

Abstract

The tephrochronological record in northern Iceland allows for relatively fine temporal control over changing settlement patterns during the Viking Age. Over the last 6 years the Skagafjörður Archaeological Settlement Survey (SASS) has developed a series of protocols involving coring, electromagnetic conductivity survey, resistivity, GPR, and test excavations to make an accurate assessment of the first few hundred years of Viking Age settlement in Iceland. Here tephrochronology is used to date the settlement sequence of approximately 20 farms in the Langholt region of Skagafjörður. Based on systematic survey data from Langholt three distinct stages of farmstead establishment are apparent, each reflecting the landowning elite's control over productive land and, after the initial settlement, dictating the terms of subsequent farmstead establishment: (1) an initial, sparse settlement with large, independent farmsteads; (2) the later division of property into additional independent farmsteads; and (3) the subdivision of existing farmstead properties creating a new class of smaller, subordinate farms likely to be the first tenant farms in Iceland.

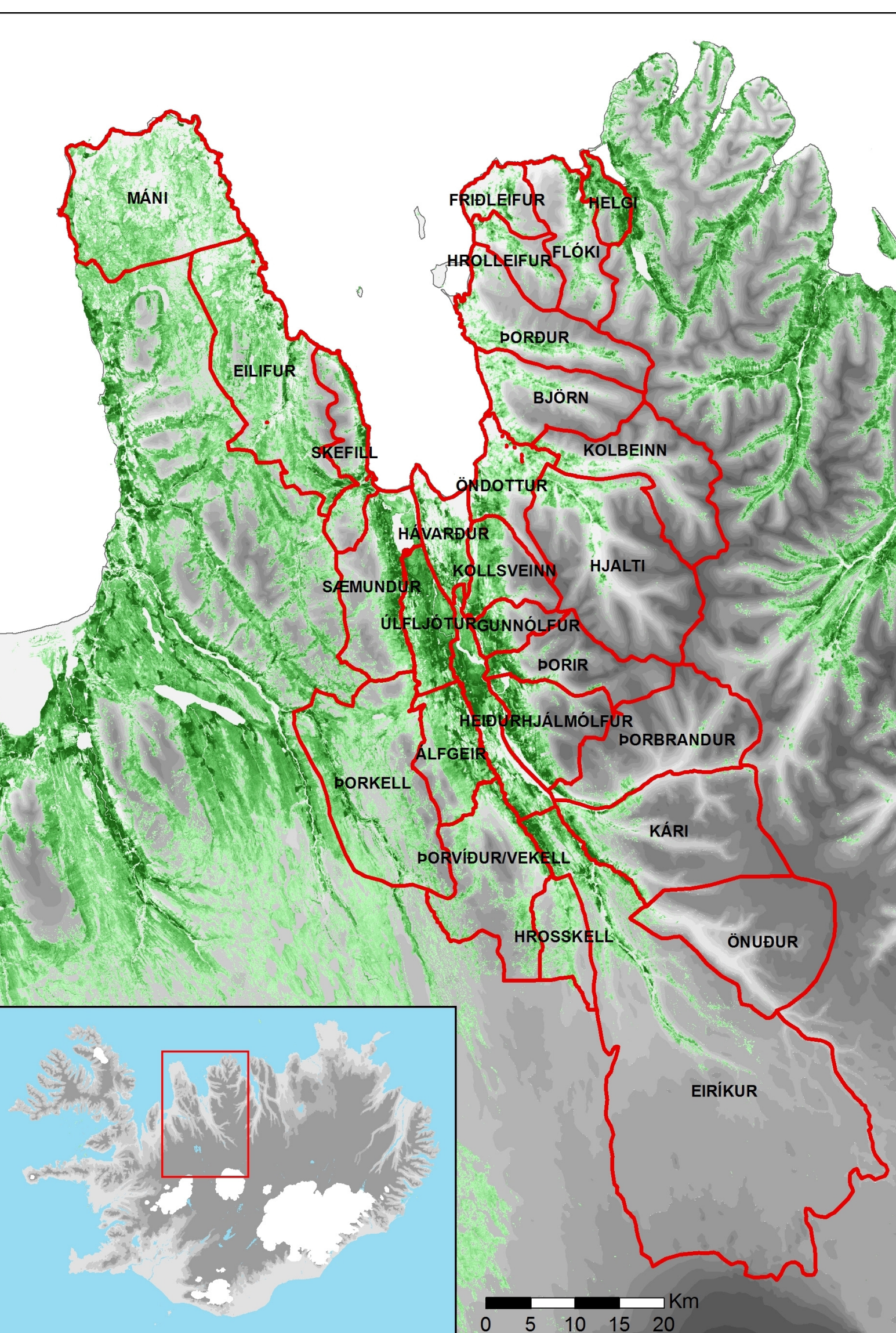


Figure 1. Initial land claims in Skagafjörður according to the *Landnámabók*.

The Creation of a Propertied Landscape

Iceland was first settled in the Viking Age (870-930 AD). Colonists claimed lands and established independent farms. Accounts of the settlement are found in the Icelandic Sagas and, in particular the *Landnámabók*, a record of approximately 400 colonists and the lands they claimed (figure 1). By the 17th century, when systematic records of land ownership are first available, there are roughly 10 times as many farms and over 95% of Icelandic householders were tenants. Thus, Iceland provides an opportunity to explore the emergence of social complexity, from the settlement of an uninhabited island to a highly stratified state.

The histories provide little information on the transition from settlement to state. What happened? How did the landscape fill in and when did substantial inequalities develop among farmsteads and households? We systematically surveyed and conducted test excavations in the Langholt region of Skagafjörður to examine this process.

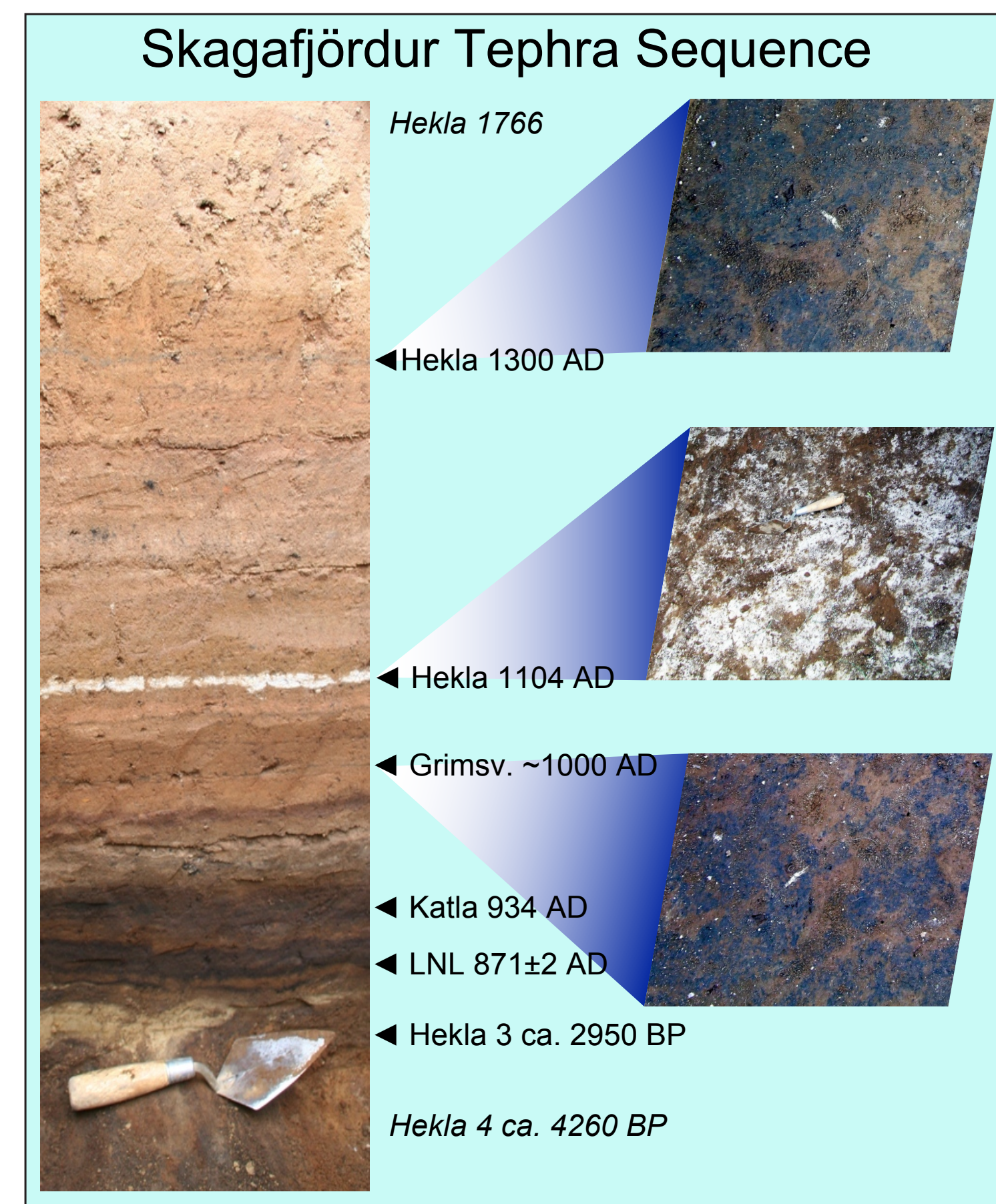


Figure 2. Skagafjörður local tephra sequence. showing volcanic system of origin for historically dated and pre-historic eruptions. Individual tephra layers are distinguished by sequence, color, and texture.

Tephrochronology

Regular volcanic eruptions in Iceland provide an alternative means to date archaeological deposits. Individual tephra layers can be matched with source volcanic systems and the time of eruption. Volcanic ash layers preserved in stratigraphic sequences allow farm buildings, sheet middens, and relict field systems to be dated. Tephra layers can also be used to refine radiocarbon dates by eliminating multiple intercepts from the radiocarbon calibration curve (figure 3).

Skagafjörður has a tephra sequence well-suited to the study of the settlement with tephra layers from approximately 871, 950, 1000, and 1104 AD (figure 2). These can be used as consistent temporal markers within sites and among sites. We used the local sequence of volcanic tephra to date the sequence of farm establishment and determine the area of farm buildings and middens in different time periods.

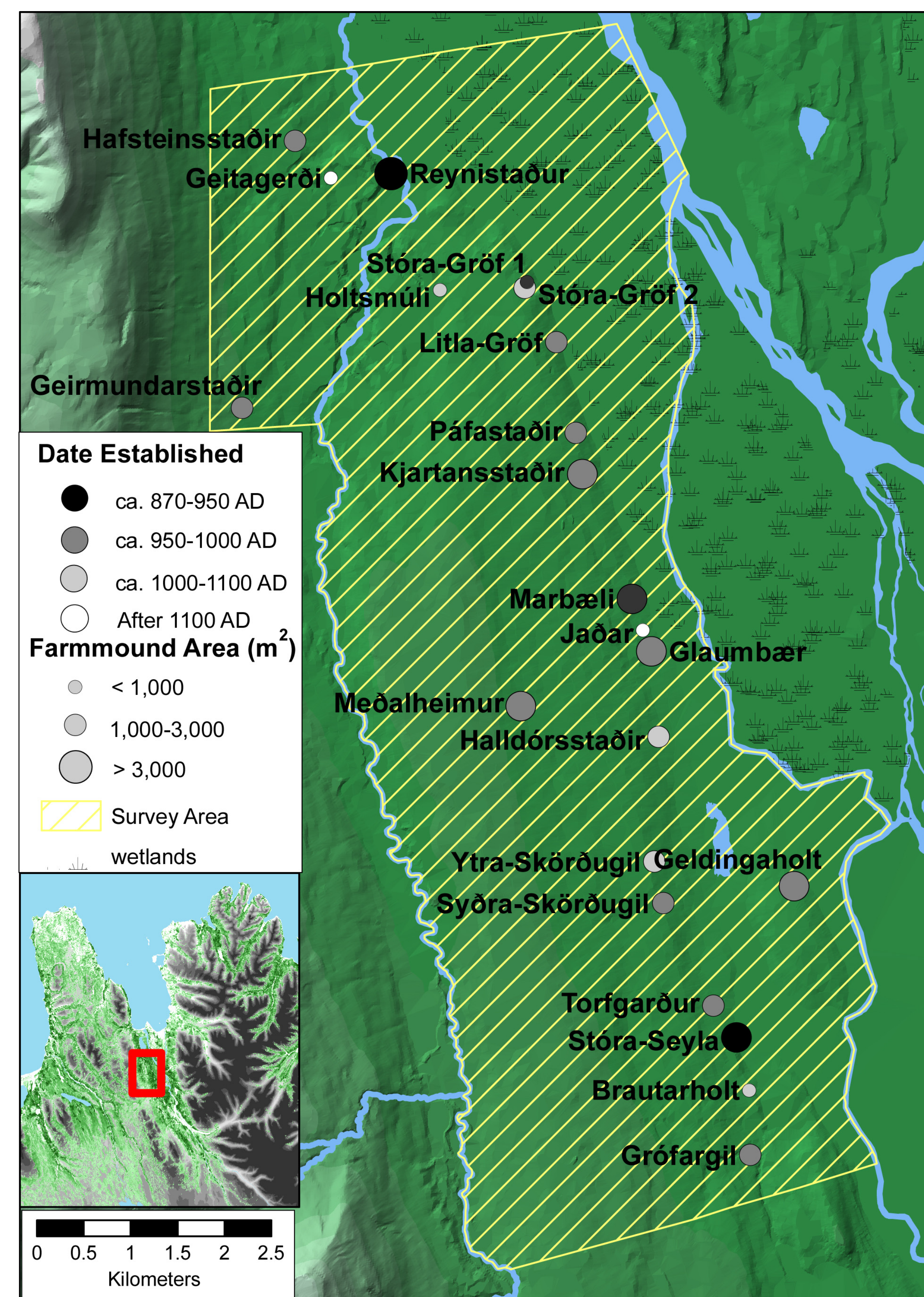


Figure 4. Settlement pattern for Langholt ca. 1100 AD.

Douglas J. Bolender¹, John M. Steinberg¹, Brian N. Damiata², E. Paul Durrenberger³

¹Fiske Center for Archaeological Research, University of Massachusetts Boston

²Cotsen Institute of Archaeology, University of California, Los Angeles

³Department of Anthropology, University of Pennsylvania

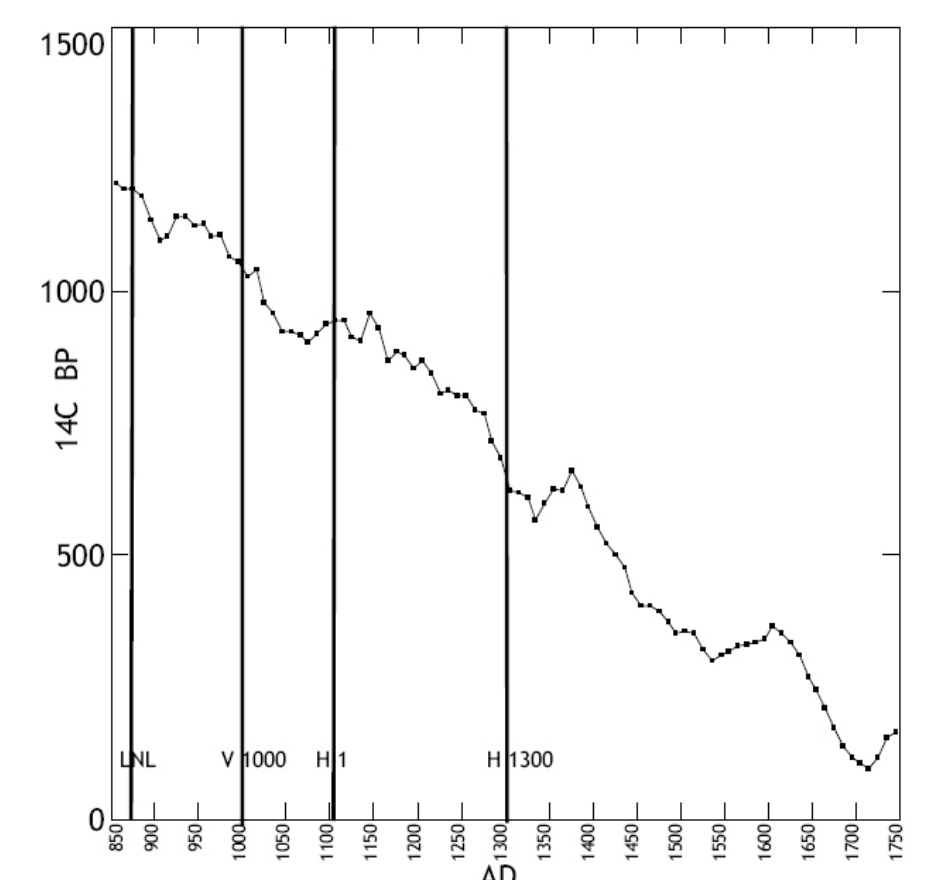
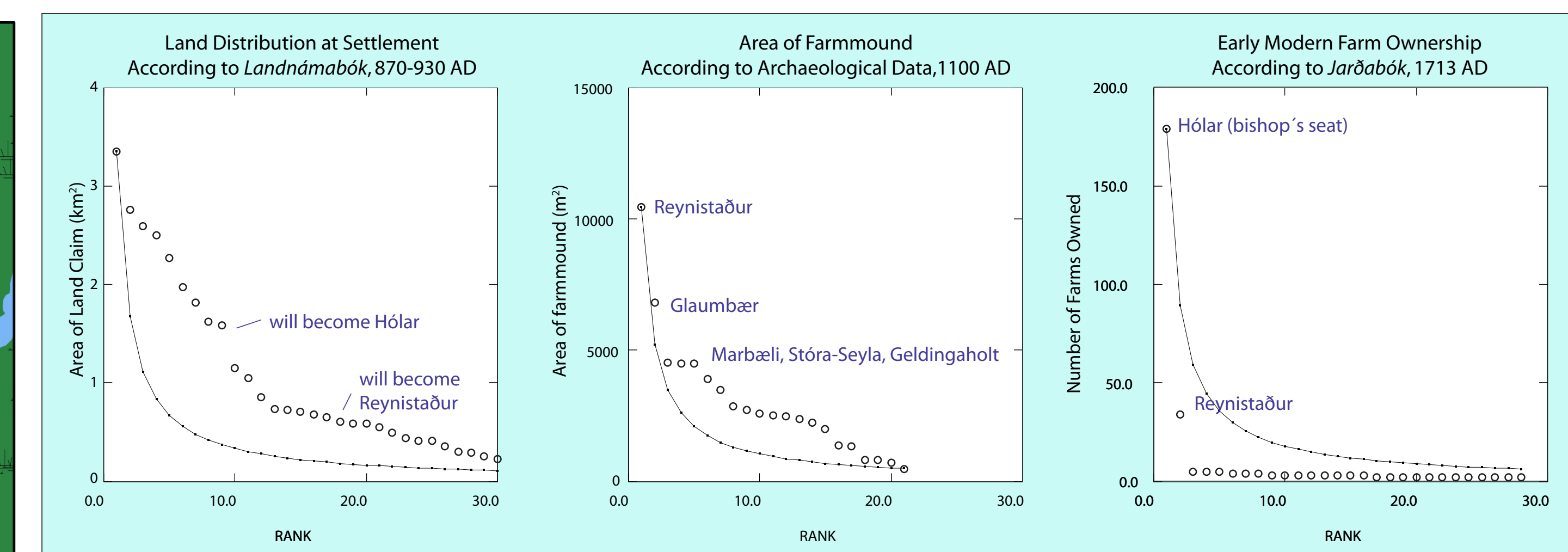


Figure 3. Radiocarbon calibration curve for the Viking Age showing intersecting tephra layers.



Land Division and Inequality

Over 8 years (2001-2009) SASS experimented with and implemented novel survey protocols to systematically identify, date, and characterize the approximately 20 Viking Age farmsteads in Langholt. The resulting settlement pattern reveals distinct patterns in the order, size, and timing of farm establishment and land division (figure 4).

The first farms, dating to the initial colonization, are widely spaced, roughly corresponding to the distribution represented in the *Landnámabók*. Later, these initial land claims were divided, resulting in the establishment of new, relatively large and independent farmsteads. At the end of the 10th century a new class of small farms appears resulting in pronounced differences in the size of farmsteads. The survey shows that incipient inequality among farms originated in the process of land division and farm establishment (figure 5).

Figure 5. Rank-Size Distributions for sites and landowners in Skagafjörður and Langholt based on textual and archaeological sources.

Acknowledgements
This material is based upon work supported by the US National Science Foundation under BCS grants 0107413, 0453892, and 0731371. Additional funding was provided by the Wenner-Gren Fund for Anthropological Research. Additional support came from the Commune of Skagafjörður and Icelandair. The work was done in conjunction with Byggðasafn Skagafringa Glaumbæ, the Hólasvíti, and the Hólar Research Project. The SASS project operated under permits granted by Þjóðminjasafn Íslands & Fornleifavernd ríkisins. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of any of the sponsors or supporters of this work. Reports and the raw data for this study can be obtained from <http://www.fiskecenter.umb.edu/SASS>.