



El'gygytyn impact crater lake is located in the Chukotka province of the Russian Federation. The 18km (12 mile) meteor impact crater is located 100km north of the Arctic circle. In the winter of 2009, as part of the International Polar Year, a scientific drilling expedition to the lake collected over 300 meters of sediment cores and over 200 meters of impact fractured rocks. The sediments have been extensively studied because they hold the longest, uninterrupted record of climate change of any location in the continental Arctic. The core sample below extends from the composite depth 17.4 meters below lake floor (MBLF) to 19.6 MBLF which corresponds to 378,000–430,000 years ago. Study the core sample and associated data to learn about the Arctic climate 400,000 years ago.

MBLF
(Composite depth)

Pollen

Plant spores and pollen found in the sediment are evidence of the plants that lived in an area. Reconstructing past environments is one way to understand environmental conditions. The tables below contain:

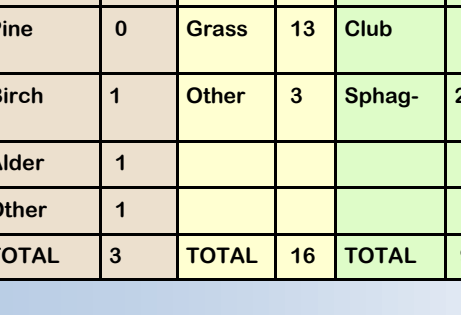


Alder (Alnus) and Pinus (Pine)

17.50

Sample 17.57 m			
TREES	HERBS	SPORES	
Spore	Sedges	Ferns	Club
0	0	0	0
0	0	13	7
Birch	1	Other	Sphag
1	0	3	2
Alder	1		
Other	1		
TOTAL	3	TOTAL	16 TOTAL
			9

17.60



Sphagnum (Club Moss)

17.70

Sample 17.77 m			
TREES	HERBS	SPORES	
Spore	Sedges	Ferns	Club
0	20	0	1
0	0	0	17
Birch	51	Other	Sphag
51	15	15	19
Alder	12		
Other	1		
TOTAL	67	TOTAL	134 TOTAL
			37

17.80

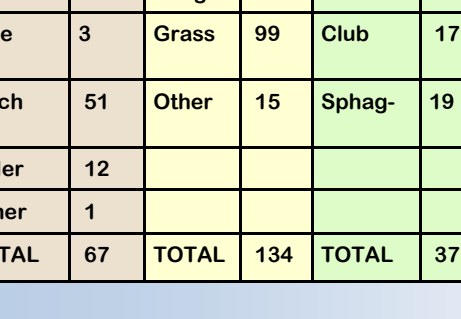


Pinus (Pine)

18.00

Sample 18.07 m			
TREES	HERBS	SPORES	
Spore	Sedges	Ferns	Club
46	44	0	15
43	0	0	15
Birch	82	Other	Sphag
82	20	20	97
Alder	46		
Other	20		
TOTAL	246	TOTAL	156 TOTAL
			125

18.10



Sphagnum (Club Moss)

18.20

Sample 18.26 m			
TREES	HERBS	SPORES	
Spore	Sedges	Ferns	Club
26	18	0	5
66	0	0	17
Birch	57	Other	Sphag
57	14	14	151
Alder	99		
Other	17		
TOTAL	267	TOTAL	119 TOTAL
			113

18.30



Pinus (Pine)

18.40

Sample 18.49 m			
TREES	HERBS	SPORES	
Spore	Sedges	Ferns	Club
243	20	0	6
170	0	0	1
Birch	173	Other	Sphag
173	1	1	47
Alder	104		
Other	27		
TOTAL	607	TOTAL	40 TOTAL
			74

18.50

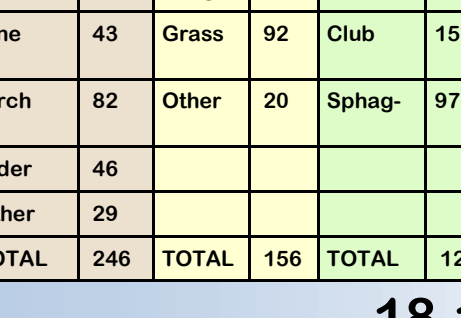


Pinus (Pine)

18.60

Sample 18.67 m			
TREES	HERBS	SPORES	
Spore	Sedges	Ferns	Club
115	14	0	0
87	0	0	0
Birch	134	Other	Sphag
134	0	0	72
Alder	243		
Other	13		
TOTAL	592	TOTAL	33 TOTAL
			73

18.70



Pinus (Pine)

18.80

Sample 18.85 m			
TREES	HERBS	SPORES	
Spore	Sedges	Ferns	Club
117	33	0	2
20	0	0	0
Birch	180	Other	Sphag
180	5	5	75
Alder	249		
Other	20		
TOTAL	596	TOTAL	52 TOTAL
			80

18.90

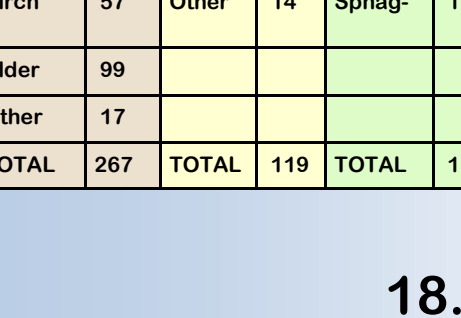


Pinus (Pine)

19.00

Sample 19.03 m			
TREES	HERBS	SPORES	
Spore	Sedges	Ferns	Club
352	23	0	2
3	0	0	0
Birch	356	Other	Sphag
356	7	7	143
Alder	187		
Other	91		
TOTAL	1019	TOTAL	129 TOTAL
			150

19.10



Alder (Alnus)

19.20

Sample 19.21 m			
TREES	HERBS	SPORES	
Spore	Sedges	Ferns	Club
1	29	0	1
0	0	0	14
Birch	165	Other	Sphag
165	14	14	84
Alder	19		
Other	3		
TOTAL	194	TOTAL	102 TOTAL
			59

19.30

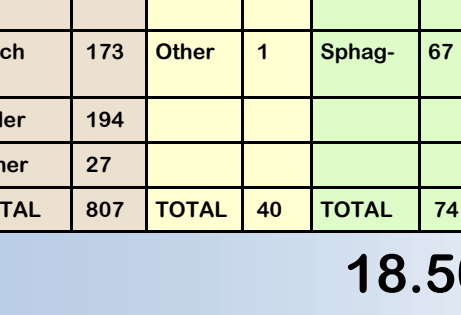


Pinus (Pine)

19.40

Sample 19.33 m			
TREES	HERBS	SPORES	
Spore	Sedges	Ferns	Club
0	20	0	0
0	0	0	9
Birch	10	Other	Sphag
10	37	37	4
Alder	3		
Other	3		
TOTAL	16	TOTAL	202 TOTAL
			13

19.50



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0	0	0	9
Birch	10	Other	Sphag
10	37	37	4
Alder	3		
Other	3		
TOTAL	16	TOTAL	202 TOTAL
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19.60

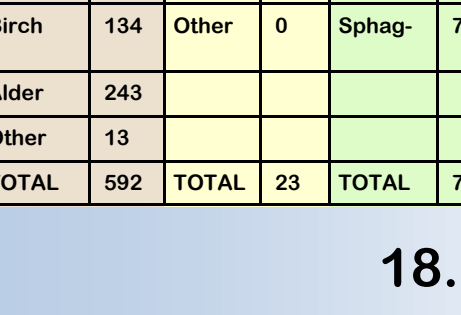


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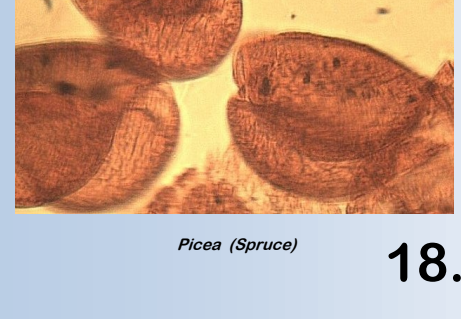


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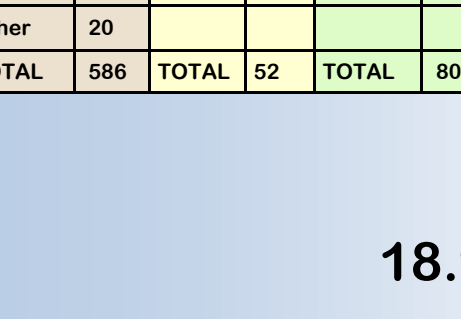


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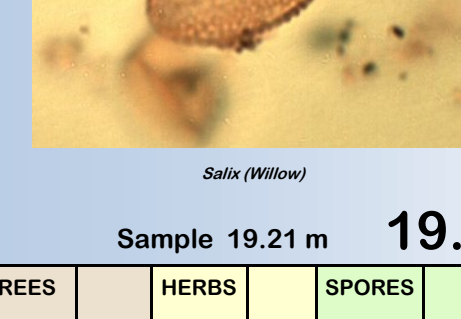


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