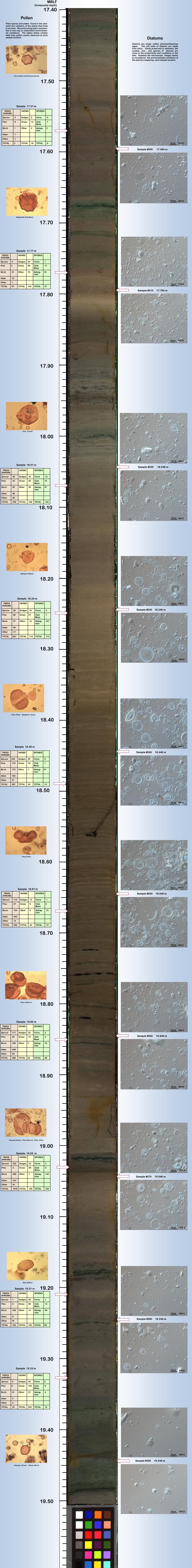


Lake El'gygytgyn Sediment Core Sample



El'gygytgyn 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.







Sample 18.07 m						
TREES SHRUBS		HERBS		SPORES		
Spruce	46	Sedges	44	Ferns	13	
Pine	43	Grass	92	Club Moss	15	
Birch	82	Other	20	Sphag- num	97	
Alder	46					
Other	29					
TOTAL	246	TOTAL	156	TOTAL	125	
18 10						





Sample 18.25 m							
	TREES SHRUBS		HERBS		SPORES		
	Spruce	28	Sedges	78	Ferns	5	
	Pine	66	Grass	27	Club Moss	7	
	Birch	57	Other	14	Sphag- num	101	
	Alder	99					
	Other	17					
	TOTAL	267	TOTAL	119	TOTAL	113	



Sample 18.49 m						
TREES SHRUBS		HERBS		SPORES		
Spruce	243	Sedges	29	Ferns	6	
Pine	170	Grass	10	Club Moss	1	

19.60







The expedition to Lake El'gygytgyn and this paleoclimatology activity was made possible through generous contributions of members of the Lake El'gygytgyn scientific team— Special thanks to Dr. Julie Brigham-Grette (PI) University of Massachusetts, Dr. Jeff Snyder (Diatomist) Bowling Green State University, Dr. Pat Anderson (Palynologist) University of Washington, Dr. Anatoly Lozhkin (Palynologist) North East Interdisciplinary Research Institute Russian Academy of Science. Funding for the expedition and research was provided by US National Science Foundation, Russian Academy of Science, German Research Foundation and Polar TREC.

Activity designed by Greensboro Day School Earth Science teacher $\operatorname{Tim}\nolimits$ Martin

