



The bark fibre connection

A comparison of prehistoric linden (*Tilia* spp.) bark rope making in Austria
with contemporary baobab (*Adansonia digitata* L.) bark fibre rope
production in West Africa

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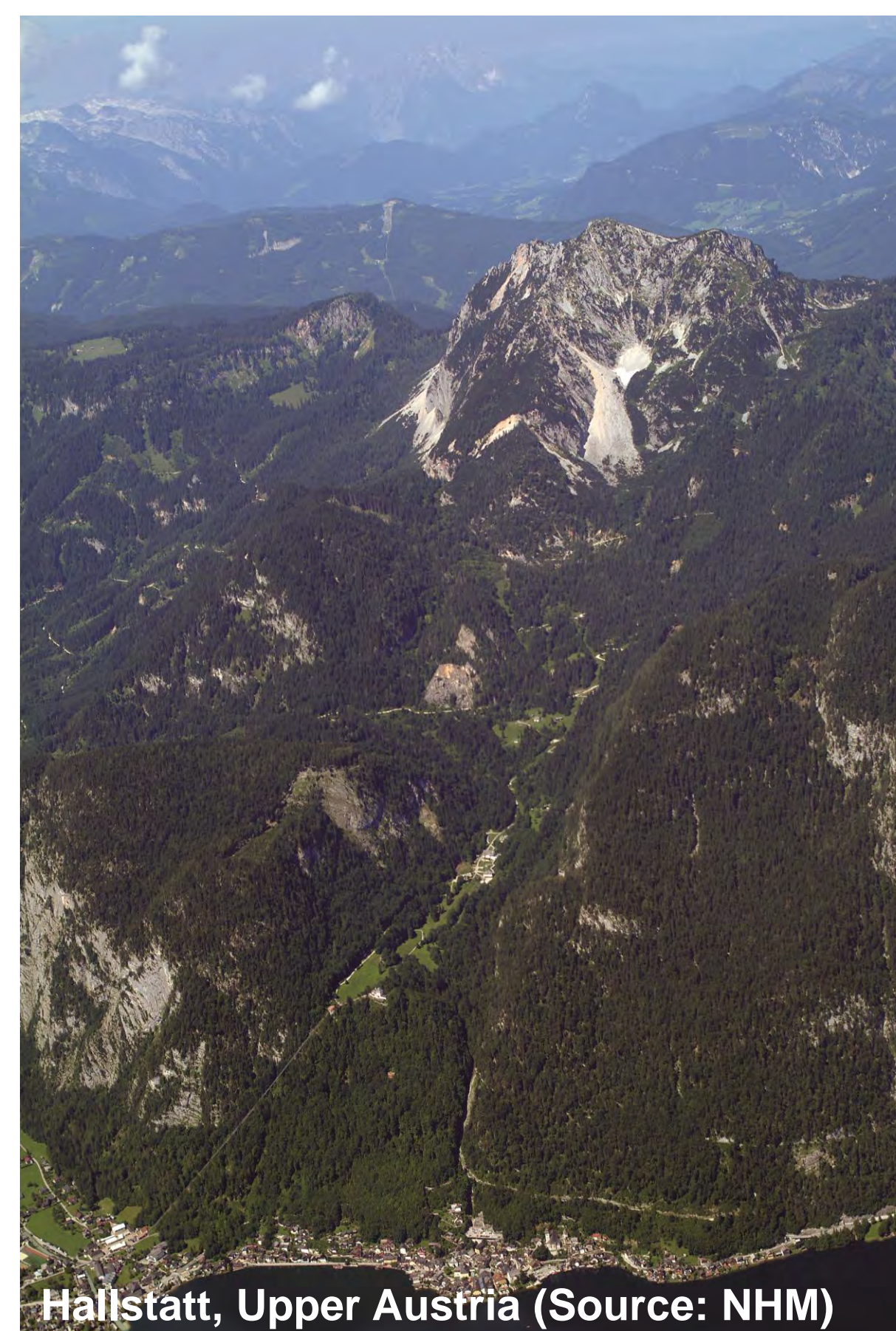
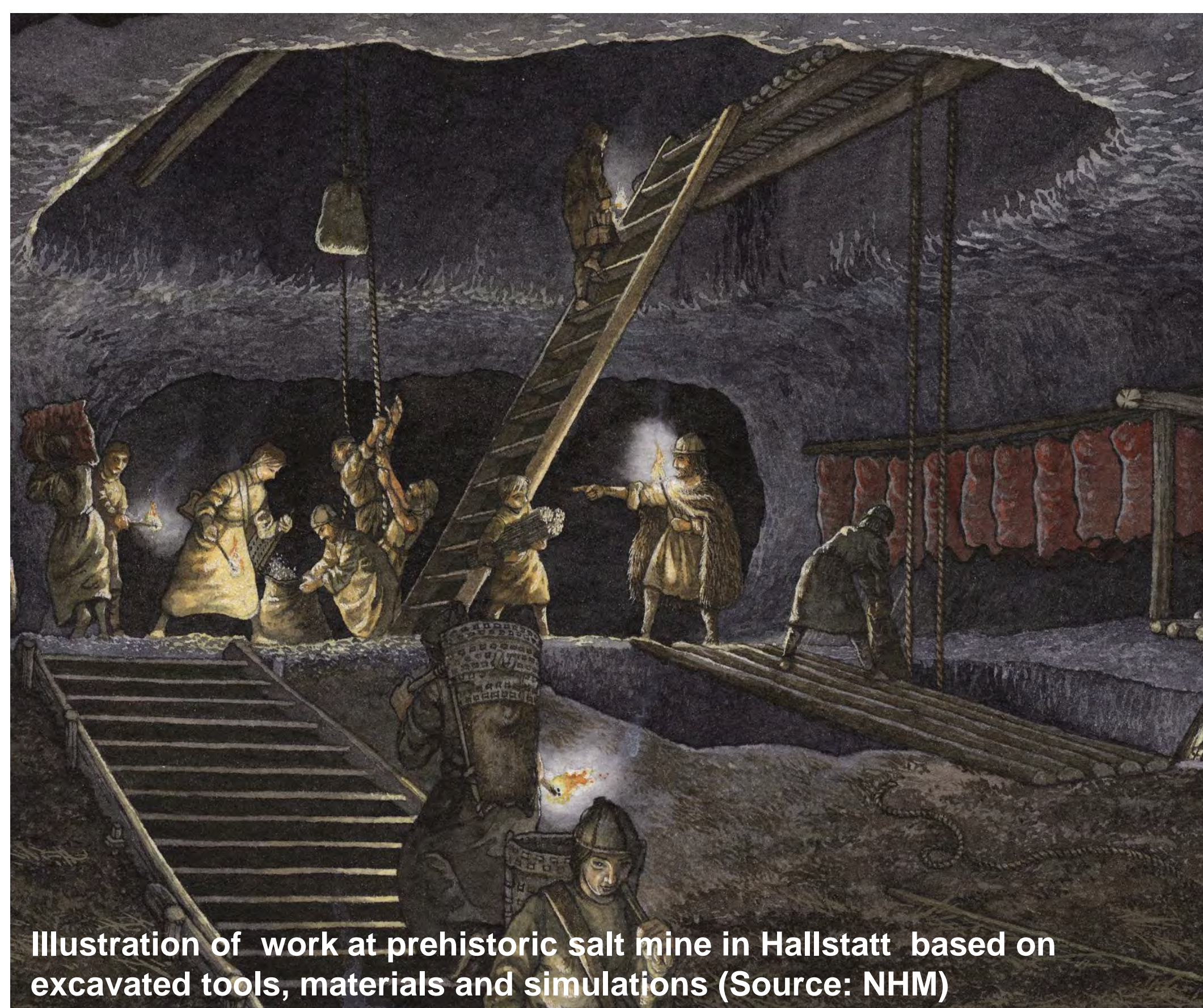
Aim

Salt is mined in Hallstatt/ Upper Austria since the 15th century BC. Through the preserving properties of the salt, abandoned tools and material of prehistoric mining can still be found today. One such specific tool is a 4cm thick rope made from bark fibres of the linden tree (*Tilia* spp.). The rope was presumably used for salt transport, but in order to quantify prehistoric working processes in the mine, simulations are needed.

Archaeological analysis on ancient working processes of rope production was primarily based on literature and ethnographic movies, since such knowledge has been lost in central Europe.

In some areas in West Africa, rope making using bark fibres is still practised today. To better understand prehistoric linden fibre rope making as practised in Hallstatt, research was undertaken with contemporary baobab (*Adansonia digitata*) rope makers in Mali.

Research questions focused on rope production processes, including selection and harvest of fibres, time needed to complete ropes, rope quality and variability depending on producer, as well as rope uses and durability.



Methods

Structured interviews, group discussions and participatory research methods on traditional and contemporary uses of baobab were conducted with 220 informants from 11 ethnic groups throughout Benin, Mali and Senegal.

In Medolo, Dogon country, Mali, two expert rope makers and one hobby rope maker were filmed while harvesting baobab bark, preparing the fibres and making a 1m three-strand rope. This process was repeated with the supplied linden fiber (harvested in Austria). Production, access, processing techniques, uses, and marketability of baobab rope were discussed and documented.

The video footage along with the completed ropes was returned to Vienna for analysis in the Natural History Museum (NHM), focusing on the variability of techniques employed by the rope makers. The completed ropes were referenced during this process comparing similarities and differences between these ropes and those from Hallstatt.



Results

In the regional study with 11 ethnic groups, the use of baobab ropes was the most frequently stated non-food use of baobab plant parts reported. Rope-use ranked higher than popular medicinal uses of the baobab tree. However, the knowledge of the baobab rope making is eroding, due to the increasing availability of more durable and water-resistant synthetic ropes.

The Dogon rope makers used identical techniques for both the baobab and linden ropes. Traditionally, they produce specific ropes, varying in length, thickness and winding techniques, for different purposes. Three-single-strand ropes (3x1) are used to tie livestock, or to bundle firewood. Two two-strand ropes wound together (2x2) are used for pulling water from the well, and 3x2 ropes are used for tying horses. The ropes traditionally used by the Dogon to haul the dead to the cliff burial chambers (3x3) are no longer produced in Mendolo, but fortunately the knowledge of this technique has not been lost.

In the Hallstatt mine no single rope has been found in a functional context. Therefore, we do not have any proof of how the ropes were used. Based on the diversity of the found rope pieces, and the observations made in Mali, we now assume that the different types of ropes in Hallstatt were also used for different purposes. Further simulations and testing of the rope qualities, e.g. durability, will increase our knowledge on prehistoric rope uses and production.

This collaboration based on quantitative and qualitative ethnobotanical field research combined with reconstruction and simulation exercises in archaeology has proven successful for the scientists, but will also be used to promote the appreciation of traditional knowledge in both Africa and Europe, e.g. through video screenings and workshops.

Acknowledgements

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