

7

# Fornt jarðhús í Breiðuvík og fleiri minjar á Tjörnesi

Rannsóknir vegna vegagerðar

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ÞJÓÐMINJASAFN  
ÍSLANDS

## 4 Viðauki 2. Insect fossils from Breidavik, Tjörnes Magnus Hellqvist

National Museum of Iceland, Lyngás 7, 210 Garðabæ.\*)

Three samples from the excavation of a Viking age pithouse in Breidavik were subsampled and investigated for the content of fossil insect remains, primarily remains of order Coleoptera (beetles). The method for preparing the samples follows Coope (1986).

### The Samples and soil condition

The samples were collected in the pithouse that is probably placed at the western end of a Viking age longhouse. Sample 11 (Sýni 11) was collected from what was originally a barrelhole, but was later used as a fireplace. Sample 5 and 10 (Sýni 5 and 10) were collected from the pit house floor, in a layer largely consisting of charcoal particles and burnt bones. Samples rich of charcoal are very difficult to use for investigation of insect remains since they have often been destroyed by fire.

The sampled layers were only c. 40 cm under the surface, which explains why all samples contained much plant roots of present age. This means a risk for soil disturbance and that more air could be transported into the soil helping to break down any fossil remains. All samples were rich in coal fragments and samples 5 and 10 were also rich with fragments of bone and burned bone.

The preservation degree of the few fossil insect remains was very low because of the soil condition and this had profound effect on the possibility to identify the fossils to species (see table 1). Fossil remains were only found in sample 5 and 10. The interpretation of the insect finds, however, is that these remains were deposited during the building phase of the house or while the house was in use and not transported into the soil later.

### The insect remains

It is very difficult to make a good interpretation of the insect remains found at Breidavik, they are few and badly preserved. Only beetles were

found. Here is a brief presentation of the species and interpretation of their probable connection to the settlement. Information on the biology of the species is from Böcher (1988), Larsson and Gigja (1958) and Palm (1996).

The weevil species *Otiorrhyncus nodosus* is in Iceland common in drier habitats and the species is found in many varied biotopes (eurytopic) in moss and under stones. In Iceland it has been observed feeding on leaves of *Rumex acetosa*, *R. longifolius*, *Dryas octopetala*, *Saxifraga hirculus* and flowers of *Trifolium repens*. The larvae is a root feeder, living permanently in soil, feeding on a wide variety of various plant species (polyphagous). It is not particularly bounded to human environments or living in close association with man (synanthropic) and therefore it was probably introduced into the pithouse at Breidavik either during the building phase of the house, most likely in the building material, or it came in to the house by accidental transport in substrates, such as plant remains or peat. The material is to small definitely find its origin.

The weevil *Tropiphorus obtusus* is common in Iceland today. It inhabits grassland and meadows, sometimes found in large numbers in river flood refuse, but it is also found in drier localities. The larva is a root eater and the beetle feeds on grass plants and has been observed gnawing several herbs. It has been observed feeding on leaves of *Rumex acetosa*, *R. acris*, *R. repens* and *Leotodon autumnalis*. *Tropiphorus obtusus* is not synanthropic, but often found near built up areas or on cultivated land. The probable origin of this weevil in the pithouse is difficult to interpret, it is likely that it was introduced to the house accidentally, likely in some kind of substrates, such as plant remains or peat. This means that the insect remains from the pithouse cannot help us to determine the function of the house.

TAXA	SAMPLE		
	Sýni 5	Sýni 10	Sýni 11
<i>Carabidae</i> indet.		1	-
<i>Otiorrhyncus</i> cf. <i>nodosus</i> (Müller)		1	-
<i>Otiorrhyncus</i> sp.	1		-
<i>Tropiphorus</i> cf. <i>obtusus</i> (Bonsd.)	1	1	-

Note: cf. stands for uncertain identification of a species; sp. means unable to identify to more than the genus; indet. means unable to identify to more than family.

Table 1. Remains of fossil Coleoptera (beetles) in samples from Breidavík. Minimum numbers of individuals in each sample are calculated from the most abundant skeletal part.

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