

## Nordic Bronze Age attracted wide variety of migrants to Denmark

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Karin Frei at the lab just before taking an enamel sample from one of the many Bronze Age individuals. Credit: Cristina Jensen



Migration patterns in present-day Denmark shifted at the beginning of the Nordic Bronze Age, according to a study published August 21, 2019 in the open-access journal *PLOS ONE* by Karin Frei of the National Museum of Denmark and colleagues. Migrants appear to have come from varied and potentially distant locations during a period of unprecedented economic growth in southern Scandinavia in the 2nd millennium BC.

The 2nd and 3rd millennia BC are known to have been a period of significant migrations in western Europe, including the movement of steppe populations into more temperate regions. Starting around 1600 BC, southern Scandinavia became closely linked to long-distance metal trade elsewhere in Europe, which gave rise to a Nordic Bronze Age and a period of significant wealth in the region of present-day Denmark.

In this study, Frei and colleagues investigated whether patterns of migration changed during this Nordic Bronze Age. They examined skeletal remains of 88 individuals from 37 localities across present-day Denmark. Since strontium isotopes in tooth enamel can record geographic signatures from an early age, analysis of such isotopes was used to determine individuals' regions of provenance. Radiocarbon dating was used to determine the age of each skeleton and physical anthropological analyses were also conducted to add information on sex, age and potential injuries or illness.

From c. 1600 BC onwards, around the beginning of the Nordic Bronze Age, the geographic signal of migrants became more varied, an indication that this period of economic growth attracted migrants from a wide variety of foreign locales, possibly including more distant regions. The authors suggest this might reflect the establishment of new cultural alliances as southern Scandinavia flourished economically. They propose that further study using ancient DNA may further elucidate such social dynamics at large scales.





Teeth from male individual from the site of Gjerrild (Rise 73a) Credit: Marie Louise Jørkov

Co-author Kristian Kristiansen notes: "Around 1600 BC, the amount of metal coming into southern Scandinavia increased dramatically, arriving mostly from the Italian Alps, whereas tin came from Cornwall in south England. Our results support the development of highly <u>international</u> trade, a forerunner for the Viking Age period."

Karin Frei adds: "Our data indicates a clear shift in human mobility at the breakthrough point of the Nordic Bronze Age, when an unprecedented rich period in southern Scandinavia emerged. This suggests to us that these aspects might have been closely related."

More information: Frei KM, Bergerbrant S, Sjögren K-G, Jørkov



ML, Lynnerup N, Harvig L, et al. (2019) Mapping human mobility during the third and second millennia BC in present-day Denmark. *PLoS ONE* 14(8): e0219850. doi.org/10.1371/journal.pone.0219850

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