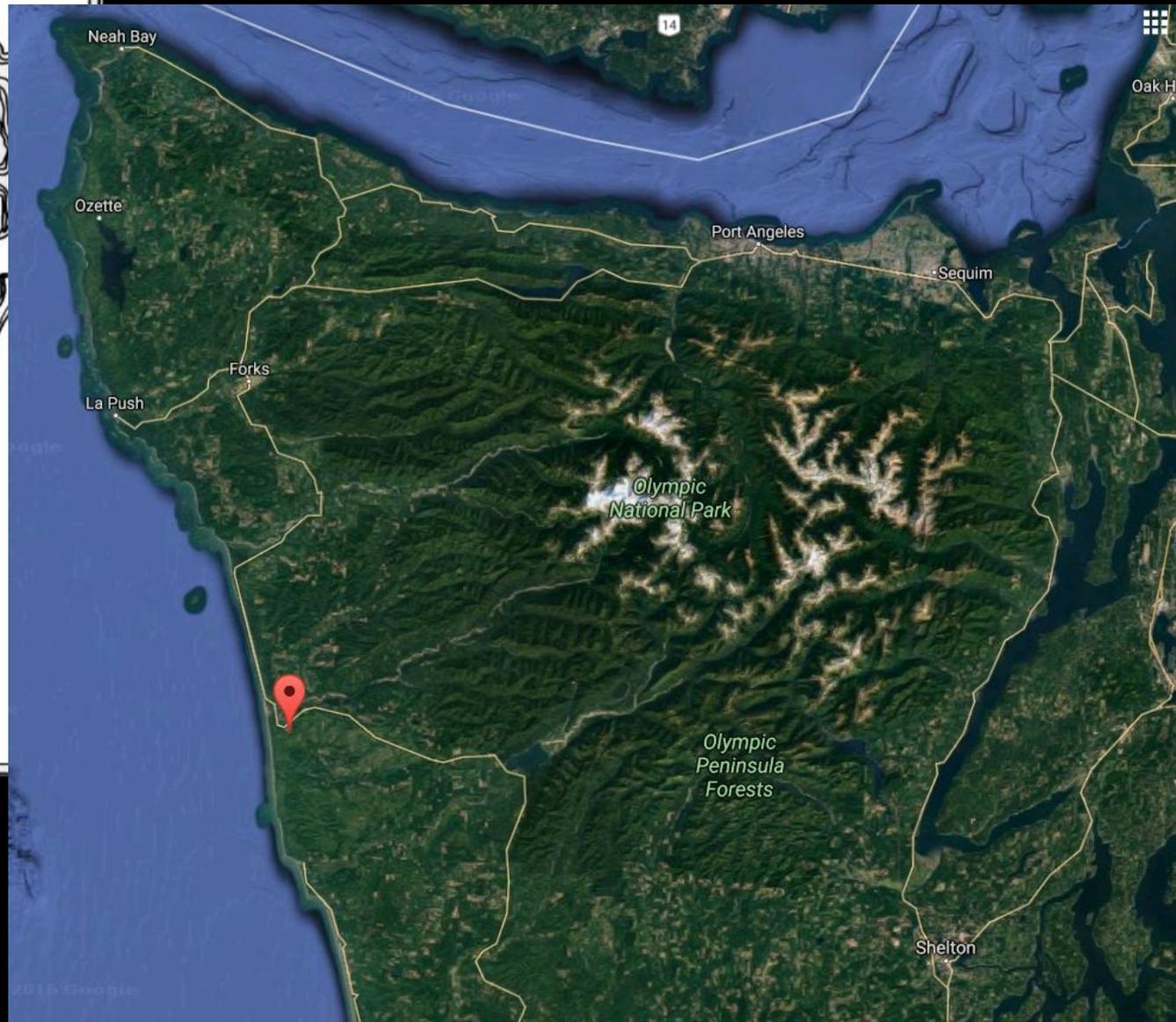


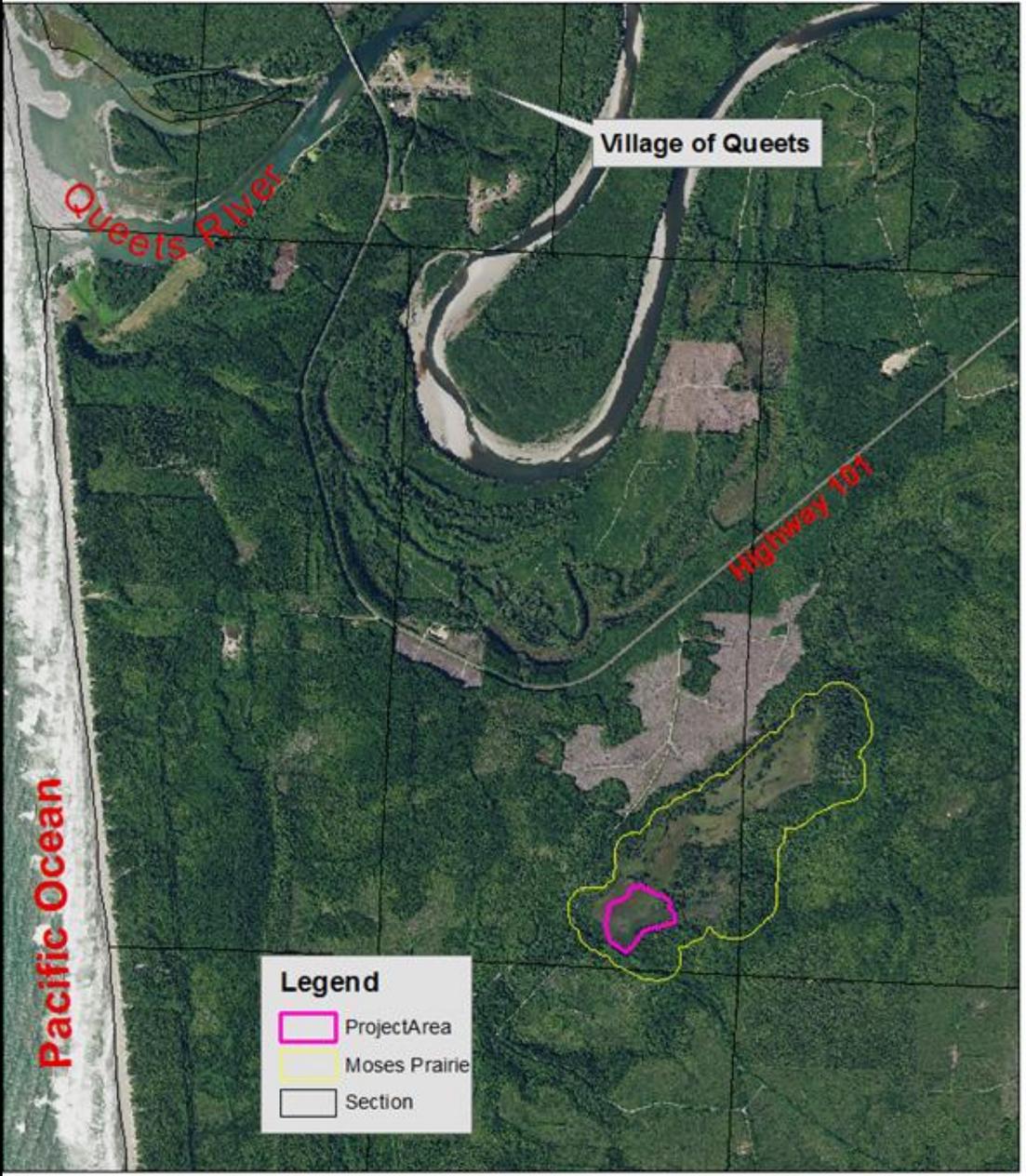
*Erythronium quinaultense*  
Quinault Fairy Lily  
June 2015  
Caroline Marmorek  
Baker's Prairie, OR  
E58514101, OR  
State-threatened endemic to Lake Quinault





(redrawn from Singh 1956)





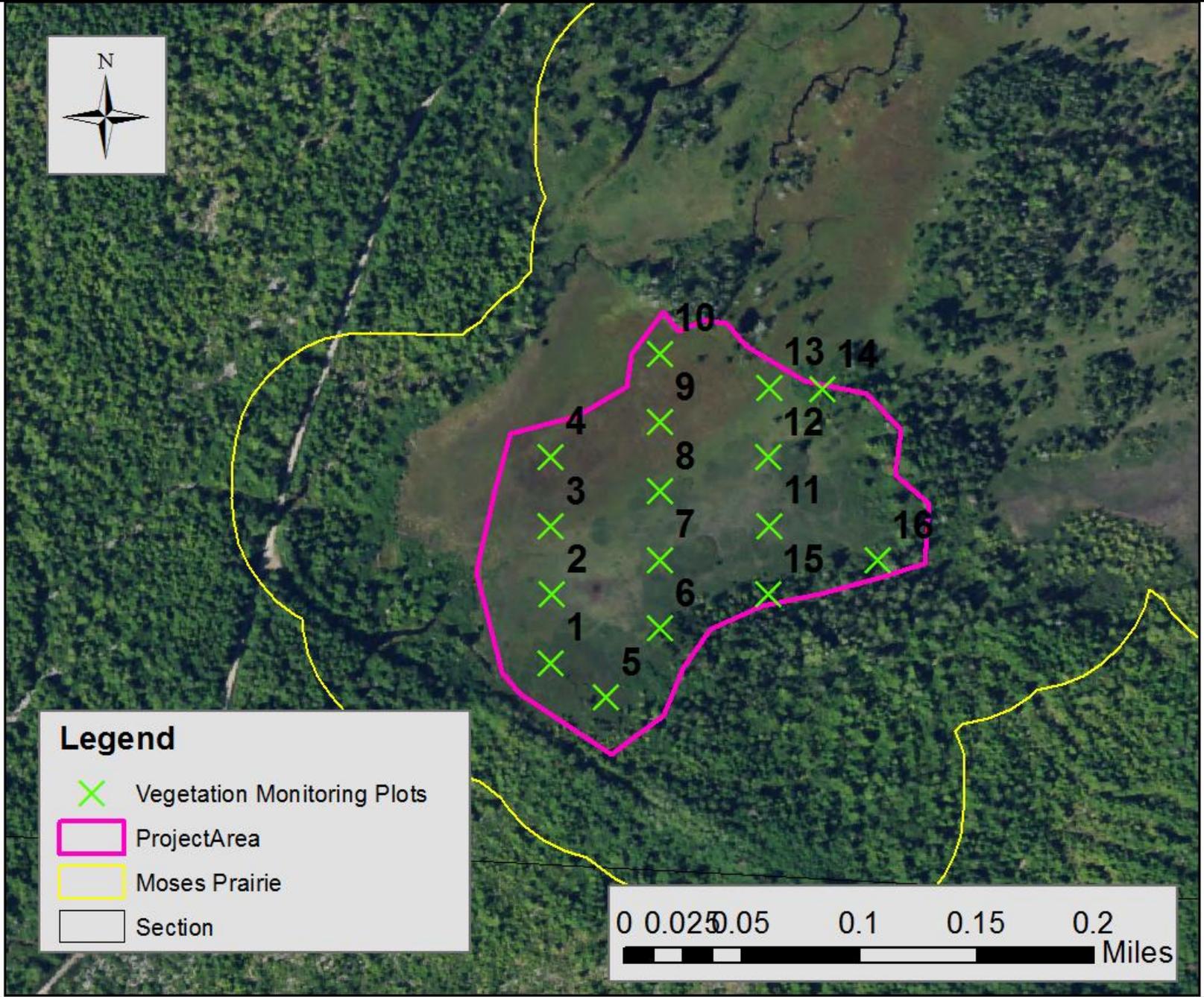






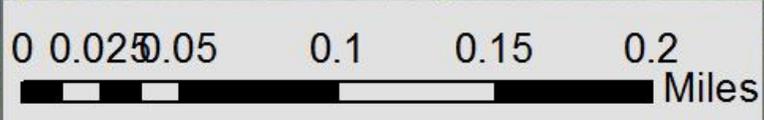






**Legend**

-  Vegetation Monitoring Plots
-  ProjectArea
-  Moses Prairie
-  Section



Frequency	# of quadrats a species occupies			
Species	Pre-burn	Post-burn	Difference	
THPL (Cedar)		13	5	-8
PICO (Shore pine)		13		



PISI (Sitka spruce)				
RHPU (Cascara)				
TSHE (W hemlock)				
MAFR (Crab apple)				
MYGA (Myrica Gale)				
SAOF (Great Burn)				
GASH (Salal)				
SPDO (Hardhack)				
LEGR (Indian Tea)				
MADI (May lilly)				
FACR (Deer cabb)				
KAMI (Bog laurel)				
BLSP (Deer fern)				
COCA (Bunch berry)				
CARU (Pinegrass)				
VAOV (Oval blueberry)		1		
VACA (Dwarf Blueberry)		16		
VAOT (Evergreen huckleberry)		1		
CAQU (Camas)		11		
GESC (Gentian)		23		
CA (Carex sedges)		127		
PTAQ (Bracken fern)		2		
CALI (Pale sedge)		5		
DECA (Tufted hairgrass)		5		
OXOX (Bog Cranberry)		2		
CACA (Bluejoint grass)		1		
TRAR (Starflower)		4		

Cover Type	mean % cover		difference
	pre-burn	post-burn	
Plants	60		
Litter	23.75		
Bare ground	2.1875		
Moss	8.5		
Water	3.625		
Peat Moss	5.25		

	Species	Mean % Cover		difference
		pre-burn	post-burn	
Shrubs	Myrica gale	26.09375		
	Vaccinium caespitosum	0.98125		
	Gaultheria shallon	15.40625		
	Ledum groenlandicum	8.853125		
	Spiraea douglasii	3.36875		
	Kalmia microphylla ssp. occidentalis	0.01875		
	Vaccinium ovalifolium	0.073125		
	<b>Total Shrub Cover</b>	<b>54.795</b>		
Trees	Pinus contorta var. contorta	2.175		
	Picea stichensis	3.2375		
	Tsuga heterophylla	0.95625		
	Thuja plicata	5.2375		
	Malus fusca	4.83125		
	Rhamnus purshiana	3.65		
	<b>Total Tree Cover</b>	<b>20.0875</b>		













