

Ecological impact of human occupation in Skíðadalur in North Iceland: preliminary results.



Elísabet Ásta Eypórsdóttir¹, Egill Erlendsson¹, Árni Daníel Júlíusson²

¹ University of Iceland

² Stefansson Arctic Institute

About the project:

The research is a part of a bigger project titled: Power, Wealth and the Plague in Two Valleys. It is a multi-disciplinary study involving scientists from the fields of Geography, Geology, History and Archaeology. Palaeoenvironmental reconstructions are central to this project.

Paleoecology:

Palynology and soil analyses will be used to answer some main questions:

- Timing, speed, and extent of colonization after Landnám (settlement) 877 AD.
- Changes in agricultural emphasis and social structure.
- Environmental significance of the 15th-century epidemic, farm abandonment and environmental change in a broader sense.

Study Area: Kot in Skíðadalur.

Skíðadalur is a valley that separates from Svarfaðardalur.

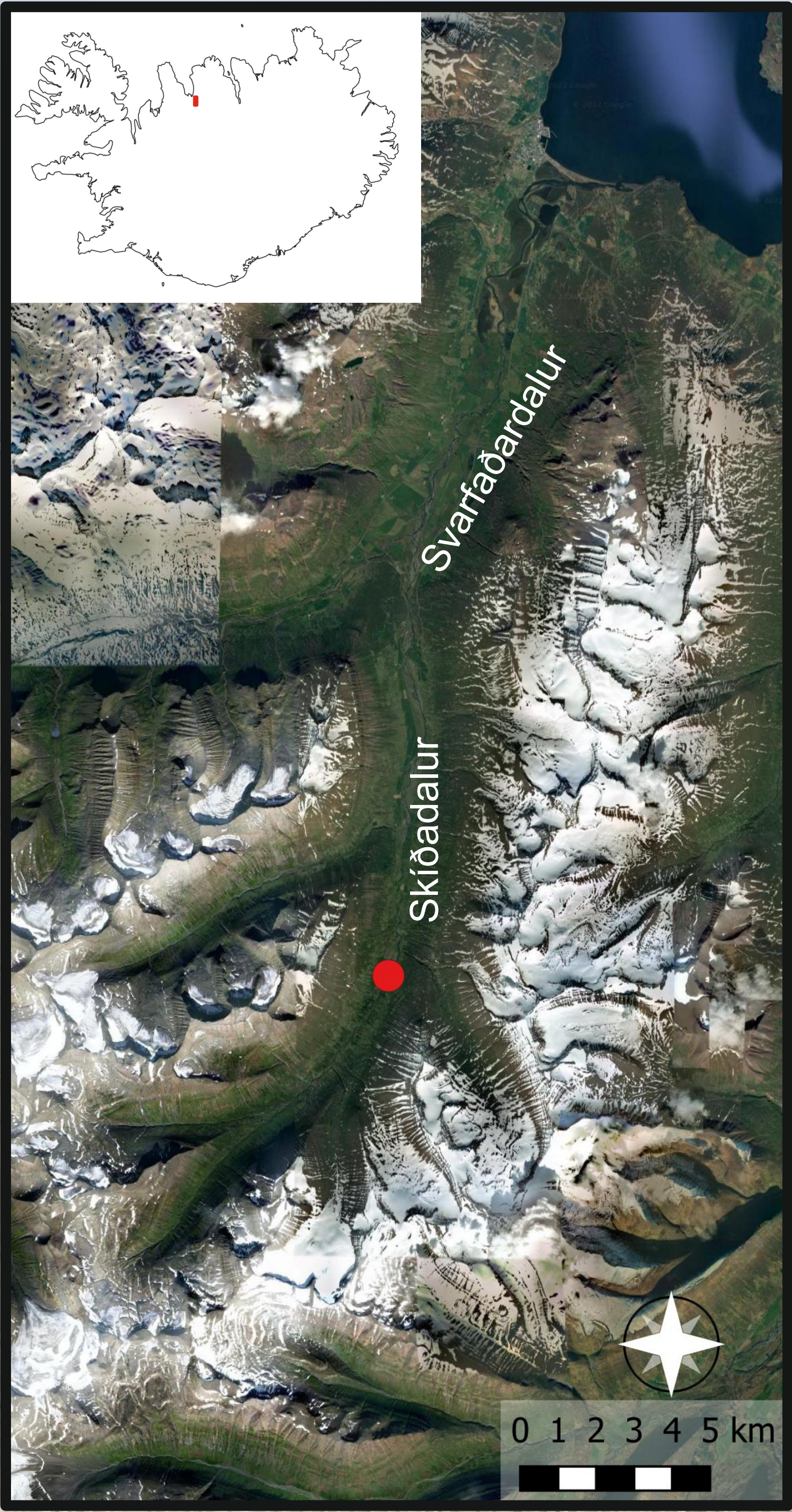
The earliest evidence of farming in the area was found to be prior to the 1104 eruption of Hekla.

It is thought that the land was used for grazing but not as a permanent farm.

Farm was established in the 12th or 13th century and abandoned in the 14th century.

The farm enclosure was 70x80 m, just under 0.6 hectares.

Small sizes of farmhouse and the hayfield indicate a small farm.



Results: Environment

-877 Pollen assemblages indicate birch (*Betula*) forests with some grassland (*Poaceae*).

877 to ~1200 the grassland is still in place although the birch forest is receding, most probably due to rangeland grazing of animals from neighboring farms. *Drosera* pollen increase after the landnám and there is a great increase of *Pteropsida* fern spores that can indicate erosion, presumably due to grazing and contraction of the birch woodland.

1200 – Around 300 mm (ca. AD 1100) the birch decreases drastically, most likely due to the establishment of a full farm at Kot. The birch was likely removed for better grassland, which is evident by the increasing number of grass pollen found in the samples.

