

# ROMAN BONE SKATES FROM HALMYRIS

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**Key words:** Halmyris fort, Episcopal basilica, fragments of bones.

**Abstract.** The 2002-2004 investigations carried out in the barrack blocks no. I-IV on the Western side of the Halmyris fort and Domus 2, to the North of the Episcopal basilica, among other specific artifacts for these types of buildings, yielded several fragments of bones that proved to be of some importance in the context of the complex and multidisciplinary research of social and economic life in the area. All the fragments were recuperated, cleaned, processed, and assembled in the Laboratory of restoration of the National Museum of History of Romania<sup>1</sup>.

**Cuvinte cheie:** fortul Halmyris, basilica episcopală, fragmente de oase.

**Rezumat.** În perioada 2002-2004 cu ocazia cercetărilor efectuate în Vestul fortului Halmyris și în Nordul basilicii episcopale s-au descoperit pe lângă alte artefacte mai multe fragmente de oase care s-au dovedit importante din punctul de vedere al cercetării multidisciplinare pentru contextul social și economic al zonei.

## THE ARCHAEOLOGICAL CONTEXT AND THE TECHNICAL DESCRIPTION OF THE PIECES

1. Five fragments of a horse metatarsus whose assemblage resulted in a fragmentary piece; the posterior half of the diaphysis is missing (Pl. 1/a-b); dimensions: length = 27cm; diameter: 2.5 cm. The piece was found in barrack no. III, room 2, at - 0.47/0.50 m, on the level XII of occupation (578-599/602)<sup>1</sup>. The anterior part of the metatarsus shows clear traces of carving, aiming to create upwards beveled points (Pl. 1/2), while the rear part appears smoothly cut off and roughly polished. On the posterior part, the piece shows a flat smooth surface indicating a longer use. The piece appears strongly affected by fire. Traces of fire embedded into the bone are visible on the entire surface, a rather surprising feature, for the archaeological context in which it was found shows no traces of a generalized fire. This aspect entails the observation that, given the signs of longer utilization and the fire traces as well, the piece could have belonged to a period previous to the level XII, eventually from the XI level of occupation, which indeed shows massive traces of fire, identified on the almost entire investigated area.

The piece configuration and the way the bone was processed show clearly the manufacture of a skate.

2. A horse metatarsus found in the barrack III at -1.67 m; dimensions: length 22.5 cm; diameter: 2.5 cm (Pl. 2/1). Date: level XII (578-599/602). The piece is processed only at the front part, through carving of the cartilage aiming to create the same slightly upwards beveled point. (Pl. 2/2). The proximal epiphysis is cut off but not polished. The processing seems to have been stopped because the bone cracked at a certain moment. However, a piercing at the upper part appears to have been made before or during the fracture of the bone. The splinter of the piece entailed the abandonment of the piece processing.

3. A fragment of the horse metacarpus, with a commencement of processing; dimensions: length: 22 cm; diameter: 3 cm. Found in the Domus 2 area, O 3, ca. -0.80 m Date: level XII (578-599/602) (Pl. 2/5). Traces of intervention are visible only to the posterior part of the distal epiphysis, where the surface was

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<sup>1</sup> Al. Suceveanu, M. Zahariade, in Al. Suceveanu, M. Zahariade, Fl. Topoleanu, Gh. Poenaru Bordea, *Halmyris I. Monografie arheologică*, Cluj-Napoca, 2003, p. 39-40.

partially cut off following an attempt to pierce the bone. There has been also tried to pierce the bone at its dorsal part. Both operations were abandoned of unknown reasons.

The three pieces are particularly important, for they clearly show what raw material was used for this category of objects and especially how the processing began.

The study of technical details of bone processing and some specific characteristics of the three pieces offers, although only approximately, knowledge on the methods the skates were attached to the feet, the way they functioned during the usage, and especially a sketching out, as general rules applicable to all the pieces of the same category, of the reasons for their utilization.

A first observation is that all the pieces were made of horse metapodials. The processing seems to have begun with the posterior part of the bone. In case of failure of a correct cutting and piercing the continuation of that particular bone work would have been abandoned, as shown by the piece no. 3. A closer insight of the bones show the fact that the bones were firstly emptied of marrow, either after a progressive or longer drying, or as a result of an on spot intervention. At approximately half length of the metacarpus, on the proximal part, a backwards oriented small beveled orifice was made in the already void bone. The posterior part of the bone was usually cut off and two lateral small holes were pierced through. (Pl. 2/3). Another incision on the posterior part that responded to the interior hollow bone was made underneath at equal distance from the two holes (Pl. 2/4). There were four orifices in total, through which the laces-possibly ox veins- for attachment to the feet were brought in as follows: two laces were run through the hole on the dorsal part, pulled out on the central orifice on the rear part; the laces were again run through the two lateral holes and were tightened up on the top of the boot. The remaining ends of the laces left on the dorsal part of the skate were used for a faster tightening of the skate to the forefront of the foot.

The length of two bone pieces raises the question of their users. The length of the pieces no. 2 and 3 would rather fit to a child's sole size. The piece no. 1 has 27 cm in length and it might be assigned to an adult use. The find of this piece in the barrack, in a military environment is also inductive for the person who used it.

This category of artifacts was found on the Danube line at Capidava<sup>2</sup>, Dinogetia (Garvăn)<sup>3</sup>, and Nufăru<sup>4</sup>. In the present day Bulgaria skates were found at Durankulak<sup>5</sup>. The finds were dated in 10–11<sup>th</sup> centuries, while the Halmyris pieces are second half of the 6<sup>th</sup> century in date, which is, as far as we know, the only finds of late Roman epoch in Dobrudja.

The find spots and the markedly traces of a long use detectable in case of the piece no. 1 entails an interesting significance for the Halmyris site, located at that time close to the course of the Danube<sup>6</sup>. The marked cooling of the climate<sup>7</sup> towards mid I<sup>st</sup> millennium A.D. was highlighted for the Lower Danube in quite a few literary sources which stress on the freezing of the Danube in winter time. From Ovid to Ammianus Marcellinus, ancient writers described in an impressive manner this observable fact, and accounts of the freezing phenomenon

<sup>2</sup> Capidava: Gr. Florescu, R. Florescu, P. Diaconu, *Capidava I. Monografie arheologică*, București, 1958, p. 235; P. Diaconu, *Cu privire la patinele de os din epoca feudală timpurie*, SCIV 11, 1960, p. 177-178.

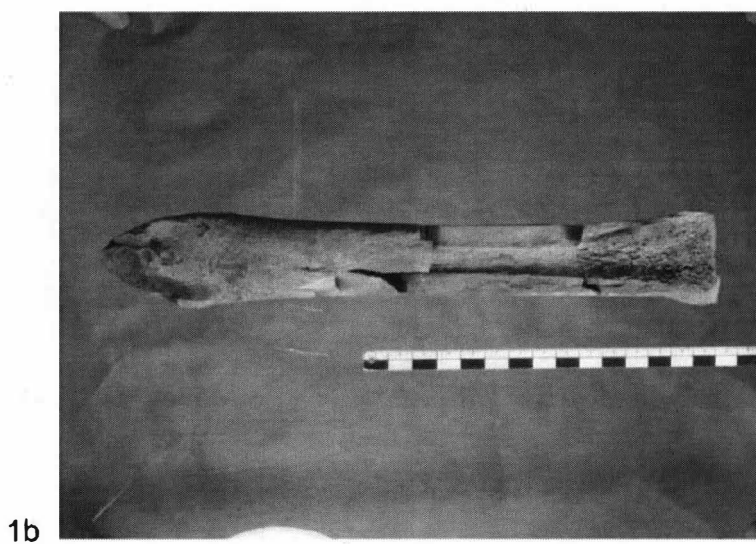
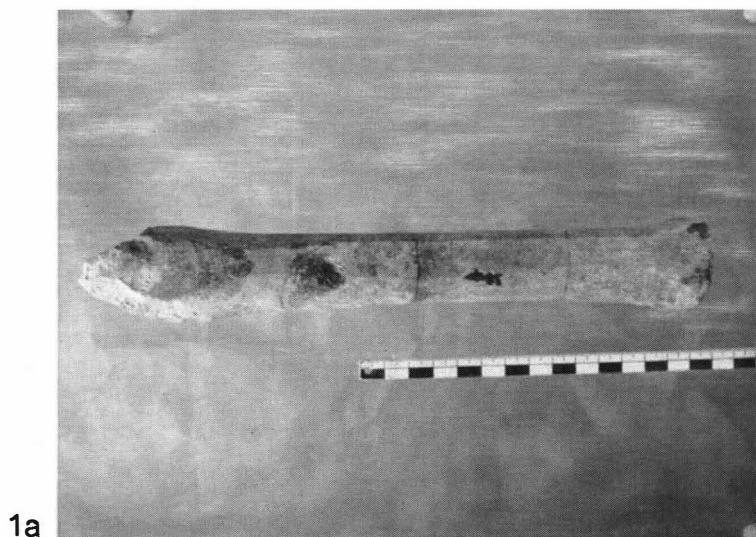
<sup>3</sup> Dinogetia: *Dinogetia I. Așezarea feudală timpurie de la Bisericiuța-Gravăn*, București, 1967, p. 94-95, Pl. 42.26; 42.24.25

<sup>4</sup> Particular thanks to Dr. Oana Damian for this information so as the Nufăru piece was not published as yet.

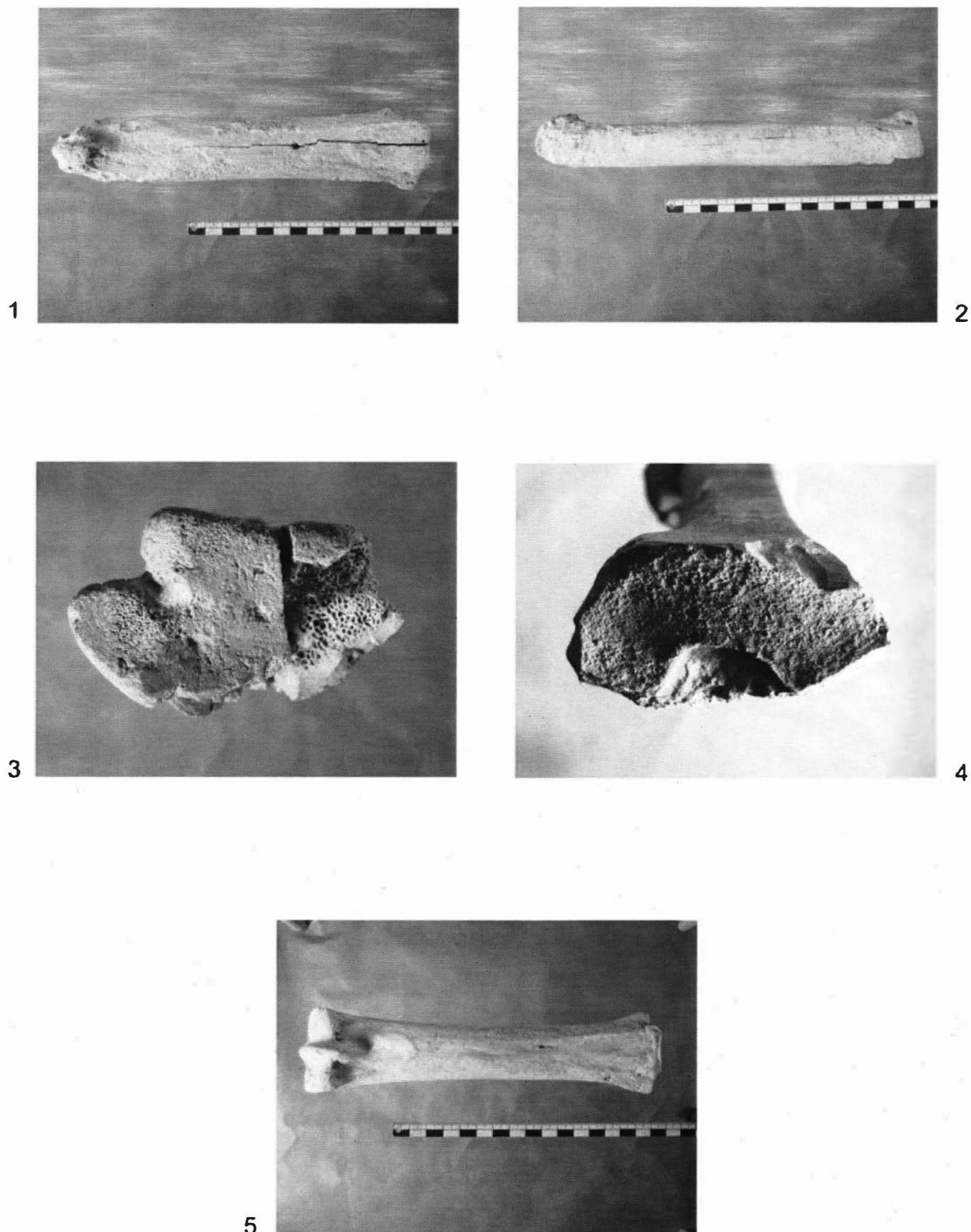
<sup>5</sup> T. Dimov, in *Durankulak I*, Sofia, 1989, p. 259, pl. V. Although the bones are considered human by the author, a quick look over the entire group presented in the table V shows clearly their animal provenance (Al. Comșa).

<sup>6</sup> On the environment at Halmyris see M. Zahariade in: Suceveanu, Zahariade, Topoleanu, Poenaru Bordea, *op. cit.*, p. 9-19.

<sup>7</sup> The cold climate of Scythia at later writers: Exp. Tot.. Mund. et Gent. 57; Ruf. Fest. Brev. IV 35; Them. Or. IX 121; Orph. 1372Ş Amm. Marc. XXII 8, 48; Paul. Nol. 201; Hieronym. Ep. 107,2; Philost. Hist. Eccl XI 8; Ennod. Paneg. II 9. A passage in Theoph. Confess. Chron. 6255 (763) gives an eloquent and frightening picture of the dramatic cooling of the climate. Under the year 763, he states: "since the month of October a hard and terrible frost came up not only in our lands, but in the eastern, northern and western parts, so that the northern shore of Pontus, along a length of o hundred thousand miles, saw the sea frozen to a depth of thirty cubits, from Zinchia to the Danube the Cufis river to Danastris, Danapolis and Necropole: and the remaining shore down to Mesembria and Media suffered the same. Snow fell over the ice, fell again and added with twenty cubits more, so that the sea became one and the same with the land and could be trod on foot over the ice, from Chazaria to Bulgaria and other neighbouring populations, both by people and wild and domestic animals".



Pl. 1. Halmyris, bones skate (piece no 1): 1a – view from beneath; 1b – view from above; 2 – side view showing a beveled front end.



Pl. 2. Halmyris, 1–4 the metatarsus (piece no 2): 1 – upwards view; 2 – sideview showing beveled front end; 3 – the posterior part; 4 – the hole in the hind part; 5 – a fragment of the horse metacarpus (piece no 3).

appear frequently in 4<sup>th</sup>–6<sup>th</sup> century literature. Noteworthy were the extreme freezing of the Danube and the Black Sea in the winters of 383, 391, 400, 462, and 559, while Libanius alludes in the mid 4<sup>th</sup> century to how the frequent freezing of the Danube was propitious to Gothic raids<sup>8</sup>.

<sup>8</sup> *The freezing of the Danube in late sources*: e.g. Lib. *Or.* 59, 90 (Foerster IV 252); Philost. *Hist. Eccl.* X 6 (383); Claud. *Paneg de tertio Cons. Honorii Aug VIII* 50 (391); Agath. *Hist.* V 11, 5 (559): cf. in general Ps.-Caes. *Erotapokr.* I 68. *Black Sea and the Danube*: Amm. Marc. XXII 8, 48; Marc. Comes. *Chron.* 401, 2 (401).

The utilization of the skates by the Halmyris inhabitants, as it seems to clearly result from the find spots of pieces was certainly part of their daily life in winter time when the river froze almost every year. The fact made necessary the using of the skates as a way of moving on the ice of the river, as this type of bone skates<sup>9</sup> perpetuated with insignificant, if at all, changes since Neolithic times until the eve of the modern era.

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<sup>9</sup> The use of the skates in north-western Europe is described by the Arab writer Al-Marwazi (ca. 1120) as follows: *"In those lands there is no chance to move on snow and ice, unless they attach to the their feet cow tibia and hold in their hands two sticks which allow to slide on ice with a wind speed"*. (Lyzwy kosciane polnocno-wschodniej Europy swietle notatki srednowiecznego pisarza arabskiego Al Marwaziego (ok. R. 1120), *Przeglwed Archeologiczny* 9, 1953, 2-3, p. 393 (apud Diaconu, *op. cit.*, p. 177).

