Differential Skeletal Preservation in the Mound Cemetery at Celic-Dere in Northern Dobrudja

by Ralph M. Rowlett

At Celic-Dere (Steel River) in the mountain-top forest (fig. 1/1) under the tumuli or movile (fig. 1/2) there exists an enormous variety among the 56 burials in the 42 Late Hallstattian tumuli already excavated, as indicated by G. Simion (1997). This variation is manifested under the relatively uniform pattern of a highly patterned earth and stone covering, all inset within a ring a of stones. The burials are first covered with dirt, then an inverted truncated cone of stones, and finally another stone cover. The actual variation in ritual occurs among the burials themselves and is manifested not only in skeletal position – extended supine cubitus dorsal vs. flexed –, but also in the amount and kinds of grave goods (hardly any vs. a rich accompaniment). The nature of the grave goods can vary too-weapons vs. more civilian accouterments. There is the strong correlation of the extended supine burial with plentiful grave goods, a pattern forcibly recalling funerary practices of the horse pastoralists on the east European steppes, as Simion indicates.

This variation or differential in funerary positioning and endowment extends also to enormous differences in preservation of the skeleton. Skeletal preservation varies from almost complete disappearance of the skeleton to quite clear survival of the bones. Unlike in the cemetery dug by Rodica Ursu at nearby Posta, even the best preserved bones, however, are not really hard, but are exceedingly soft, with bones being largely decalcified in the soil matrix usually reading 5.5 on pH scale as measured by archaeochemist G. Rica.

Almost every skeleton exposed in the 1995 and 1996 field season reflects a different state of preservation. One supine skeleton Tumulus 7 - 8, No. 3 (fig. 2/3) was so badly decayed that there were in effect in do bones to lift. The photo no 4 shows an extremely poorly preserved skeleton, lying on the right side in a flexed position in Tumulus XI - XIII, No. 4. The flexed skeleton lying on the right side seems to be female from the pelvis reconstruction accomplished by Michael Charlton. Although these two constitute extreme examples, all of the skeletons needed to be consolidated before the bones could be lifted for further study. This consolidation was achieved with a water penetrant, but non-water soluble, new consolidator called "Palaeo-Bond" and manufactured by Uncommon Conglomerates in St. Paul, Minnesota, USA Since Dr. Gavrilă Simion (1997) and others on the Celic-Dere cemetery project were concerned to conserve the form of the crania and other parts of the skeleton, we did not dare use a water-soluble consolidator. This decision was especially fortuitous for 1997, for there as an especially rainy, humid and cool summer in Dobrudja. While bone and soil samples are taken for DNA analysis, (Thuesen, Engberg, Nielsen 1992; Rogan, Salvo 1992) we want to preserve the phenotypical morphology of the skeleton material so that the prehistoric personages can be envisioned, for the DNA is "not a blueprint, but a recipe" (Bryand 1997).

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When using "Palaeo-Bond", be sure to keep a solvent such as acetone on hand, for one can easily become bonded or glued to the skeleton that one is excavating. In 1997 we often had to have some special assistants to liberate us from skeletons to which one had become overly attached.

Although all the skeletons at Celic-Dere needed consolidation, the differences in preservations are remarkable. This is quite in contrast to the Roman-era Sarmatian skeletons dug at nearby Posta by R. Ursu, where almost all the skeletons showed an rather uniform preservation, even though some were buried with pine-wood coffins, as identified by Neely Current, that still survive, and some do not have surviving coffins.

This flexed skeleton on the right (fig. 2/4) is in rather bad condition, but only a little worst than skeleton No. 2 from Tumulus XIV (fig. 3/5). In that mound, flexed Skeleton No. 1 was one of the best preserved in the entire cemetery. One extended supine skeleton is well preserved on the legs, but the upper part has almost completely disappeared.

Another extended supine skeleton (fig. 3/6) in Tumulus 9 is the second best preserved. This burial exhibits a Horse Pastoralist burial rite, cubitas dorsal, with arms extending along its side. This person was equipped with a pendant, spear, and lance, implying a warrior status, but the wide angled ischial notch of the pelvis (fig. 4/7) as well as the smooth round forehead and pointed chin indicate a biological female. Below the right hip at the back (fig. 4/8) was a small bronze bell with a crimped sheet metal bronze clapper. Gavrilă Simion will publish more on this apparent female warrior of Celic-Dere. Female warriors are quite well, attested among the Iranic-speaking horse pastoralists of southern Russia (Rolle 1980; 1989: 86 - 91), composing 20% of the warrior graves in the lower Volga region (traditionally Sarmatian home territory) and therefore nearly a fourth of the adult female graves there. Since the defunct in Tumulus IX is the only detectable female warrior among 56 graves at Celic-Dere, apparently such women were rare here. Her wide, flat medial incisors exhibit some shoveling of the back surface. Despite this use for some individuals the burial rite similar to the horse-mounted pastoralists east of the Danube, none of the skeletons at Celic Dere examined by me have the lowest lumbar vertebra fused to the top of the sacrum, a condition found on a sizable minority of the horse-riding plains Indians of early 19th century North America when equestrianism subjected their lumbar vertebrae and sacra to considerable stress (Schwartz 1995, 238 - 239).

Tumulus XIV is particularly interesting in that it had two burials in quite different states of preservation, but both buried in the traditional Iron Age manner of the general region (Simion 1997), lying on the left side with the defunct being relatively poorly endowed with grave goods. The already mentioned skeleton, No. 2, (fig. 3/5) to the west, was rather poorly preserved, but, as best as we can determine from the surviving bone, was in a completely intact, anatomical position. From preliminary analysis it appears to be male.

Skeleton No. 1, (fig. 5/9) lying flexed on its left side to the east, is among the best two preserved skeletons of the 1995 - 1996 field seasons at Celic-Dere. The wide sciatic notch (fig. 5/10) and smooth forehead indicate a female. Despite its excellent preservation, the skeleton is not intact. It is only roughly in anatomical order, although almost all the bones were present in the grave, even if some of them, primarily ribs, were not recoverable. Although the spinal column was in very good shape, and we were able to remove an entire series of lumbar and cervical vertebrae in order, the mandible of the skull was under the left scapula, which was the scapula on which the weight of the corpse lay (fig. 5/11). A femur head was at the position of the left humerus.

Even allowing for some normal post-decay shifting of the skeletal elements in the grave, these are still an unlikely positions for articulated bones. Examination of the butter-soft, but morphologically well-preserved bones pain-stakingly uncovered by Ioana Rica, fails to find any cut marks, bone scraping, or damage to the

bone that could have come from excarnation or ritual mutilation of this well preserved skeleton.

The explanation of the displaced bone seems to be not in some kind of bizarre burial rites, such as ritual mutilation or decarnation, but that this grave was left open for some days and that natural agents, such as dogs or wild mammals, had been able to disturb slightly the grave. What instigates this thought is that a land snail, Helix, was found under the lower legs (fibula and tibia) just below the left knee, of skeleton No. 1. Thus it appears that skeleton number 1 was left open for some time, and guarded semi-carelessly, so that some displacement of the bones could occur, but the disturbing agents, dogs or whatever, were shooed away before further damage, such as chewing on the bones, could occur. Likewise, fragments of a snail were found under the right hip's innominate bone of the skeleton lying on the right side (fig. 2/4) when the soil under this paper thin pelvic bone was completely removed in the laboratory. This skeleton was too decayed to give a clear indication of intactness or bone prisitinity, but the right forearm appears to have been missing when uncovered archaeologically.

From its intact and fully articulated position, skeletal No. 2 of Tumulus IX was apparently immediately covered over after entombment. Thus this highly differentiated preservation seems to be due at least part to differences in the funerary rite - i.e., the speed of recovering the body with dirt in the tumulus. The supine burials with bones that survived well enough to notice seem to have been in anatomical position, so they must have been covered with earth and stone relatively soon (Table I). This different timing of the recovering of the burials becomes an additional element of variation in the remarkably variegated and individualized burial rites at Celic Dere in the Iron Age. This hypothesis that exposure of the dead varied according to the details of the funerary rite can be tested in further excavations at this still unfinished tumulus cemetery.

Tabel I.

1995 - 1996 SKELETONS OF CELIC-DERE

Listed in Order of Degree of Preservation

State of preservation (Good to bad)	Sex	Position	Timing of covery
Tumulus XIV, Nr. 1	F*	Flexed on the left	Delayed
Tumulus IX, Nr. 1	F	Supine	Soon
Skeleton with legs surviving	M	Supine	Soon ?
Tumulus XIV	M	Flexed on left	Soon
Skeleton Nr. 1, Tumulus XI - XIII	F	Flexed on right	Delayed
Badly Preserved, Tumulus VII / VIII	?	Supine	Soon

* F = female, M = Male

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Fig 1. 1. The forest at Celic-Dere; 2. Example of tumulus with the humus layer removed from stone and earth structure.

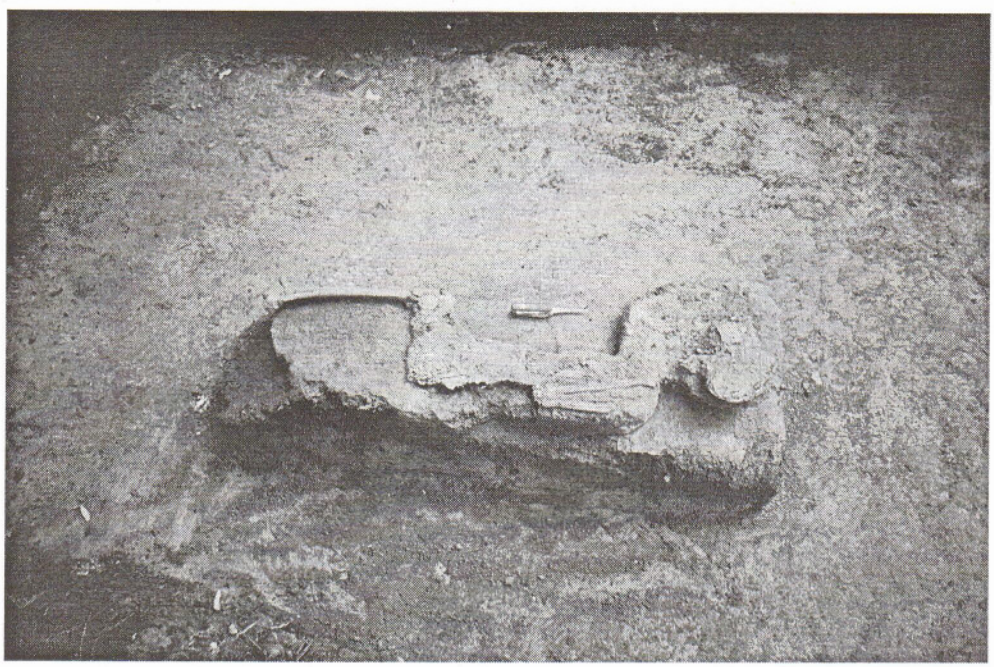


Fig. 2. 3. A very severely decayed supine skeleton (Tumulus VII-VIII, nr. 3);
4. Badly decayed skeleton flexed on right side (Tumulus XI-XIII, nr. 4).

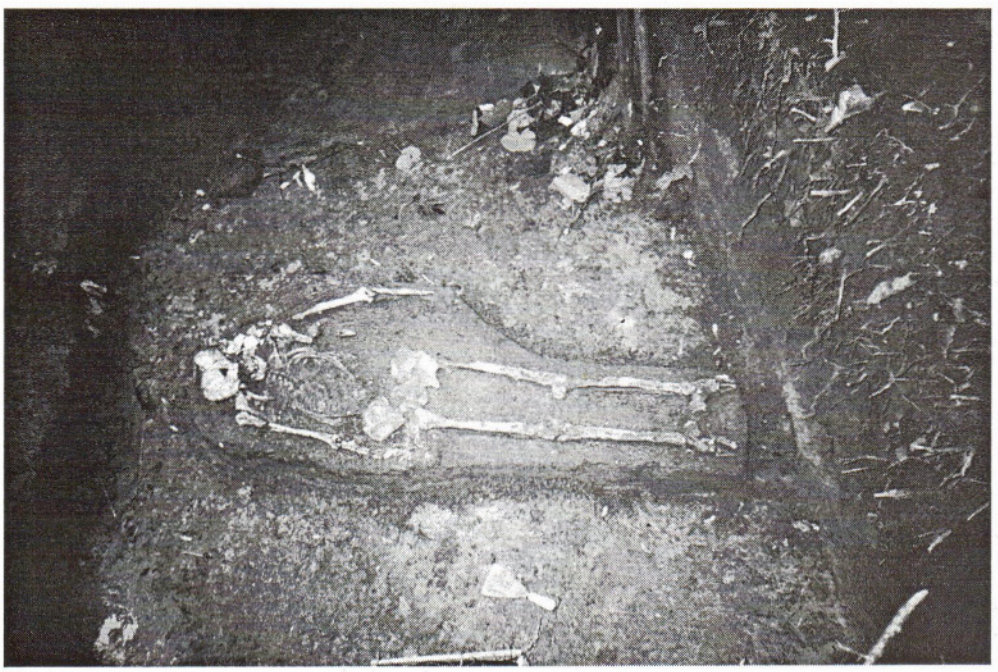


Fig. 3. 5. Poorly preserved flexed skeleton nr. 1 of Tumulus XIV;
6. Well preserved supine skeleton of Tumulus IX with weapons and bronze bell.

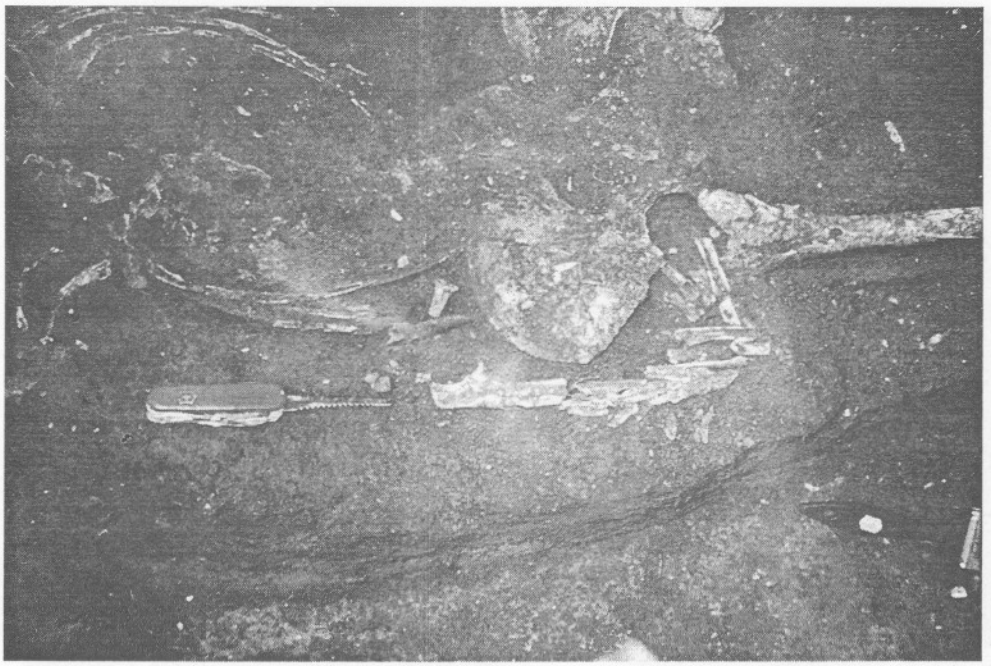
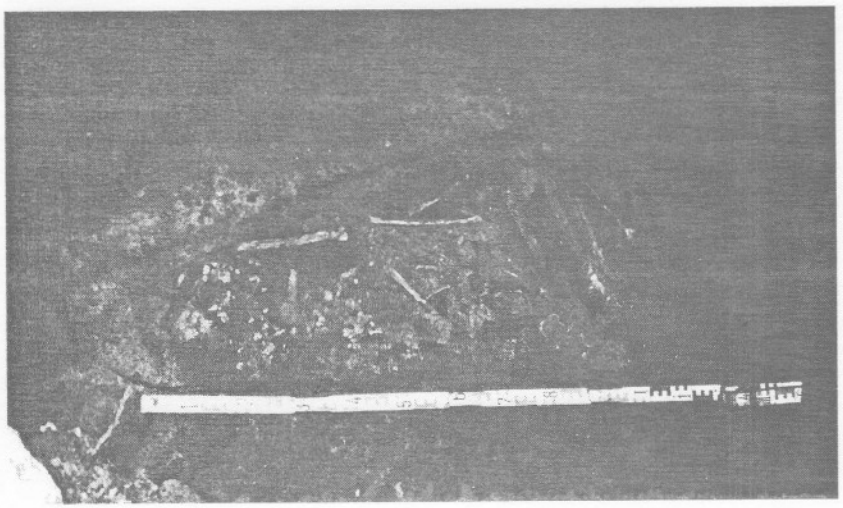


Fig. 4. 7. Ischial notch of the skeleton of Tumulus IX indicating female sex;
8. Bronze bell under right hip of the burial in Tumuls IX.



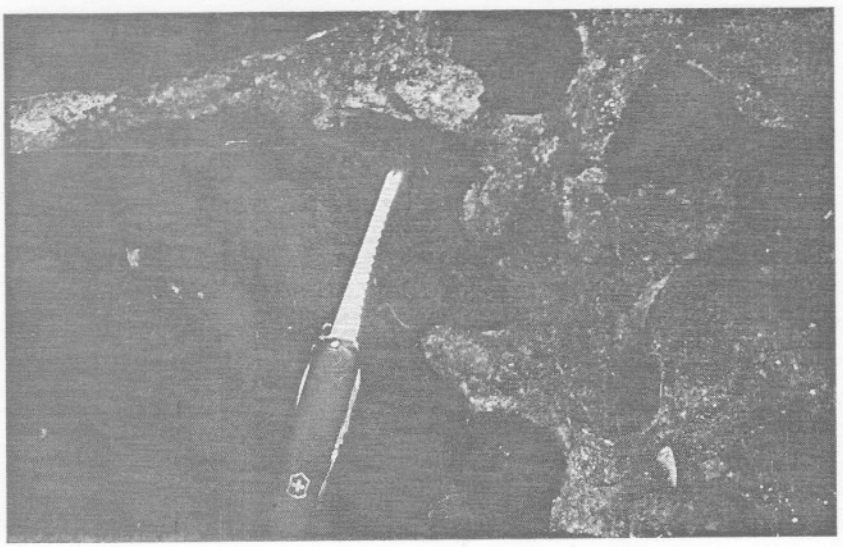


Fig. 5. 9. Well-preserved flexed skeleton nr. 1 of Tumulus XIV; 10. Ischial notch of the skeleton nr. 1 of Tumulus XIV indicating female sex; 11. Mandible of skeleton nr. 1, Tumulus XIV, under left scapula on which the skeleton lay.