

Reconstructing forest activities in prehistoric Hallstatt, Austria

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The prehistoric salt mine Hallstatt together with its burial ground is one of the most prominent archaeological site in Austria. Due to the excellent conservation with rock salt a great number of organic material, primarily wooden artefacts, have been found.

• Mining Timber

For mining timber mainly spruce (47%) and fir (43%) was used. A small number of samples belonging to beech (8%), maple (1%) and larch (1%) (Fig.1). Compared with the forest ecotype, a higher proportion of beech-wood can be expected, therefore we hypothesize that beech was mostly used as fire wood. The small number of larch wood found in the mine indicates that almost all larch trees were used for housing. Almost 90% of the mining timber was low diameter wood between 5 and 15 cm.

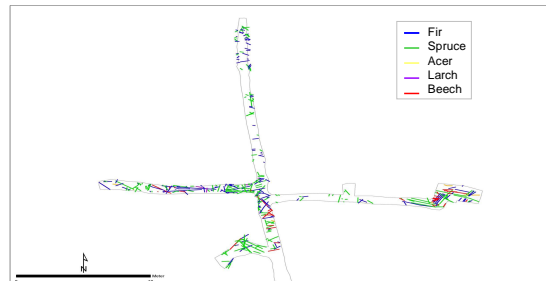


Fig.1: Distribution of the wood species in the mine

• Lightning Strands

Abundantly found lightning strands (Fig. 2) provided light to the workers in the mine. They were prepared by peeling-off about 1m long strands. These strands were found in bundles of about 40 pieces. Almost all strands were split-off from knot free stem regions. Almost 100% of all lightning strands were made out of fir wood, which is rather remarkable as usually pitchy pine is used to ensure proper burning.

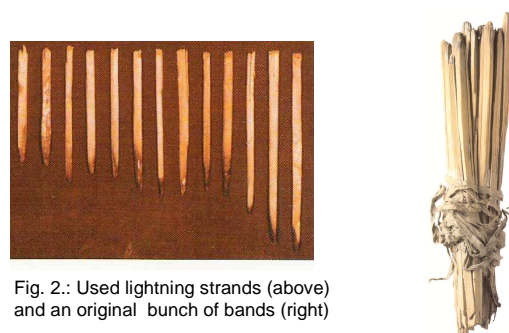


Fig. 2.: Used lightning strands (above) and an original bunch of bands (right)

• Tools and Transportation Bins

Transportation bins were mainly made out of overgrown fir stumps (Fig.3). The texture of these bins is undirected, sometimes growing in circles. This tissue is more resistant against splitting.



Fig.3: Bin made out of an overgrown stump

Reconstruction of Forest Activities

Facts:

- *Mining timber*: mainly fir and spruce, diameters between 5 and 20 cm
- *Lightning strands*: mainly fir, diameters between 10 and 30 cm, ring width between 1 and 3 mm
- *Bins*: overgrown fir stumps, diameter between 25 and 35 cm, ring width below 1mm

diameter < 25cm

diameter. 20-30cm

diameter 25-35cm

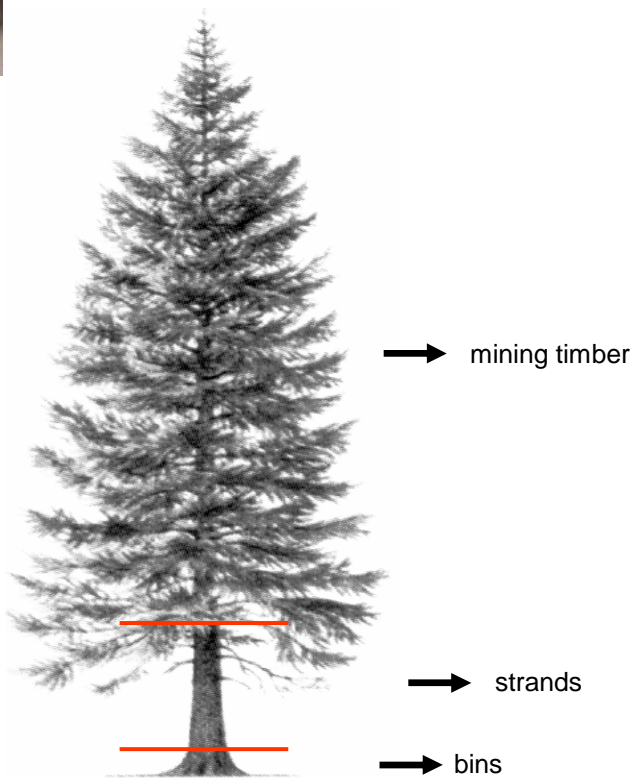


Fig.4 : Hypothesized stem utilisation

Hypothesized forest type:

- high proportion of fir
- dens stands
- small diameter trees are heavily utilised

Utilisation of tree stems

(Fig.4)