A large, gnarled pine tree stands prominently in the center of a mountainous landscape. The tree has a thick, textured trunk and a dense, rounded canopy of green needles. The background features rolling hills and mountains under a blue sky with scattered white clouds. In the foreground, there is a grassy field with some purple flowers and large rocks. The overall scene is serene and natural.

Anna Norberg
Barbora Možná
Ivo Rossetti
Terezie Englová

TREES GROUP

SCOTS PINE - *PINUS SYLVESTRIS* L.

- ✗ the most widely distributed conifer in the world
- ✗ from sea level to 2400 m
- ✗ can grow to 36 m
- ✗ max. girth at breast height – up to 2,4 m
- ✗ lives up to an age of 250-300 years
- ✗ male and female flowers occur on the same tree
- ✗ seeds weighing 0.005 g, dispersed by the wind



HOW DOES THE SITE AFFECT THE GROWTH?



REASONS FOR THIS STUDY



Azonalality → variability between age, height and diameter

3
4

PREVIOUS STUDIES

- No relationship between latitudinal location and growth rate → pine growth is largely controlled by site specifics
- The growth rate of pines is not correlated with any peat nutrient
- Water availability is the primary growth-limiting factor
- Mistletoe infection reduces height and radial growth

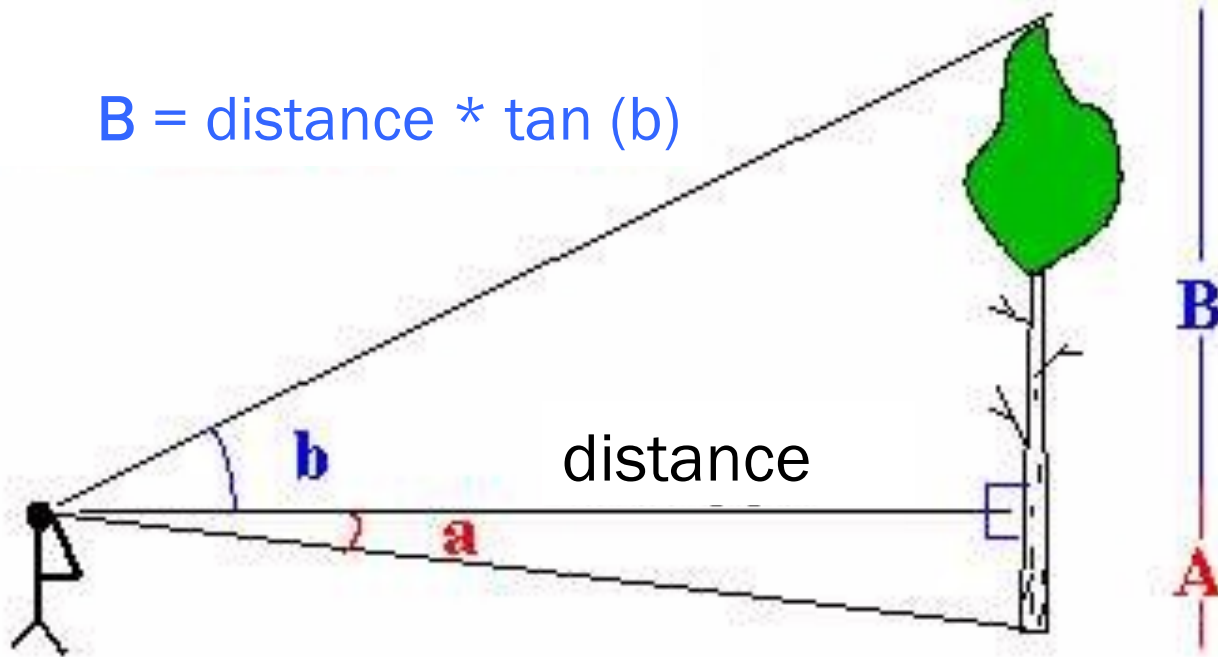
MEASURING TREE HEIGHT & DBH

All you need:

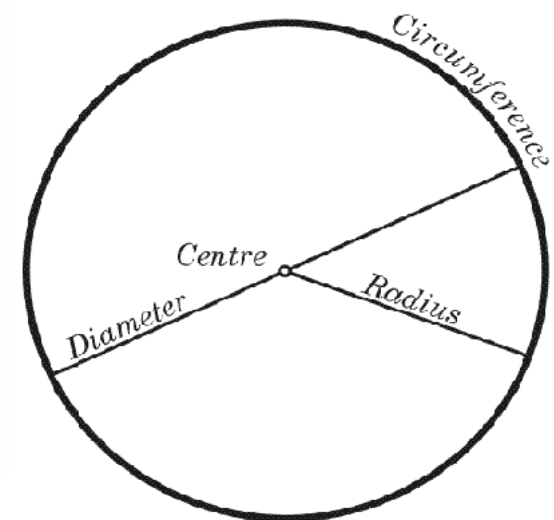
- hypsometer
- ruler / distance plate



$$B = \text{distance} * \tan (b)$$



$$\text{diameter} = \text{circumference} / \pi$$



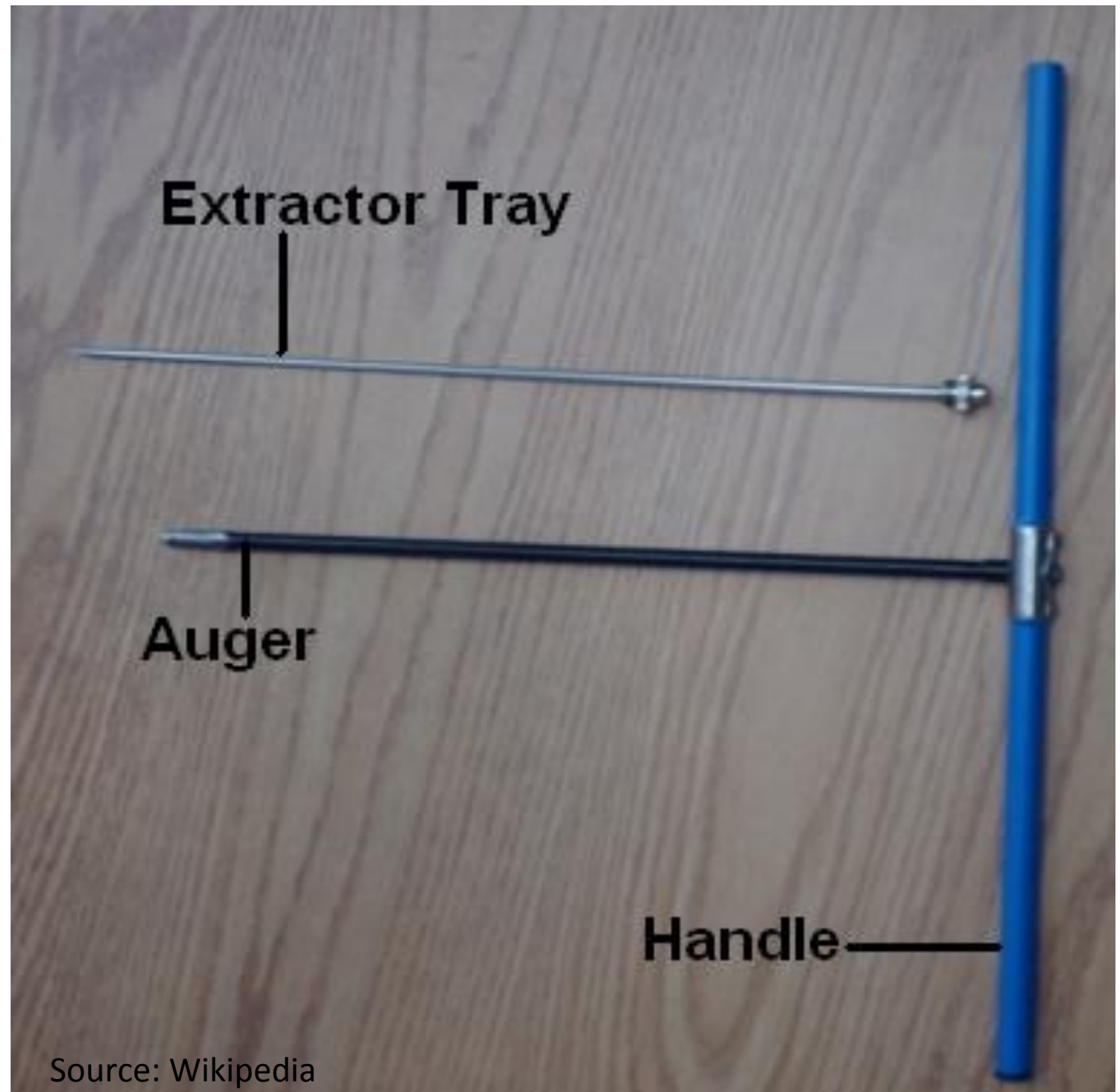
COUNTING TREE RINGS



Rings were counted from bark to core

All you need:
- increment borer
- good eyesight

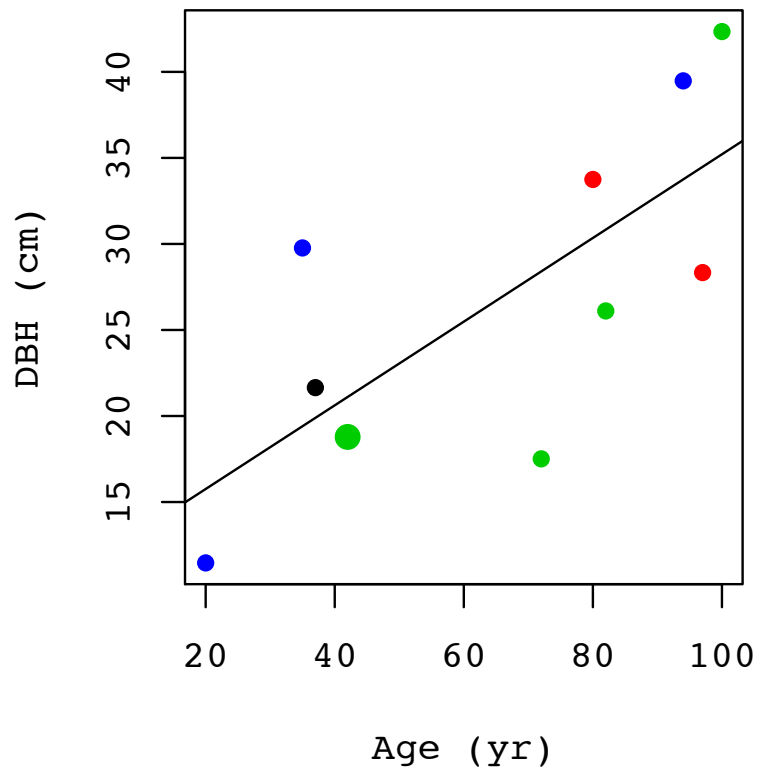
INCREMENT BORER



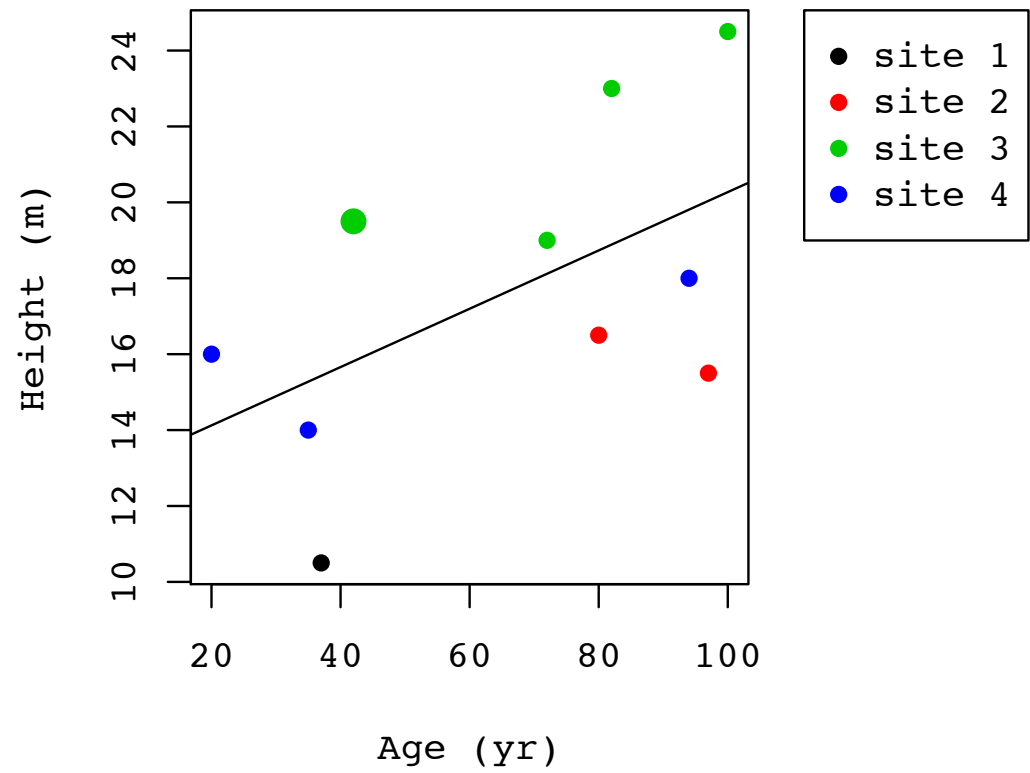
Source: Wikipedia

RESULTS

Diameter ~ age

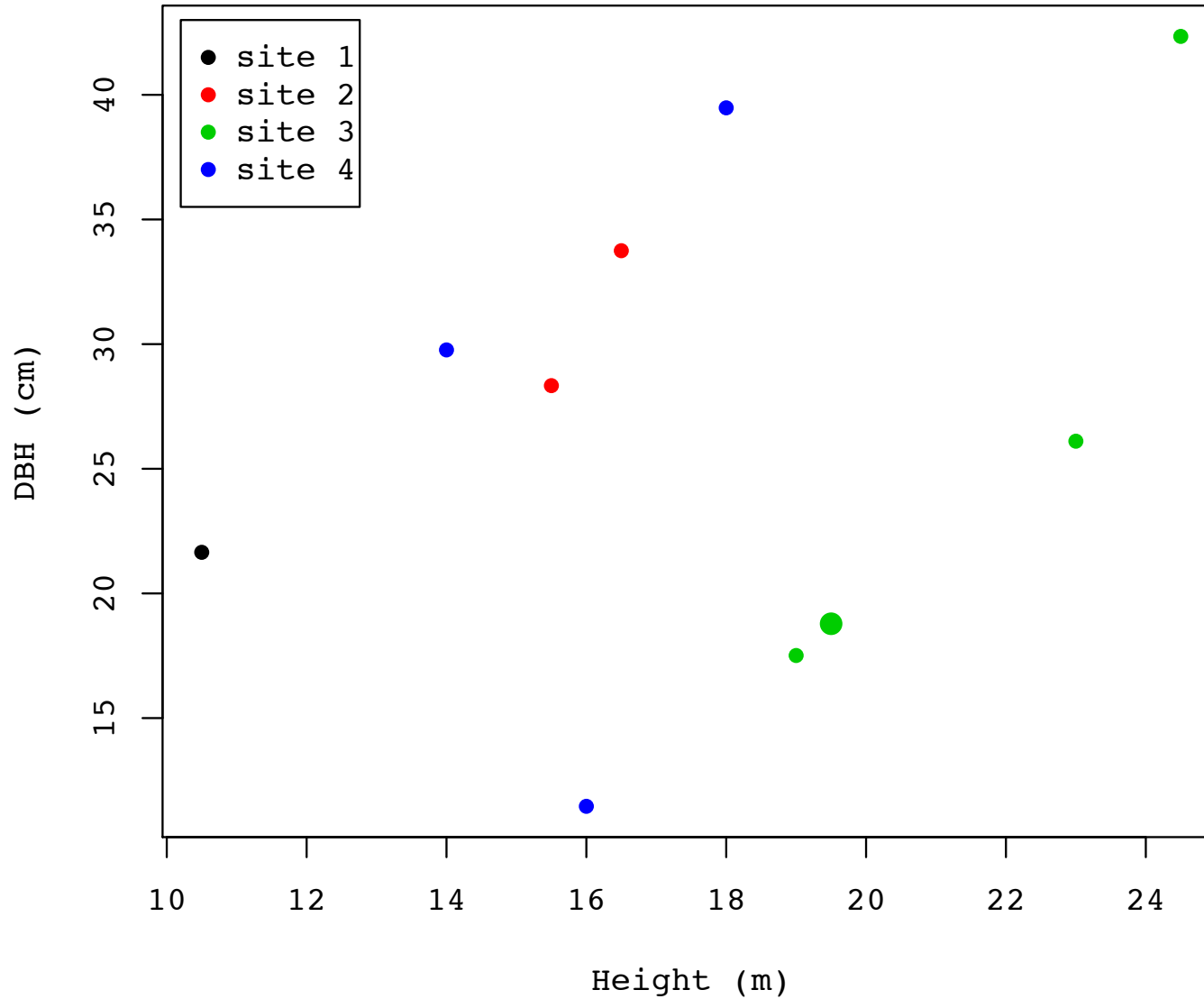


Height ~ age



RESULTS

Diameter ~ height



DISCUSSION

- Few samples
- No random samples
- Site parameters should be measured
(annual precipitation, soil horizon, soil type)



Thank you for your attention!

We had a nice time with you

— thank you Šuspa, Katka, Jakub, Petr