EXARC JOURNAL 2024/4
14 Articles | Open Access



## Unreviewed Mixed Matters Article:

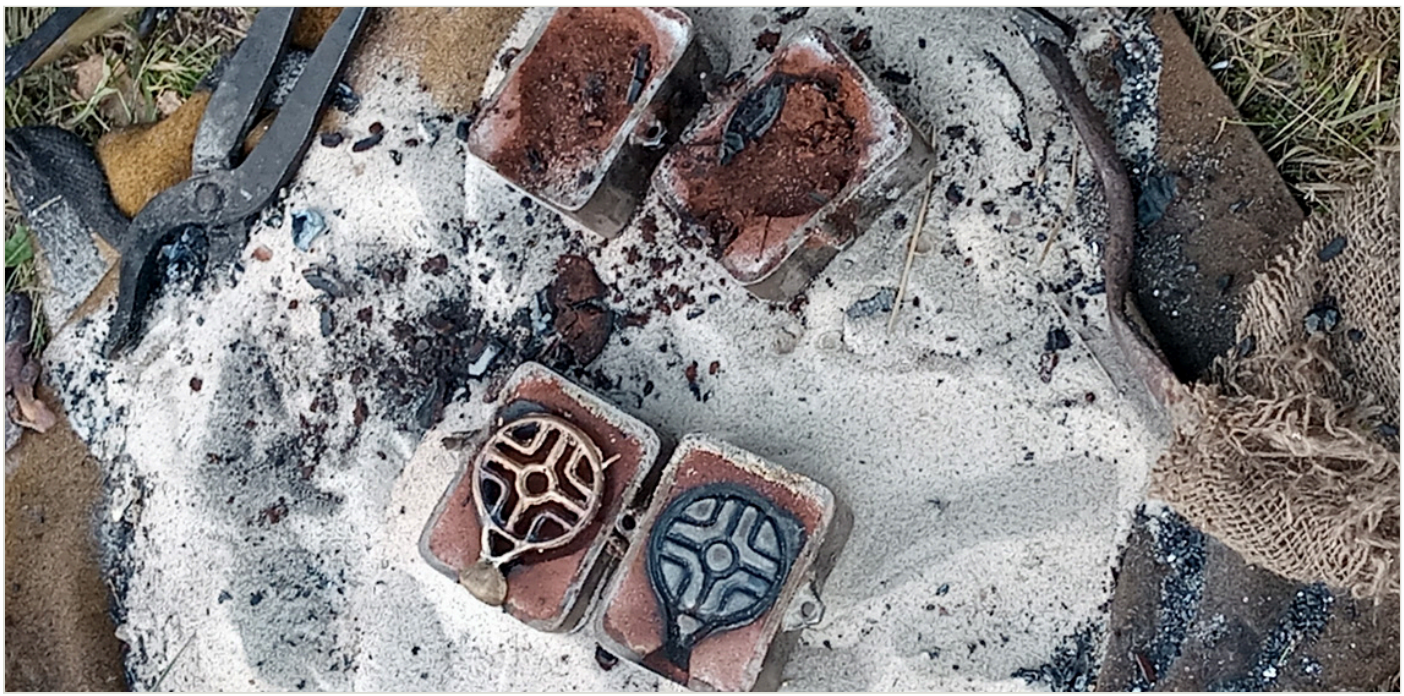
# Event Review: Bronze Casting in Daugailiai, Lithuania

**Persistent Identifier:** https://exarc.net/ark:/88735/10763

EXARC Journal Issue 2024/4 | **Publication Date:** 2024-11-27

**Author(s):** E. Giovanna Fregni [1] ✉

[1] Ali Yatman Sokak, Karaoğlanoğlu, Flat #2, High Park Sitesi Girne 99320, Mersin 10 Turkey



On 13 July 2024 the village of Daugailiai celebrated the 770th year of its founding on with a festival that included demonstrations and experiments in bronze casting. Daugailiai is a village in Utena County in Northeast Lithuania. The village features a hillfort, which is dated to 1st millennium BC-beginning of 1st Millenium AD, upon which a castle was built in 1254 and a church and cemetery that were built in 1685. The hillfort is 10-12 metres high and has a 46x30 metre oval shape. A set of stairs leads to the summit and at the base there are signboards with QR codes that provide visitors with information about the site.

> It is hoped that the samples will provide some preliminary data for a project that was introduced in a session at the 2022 EAA in Budapest that proposes to explore environmental contaminants caused by small scale metalworking.

The team in charge of the weekend event included the author, Dr Agnė Čivilytė, and Dr Gvidas Slah. Dr Čivilytė is an archaeologist with the Lithuanian Institute of History. In 2016 she worked on the excavation of the Late Bronze Age hillfort of Garniai 1, just 5 km away from Daugailiai village, and worked on Antilgė in 2017. Dr Slah is a reenactor specializing in ancient metals and stonework at the Lithuanian Academy of Arts, Telšiai faculty. The goal for the event was two-fold: to provide an interpretive archaeological experience for visitors who came for the day-long festival, and to take environmental samples for a pilot programme exploring the environmental effects of small-scale metalworking events.

The location for building the furnace near the base of the hillfort was chosen the day before the event. Priority was given to a location that would not disturb archaeological cultural layers. A shallow pit for the furnace was dug and then lined with clay mixed with sand and organic material. Plastic models made from moulds that were taken from museum objects were also available for making moulds.

The next morning a small fire was lit to dry the furnace. The day was clear until a thunderstorm formed in the late morning and continued until early afternoon. A polytunnel was erected to protect the furnace and the worksite. However, by mid-afternoon the storm had subsided, allowing time for everything to dry and to be ready for casting when the festival started at 5 pm.

The hillfort is a popular attraction and a steady stream of visitors were walking up to the top throughout the afternoon and evening. Agnė was the spokesperson for the event, describing what was happening along with speaking about the archaeology of metalworking in the area surrounding Daugailiai and in the entire Eastern Baltic region. The casting process went quickly and visitors could see the molten metal poured into moulds. Soon after, the moulds were opened to reveal the newly cast objects. The objects were quickly cooled and handed around to the groups of visitors. Several people volunteered to pump the bellows, giving the team a break from the work.

Casting was done in a variety of moulds, including clay (lost wax), steatite, and sand casting. The first casts were done of a spearhead in the soapstone mould. The mould continued to be used until it developed a crack. Next, fibulae were cast using lost wax moulds, and finally sand moulds were made using a bronze pendant as a model. Experiments were done exploring different ways to make air vents in order to improve the quality of the casts.

Downhill from the hillfort, the festival was crowded. There was traditional music and dancing, booths with homemade honey, local crafts, and games. The event ended at 11 pm with fireworks.

Agnė had talked for hours, explaining the process over and over again to the groups that came up to see what we were doing. By the end of the festival we were tired but happy. What could have been a washed-out disastrous day, ended up being highly successful.

The next morning we returned to pack up and finish cleaning the site. In addition, soil samples were taken for analysis. These were taken at the external edge of the furnace opposite the tuyere, and at one and two metres downwind of the furnace, using two different wind directions based on changes during the previous day. It is hoped that the samples will provide some preliminary data for a project that was introduced in a session at the 2022 EAA in Budapest that proposes to explore environmental contaminants caused by small scale metalworking. It is hoped that further funding will expand the project to provide more in-depth analysis that can be compared to data collected from known ancient metalworking sites.

The event was successful, bringing a new form of engagement to visitors at an ancient site during the village's anniversary festival. Visitors learned the process of how ancient metalworking and got to witness the performative aspects first-hand.

Keywords bronze
smelting
review

Country Lithuania



## Corresponding Author

**E. Giovanna Fregni**
Flat #2, High Park
Sitesi Girne 99320
Mersin 10
Turkey
E-mail Contact

## Gallery Image

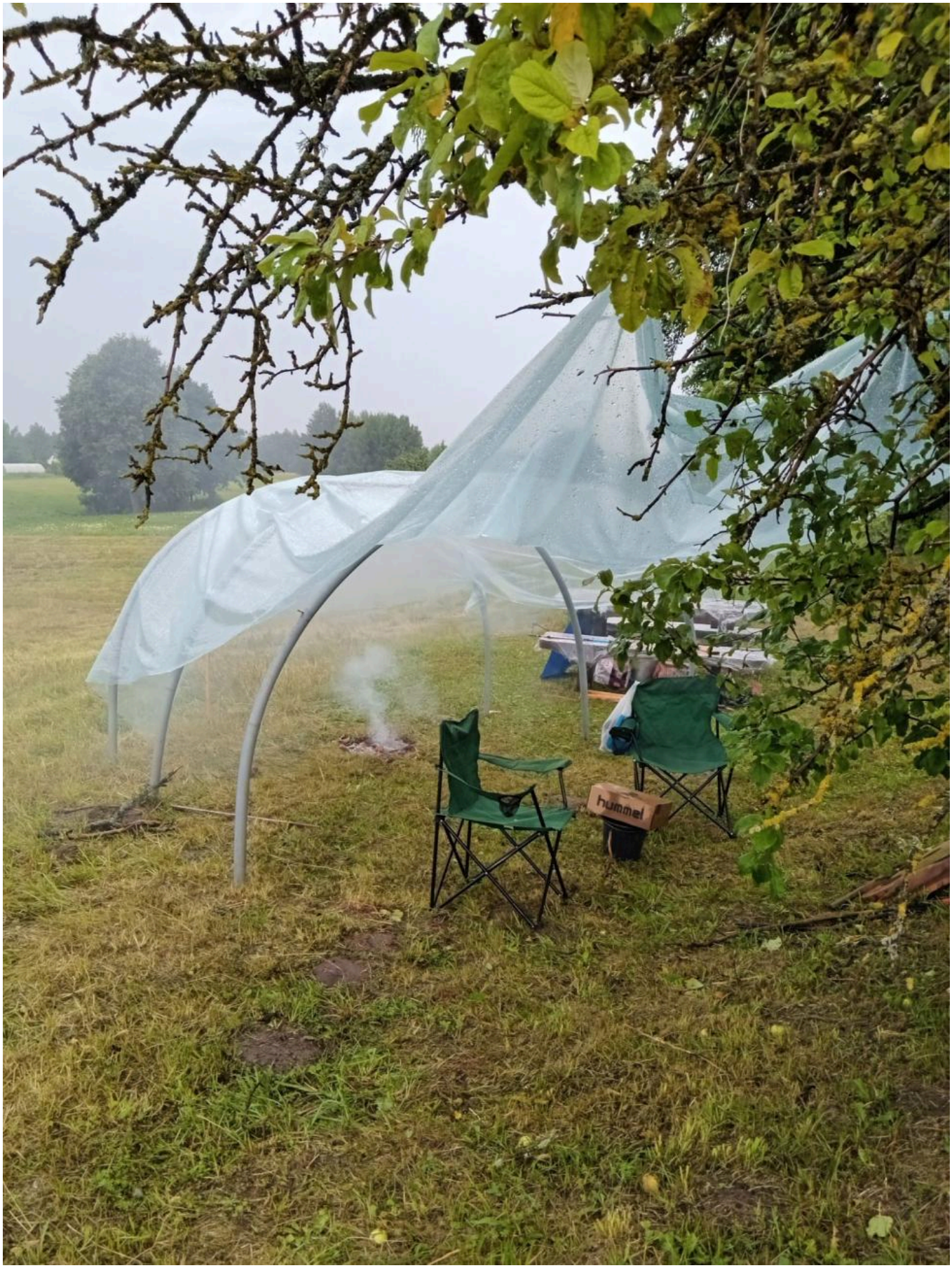



FIG 1. AN IMPROVISED POLYTUNNEL IN THE RAINSTORM. PHOTO BY E. GIOVANNA FREGNI

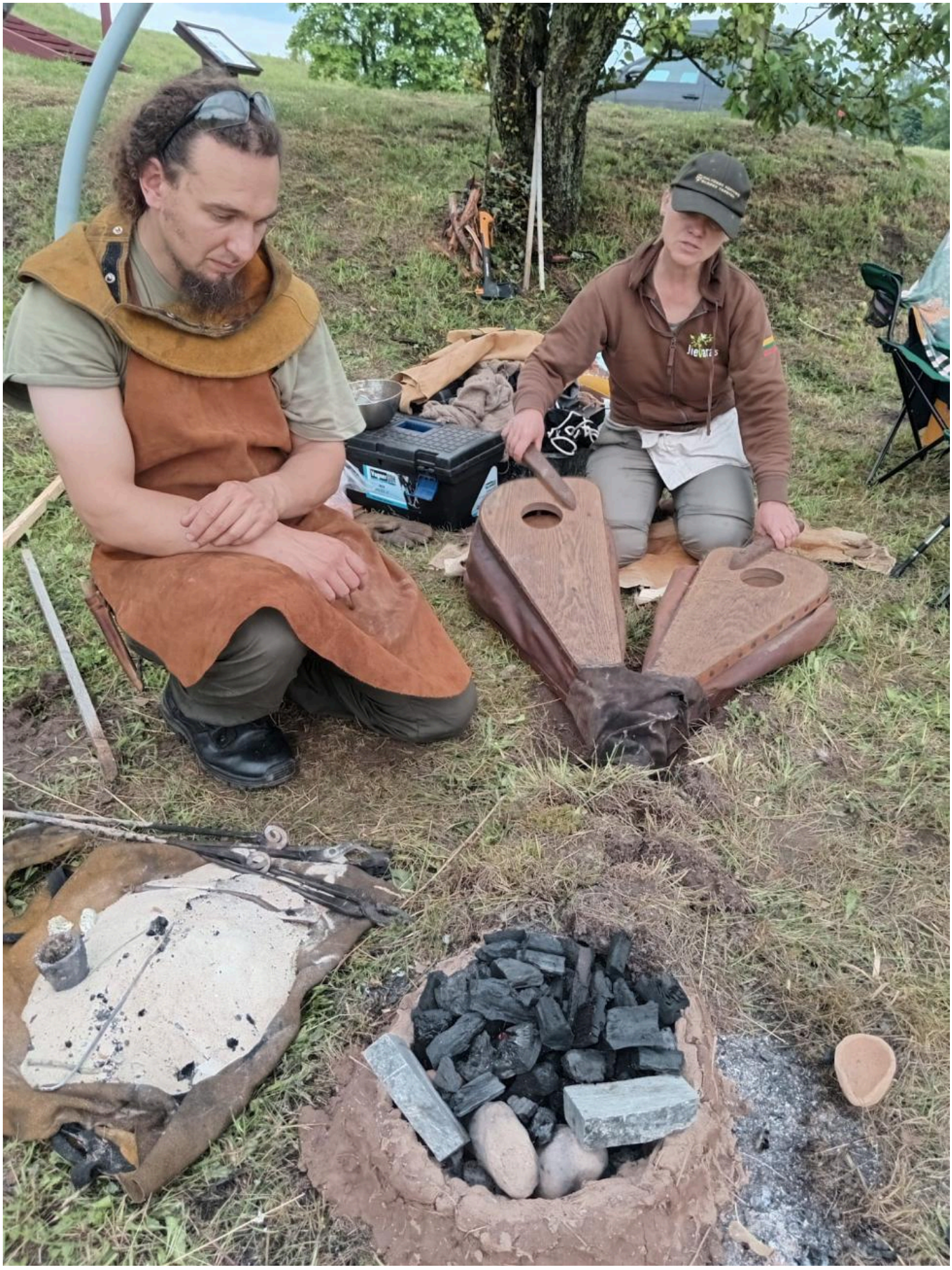


FIG 2. BRONZE CASTING IN DAUGAILIAI. PHOTO BY E. GIOVANNA FREGNI

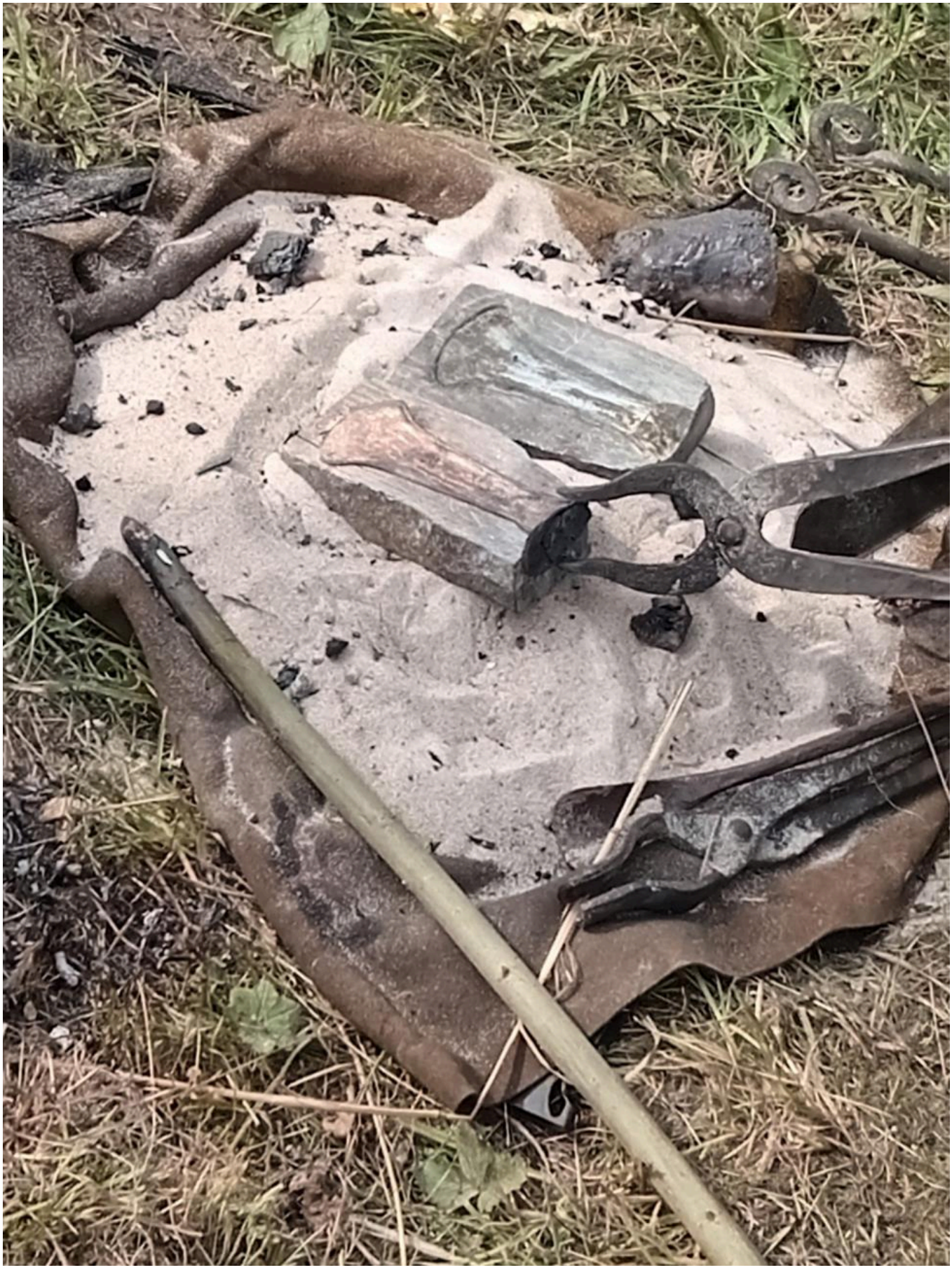


FIG 3. FLAT AXE CAST IN STEATITE. PHOTO BY E. GIOVANNA FREGNI

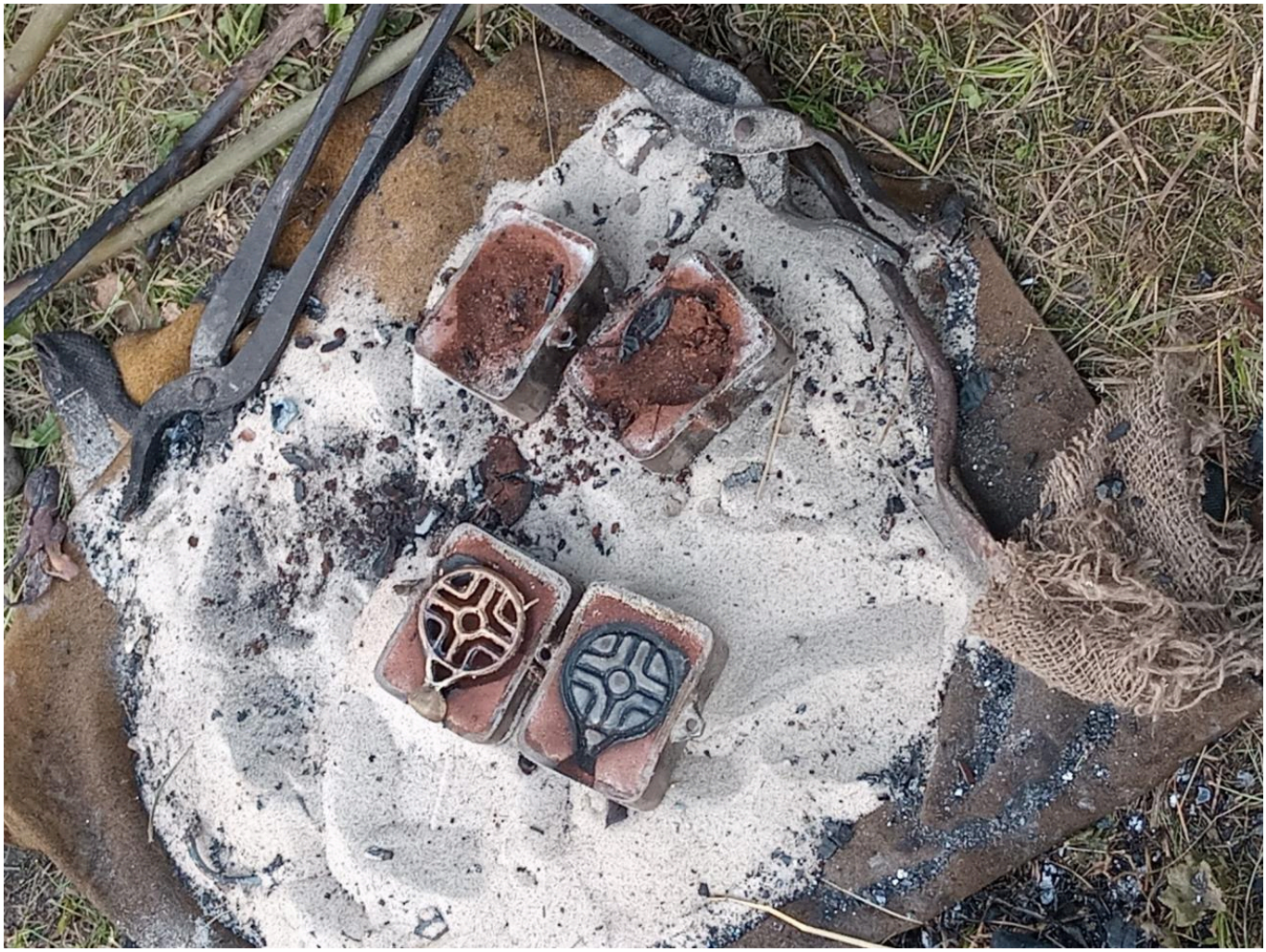


FIG 4. PENDANT CAST IN SAND. PHOTO BY E. GIOVANNA FREGNI

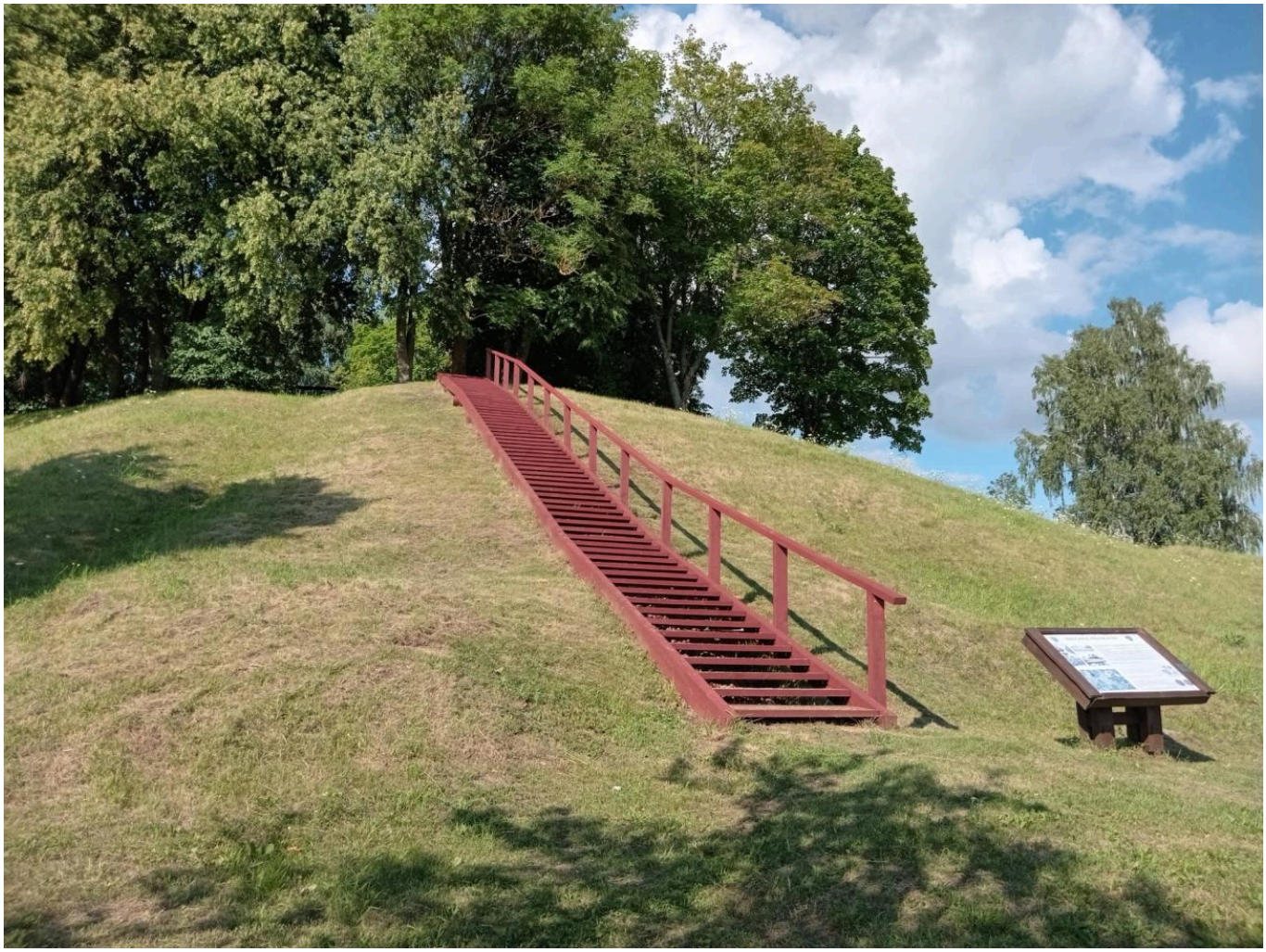


FIG 5. THE HILLFORT IN DAUGAILIAI. PHOTO BY E. GIOVANNA FREGNI