

New Research Project: Bodily Biographies of the Bronze Age

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The newly funded research project, *Bodily Biographies of the Bronze Age* (BODYBIO), takes its point of departure from the intersection of the body, society and material culture in the Nordic Bronze Age (NBA, c. 1700–500 BCE). The project is financed by the Augustinus Foundation (grant no. 2025-1118) and run from 2026 to 2029. By combining theoretical perspectives from New Materialism (Coole & Frost 2010) with those of classical sociology (Meskell & Preucel 2007; Schatzki 2010), we use artefacts as proxies for fragmented and missing bodies (Cormier & Mille 2018; Maller 2018). BODYBIO combines the study of these artefacts together with state-of-art osteological re-examination and scientific analysis of heavily fragmented cremated human remains to reconstruct bodily biographies.

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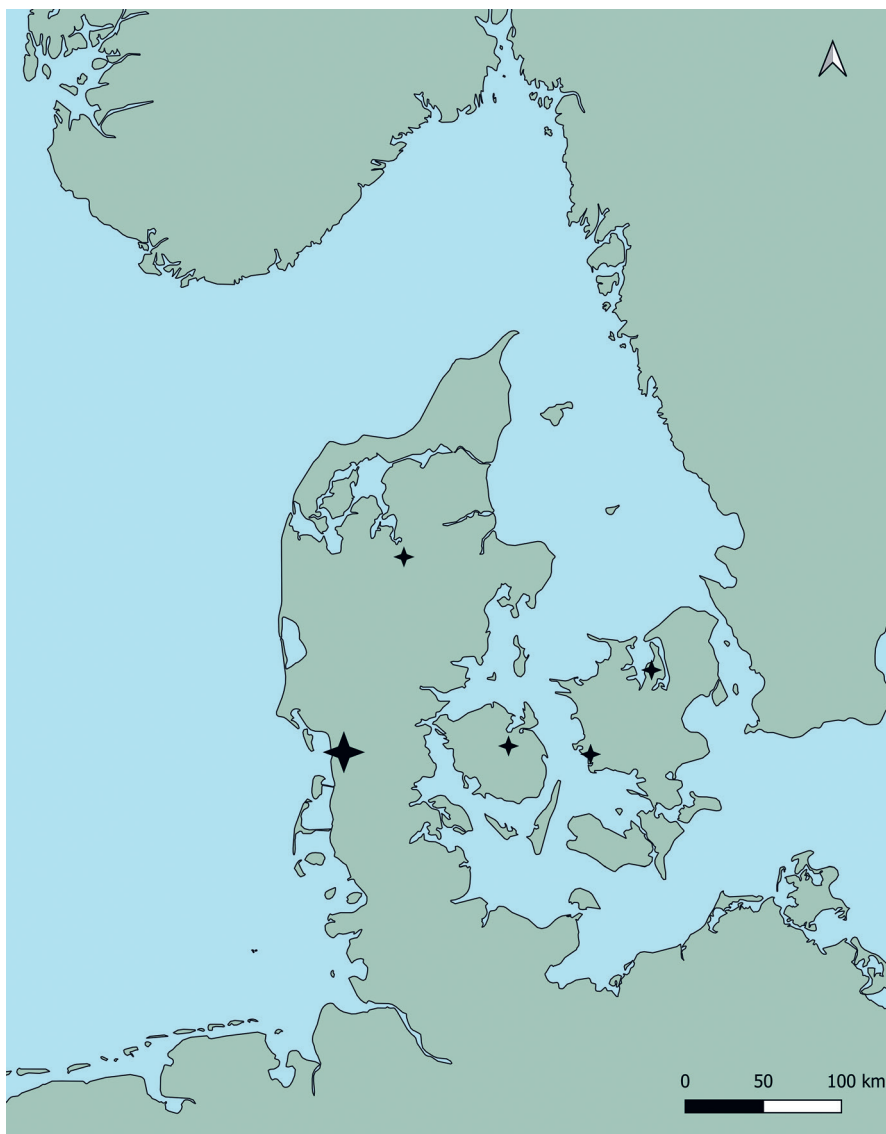


Figure 1. Map of key sites for the analyses of cremated remains. Lustrupholm is marked by a larger asterisk. Map by authors.

Studying ‘invisible’ bodies

Cremated human remains from key sites in present-day Denmark (Figure 1) will undergo pioneering scientific analyses allowing for new insight into sex, individual lifeways, and the cremation practice itself (Østergaard 2024).

Micro-CT scanning will enable measurements of the lateral angle of petrous bones, and by modelling these measurements alongside other morphological markers on selected fragmented remains we can improve accuracy in sex estimation (Waltenberger et al. 2024; 2026). Combined with strontium isotope analysis, such estimates may help identify differences in mobility patterns between individuals of different biological sexes (Reiter et al. 2021).

Drawing on research into human skeletal growth, the project studies how artefacts can serve as proxies for fragmented or missing bodies. One approach involves measuring the internal diameter of armrings to estimate the age at which they may have been first worn, based on changes in wrist size during growth (Lehnert & Wahl 2021). Combined with use-wear analyses, this approach can provide insights into how objects were used and retained across different life stages, including childhood, adolescence and adulthood. This, in turn, may allow for the investigations of identities tied to the body.

Lustrupholm: an early cremation site

One of the project's key case study sites is Lustrupholm near Ribe, an early cremation site dating to the Nordic Bronze Age Period III (c. 1300–1100 BCE) (Feveile & Bennike 2002). The site contains 23 urn and cremation graves, and anthropological analyses has established the presence of individuals of both sexes and of varied ages (from newborns to adults). Preliminary analyses suggest careful cleaning and handling of the bones before being placed in the urns; efforts were seemingly made to collect the entire individual. Seven graves included bronze artefacts, providing an oppor-

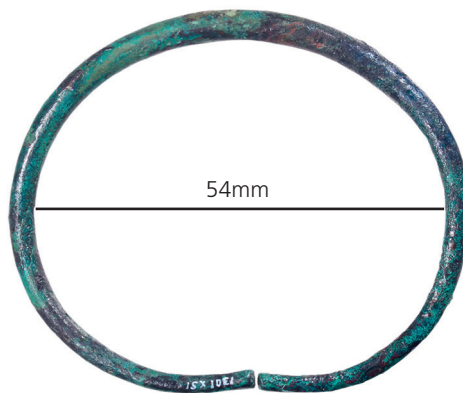


Figure 2. Armring/ bracelet from a female grave from the site Lustrupholm (ASR 1301x51, G5). Photo: Museum Vest.

Internal Bracelet Diameter by Age

Approximate midpoints of the diameter ranges reported by Lehnert & Wahl.
The red-highlighted observation represents a bracelet with a 54 mm internal diameter.

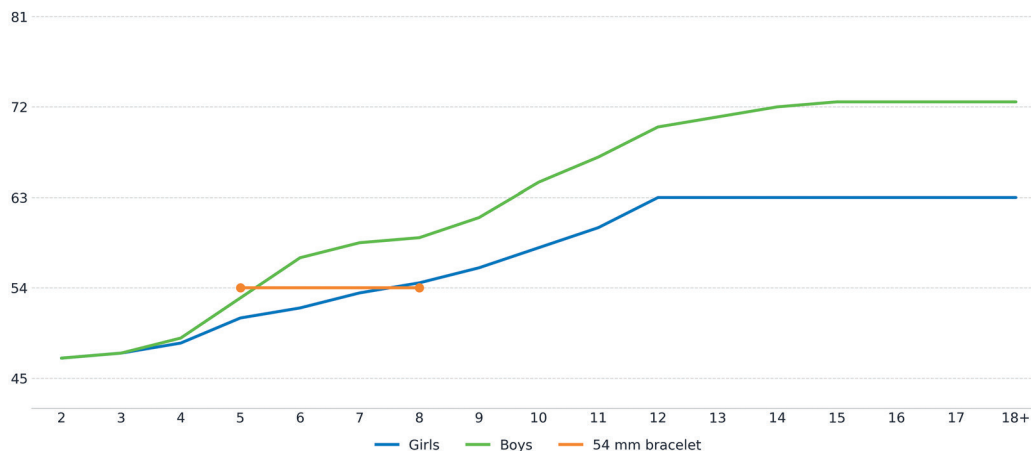
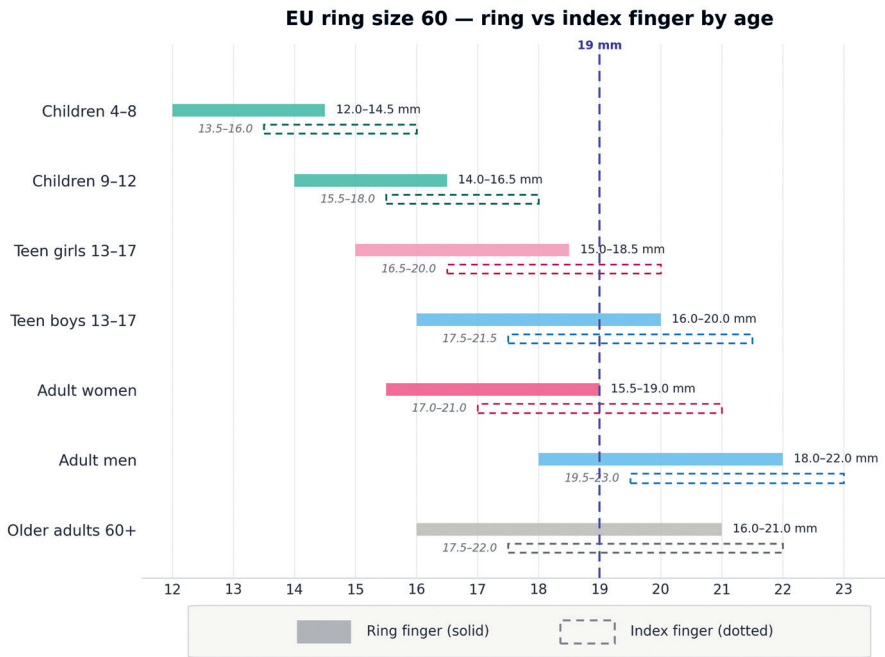


Figure 3. Graph with age and internal bracelet diameter. The relevant age range for the bracelet from grave 5 is marked in red indicating that the bracelet would have been put on at the latest at age 8. Figure by authors using genAI (chatgpt) source data from table 1, Lehnert & Wahl 2021. Verified by authors.

tunity to investigate human-object entanglements. Petrous bone samples from nine individuals have been collected for strontium isotope analysis and micro-CT scanning.

Initial osteological analysis show that grave 5 contained the remains of an adult individual, estimated to be female and aged 30–50 years at death (Feveile & Bennike 2002). The armring recovered from the grave (Figure 2), has an internal diameter of 54 mm. Based on our analysis of wrists growth (Figure 3), this diameter is consistent with the ring having been fitted during childhood, likely before the age of eight for girls or six for boys. If the armring remained on the individual as they grew, it would have become impossible to remove without damaging the arm or the ring, meaning that it would likely have remained in place until death. The finger ring has a diameter of 19 mm, a size compatible with adult fingers of either biological sex (Figure 4). Since the objects are unburnt, they have likely been removed at some point before the cremation event itself. Further investigation and comparison with other burials is needed to assess these interpretations. These preliminary findings suggest that some objects may provide evidence of particular life stages, and therefore has the potential to act as proof of concept for future studies.

The BODYBIO project is timely, as advances in scientific methods now allow detailed studies of objects and poorly preserved human remains. This is evident in the new types of analyses carried out in tandem with ongoing



EU size 60 (19 mm) — where it lands

Ring finger: upper end of adult women · slim adult men · teen boys 15-17

Index finger: mid-range for adult women · lower range for teen girls 15-17

Index finger runs ~1.5-2 mm wider than ring finger across all groups

Figure 4. Diagram of ring sizes related to age, gender and type of finger. A ring with diameter 19mm is a typical men's little finger or women's index size, or a larger-than-average women's ring finger (contemporary EU sizes). Illustration generated by ClaudeAI – verified by authors (sources: In season jewellery, n.d.; The jewellery room, n.d.).

excavations, on newly discovered objects. Yet existing museum collections remain underused in this regard. By combining osteological and scientific analyses with the study of material culture in regards to NBA urn burials, BODYBIO seeks to demonstrate how these archaeological collections can contribute to our understanding of bodies, identities and mortuary practices in the Nordic Bronze Age. The project will bring them out of the dark storerooms and into the light of the laboratory, stimulating methodological advances that can be applied to other fragmented archaeological assemblages and generating new insights into this period of Scandinavian Prehistory.

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