

## MACROFOSSILS IN "GRUBENHÄUSER" FROM VIKING AGE IN DENMARK

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Two recent finds of carbonized macrofossils from Viking Age Grubenhäuser (sunken buildings) have given an insight in different aspects of the construction and function of these types of houses.

A Grubenhäuser from a rural site on the west coast of Jutland contained a floor layer, partly preserved by fire. The layer consisted mainly of straw, but the archaeobotanical analysis also revealed large numbers of awns and grains of *Secale cereale*, rye. The proportion of grains and awns in combination with the presence of straw reveals that the floor presumably had been covered with threshed rye straw. Another sample from the house which contained many weed seeds indicates that underneath the layer of straw there presumably was a layer of turf. According to weaving experiments, straw on the floor of a Grubenhäuser gives a better light in the house and provides constant humidity, which are beneficial for weaving. The archaeological investigations uncovered several loom weights and small pieces of cloth in the house which supports its interpretation as a building used for weaving.

A recently excavated Grubenhäuser in the town centre of Viking Age Aarhus contained large amounts of grain. The house had been used for occupation and a preliminary analysis of the macrofossils indicates that the grains were part of a store of rye and oats.

The archaeobotanical analyses of Grubenhäuser thus revealed different uses of these kinds of features, which can only be determined by careful excavation and investigation.

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