

ESS 431 PRINCIPLES OF GLACIOLOGY
ESS 505 THE CRYOSPHERE

Lecture 13 – Paleoclimate and Ice Ages III: Evidence of former glaciers

Due Monday, November 20 2017, at start of class

Porter, S.C., 1985: Glaciological evidence of Holocene climatic change, In *Climate and History*, 82–110.

1. What are 2 types of organisms that can be used to date glacier moraines, and how do the methods work?
2. Why is ^{14}C dating sometimes unreliable for samples from the past 500 years?
3. Why is it hard in many areas to find moraines from the early Holocene (5-8 kyr B.P.)?
4. Does the radiocarbon age of plant material found on top of a glacial deposit usually represent a maximum or minimum age of the glacial deposit?
5. What is a potential problem with using the accumulation-area ratio method to reconstruct former equilibrium-line altitudes (ELA)?
6. Why might the exact age of a glacial moraine not represent the exact age of a climatic change?