Abstract: The results of a general anthropological examination of 140 individuals from a late Roman period cemetery at Somogyszil-Dögkút site are presented in this paper. The population had a more or less balanced sex ratio, lived a fundamentally peaceful life suggested by the low frequency of bone injuries, and according to their morphoscopic traits, they all belonged to the Caucasoid group. Based on the biological distances calculated from selected linear measurements of male crania, the population of Somogyszil-Dögkút proved to be quite similar to several other late Roman period cemeteries in Transdanubia, as well as to some local Avar period series. This raises the possibility of a significant local continuity between the late Roman and late Avar period on this territory, however other potential explanations cannot be ruled out. Some anthropological characteristics of the human skeletal material unearthed from graves oriented differently than the cemetery’s norm suggest the presence of immigrants in the community. Their biological background cannot be traced from the present data, however a few skeletal evidence proposes the probability of a Sarmatian origin.

Keywords: Somogyszil, late Roman period, anthropology, biological distance

INTRODUCTION

The first finds of a late Roman period cemetery at Somogyszil-Dögkút was found in 1964, and until the end of 1968 altogether 148 graves had been excavated by the archaeologist Balázs Draveczky.¹ A full archaeological publication of the cemetery was given first by Alice Sz. Burger² with some basic anthropological information about the human skeletal remains provided by Tibor Tóth. However, recently both the archaeological and anthropological material was put to a re–assessment.³ In this paper a more detailed version of the results of the anthropological examination is presented.

MATERIAL AND METHODS

The human skeletal material of Somogyszil-Dögkúti dülő site is housed in the Department of Anthropology of the Hungarian Natural History Museum under the inventory numbers 68.126.1. – 68.126.124. and 68.150.1. – 68.150.17. The general preservation of the bones are quite mediocre on average with many of them being strongly incomplete and/or badly preserved.

For scoring morphological sex, altogether 21 anatomical characteristics indicating sexual dimorphism were used.⁴

¹ Draveczky 1965; Draveczky 1966; Draveczky 1967. ² Burger 1979. ³ Horváth et al. 2018. ⁴ Éry et al. 1963; Éry 1992.
The biological age estimation of children was based on tooth eruption and on the maximum length of longbones. In the case of juveniles, the union of certain ossification centres was checked. The biological age of adults was estimated on the basis of the surface alterations of the pubic symphysis, the ossification of cranial suture, the alterations of the sternal rib ends, the wear of permanent dentition and on the root transparency of teeth.

Cranial and longbone measurements and indices were taken according to the work of R. Martin and K. Saller. Cranial indices were categorized into classes based on the recommendations of V. P. Alekseyev and G. F. Debetz. Cranial capacity was calculated with the method of A. Lee and K. Pearson. Using the mean standard deviations of cranial measurements and indices given by V. P. Alekseyev and G. F. Debetz sigma ratios (S.R.) were calculated which offer basic information about the relative measure of variance of these traits. This way, they tell whether the examined population was more heterogeneous or homogeneous than a theoretical natural population based on their selected measurements and indices.

Stature was calculated using the formula proposed by T. Sjøvold that controls for all geographic areas and for both sexes using the femur. If the femur was not measurable, the tibia was used instead.

Mortality tables for the demographic analysis were created based on the works of D. H. Ubelaker and K. Éry, using the Excel software package created by Zs. Bernert. For the „lack of newborns” (a common problem with excavated ancient populations) no correction was applied.

A systematic pathological examination was not performed on the skeletal material; only the observed traumatic lesions were described based on D. J. Ortner and V. L. Wedel and A. Galloway.

The estimation of the biological distance between the late Roman period population of Somogyszil-Dögkúti dűlő and other ancient populations was performed using the method elaborated by Penrose, based on the means of ten selected measurements (M1, M8, M9, M17, M45, M48, M51, M52, M54, M55) of the male skulls. For scale adjustment, the raw data were transformed with the standardised mean deviations of A. Thoma. According to the recommendation of I. Schwidetzky, only those series should be drawn into the Penrose biodistance calculation where the mean of every selected measurement is made up of at least seven data. We followed this recommendation in the case of the comparative materials, thus from the territory of the Carpathian Basin and from between the second to eighth centuries only those series were selected that conform to this criterion. This resulted in a total of 55 series for comparison. However, the Somogyszil-Dögkúti dűlő male cranial material itself fails to satisfy the above-mentioned criterion, as one of the selected cranial measurements (M17) is made up of only six individuals. Nonetheless, we chose to perform the biodistance calculations in order to determine how the Somogyszil-Dögkúti population fits into the “framework” of other populations representing the territory and time interval chosen for the analysis. (Naturally, using an insufficient sample size may weaken the conclusions drawn from the analysis.) The relations of the Somogyszil-Dögkúti dűlő (male) population and its close analogies (below the 1% and 2% error bands) were visualized with the help of a dendrogram that was created with the UPGMA (Unweighted Pair Group Method with Arithmetic Mean) hierarchical clustering method.

---

5 Schour–Massler 1941; Ubelaker 1989.
6 Stoukal–Hanárova 1978.
7 Schenzel et al. 1952; Feirembach et al. 1979.
8 Todd 1920.
9 Nemeskéri et al. 1960; Meindl–Lovejoy 1985.
10 Iscan et al. 1984.
11 Huszár–Schranz 1952; Perizonius cit. Éry 1992.
12 Lambdin et al. 1992.
13 Martin–Saller 1957.
14 Alekseyev–Debetz 1964.
15 Lee–Pearson, cit. Éry 1992.
16 Alekseyev–Debetz 1964.
17 Sjøvold 1990.
18 Ubelaker 1989.
19 Éry 1992.
20 Bernert 2005.
21 Ortner 2003.
22 Wedel–Galloway 2014.
23 Penrose 1952.
24 Thoma 1978.
25 Schwidetzky 1967.
26 Sokal–Michener, cit. Podani 1997.
RESULTS

Demographic results

The remains of 140 individuals were brought to light. The basic summary data of their sex and age distribution are presented in Table 1. The male/female sex ratio is more or less balanced (49 males, 56 females and 3 indeterminate individuals). The proportion of children as compared to adults is low, which can most likely be explained by the poor preservation of the anthropological material (Table 2). The mortality peak falls at the beginning of the maturus age in the case of males (40–44 years) and in the middle of the adultus age in the case of females (30–34 year; Figure 1 and Table 3). This sexual difference in the mortality peak is generally observed among historical populations, and it is most likely an effect of the risks of childbearing (the possible complications of pregnancy and giving birth).

Metric and morphological characteristics of the skulls

In terms of morphological attributes (Table 4), the following traits are quite common in the population: the skull is ovoid in superior view, the occipital is curved, and the spina nasalis anterior is small or moderately developed. Rounded and rectangular-shaped orbits are equally frequent, and the morphology of the canine fossa is also

| Sex \ Age group | Males | Females | Unknown | Total |
|----------------|-------|---------|---------|-------|
| 1–6            |       |         | 12      | 12    |
| 7–14           |       |         | 17      | 17    |
| 15–19          | 1     |         | 3       | 4     |
| 20–39          | 20    | 40      | 1       | 61    |
| 20–59          | 1     | 4       | 5       |
| 40–59          | 26    | 8       | 34      |
| 60+            | 1     | 2       |
| Unknown        | 2     | 2       | 4       |
| Total          | 49    | 56      | 35      | 140   |
Table 2.
Some basic data of the human skeletal material of Somogyszil-Dögkút

| Inventory number | Grave | Sex | Age     | Skull   | Mandible | Postcranial skeleton |
|------------------|-------|-----|---------|---------|----------|----------------------|
| 68.126.1.        | 1     | female | 20 – 25 | incomplete | missing | incomplete          |
| 68.126.2.        | 2     | female | 60 – 65 | incomplete | incomplete | missing            |
| 68.126.3.        | 3     | male   | 50 – 60 | incomplete | incomplete | incomplete          |
| 68.126.4.        | 4     | ?      | 3 – 5   | incomplete | incomplete | incomplete          |
| 68.126.5.        | 5a    | male   | 30 – 40 | well preserved | well preserved | incomplete |
| 68.126.6.        | 5b    | male   | 40 – 50 | incomplete | well preserved | incomplete          |
| 68.126.7.        | 6     | ?      | 7 – 8   | incomplete | missing | incomplete          |
| 68.126.8.        | 7     | male   | 50 – 60 | incomplete | incomplete | incomplete          |
| 68.126.9.        | 8     | female | 40 – 75 | incomplete | incomplete | missing            |
| 68.126.10.       | 12    | male   | 20 – 40 | incomplete | missing | incomplete          |
| 68.126.11.       | 13    | ?      | 8 – 10  | missing   | missing | incomplete          |
| 68.126.12.       | 14    | male   | 20 – 60 | incomplete | incomplete | missing            |
| 68.126.13.       | 15    | male   | 30 – 40 | incomplete | incomplete | incomplete          |
| 68.126.14.       | 16    | female | 25 – 35 | incomplete | incomplete | incomplete          |
| 68.126.15.       | 17    | male   | 40 – 55 | incomplete | well preserved | well preserved |
| 68.126.16.       | 18    | male   | 25 – 30 | incomplete | incomplete | incomplete          |
| 68.126.17.       | 19    | female | 60 – 70 | incomplete | incomplete | incomplete          |
| 68.126.18.       | 20    | female | 25 – 35 | incomplete | well preserved | incomplete          |
| 68.126.19.       | 21    | female | 30 – 40 | incomplete | well preserved | incomplete          |
| 68.126.20.       | 23    | male   | 30 – 40 | incomplete | incomplete | incomplete          |
| 68.126.21.       | 24    | female | 30 – 35 | incomplete | incomplete | incomplete          |
| 68.126.22.       | 25    | ?      | 15 – 18 | incomplete | incomplete | incomplete          |
| 68.126.23.       | 26    | female | 20 – 23 | incomplete | incomplete | incomplete          |
| 68.126.24.       | 27    | male   | 25 – 30 | missing   | missing | well preserved      |
| 68.126.25.       | 29    | male   | 40 – 45 | incomplete | incomplete | incomplete          |
| 68.126.26.       | 30    | ?      | 15 – 18 | incomplete | incomplete | incomplete          |
| 68.126.27.       | 31    | female | 25 – 30 | incomplete | incomplete | incomplete          |
| 68.126.28.       | 32    | female | 20 – 40 | incomplete | missing | missing             |
| 68.126.29.       | 33    | male   | 50 – 55 | incomplete | well preserved | incomplete          |
| 68.126.30.       | 34    | ?      | 9 – 11  | incomplete | well preserved | incomplete          |
| 68.126.31.       | 35    | female | 55 – 60 | incomplete | incomplete | incomplete          |
| 68.126.32.       | 36    | female | 25 – 35 | incomplete | incomplete | incomplete          |
| 68.126.33.       | 37    | female | 20 – 25 | incomplete | incomplete | incomplete          |
| 68.126.34.       | 38    | female | 35 – 40 | well preserved | well preserved | incomplete          |
| 68.126.35.       | 39    | male   | 40 – 45 | incomplete | well preserved | incomplete          |
| 68.126.36.       | 40    | female | 20 – 25 | incomplete | well preserved | incomplete          |
| 68.126.37.       | 41    | male   | 50 – 60 | incomplete | well preserved | incomplete          |
| 68.126.38.       | 42    | ?      | 6 – 7   | incomplete | missing | incomplete          |
| 68.126.39.       | 43    | female | 50 – 60 | incomplete | incomplete | incomplete          |
| 68.126.40.       | 44    | female | 35 – 45 | incomplete | incomplete | incomplete          |
| 68.126.41.       | 45    | male   | 35 – 40 | incomplete | incomplete | incomplete          |
| 68.126.42.       | 46    | male   | 40 – 50 | incomplete | incomplete | incomplete          |
| 68.126.43.       | 48    | male   | 40 – 45 | well preserved | incomplete | incomplete          |
| 68.126.44.       | 49    | male   | 60 – 70 | incomplete | incomplete | incomplete          |
| 68.126.45.       | 50    | male   | 50 – 55 | incomplete | incomplete | incomplete          |
| 68.126.46.       | 51    | male   | 35 – 40 | incomplete | incomplete | incomplete          |
| 68.126.47.       | 52    | female | 25 – 35 | incomplete | incomplete | incomplete          |
| Inventory number | Grave | Sex | Age | Skull | Mandible | Mandible | Postcranial skeleton |
|------------------|-------|-----|-----|-------|----------|----------|---------------------|
| 68.126.48.       | 53    | male| 35 – 40 | well preserved | incomplete | incomplete |
| 68.126.49.       | 54    | ?   | 7 – 9  | incomplete | incomplete | incomplete |
| 68.126.50.       | 55    | female| 25 – 35 | incomplete | incomplete | incomplete |
| 68.126.51.       | 56    | female| 20 – 40 | incomplete | missing | incomplete |
| 68.126.52.       | 57    | male| 40 – 50 | incomplete | incomplete | incomplete |
| 68.126.53.       | 58    | male| 20 – 40 | missing | missing | incomplete |
| 68.126.54.       | 59    | male| 40 – 50 | incomplete | incomplete | incomplete |
| 68.126.55.       | 60    | male| 50 – 55 | incomplete | incomplete | incomplete |
| 68.126.56.       | 61    | female| 30 – 35 | well preserved | well preserved | incomplete |
| 68.126.57.       | 62    | female| 25 – 35 | incomplete | incomplete | incomplete |
| 68.126.58.       | 63    | ?   | 7 – 8  | incomplete | incomplete | incomplete |
| 68.126.59.       | 64 – 65 | ? | 4 – 5  | incomplete | incomplete | incomplete |
| 68.126.60.       | 66    | ?   | 0 – 1  | incomplete | incomplete | incomplete |
| 68.126.61.       | 67    | female| 25 – 30 | incomplete | incomplete | incomplete |
| 68.126.62.       | 68    | female| 30 – 35 | incomplete | incomplete | incomplete |
| 68.126.63.       | 69    | ?   | 9 – 10 | incomplete | incomplete | incomplete |
| 68.126.64.       | 70    | female| 30 – 40 | incomplete | incomplete | incomplete |
| 68.126.65.       | 71    | female| 45 – 55 | incomplete | incomplete | incomplete |
| 68.126.66.       | 72    | male| 50 – 60 | incomplete | incomplete | incomplete |
| 68.126.67.       | 73    | ?   | 10 – 14 | missing | missing | incomplete |
| 68.126.68.       | 75    | female| 20 – 25 | incomplete | incomplete | incomplete |
| 68.126.69.       | 75a   | male| 45 – 60 | incomplete | missing | incomplete |
| 68.126.70.       | 76    | ?   | 20 – 40 | incomplete | missing | incomplete |
| 68.126.71.       | 77    | female| 25 – 30 | incomplete | incomplete | incomplete |
| 68.126.72.       | 78    | female| 20 – 75 | missing | missing | incomplete |
| 68.126.73.       | 79    | male| 50 – 60 | incomplete | incomplete | incomplete |
| 68.126.74.       | 80    | female| 25 – 30 | incomplete | incomplete | incomplete |
| 68.126.75.       | 81    | ?   | 15 – 18 | incomplete | incomplete | incomplete |
| 68.126.76.       | 82    | female| 30 – 40 | incomplete | incomplete | incomplete |
| 68.126.77.       | 84    | male| 30 – 40 | incomplete | incomplete | incomplete |
| 68.126.78.       | 86    | male| 20 – 25 | well preserved | well preserved | incomplete |
| 68.126.79.       | 87    | ?   | 7 – 9  | incomplete | incomplete | incomplete |
| 68.126.80.       | 88    | male| 20 – 40 | incomplete | incomplete | incomplete |
| 68.126.81.       | 89    | female| 25 – 30 | incomplete | incomplete | incomplete |
| 68.126.82.       | 90    | ?   | 0 – 1  | incomplete | missing | missing |
| 68.126.83.       | 91    | ?   | 3 – 4  | incomplete | missing | incomplete |
| 68.126.84.       | 92    | female| 20 – 25 | incomplete | incomplete | incomplete |
| 68.126.85.       | 93    | female| 30 – 35 | incomplete | incomplete | incomplete |
| 68.126.86.       | 94    | male| 30 – 40 | incomplete | missing | incomplete |
| 68.126.87.       | 95    | female| 20 – 30 | incomplete | incomplete | incomplete |
| 68.126.88.       | 96    | ?   | 6 – 7  | incomplete | incomplete | incomplete |
| 68.126.89.       | 97    | female| 40 – 60 | incomplete | incomplete | incomplete |
| 68.126.90.       | 98    | ?   | 20 – 75 | missing | missing | incomplete |
| 68.126.91.       | 99    | ?   | 2 – 6  | incomplete | incomplete | incomplete |
| 68.126.92.       | 100   | female| 20 – 60 | incomplete | incomplete | incomplete |
| 68.126.93.       | 101   | ?   | 3 – 4  | incomplete | incomplete | incomplete |
| 68.126.94.       | 102   | ?   | 7 – 8  | incomplete | incomplete | incomplete |
| 68.126.95.       | 103   | male| 45 – 50 | incomplete | incomplete | incomplete |
| 68.126.96.       | 104   | male| 40 – 50 | incomplete | incomplete | incomplete |
| 68.126.97.       | 107   | ?   | 12 – 14 | incomplete | incomplete | incomplete |
| 68.126.98.       | 108   | female| 30 – 35 | incomplete | well preserved | incomplete |
| 68.126.99.       | 109   | female| 25 – 35 | well preserved | incomplete | incomplete |
### Table 2. Some basic data of the human skeletal material of SomogySZil-Dögküt (cont'd)

| Inventory number | Grave | Sex     | Age   | Skull       | Mandible    | Postcranial skeleton |
|------------------|-------|---------|-------|-------------|-------------|----------------------|
| 68.126.100.      | 110   | ?       | 9 – 10| incomplete  | incomplete  | incomplete           |
| 68.126.101.      | 112   | male    | 18 – 20| well preserved| well preserved| incomplete           |
| 68.126.102.      | 113a  | male    | 40 – 50| incomplete  | incomplete  | incomplete           |
| 68.126.103.      | 113b  | male    | 25 – 30| well preserved| well preserved| missing              |
| 68.126.104.      | 114   | male    | 40 – 45| incomplete  | incomplete  | incomplete           |
| 68.126.105.      | 115   | female  | 30 – 35| incomplete  | incomplete  | incomplete           |
| 68.126.106.      | 116   | male    | 45 – 55| incomplete  | incomplete  | incomplete           |
| 68.126.107.      | 117   | male    | 40 – 45| incomplete  | incomplete  | incomplete           |
| 68.126.108.      | 118   | female  | 25 – 35| incomplete  | incomplete  | incomplete           |
| 68.126.109.      | 120   | female  | 20 – 60| missing     | missing     | incomplete           |
| 68.126.110.      | 121   | female  | 20 – 60| missing     | missing     | incomplete           |
| 68.126.111.      | 122   | ?       | 0 – 1 | missing     | missing     | incomplete           |
| 68.126.112.      | 123   | female  | 40 – 50| incomplete  | incomplete  | incomplete           |
| 68.126.113.      | 124   | male    | 35 – 40| incomplete  | incomplete  | incomplete           |
| 68.126.114.      | 125   | ?       | 11 – 13| incomplete  | incomplete  | incomplete           |
| 68.126.115.      | 126   | ?       | 0 – 6 | incomplete  | missing     | incomplete           |
| 68.126.116.      | 127   | female  | 35 – 40| incomplete  | incomplete  | incomplete           |
| 68.126.117.      | 129   | female  | 25 – 35| incomplete  | incomplete  | incomplete           |
| 68.126.118.      | 130   | male    | 30 – 40| well preserved| well preserved| incomplete           |
| 68.126.119.      | 131   | female  | 25 – 35| incomplete  | incomplete  | incomplete           |
| 68.126.120.      | sporadic | female  | 45 – 50| well preserved| well preserved| incomplete           |
| 68.126.121.      | sporadic | male    | 40 – 45| incomplete  | incomplete  | missing              |
| 68.126.122.      | sporadic | ?       | 11 – 13| incomplete  | incomplete  | incomplete           |
| 68.126.123.      | sporadic | ?       | 20 – 75| missing     | missing     | incomplete           |
| 68.150.1.        | 132   | female  | 40 – 50| incomplete  | incomplete  | incomplete           |
| 68.150.2.        | 133   | female  | 30 – 35| incomplete  | incomplete  | incomplete           |
| 68.150.3.        | 134   | ?       | 12 – 14| well preserved| well preserved| incomplete           |
| 68.150.4.        | 136   | ?       | 1 – 2 | incomplete  | missing     | incomplete           |
| 68.150.5.        | 137   | female  | 20 – 25| well preserved| well preserved| incomplete           |
| 68.150.6.        | 138   | male    | 50 – 60| well preserved| incomplete  | incomplete           |
| 68.150.7.        | 139   | ?       | 4 – 6 | incomplete  | incomplete  | incomplete           |
| 68.150.8.        | 140   | male    | 35 – 40| incomplete  | missing     | incomplete           |
| 68.150.9.        | 141   | female  | 40 – 50| incomplete  | incomplete  | incomplete           |
| 68.150.10.       | 142a  | ?       | 6 – 7 | incomplete  | missing     | incomplete           |
| 68.150.11.       | 142b  | ?       | 1 – 2 | incomplete  | missing     | incomplete           |
| 68.150.12.       | 143   | female  | 30 – 40| incomplete  | incomplete  | incomplete           |
| 68.150.13.       | 144   | male    | 40 – 50| incomplete  | well preserved| incomplete           |
| 68.150.14.       | 145   | female  | 25 – 30| incomplete  | well preserved| incomplete           |
| 68.150.15.       | 146   | male    | 25 – 30| incomplete  | well preserved| well preserved       |
| 68.150.16.       | 147   | male    | 25 – 35| incomplete  | well preserved| incomplete           |
| 68.150.17.       | 148   | female  | 20 – 22| well preserved| well preserved| well preserved       |
Table 3.
Mortality table of the Somogyszil-Dögkút population

| Age     | Dead Number (Dx) | Percentage (dx) | Survivals entering (lX) | Life expectancy (ex) |
|---------|------------------|-----------------|-------------------------|----------------------|
| Whole population |                  |                 |                         |                      |
| 0       | 1.6              | 1.17            | 100.00                  | 31.77                |
| 1–4     | 8.2              | 5.84            | 98.83                   | 31.14                |
| 5–9     | 12.2             | 8.70            | 92.99                   | 28.97                |
| 10–14   | 7.0              | 5.00            | 84.29                   | 26.70                |
| 15–19   | 3.7              | 2.62            | 79.29                   | 23.22                |
| 20–24   | 10.8             | 7.72            | 76.67                   | 18.93                |
| 25–29   | 17.1             | 12.24           | 68.95                   | 15.77                |
| 30–34   | 19.3             | 13.80           | 56.71                   | 13.64                |
| 35–39   | 15.2             | 10.85           | 42.91                   | 12.22                |
| 40–44   | 13.8             | 9.86            | 32.06                   | 10.51                |
| 45–49   | 10.0             | 7.12            | 22.20                   | 9.06                 |
| 50–54   | 9.6              | 6.85            | 15.08                   | 7.16                 |
| 55–59   | 6.2              | 4.43            | 8.23                    | 6.05                 |
| 60–64   | 3.2              | 2.26            | 3.79                    | 5.19                 |
| 65–69   | 1.5              | 1.06            | 1.54                    | 4.15                 |
| 70–74   | 0.6              | 0.42            | 0.48                    | 2.80                 |
| 75–79   | 0.1              | 0.06            | 0.06                    | 2.50                 |
| Total   | 140.0            | 100.00          |                         |                      |
| Males   |                  |                 |                         |                      |
| 15–19   | 0.7              | 1.36            | 100                     | 27.13                |
| 20–24   | 2.0              | 4.09            | 98.64                   | 22.47                |
| 25–29   | 4.8              | 9.78            | 94.55                   | 18.33                |
| 30–34   | 4.7              | 9.56            | 84.77                   | 15.16                |
| 35–39   | 7.8              | 15.96           | 75.21                   | 11.77                |
| 40–44   | 10.1             | 20.69           | 59.25                   | 9.27                 |
| 45–49   | 6.2              | 12.69           | 38.56                   | 7.90                 |
| 50–54   | 7.2              | 14.76           | 25.88                   | 5.54                 |
| 55–59   | 3.8              | 7.79            | 11.12                   | 4.58                 |
| 60–64   | 1.1              | 2.22            | 3.33                    | 4.45                 |
| 65–69   | 0.5              | 0.93            | 1.11                    | 3.33                 |
| 70–74   | 0.1              | 0.19            | 0.19                    | 2.90                 |
| 75–79   | 0.0              | 0.00            | 0.00                    | 0.00                 |
| Total   | 49.0             | 100.00          |                         |                      |
| Females |                  |                 |                         |                      |
| 15–19   | 0.0              | 0.00            | 100                     | 20.71                |
| 20–24   | 8.4              | 14.97           | 100.00                  | 15.71                |
| 25–29   | 11.9             | 21.31           | 85.03                   | 13.03                |
| 30–34   | 14.2             | 25.39           | 63.72                   | 11.55                |
| 35–39   | 6.9              | 12.40           | 38.33                   | 12.55                |
| 40–44   | 3.4              | 6.15            | 25.92                   | 12.36                |
| 45–49   | 3.6              | 6.38            | 19.78                   | 10.42                |
| 50–54   | 2.2              | 3.89            | 13.39                   | 9.20                 |
| 55–59   | 2.2              | 3.95            | 9.50                    | 6.95                 |
varied. The presence of maxillary torus is quite rare, whereas no shovel-shaped incisors occurs in the studied material. There are differences in the frequencies of palatinus torus and fossa praenasalis as well as in the occurrence of the curved and straight foreheads between the two sexes.

The metric data and indices of the skulls are presented in Tables 5–6, while Table 7 shows the summary statistics of the skulls.

On the basis of the cranial indices, the majority of the late Roman community of Somogyszil-Dögkút can be characterized by a medium long/long (length–width index), low/moderately high (length–height index), and moderately high/high (height–width index) skull. Male foreheads are most often moderately wide or wide (transversal–frontoparietal index), whereas this index shows greater variability among females. Cranial capacity falls into the moderately large/large categories in both sexes. The face and upper face are medium wide/medium high in around half of the cases. Male orbits are usually low, whereas female orbits are low/moderately high. Nasal width varies in both sexes (Table 8).

For the calculation of the mean sigma ratio only the sigma ratios of those cranial measurements and indices were used that were composed of at least seven individual data. The mean sigma ratio of the cranial measurements is 103.53 for male skulls, and 102.08 for female skulls. The value for the cranial indices is 112.18 for males, and 137.21 for females respectively. Thus, the variability of the linear measurements (bearing information mainly about cranial size) indicates a natural population (the theoretical value for an average level of heterogeneity is 100.00), however the sigma ratios of the indices (bearing information about cranial shape) show a more mixed population, particularly for females, with a greater level of heterogeneity than that is typical for a natural population. This may suggest that the community was composed not just by local people, but some extralocal gene flow (immigrants that differed from the locals in their cranial shapes) were also present in it.

It is important to point out that due to the combined effect of the relatively small sample size and the poor preservation of the skeletal material the number of recorded cranial measurements and morphological attributes are rather small. Thus, every above mentioned result, and the conclusions drawn from it should be handled with caution as the small sample size goes along with an increased possibility of random effects that may influence the results.

Based on morphoscopic traits, every examinable skull belongs to the Caucasoid group. With respect to the traditional (and quite subjective, thus, in our opinion, “semi-scientific”) racial typology, it can be stated that Nordoid/Mediterranoid, Cromagnoid and archaic chamaecran types occurred in the population (Figs 2–6).

Mention must be made of the characteristics of the skulls recovered from burials whose S–N/N–S orientation differed from the period’s norm. Due to their poor preservation (which was among the worst in the excavated skeletal material) only a few measurements of a single female skull could be taken (Grave no. 70, Fig. 7), although the form and major proportions of the braincase of two further male skulls (Graves no. 41 and no. 50) could also be estimated, despite their fragmentation. A shared trait of these three skulls is that the length/width index of every one of them falls into the short (brachycran or hyperbrachycran) class category. The frequency of brachycran skulls is rather low in the cemetery; disregarding the female interred in Grave no. 70, from the altogether 32 skulls suitable to calculate the length/width index, only four fall into the brachycran/hyperbrachycran category. This marked difference suggests that these S–N/N–S oriented graves contained the burials of a (smaller) immigrant group whose anthropological characteristics differed in certain aspects from the local population. This possibility is indirectly further strengthened with the stature data presented below. In the lack of measurable/examinable skulls, we cannot use any traditional anthropological approach to identify the origin of this possibly immigrant group, but – to make

| Age | Dead Number (Dx) | Percentage (dx) | Survivals entering (lx) | Life expectancy (ex) |
|-----|-----------------|----------------|------------------------|---------------------|
| 60–64 | 1.9 | 3.38 | 5.55 | 5.11 |
| 65–69 | 0.8 | 1.52 | 2.17 | 4.19 |
| 70–74 | 0.3 | 0.57 | 0.65 | 3.13 |
| 75–79 | 0.0 | 0.08 | 0.08 | 2.50 |
| Total | 56.0 | 100.00 | | |
Table 4.
Distribution of the morphological characteristics of the skull in the population of Somogyyszil-Dögkút

| Characteristics                      | Males | Females | Together |
|--------------------------------------|-------|---------|----------|
|                                      | N     | %       | N        | %       | N | %    |
| Cranium (norma verticalis)           |       |         |          |         |    |      |
| Ellipsoid                            | 4     | 16.67   | 3        | 12.00   | 7  | 14.29 |
| Ovoid                                | 15    | 62.50   | 21       | 84.00   | 36 | 73.47 |
| Pentagonoid                          | 3     | 12.50   | 1        | 4.00    | 4  | 8.16  |
| Sphenoid                             | 0     | 0.00    | 0        | 0.00    | 0  | 0.00  |
| Spheroid                             | 0     | 0.00    | 0        | 0.00    | 0  | 0.00  |
| Rhomboid                             | 2     | 8.33    | 0        | 0.00    | 2  | 4.08  |
|                                      | 24    | 100.00  | 25       | 100.00  | 49 | 100.00|
| Forehead                             |       |         |          |         |    |      |
| Straight                             | 5     | 14.81   | 18       | 62.07   | 23 | 38.98 |
| Curved                               | 24    | 80.00   | 10       | 34.48   | 34 | 57.63 |
| Sloped                               | 1     | 3.33    | 1        | 3.45    | 2  | 3.39  |
|                                      | 30    | 100.00  | 29       | 100.00  | 59 | 100.00|
| Occipital                            |       |         |          |         |    |      |
| Bathrocran                           | 4     | 14.81   | 4        | 16.00   | 8  | 15.39 |
| Curvoccipital                        | 23    | 85.19   | 20       | 80.00   | 43 | 82.69 |
| Planoccipital                        | 0     | 0.00    | 1        | 4.00    | 1  | 1.92  |
|                                      | 27    | 100.00  | 25       | 100.00  | 52 | 100.00|
| Orbits                               |       |         |          |         |    |      |
| Rounded                              | 6     | 50.00   | 11       | 57.89   | 17 | 54.84 |
| Rectangular                          | 6     | 50.00   | 8        | 42.11   | 14 | 45.16 |
|                                      | 12    | 100.00  | 19       | 100.00  | 31 | 100.00|
| Lower margin of the apertura piriformis | 10 | 55.56 | 13 | 81.25 | 23 | 67.65 |
| Anthropin                            | 8     | 44.44   | 3        | 18.75   | 11 | 32.35 |
| Fossa praenalis                      | 0     | 0.00    | 0        | 0.00    | 0  | 0.00  |
| Sulcus praenalis                     | 0     | 0.00    | 0        | 0.00    | 0  | 0.00  |
|                                      | 18    | 100.00  | 16       | 100.00  | 34 | 100.00|
| Spina nasalis anterior               |       |         |          |         |    |      |
| Broca 1                              | 0     | 0.00    | 0        | 0.00    | 0  | 0.00  |
| Broca 2                              | 5     | 50.00   | 6        | 66.67   | 11 | 57.89 |
| Broca 3                              | 2     | 20.00   | 3        | 33.33   | 5  | 26.32 |
| Broca 4                              | 2     | 20.00   | 0        | 0.00    | 2  | 10.53 |
| Broca 5                              | 1     | 10.00   | 0        | 0.00    | 1  | 5.26  |
|                                      | 10    | 100.00  | 9        | 90.91   | 19 | 61.36 |
| Alveolar prognathism                 |       |         |          |         |    |      |
| Not present                          | 5     | 38.46   | 9        | 69.23   | 14 | 53.85 |
| Moderate                             | 8     | 61.54   | 4        | 30.77   | 12 | 46.15 |
| Strong                               | 0     | 0.00    | 0        | 0.00    | 0  | 0.00  |
|                                      | 13    | 100.00  | 13       | 100.00  | 26 | 100.00|
| Torus palatinus                      |       |         |          |         |    |      |
| Not present                          | 4     | 57.14   | 4        | 100.00  | 8  | 72.73 |
| Moderate                             | 3     | 42.86   | 0        | 0.00    | 3  | 27.27 |
| Strong                               | 0     | 0.00    | 0        | 0.00    | 0  | 0.00  |
|                                      | 7     | 100.00  | 4        | 100.00  | 11 | 100.00|
| Torus maxillaris                     |       |         |          |         |    |      |
| Not present                          | 15    | 93.75   | 10       | 100.00  | 25 | 96.15 |
| Moderate                             | 1     | 6.25    | 0        | 0.00    | 1  | 3.85  |
| Strong                               | 0     | 0.00    | 0        | 0.00    | 0  | 0.00  |
|                                      | 16    | 100.00  | 10       | 100.00  | 26 | 100.00|
| Shovel–shaped incisor                |       |         |          |         |    |      |
| Not present                          | 3     | 100.00  | 3        | 100.00  | 6  | 100.00|
| Present                              | 0     | 0.00    | 0        | 0.00    | 0  | 0.00  |
|                                      | 3     | 100.00  | 3        | 100.00  | 6  | 100.00|
| Canine fossa                         |       |         |          |         |    |      |
| Shallow                              | 9     | 45.00   | 5        | 26.32   | 14 | 35.90 |
| Moderately deep                      | 5     | 25.00   | 11       | 57.89   | 16 | 41.02 |
| Deep                                 | 6     | 30.00   | 3        | 15.79   | 9  | 23.08 |
|                                      | 20    | 100.00  | 19       | 95.00   | 39 | 100.00|
Table 5.

Male cranial measurements and indices in the population of Somogyszil-Dögkút

| Martin No. | Grave No. | 3 | 5/a | 5/b | 7 | 17 | 23 | 29 | 33 | 39 | 41 | 45 | 48 |
|------------|-----------|---|-----|-----|---|----|----|----|----|----|----|----|----|
| 1          | 180       | 197 | 183 |     |   |   | 188 | 170 | 183 |   |   |    | 181 |
| 5          | –         | 104 | 102 |     |   |   |    |    |   |    |    |    |    |
| 8          | 138       | 136 | 141 | 133 |   |   |    |    |   |    |    |    |    |
| 9          | –         | 99  | 96  | 95  | 100 | 96 |    |    |    |    |    |    |    |
| 10         | –         | 121 | 120 | 116 |   |   |    |    |   |    |    |    |    |
| 11         | –         | 124 | 130 | 118 |   |   |    |    |   |    |    |    |    |
| 12         | 103       | 110 | 112 | 111 | 108 |    |    |    |   |    |    |    |    |
| 17         | –         | 139 | 133 |     |   |   |    |    |   |    |    |    |    |
| 20         | –         | 116 | 108 | 110 |   |   |    |    |   |    |    |    |    |
| 38         | –         | 1494| 1376| 1363|   |   |    |    |   |    |    |    |    |
| 40         | –         | 103 |     |     |   |   |    |    |   |    |    |    |    |
| 43         | –         | 107 | 106 | 105 | 106| 105| 103 |   |   |    |    |    |
| 45         | –         | 133 | 140 |     |   |   |    |    |   |    |    |    |    |
| 46         | –         | 100 |     |     |   |   |    |    |   |    |    |    |    |
| 47         | –         | 115 |     |     |   |   |    |    |   |    |    |    |    |
| 48         | –         | 72  |     |     |   |   |    |    |   |    |    |    |    |
| 51         | –         | 43  | 42  |     |   |   |    |    |   |    |    |    |    |
| 52         | –         | 33  | 35  |     |   |   |    |    |   |    |    |    |    |
| 54         | –         |     |     |     |   |   |    |    |   |    |    |    |    |
| 55         | –         |     |     |     |   |   |    |    |   |    |    |    |    |
| 62         | –         | 51  |     |     |   |   |    |    |   |    |    |    |    |
| 63         | –         |     |     |     |   |   |    |    |   |    |    |    |    |
| 65         | –         | 126 |     |     |   |   |    |    |   |    |    |    |    |
| 66         | –         |     |     | 111 | 102|   | 115 | 105| 98 | 105|   |    |
| 69         | –         |     |     | 33  | 31 |   | 36 | 37 | 31 | 35 | 38 |   |
| 70         | –         | 68  | 69  | 58  |   |   | 62 | 70 | 62 | 62 | 62 |   |
| 71         | –         | 39  | 30  | 28  | 29 |   | 31 | 33 | 34 | 31 | 32 | 36 |
| 8:1        | 76.67     | 69.04| 77.05| 70.74|   |   | 74.86|   |   |    |    |    |
| 17:1       | –         | 70.56| 72.68|     |   |   | 74.32|   |   |    |    |    |
| 17:8       | –         | 102.21| 94.33|     |   |   | 99.27|   |   |    |    |    |
| 20:1       | –         | 58.88| 59.02| 58.51|   |   | 61.75|   |   |    |    |    |
| 20:8       | –         | 85.29| 76.60| 82.71|   |   | 82.48|   |   |    |    |    |
| 9:8        | –         | 72.79| 68.09| 71.43|   |   | 70.07|   |   |    |    |    |
| 47:45      | –         | 86.47|     |     |   |   |    |    |   |    |    |    |
| 48:45      | –         | 54.14|     |     |   |   |    |    |   |    |    |    |
| 52:51      | –         | 76.74| 83.33|     |   |   | 71.43|   |   |    |    |    |
| 54:55      | –         |     |     |     |   |   |    |    |   |    |    |    |
| 63:62      | –         |     |     |     |   |   |    |    |   |    |    |    |

Acta Archaeologica Academiae Scientiarum Hungaricae 70, 2019
### Table 5.
Male cranial measurements and indices in the population of Somogyszil-Dögkút (cont’d)

| Martin No. | Grave No. |
|------------|-----------|
|            | 49        | 50 | 51 | 53 | 57 | 59 | 60 | 79 | 84 | 86 | 103 | 113/a |
| 1          | 192       | 176| 192| 186| –  | –  | –  | 190| 197| 175| –   | 193   |
| 5          | –         | –  | –  | 101| –  | –  | –  | 106| 96 | –  | –    | –     |
| 8          | 136       | –  | –  | 135| –  | –  | –  | 150| 144| 135| –   | 149   |
| 9          | 91        | 98 | –  | 89 | –  | –  | –  | 101| 101| 103| 90  | –     | 101   |
| 10         | –         | 120| –  | 114| –  | –  | 121| –  | 123| 109| –   | 133   |
| 11         | –         | –  | –  | 115| –  | –  | –  | 135| 127| 118| –   | 123   |
| 12         | –         | –  | –  | 110| –  | –  | –  | 118| 122| 106| –   | 113   |
| 17         | –         | –  | –  | 128| –  | –  | –  | –  | 140| 135| –   | –     |
| 20         | –         | –  | –  | 106| –  | –  | 114| 116| 114| –  | –    | –     |
| 38         | 192       | 176| 192| 186| –  | –  | –  | 190| 197| 175| –   | 193   |
| 40         | –         | –  | –  | 133| –  | –  | –  | 1545| 1560| 1342| –   | –     |
| 43         | –         | –  | –  | 92 | –  | –  | –  | –  | 91 | –   | –     |
| 45         | 98        | 107| –  | 101| –  | –  | 107| 115| 113| 99  | –   | 109   |
| 46         | –         | –  | –  | 126| –  | –  | –  | –  | 134| 127| –   | –     |
| 47         | –         | –  | –  | 91 | –  | –  | –  | –  | 93 | –   | –     |
| 48         | –         | –  | –  | 114| –  | –  | –  | –  | 116| –   | –     |
| 51         | –         | –  | –  | 71 | –  | –  | –  | –  | 67 | –   | –     |
| 52         | –         | –  | –  | 40 | –  | –  | –  | –  | 41 | –   | –     |
| 54         | –         | –  | –  | 34 | –  | –  | –  | –  | 29 | –   | –     |
| 55         | –         | –  | –  | 25 | –  | –  | –  | –  | 23 | –   | –     |
| 62         | –         | –  | –  | 44 | –  | –  | –  | –  | –  | –   | –     |
| 63         | –         | –  | –  | –  | –  | –  | –  | –  | 43 | –   | –     |
| 65         | –         | –  | –  | –  | –  | –  | –  | –  | 123| –   | –     |
| 66         | –         | –  | –  | 33 | 33 | –  | 34 | –  | 100| –   | –     |
| 69         | –         | –  | 33 | 33 | –  | –  | 34 | –  | 34 | 34  | 31    |
| 70         | –         | –  | –  | 67 | 66 | 71 | 61 | 73 | 63 | 58  | 62    | 58    |
| 71         | –         | –  | 34 | 30 | 31 | 33 | 35 | 33 | 33 | 32  | 33    | 35    |
| 81         | 70.83     | –  | –  | 72.58| –  | –  | –  | 78.95| 73.10| 77.14| –    | 77.20 |
| 17:1       | –         | –  | –  | 68.82| –  | –  | –  | 71.07| 77.14| –    | –     |
| 17:8       | –         | –  | –  | 94.81| –  | –  | –  | 97.22| 100.00| –   | –     |
| 20:1       | –         | –  | –  | 56.99| –  | –  | –  | 60.00| 58.88| 65.14| –    | –     |
| 20:8       | –         | –  | –  | 78.52| –  | –  | –  | 76.00| 80.56| 84.44| –    | –     |
| 9:8        | 66.91     | –  | –  | 65.93| –  | –  | –  | 67.33| 71.53| 66.67| –    | 67.79 |
| 47:45      | –         | –  | –  | 90.48| –  | –  | –  | –  | 91.34| –   | –     |
| 48:45      | –         | –  | –  | 56.35| –  | –  | –  | –  | 52.76| –   | –     |
| 52:51      | –         | –  | –  | 83.00| –  | –  | –  | –  | 70.73| –   | –     |
| 54:55      | –         | –  | –  | 47.17| –  | –  | –  | –  | 46.00| –   | –     |
| 63:62      | –         | –  | –  | –   | –  | –  | –  | –  | –   | –   | –     |
### Table 5.
Male cranial measurements and indices in the population of Somogyaszil-Dögkút (cont’d)

| Martin No. | Grave No. | 113/b | 114 | 116 | 117 | 124 | 130 | 138 | 140 | 144 | 146 | 147 |
|------------|-----------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1          |           |       |     |     |     | 187 | 181 | 183 |     |     |     |     |
| 5          |           |       |     |     |     |     | 95  |     |     |     |     |     |
| 8          |           |       |     |     |     | 138 | 152 | 135 |     |     |     |     |
| 9          |           |       |     |     |     |     | 97  | 89  | 96  | 93  |     |     |
| 10         |           |       |     |     |     |     | 119 |     | 116 | 120 |     |     |
| 11         |           |       |     |     |     |     | 130 |     | 126 |     |     |     |
| 12         |           |       |     |     |     |     | 118 |     | 114 |     |     |     |
| 17         |           |       |     |     |     |     |     |     |     |     |     |     |
| 20         |           |       |     |     |     |     | 115 |     |     |     |     |     |
| 38         |           |       |     |     |     |     | 1510|     |     |     |     |     |
| 40         |           |       |     |     |     |     |     |     |     |     |     |     |
| 43         |           |       |     |     |     | 108 |     | 107 | 98  | 105 | 103 |     |
| 45         |           |       |     |     |     |     | 133 |     |     |     |     |     |
| 46         |           |       |     |     |     |     | 97  |     |     |     |     |     |
| 47         |           |       |     |     |     | 106 |     |     |     |     |     |     |
| 48         |           |       |     |     |     |     | 66  |     | 74  | 63  | 69  |     |
| 51         |           |       |     |     |     |     | 44  |     |     |     |     |     |
| 52         |           |       |     |     |     |     | 34  |     |     |     |     |     |
| 54         |           |       |     |     |     |     | 24  |     |     |     |     |     |
| 55         |           |       |     |     |     |     | 48  |     |     |     |     |     |
| 62         |           |       |     |     |     |     | 43  |     |     |     |     |     |
| 63         |           |       |     |     |     |     | 45  |     |     |     |     |     |
| 65         |           |       |     |     |     |     | 123 |     |     |     |     |     |
| 66         |           |       |     |     |     | 108 |     | 107 | 105 | 103 |     |     |
| 69         |           |       |     |     |     |     | 26  | 30  |     |     |     |     |
| 70         |           |       |     |     |     |     |     |     |     |     |     |     |
| 71         |           |       |     |     |     |     |     |     |     |     |     |     |
| 8:1        |           |       |     |     |     |     |     |     |     |     |     |     |
| 17:1       |           |       |     |     |     |     |     |     |     |     |     |     |
| 17:8       |           |       |     |     |     |     |     |     |     |     |     |     |
| 20:1       |           |       |     |     |     |     |     |     |     |     |     |     |
| 20:8       |           |       |     |     |     |     |     |     |     |     |     |     |
| 47:45      |           |       |     |     |     |     |     |     |     |     |     |     |
| 48:45      |           |       |     |     |     |     |     |     |     |     |     |     |
| 52:51      |           |       |     |     |     |     |     |     |     |     |     |     |
| 54:55      |           |       |     |     |     |     |     |     |     |     |     |     |
| 63:62      |           |       |     |     |     |     |     |     |     |     |     |     |

| Martin No. | Grave No. | 113/b | 114 | 116 | 117 | 124 | 130 | 138 | 140 | 144 | 146 | 147 |
|------------|-----------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1          |           |       |     |     |     | 187 | 181 | 183 |     |     |     |     |
| 5          |           |       |     |     |     |     | 95  |     |     |     |     |     |
| 8          |           |       |     |     |     | 138 | 152 | 135 |     |     |     |     |
| 9          |           |       |     |     |     |     | 97  | 89  | 96  | 93  |     |     |
| 10         |           |       |     |     |     |     | 119 |     | 116 | 120 |     |     |
| 11         |           |       |     |     |     |     | 130 |     | 126 |     |     |     |
| 12         |           |       |     |     |     |     | 118 |     | 114 |     |     |     |
| 17         |           |       |     |     |     |     |     |     |     |     |     |     |
| 20         |           |       |     |     |     |     | 115 |     |     |     |     |     |
| 38         |           |       |     |     |     |     | 1510|     |     |     |     |     |
| 40         |           |       |     |     |     |     |     |     |     |     |     |     |
| 43         |           |       |     |     |     | 108 |     | 107 | 98  | 105 | 103 |     |
| 45         |           |       |     |     |     |     | 133 |     |     |     |     |     |
| 46         |           |       |     |     |     |     | 97  |     |     |     |     |     |
| 47         |           |       |     |     |     | 106 |     |     |     |     |     |     |
| 48         |           |       |     |     |     |     | 66  |     | 74  | 63  | 69  |     |
| 51         |           |       |     |     |     |     | 44  |     |     |     |     |     |
| 52         |           |       |     |     |     |     | 34  |     |     |     |     |     |
| 54         |           |       |     |     |     |     | 24  |     |     |     |     |     |
| 55         |           |       |     |     |     |     | 48  |     |     |     |     |     |
| 62         |           |       |     |     |     |     | 43  |     |     |     |     |     |
| 63         |           |       |     |     |     |     | 45  |     |     |     |     |     |
| 65         |           |       |     |     |     |     | 123 |     |     |     |     |     |
| 66         |           |       |     |     |     | 108 |     | 107 | 105 | 103 |     |     |
| 69         |           |       |     |     |     |     | 26  | 30  |     |     |     |     |
| 70         |           |       |     |     |     |     |     |     |     |     |     |     |
| 71         |           |       |     |     |     |     |     |     |     |     |     |     |
| 8:1        |           |       |     |     |     |     |     |     |     |     |     |     |
| 17:1       |           |       |     |     |     |     |     |     |     |     |     |     |
| 17:8       |           |       |     |     |     |     |     |     |     |     |     |     |
| 20:1       |           |       |     |     |     |     |     |     |     |     |     |     |
| 20:8       |           |       |     |     |     |     |     |     |     |     |     |     |
| 47:45      |           |       |     |     |     |     |     |     |     |     |     |     |
| 48:45      |           |       |     |     |     |     |     |     |     |     |     |     |
| 52:51      |           |       |     |     |     |     |     |     |     |     |     |     |
| 54:55      |           |       |     |     |     |     |     |     |     |     |     |     |
| 63:62      |           |       |     |     |     |     |     |     |     |     |     |     |

Acta Archaeologica Academiae Scientiarum Hungaricae 70, 2019
Table 6. Female cranial measurements and indices in the population of Somogyszil-Dögkút

| Martin | Grave No. | No. | 2 | 19 | 20 | 21 | 24 | 35 | 38 | 40 | 43 | 44 | 55 | 61 |
|--------|-----------|-----|---|----|----|----|----|----|----|----|----|----|----|----|
| 1      | 186       | –   | – | 174| –   | 181| 191| –  | 185| 186| –  | 182|    |    |
| 5      | –         | –   | – | 102| –   |    | –  | –  | –  | 93 |    |    |    |    |
| 8      | 125       | –   | – | 141| –   | –  | 138| –  | 141| –  | –  | 143|    |    |
| 9      | 93         | 95  | 90 | 89 | 96  | 88 | 95 | 92 | 93 | 99 | 90 | 94 |    |    |
| 10     | 112       | 123 | – | 117| –   | –  | 116| –  | 117| –  | 117| 123|    |    |
| 11     | –         | –   | – | 118| –   | 125| –  | –  | –  | 126|    |    |    |    |
| 12     | –         | –   | – | 107| –   | 107| 116| –  | 110| –  | 108|    |    |    |
| 17     | –         | –   | – | 136| –   | –  | –  | –  | 115|    |    |    |    |    |
| 20     | –         | –   | – | 104| –   | 108| 112| –  | –  | 108|    |    |    |    |
| 38     | –         | –   | – | 1253| –  | 1403| –  | –  | –  | 1272|    |    |    |    |
| 40     | –         | –   | – | 94 | –   | –  | –  | –  | 86 |    |    |    |    |    |
| 43     | 102       | 100| – | 97 | 101| 101| 104| 100| –  | 97 | 99 |    |    |    |
| 45     | –         | –   | – | 129| –   |    | –  | –  | 133|    |    |    |    |    |
| 46     | –         | –   | – | 99 | 91 | –  | –  | 92 | 88 |    |    |    |    |    |
| 47     | –         | –   | – | 116| 105| –  | –  | –  | 93 |    |    |    |    |    |
| 51     | 42        | –   | – | 40 | –   | 42 | 40 | –  | 39 | 39 |    |    |    |    |
| 52     | 35        | –   | – | 36 | –   | 33 | 34 | –  | 30 | 33 |    |    |    |    |
| 54     | –         | –   | – | 24 | 24 | –  | –  | 23 | 23 |    |    |    |    |    |
| 55     | –         | –   | – | 51 | 48 | –  | –  | 44 | 48 |    |    |    |    |    |
| 62     | –         | –   | – | 42 | –   | –  | –  | –  | –  |    |    |    |    |    |
| 63     | –         | –   | – | 70 | 63 | –  | –  | 60 | 58 |    |    |    |    |    |
| 65     | –         | –   | 118| 116| –  | –  | 125| –  | –  | –  | 123|    |    |    |
| 66     | 100       | –   | 94 | 86 | 95 | –  | 99 | 96 | –  | 91 | 86 |    |    |    |
| 69     | 34        | –   | 26 | 34 | –  | 33 | 26 | –  | 29 | 28 | –  |    |    |    |
| 70     | –         | 49  | 52 | 59 | 55 | –  | 61 | 56 | 56 | 54 | 54 |    |    |    |
| 71     | 30        | 27  | 30 | 27 | 28 | –  | 34 | 33 | 31 | 29 | 29 | –  |    |    |
| 8:1    | 67.20     | –   | – | 81.03| –  | –  | 72.25| –  | 76.22| –  | –  | 78.57|    |    |
| 17:1   | –         | –   | – | 71.20| –  | –  | –  | –  | –  | –  | 63.19|    |    |    |
| 17:8   | –         | –   | – | 98.55| –  | –  | –  | –  | –  | –  | 80.42|    |    |    |
| 20:1   | –         | –   | – | 59.77| –  | 59.67| 58.64| –  | –  | –  | –  | 54.95|    |    |
| 20:8   | –         | –   | – | 81.16| –  | –  | –  | –  | –  | –  | 69.93|    |    |    |
| 9:8    | 74.40     | –   | – | 63.12| –  | –  | 68.84| –  | 65.96| –  | –  | 65.73|    |    |
| 47:45  | –         | –   | – | 89.92| –  | –  | –  | –  | –  | –  | 69.92|    |    |    |
| 48:45  | –         | –   | – | 54.26| –  | –  | –  | –  | –  | –  | 43.61|    |    |    |
| 52:51  | 83.33     | –   | – | 90.00| –  | –  | 78.57| 85.00| –  | –  | 76.92| 84.62|    |    |
| 54:55  | –         | –   | – | 47.06| 50.00| –  | –  | 52.27| 47.92|    |    |    |    |    |
| 63:62  | –         | –   | – | –  | –  | –  | –  | –  | –  | –  | –  | –  | –  |    |
Table 6.
Female cranial measurements and indices in the population of Somogyiszil-Dögkút (cont’d)

| Martin No. | 67  | 68  | 70  | 71  | 75  | 92  | 108 | 109 | 115 | 118 | 123 |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1          | 163 | 186 | 168 | –   | 167 | –   | 168 | 168 | 179 | –   | –   | 180 |
| 5          | –   | –   | –   | –   | –   | –   | –   | 105 | –   | –   | –   |
| 8          | –   | 142 | 150 | 141 | –   | –   | –   | 143 | 134 | –   | –   | 138 |
| 9          | 88  | 98  | 96  | 100 | –   | –   | 95  | 95  | 98  | 85  | –   | 95  |
| 10         | –   | –   | 129 | –   | –   | –   | 122 | –   | 112 | –   | –   | 117 |
| 11         | –   | 128 | 126 | –   | –   | –   | 121 | 118 | –   | –   | –   |
| 12         | –   | 116 | 107 | –   | –   | –   | 107 | 112 | 104 | –   | –   | 106 |
| 17         | –   | –   | –   | –   | –   | –   | –   | 134 | –   | –   | –   |
| 20         | –   | 110 | 120 | –   | –   | –   | 115 | 116 | –   | –   | –   |
| 38         | –   | 1386| 1430| –   | –   | –   | 1332| 1340| –   | –   | –   |
| 40         | –   | –   | –   | –   | –   | –   | –   | 101 | –   | –   | –   |
| 43         | 93  | 105 | 105 | 105 | –   | –   | 99  | 105 | –   | 95  | –   |
| 45         | –   | –   | –   | –   | –   | –   | –   | 129 | –   | –   | –   |
| 46         | –   | –   | –   | –   | –   | –   | –   | –   | –   | –   | –   |
| 47         | –   | –   | –   | –   | –   | –   | –   | 118 | –   | –   | –   |
| 48         | 64  | –   | –   | –   | –   | –   | –   | 74  | –   | –   | –   |
| 51         | 39  | 41  | 43  | 42  | –   | –   | –   | 42  | –   | 41  | –   |
| 52         | 32  | 32  | 33  | 33  | –   | –   | –   | 34  | –   | 35  | –   |
| 54         | –   | –   | –   | –   | –   | –   | –   | 25  | –   | –   | –   |
| 55         | 46  | –   | –   | –   | –   | –   | –   | 52  | –   | –   | –   |
| 62         | –   | –   | –   | –   | –   | –   | –   | 43  | –   | –   | –   |
| 63         | –   | –   | –   | –   | –   | –   | –   | 40  | –   | –   | –   |
| 65         | –   | 122 | –   | –   | –   | –   | 121 | 122 | –   | –   | –   |
| 66         | –   | 99  | 95  | –   | –   | –   | 96  | 88  | –   | –   | –   |
| 69         | 26  | 33  | –   | 30  | –   | 29  | 32  | 32  | 32  | 26  | 25  |
| 70         | 55  | 62  | 61  | –   | –   | –   | 59  | 54  | 55  | –   | 52  | 53  |
| 71         | 30  | 33  | 33  | 32  | –   | 31  | 34  | 31  | 34  | –   | 29  | 33  |

| 8:1        | –   | 76.34| 89.29| –   | –   | –   | –   | 85.12| 74.86| –   | –   | 76.67|
| 17:1       | –   | –   | –   | –   | –   | –   | –   | 74.86| –   | –   |
| 17:8       | –   | –   | –   | –   | –   | –   | –   | 100.00| –   | –   |
| 20:1       | –   | 59.14| 71.43| –   | –   | –   | –   | 68.45| 64.80| –   | –   |
| 20:8       | –   | 77.46| 80.00| –   | –   | –   | –   | 80.42| 86.57| –   | –   |
| 9:8        | –   | 69.01| 64.00| 70.92| –   | –   | –   | 66.43| 73.13| –   | –   | 68.84|
| 47:45      | –   | –   | –   | –   | –   | –   | –   | 91.47| –   | –   |
| 48:45      | –   | –   | –   | –   | –   | –   | –   | 57.36| –   | –   |
| 52:51      | 82.05| 85.37| 76.74| 78.57| –   | –   | –   | 80.95| 85.37| –   |
| 54:55      | –   | –   | –   | –   | –   | –   | –   | 48.08| –   | –   |
| 63:62      | –   | –   | –   | –   | –   | –   | –   | 93.02| –   | –   |
### Table 6.
Female cranial measurements and indices in the population of Somogyszil-Dögkút (cont’d)

| Martin Grave No. | 127 | 131 | stray finds | 132 | 133 | 137 | 141 | 143 | 145 | 148 |
|------------------|-----|-----|------------|-----|-----|-----|-----|-----|-----|-----|
| 1                |     |     | 184        | 177 | 178 | 181 | 179 | 169 | 184 |
| 5                |     |     | 93         |     |     |     |     |     |     | 103 |
| 8                |     |     | 128        |     |     | 140 | 134 | 136 | 134 |
| 9                | 95  | 96  | 92         | 98  | 95  | 88  | 96  |     | 87  |
| 10               |     |     | 108        |     |     |     |     | 119 | 109 | 113 |
| 11               |     |     | 114        |     |     | 121 | 123 | 125 | 118 |
| 12               |     |     | 103        |     |     | 109 | 109 |     |     | 102 |
| 17               |     |     | 128        |     |     |     |     |     |     | 127 |
| 20               |     |     | 112        |     |     | 113 | 104 | 111 | 110 |
| 38               |     |     | 1248       |     |     | 1370| 1232|     |     | 1253| 1313|
| 40               |     |     |            |     |     |     |     |     |     | 98  |
| 43               |     | 105 | 100        | 106 | 94  | 103 |     | 97  | 98  |
| 45               |     |     | 125        |     | 124 |     |     | 131 | 122 |
| 46               |     |     | 92         | 88  | 82  |     |     | 93  | 90  |
| 47               |     |     | 110        |     | 108 |     |     | 99  | 107 |
| 48               |     |     | 66         |     | 63  |     |     | 62  | 66  |
| 51               |     |     | 41         |     |     | 39  |     |     | 41  | 40  |
| 52               |     |     | 35         |     | 32  |     |     | 30  | 31  |
| 54               |     |     | 23         | 25  | 23  |     |     | 25  | 26  |
| 55               |     |     | 53         |     | 47  |     |     | 45  | 47  |
| 62               |     |     | 42         |     |     |     |     |     | 44  |
| 63               |     |     | 35         | 37  |     |     |     | 46  | 43  |
| 65               |     |     | 111        |     |     |     |     |     | 117 | 113 |
| 66               |     | 98  | 97         |     | 90  | 90  | 103 |     |     |     | 99  | 99  |
| 69               |     |     | 30         | 29  | 31  |     |     | 26  | 29  |
| 70               | 56  | 62  | 63         | 55  | 67  | 59  | 54  | 58  | 52  |
| 71               | 29  | 36  | 30         | 29  | 33  | 30  | 35  | 27  | 33  |
| 8:1              |     |     | 72.32      |     |     | 77.35| 74.86|     | 80.47| 72.83|
| 17:1             |     |     | 72.32      |     |     |     |     |     |     | 69.02|
| 17:8             |     |     | 100.00     |     |     |     |     |     |     | 94.78|
| 20:1             |     |     | 63.28      |     |     | 62.43| 58.10|     | 65.68| 59.78|
| 20:8             |     |     | 87.30      |     |     | 80.71| 77.61|     | 81.62| 82.09|
| 9:8              |     |     | 71.88      |     |     | 62.86| 71.64|     | 66.91| 64.93|
| 47:45            |     |     | 88.00      |     |     | 87.10|     |     | 75.57| 87.70|
| 48:45            |     |     | 52.80      |     |     | 50.81|     |     | 47.33| 54.10|
| 52:51            |     |     | 85.37      |     |     | 82.05|     |     | 73.17| 77.50|
| 54:55            |     |     | 43.40      |     |     | 48.94|     |     |     |     | 55.56| 55.32|
| 63:62            |     |     |            |     |     |     |     |     |     |     | 97.73|
Table 7. Summary statistics of cranial measurements and indices in the population of Somogyszil-Dögkút

| No. | Martin Males | Females |
|-----|--------------|---------|
|     | N Vmax Vmin M SD | S.R. | N Vmax Vmin M SD | S.R. |
| 1   | 21 197 170 185.43 7.25 | 118.85 22 191 163 178.00 7.76 | 93.20 90.00 |
| 5   | 7 106 95 100.86 4.02 | 98.05 5 105 93 99.20 5.76 | 147.69 |
| 8   | 19 152 133 140.58 6.19 | 123.8 16 150 125 138.00 6.12 | 127.50 |
| 9   | 22 105 89 96.82 4.47 | 101.59 30 100 85 93.40 3.87 | 147.89 |
| 10  | 16 133 109 119.25 5.30 | 110.42 15 129 108 116.93 5.71 | 124.13 |
| 11  | 15 135 115 124.47 5.21 | 108.54 12 128 114 121.92 4.27 | 92.83 |
| 12  | 17 122 103 112.06 5.25 | 116.67 15 116 102 108.20 4.09 | 95.12 |
| 17  | 6 140 128 135.17 4.36 | 88.98 5 136 115 128.00 8.22 | 174.89 |
| 20  | 14 122 106 113.21 4.32 | 108.00 12 120 100 110.58 5.62 | 147.89 |
| 38  | 13 162 130.85 1446.34 93.79 | 83.74 12 1430.40 1231.85 1319.51 67.93 | 67.93 67.59 |
| 40  | 3 103 91 95.33 6.66 | 135.92 4 101 86 94.75 6.50 | 138.30 |
| 43  | 23 115 98 105.74 4.38 | 113.77 23 106 93 100.48 3.87 | 106.03 |
| 45  | 10 144 126 133.90 5.43 | 106.47 7 133 122 127.57 3.99 | 83.13 |
| 46  | 7 103 91 96.57 4.08 | 86.81 9 99 82 90.56 4.59 | 103.15 |
| 47  | 8 126 106 117.63 6.48 | 92.57 8 118 93 107.00 8.25 | 126.92 |
| 48  | 10 79 63 70.60 4.60 | 112.20 10 74 58 64.60 4.70 | 123.68 |
| 51  | 13 45 40 42.31 1.65 | 91.67 16 43 39 40.69 1.30 | 76.47 |
| 52  | 11 36 29 32.27 2.37 | 124.74 16 36 30 33.19 1.83 | 96.32 |
| 54  | 9 27 23 25.00 1.41 | 78.33 10 26 23 24.10 1.10 | 64.71 |
| 55  | 9 56 44 50.56 3.54 | 122.07 10 53 44 48.10 3.00 | 111.11 |
| 62  | 7 51 43 46.57 2.64 | 94.29 4 44 42 42.75 0.96 | 36.23 |
| 63  | 4 45 42 43.25 1.26 | 47.55 5 46 35 40.20 4.44 | 174.12 |
| 65  | 10 137 120 125.20 5.07 | 88.95 10 125 111 118.80 4.57 | 84.63 |
| 66  | 13 115 98 105.62 4.54 | 72.06 19 103 86 94.79 4.97 | 85.69 |
| 69  | 20 38 26 32.90 2.99 | 104.91 22 34 25 29.59 2.87 | 112.55 |
| 70  | 26 74 52 63.62 5.73 | 116.94 27 67 49 56.70 4.11 | 93.41 |
| 71  | 30 40 27 32.33 2.95 | 109.26 30 36 27 30.97 2.48 | 99.20 |
| 8:1 | 18 83.98 69.04 75.32 3.69 | 115.31 15 89.29 67.20 77.03 5.45 | 170.31 |
| 17:1| 6 77.14 68.82 72.43 2.97 | 95.81 5 74.86 63.19 70.12 4.41 | 142.26 |
| 17:8| 6 102.21 94.33 97.97 3.08 | 70.00 5 100.00 80.42 94.75 8.29 | 188.41 |
| 20:1| 13 65.14 56.99 61.03 2.51 | 100.4 13 71.43 54.95 62.01 4.60 | 184.00 |
| 20:8| 13 87.41 73.03 80.99 4.36 | 132.12 12 87.50 69.93 79.90 4.87 | 147.58 |
| 9:8 | 16 72.79 58.55 68.35 3.51 | 106.36 16 74.40 62.86 68.04 3.61 | 109.39 |
| 47:45| 6 92.37 79.70 87.05 5.27 | 99.43 7 91.47 69.92 84.24 8.15 | 153.77 |
| 48:45| 7 56.35 46.67 52.16 3.24 | 102.86 7 57.36 43.61 51.47 4.67 | 148.25 |
| 52:51| 11 85.00 66.67 76.11 6.02 | 120.80 16 90.00 73.17 81.60 4.39 | 87.80 |
| 54:55| 9 56.82 44.23 49.66 4.42 | 107.80 9 55.36 43.40 49.84 3.96 | 96.59 |
| 63:62| 3 104.65 89.36 95.83 7.91 | 113.00 2 97.73 93.02 95.38 3.33 | 47.57 |
Fig. 2. Grave no. 5a; adult male; skull – anterior (A), semi-profile (B) and lateral view (C)

Fig. 3. Grave no. 38; adult female; skull – anterior (A), semi-profile (B) and lateral view (C)

Fig. 4. Grave no. 53; adult male; skull – anterior (A), semi-profile (B) and lateral view (C)
Fig. 5. Grave no. 61; adult female; skull – anterior (A), semi-profile (B) and lateral view (C)

Fig. 6. Grave no. 146; adult male; skull – anterior (A), semi-profile (B) and lateral view (C)

Fig. 7. Grave no. 70; adult female; skull – lateral view
### Table 8.

Distribution of cranial indices of the population of Somogyszil-Dögkút in the class categories of Alekseyev–DeBetz 1964

| Martin | Class category | Males | Females | Together |
|--------|----------------|-------|---------|----------|
|        | No.            | N %   | N %     | N %     |
| 8:1    | Hyperdolichokran | 73.2  | 5 27.78 | 4 26.67 | 9 27.27 |
|        | Dolichokran    | 73.3–76.4 | 6 33.33 | 74.2–77.3 | 6 40.00 | 12 36.36 |
|        | Mesokran       | 76.5–79.9 | 5 27.78 | 77.4–80.8 | 2 13.33 | 7 21.21 |
|        | Brachykran     | 80.0–83.1 | 1 5.56 | 80.9–84.0 | 1 6.67 | 2 6.06 |
|        | Hyperbrachykran | 83.2– | 1 5.56 | 84.1– | 2 13.33 | 3 9.09 |
|        | Σ              | 18    | 15 83.33 | 33 |
| 17:1   | Hyperchamaekran | 69.2  | 1 16.67 | –69.4 | 2 40.00 | 3 27.27 |
|        | Chamaekran     | 69.3–72.3 | 2 33.33 | 69.5–72.5 | 2 40.00 | 4 36.36 |
|        | Orthokran      | 72.4–75.6 | 2 33.33 | 72.6–75.8 | 1 20.00 | 3 27.27 |
|        | Hypsikran      | 75.7–78.7 | 1 16.67 | 75.9–78.9 | 0 0.00 | 1 9.09 |
|        | Hyperhypsikran | 78.8– | 0 0.00 | 79.0– | 0 0.00 | 0 0.00 |
|        | Σ              | 6     | 5 83.33 | 11 |
| 20:1   | Hyperchamaekran | 59.4  | 5 38.46 | –59.6 | 4 30.77 | 9 34.62 |
|        | Chamaekran     | 59.5–61.8 | 3 23.08 | 59.7–62.0 | 3 23.08 | 6 23.08 |
|        | Orthokran      | 61.9–64.7 | 4 30.77 | 62.1–64.9 | 3 23.08 | 7 26.92 |
|        | Hypsikran      | 64.8–67.1 | 1 7.69 | 65.0–67.3 | 1 7.69 | 2 7.69 |
|        | Hyperhypsikran | 67.2– | 0 0.00 | 67.4– | 2 15.38 | 2 7.69 |
|        | Σ              | 13    | 13 83.33 | 26 |
| 17:8   | Hypertapeinokran | –87.9 | 0 0.00 | –87.1 | 1 20.00 | 1 9.09 |
|        | Tapeinokran    | 88.0–92.3 | 0 0.00 | 87.2–91.4 | 0 0.00 | 0 0.00 |
|        | Metriokran     | 92.4–97.0 | 2 33.33 | 91.5–96.1 | 1 20.00 | 3 27.27 |
|        | Akrokran       | 97.1–101.4 | 3 50.00 | 96.2–100.4 | 3 60.00 | 6 54.55 |
|        | Hyperakrokran  | 101.5– | 1 16.67 | 100.4– | 0 0.00 | 1 9.09 |
|        | Σ              | 6     | 5 83.33 | 11 |
| 20:8   | Hypertapeinokran | –75.8 | 1 7.69 | –75.1 | 2 16.67 | 3 12.00 |
|        | Tapeinokran    | 75.0–78.9 | 4 30.77 | 75.2–78.2 | 2 16.67 | 6 24.00 |
|        | Metriokran     | 79.0–82.8 | 3 23.08 | 78.3–82.1 | 6 50.00 | 9 36.00 |
|        | Akrokran       | 82.9–85.9 | 4 30.77 | 82.2–85.2 | 0 0.00 | 4 16.00 |
|        | Hyperakrokran  | 86.0–91.8 | 1 7.69 | 85.3–91.0 | 2 16.67 | 3 12.00 |
|        | Σ              | 13    | 12 83.33 | 25 |
| 9:8    | Hyperstenometop | –62.7 | 1 6.25 | –63 | 1 6.25 | 2 6.25 |
|        | Stenometop     | 62.8–66.0 | 2 12.50 | 63.1–66.3 | 5 31.25 | 7 21.88 |
|        | Metriometop    | 66.1–69.6 | 6 37.50 | 66.4–69.9 | 5 31.25 | 11 34.38 |
|        | Eurymetop      | 69.7–72.9 | 7 43.75 | 70.0–73.2 | 4 25.00 | 11 34.38 |
|        | Hypereurymetop | 73.0– | 0 0.00 | 73.3– | 1 6.25 | 1 3.13 |
|        | Σ              | 16    | 16 83.33 | 32 |
Table 8.
Distribution of cranial indices of the population of Somogyszil-Dögkút in the class categories of ALEKSEYEV–DEBETZ 1964 (cont’d)

| Martin     | Class category     | Males |          |          | Females |          |          | Together |
|------------|--------------------|-------|----------|----------|---------|----------|----------|----------|
|            | No.                | N %   | N %      | N %      |         | N %      |         |          |
|            | Hyperoligenkephal  | 1227  | 0 0.00   | -1096    | 0 0.00  | 0 0.00   | 1 4.00  |
|            | Oligenkephal      | 1228–1337 | 1 7.69   | 1097–1195 | 0 0.00  | 1 4.00   |
| 38         | Eunenkephal       | 1338–1462 | 6 46.15  | 1196–1307 | 5 41.67 | 11 44.00 |
|            | Aristenkephal     | 1463–1572 | 5 38.46  | 1308–1406 | 6 50.00 | 11 44.00 |
|            | Hyperaristenkephal | 1573–   | 1 7.69   | 1407–1582 | 1 8.33  | 2 8.00   |
|            |                    | Σ 13   | 12 25    |          |         |          |          |
|            | Hyperereuryprosop  | ~80.5  | 1 16.67  | ~80.1     | 2 33.33 | 3 25.00  |
| 47:45      | Euryprosop        | 80.6–85.8 | 1 16.67  | 80.2–85.4 | 0 0.00  | 1 8.33   |
|            | Mesoprosop        | 85.9–91.6 | 3 50.00  | 85.5–91.1 | 4 66.67 | 7 58.33  |
|            | Leptoprosop       | 91.7–96.9 | 1 16.67  | 91.2–96.4 | 0 0.00  | 1 8.33   |
|            | Hyperleptoprosop  | 97.0–   | 0 0.00   | 96.5–     | 0 0.00  | 0 0.00   |
|            |                    | Σ 6    | 6 12     |          |         |          |          |
|            | Hyperereurven     | ~48.3  | 1 14.29  | ~48.1     | 2 28.57 | 3 21.43  |
| 48:45      | Eureven           | 48.4–51.4 | 2 28.57  | 48.2–51.2 | 1 14.29 | 3 21.43  |
|            | Mesen             | 51.5–54.9 | 3 42.86  | 51.3–54.7 | 3 42.86 | 6 42.86  |
|            | Lepten            | 55.0–58.0 | 1 14.29  | 54.8–57.8 | 1 14.29 | 2 14.29  |
|            | Hyperlepten       | 58.1–   | 0 0.00   | 57.9–     | 0 0.00  | 0 0.00   |
|            |                    | Σ 7    | 7 14     |          |         |          |          |
|            | Hyperchamaekonch  | ~73.8  | 5 45.45  | ~76.4     | 1 6.25  | 6 22.22  |
| 52:51      | Chamaekonch       | 73.9–78.7 | 3 27.27  | 76.5–81.5 | 6 37.50 | 9 33.33  |
|            | Mesokonch         | 78.8–84.3 | 2 18.18  | 81.6–87.3 | 8 50.00 | 10 37.04 |
|            | Hypsikonch        | 84.4–89.2 | 1 9.09   | 87.4–92.4 | 1 6.25  | 2 7.41   |
|            | Hyperhypsikonch   | 89.3–   | 0 0.00   | 92.5–     | 0 0.00  | 0 0.00   |
|            |                    | Σ 11   | 16 27    |          |         |          |          |
|            | Hyperleptorrhin   | ~42.5  | 0 0.00   | ~43.3     | 0 0.00  | 0 0.00   |
| 54:55      | Leptorrhin        | 42.6–46.6 | 3 33.33  | 43.4–47.5 | 2 22.22 | 5 27.78  |
|            | Mesorrhin         | 46.7–51.1 | 4 44.44  | 47.6–52.1 | 4 44.44 | 8 44.44  |
|            | Chamaerrhin       | 51.2–55.2 | 0 0.00   | 52.2–56.3 | 3 33.33 | 3 16.67  |
|            | Hyperchamaerrhin  | 55.3–   | 2 22.22  | 56.4–     | 0 0.00  | 2 11.11  |
|            |                    | Σ 9    | 9 18     |          |         |          |          |
|            | Hyperleptostaphylin| ~75.7  | 0 0.00   | ~75.8     | 0 0.00  | 0 0.00   |
| 62:62      | Leptostaphylin    | 75.8–82.6 | 0 0.00   | 75.9–82.7 | 0 0.00  | 0 0.00   |
|            | Mesostaphylin     | 82.7–90.3 | 1 33.33  | 82.8–90.5 | 0 0.00  | 1 20.00  |
|            | Brachystaphylin   | 90.4–97.2 | 1 33.33  | 90.6–97.4 | 1 50.00 | 2 40.00  |
|            | Hyperbrachystaphylin| 97.3–   | 1 33.33  | 97.5–     | 1 50.00 | 2 40.00  |
|            |                    | Σ 3    | 2 5      |          |         |          |
a merely hypothetical proposal – it should here be recalled that during this period brachycranic skulls were frequent among populations of presumably Sarmatian origin and/or populations with a significant Sarmatian component.

**Metric characteristics of the postcranial skeleton, estimated stature**

The individual postcranial measurements and the estimated stature are presented in Tables 9–10. The mean height of males is 165.94 cm, while it is 156.86 cm for females. Taking a look at the N–S/S–N oriented burials, it can be seen that three males from those graves were suitable for stature calculation (Grave no. 18: 171.33 cm; Grave no. 41: 166.05 cm; Grave no. 50: 174.33 cm). If they are excluded from the stature mean calculation, the average height of males lowers to 165.31 cm. Two of these three males (Grave no. 18 and Grave no. 50) had a stature significantly exceeding this mean value. Although far-reaching conclusions can hardly be drawn owing to the extremely low number of cases, if this record is viewed together with the data on skulls, it indirectly underpins the assumption that the N–S/S–N oriented graves contained the burials of an immigrant group that in terms of certain anthropological traits differed substantially from the overwhelming majority of the community using the cemetery.

The average stature (calculated from the lower limb bones) of the population of the Carpathian Basin during the Roman Age was 166.09 cm for males, and 156.91 cm for females. The average height of the Somogyszil-Dögkúti dűlő population fits nicely into this picture.

**Traumas and injuries**

The frequency of fractures and other injuries caused by accidents or interpersonal violence is fairly low in the Somogyszil-Dögkúti dűlő population. Fracture of the lower limb was identified in one case: a healed fracture was found in the proximal third of the right fibula of an adult woman interred in Grave no. 16. Healed fractures of the upper limb was noted in three cases: a woman buried in Grave no. 20 had broken her right ulna near the distal end, a mid diaphyseal fracture healed with an angulation was observed on the left radius of the man interred in Grave no. 23 (Fig. 8), and a mature man in Grave no. 41 had broken his left radius in the distal third. In addition, one other bone trauma was found: an ~ 11 mm long healed depressed fracture probably caused by a moderately sharp implement was identified on the left parietal bone of an elderly woman from Grave no. 19 (Fig. 9).

**Biological distance between Somogyszil-Dögkúti dűlő and other archaeological populations**

The pairwise Penrose distances ($C_R^2$; “size” and “shape” combined) between the Somogyszil-Dögkúti dűlő and other male cranial series are presented in Table 11.

From the comparative male cranial series below the 1% error band ($C_R^2 \leq 0.196$) are the late Roman period sites of Esztergom-Bánomi dűlő ($C_R^2 = 0.096$), Keszthely-Dobogó ($C_R^2 = 0.183$) and Tác-Margittelep ($C_R^2 = 0.188$), the Avar period series of Kaposvár-Road 61, Site 26 ($C_R^2 = 0.054$), Toponár-40-es ōrház [Toponár watchman’s house No. 40] ($C_R^2 = 0.075$), Zalakomár-Lesvári dűlő II ($C_R^2 = 0.076$), Kereki-Homokbánya ($C_R^2 = 0.100$), Keszthely-Város ($C_R^2 = 0.121$), Kaposvár-Fészerlakpuszta ($C_R^2 = 0.148$), Zelovce (Zsély) ($C_R^2 = 0.154$) and Virt ($C_R^2 = 0.194$). Cranial series below the 2% error band ($C_R^2 < 0.235$) are the Keszthely burial ground uncovered by Vilmos Lipp and assigned to the Keszthely culture ($C_R^2 = 0.200$), and the Late Avar period cemeteries of Tiszaderzs ($C_R^2 = 0.213$) and Nové Zámky (Érsekújvár) ($C_R^2 = 0.229$).

The biological distance-based relations of the close analogies of Somogyszil-Dögkúti dűlő male cranial series is visualized by a dendrogram (Fig. 10). Accordingly, Somogyszil-Dögkúti dűlő clusters together with the Avar period populations of Kaposvár-Road 61, Site 26, Toponár 40-es ōrház [Toponár watchman’s house No. 40] and Kereki-Homokbánya. This joins together still within the 1% error band threshold value (0.196) with an other cluster composed of the Avar period series of Kaposvár-Fészerlakpuszta and Zalakomár-Lesvári dűlő II, and the

---

27 Éry 1998.
Fig. 8. Grave no. 23; adult male; fracture of the left radius healed with an angulation (A, B)

Fig. 9. Grave no. 19; senile female; healed depressed fracture on the left parietal bone
Fig. 10. Dendrogram showing the relations among the male cranial series of Somogyszil-Dögkút and its close (below the 2% or 1% error band) analogies – Penrose distance, UPGMA hierarchical clustering method
Table 9.
The M1 measurement of long bones, and the calculated statures of the males of Somogyiszil-Dögkút

| Grave No. | Humerus Left | Humerus Right | Ulna Left | Ulna Right | Radius Left | Radius Right | Femur Left | Femur Right | Tibia Left | Tibia Right | Fibula Left | Fibula Right | Calculated stature (cm) |
|-----------|--------------|--------------|-----------|------------|-------------|-------------|------------|-------------|------------|-------------|-------------|-------------|------------------------|
| 17        | 447          | 446          | 367       |            |              |              |            |             |            |             |              |              | 166.86                 |
| 18        | 319          |              | 463       | 463        | 365         | 365         |            |             |            |             |              |              | 171.33                 |
| 27        | 316          | 305          | 259       | 258        | 424         | 426         | 342        |            |            |             |              |              | 161.04                 |
| 29        |              | 272          | 432       | 438        |              |              |            |             |            |             |              |              | 163.75                 |
| 33        | 309          | 303          | 233       | 232        | 421         | 422         | 346        |            |            |             |              |              | 160.09                 |
| 39        | 300          | 295          |           |            |              |              |            |             |            |             |              |              | 160.19                 |
| 41        | 315          |              | 441       | 446        | 350         |            |            |             |            |             |              |              | 166.05                 |
| 45        | 324          |              | 241       |            |              | 362         |            |             |            |             |              |              | 166.44                 |
| 46        | 324          | 260          | 243       | 433        | 423         | 349         | 339        |            |            |             |              |              | 161.85                 |
| 48        |              |              | 243       | 238        | 444         |              |            |             |            |             |              |              | 166.18                 |
| 50        | 326          |              |           |            |              |              |            |             |            | 386         |              |              | 174.33                 |
| 51        | 324          | 254          | 250       | 236        | 231         | 427         | 345        | 346        |            |             |              |              | 161.58                 |
| 53        | 329          | 323          | 277       | 273        | 253         | 253         | 432        |            |            |             |              |              | 162.93                 |
| 59        |              |              | 240       |            |              |              |            |             |            |             |              |              | 169.44                 |
| 60        |              |              |           |            |              |              |            |             |            | 456         | 376         |              | 169.98                 |
| 79        | 315          |              |           |            |              |              |            |             |            |             |              |              | 162.93                 |
| 84        | 339          |              |           |            |              |              |            |             |            |             |              |              | 168.35                 |
| 86        |              |              |           |            |              |              |            |             |            | 452         | 452         |              | 165.10                 |
| 103       |              |              |           |            |              |              |            |             |            |             |              |              | 156.83                 |
| 113a      |              |              | 282       | 440        |              |              |            |             |            |             |              |              | 156.83                 |
| 116       | 324          |              |           |            |              |              |            |             |            |             |              |              | 168.35                 |
| 124       |              |              | 408       | 411        |              |              |            |             |            |             |              |              | 172.01                 |
| 130       | 334          | 323          | 271       |            | 247         | 452         | 450        | 379        | 382        |            |              |              | 168.08                 |
| 138       |              |              |           |            |              |              |            |             |            | 469         |              |              | 172.96                 |
| 140       |              |              |           |            |              |              |            |             |            | 468         | 454         |              | 170.79                 |
| 144       |              |              |           |            |              |              |            |             |            | 452         |              |              | 168.35                 |
| 146       | 323          | 317          | 277       | 279        | 249         | 468         | 463        | 391        | 385        |            |              |              | 172.01                 |
| 147       | 304          |              | 225       | 425        |              |              |            |             |            |             |              |              | 161.04                 |
### Table 10.

The M1 measurement of long bones, and the calculated statures of the females of Somogyszil-Dögkút

| Grave No. | Humerus Left | Humerus Right | Ulna Left | Ulna Right | Radius Left | Radius Right | Femur Left | Femur Right | Tibia Left | Tibia Right | Fibula Left | Fibula Right | Calculated Stature (cm) |
|-----------|--------------|---------------|-----------|------------|-------------|--------------|------------|-------------|------------|-------------|--------------|--------------|------------------------|
| 16        | 314          | 311           | 225       | 421        | 423         |              |            |             |            |              |              |              | 160.22                 |
| 19        |              |               |           |            |             | 393          |            |             |            |              |              |              | 152.36                 |
| 20        | 288          | 243           |           |            | 400         | 398          |            |             |            |              |              |              | 153.99                 |
| 21        | 244          |               | 408       | 340        | 338         |              |            |             |            |              |              |              | 156.43                 |
| 24        |              |               | 409       | 325        |              |              |            |             |            |              |              |              | 156.70                 |
| 26        |              |               |           |            | 325         |              |            |             |            |              |              |              |                     |
| 36        | 251          | 228           |           |            |              |              |            |             |            |              |              |              |                     |
| 38        | 303          | 300           | 225       | 437        | 439         | 356          | 356        |              |            |              |              |              | 163.61                 |
| 40        | 281          |               | 405       | 404        | 323         | 323          |            |             |            |              |              |              | 155.48                 |
| 43        | 303          | 300           | 410       | 407        | 351         | 344          |            |             |            |              |              |              | 156.56                 |
| 44        | 281          |               | 203       | 398        | 392         | 310          | 306        |            |            |              |              |              | 152.91                 |
| 55        |              |               | 412       | 421        |              |              |            |             |            |              |              |              | 158.46                 |
| 61        | 229          | 216           | 212       | 415        | 333         | 331          |            |             |            |              |              |              | 158.33                 |
| 89        |              |               | 203       | 393        |              | 319          |            |             |            |              |              |              | 152.36                 |
| 92        | 266          |               |           |            |              |              |            |             |            |              |              |              |                     |
| 97        | 286          |               |           |            |              |              |            |             |            |              |              |              |                     |
| 108       |              |               |           |            | 409         | 410          | 340        | 337        |            |              |              |              | 156.83                 |
| 109       | 296          |               |           |            | 219         |              |            |             |            |              |              |              |                     |
| 115       | 266          |               |           |            |              | 378          |            |             |            |              |              |              | 148.30                 |
| 127       |              |               |           |            | 419         |              | 327        |            |            |              |              |              | 159.41                 |
| 131       | 322          |               |           |            |              |              |            |             |            |              |              |              |                     |
| 133       |              |               |           |            | 431         |              |            |             |            |              |              |              | 162.66                 |
| 143       |              |               |           |            |              | 428          |            |             |            |              |              |              | 161.85                 |
| 145       | 301          | 297           | 219       | 421        | 422         | 342          |            |             |            |              |              |              | 160.09                 |
| 148       | 283          | 275           | 242       | 239        | 215         | 216          | 400        | 399        | 321        | 319         | 318          | 308          | 153.72                 |
Table 11.
Penrose distance between the male cranial series of Somogyzil-Dögkút and other comparative series

| Male cranial series | Penrose distance (size and shape) $C^{22}$ |
|---------------------|------------------------------------------|
| **Carpathian Basin, ~2nd–5th centuries** | |
| Budapest, III. kerület, Kaszás dűlő, Raktárrét (FRÁTER 1993) | 0.453 |
| Esztergom-Bánomi dűlő (MERCZI 2008) | **0.089*** |
| Keszthely-Dobogó (VARGA et al. 2005) | **0.183*** |
| Pécs (Geesler Eta utca 8. and 14., István tér 12.) (ÉRy 1973) | 0.240 |
| Tác-Margittelep (ÉRy 2000) | **0.188*** |
| Tokod (ÉRy 1981) | 0.348 |
| Visegrád-Diós (MERCZI 2001) | 0.236 |
| **Carpathian Basin, 5th–8th centuries** | |
| Adorján-Ország (BARTUCZ–FARKAS 1957) | 0.449 |
| Alattyán-Talát (WENGER 1957) | 0.754 |
| Ártánd-Kaptány (ÉRy 1966) | 0.308 |
| Bačko Petrovo Selo (Péterréve) (ÉRy 1990) | 0.430 |
| Bácska-Topolya (FARKAS–MARCΣIK 1984) | 2.418 |
| Bágyszóvát-Gyürhegy (DESSÖ 1968) | 0.534 |
| Csákberény-Orondpuszta (ÉRy 2001a) | 0.443 |
| Előszállás-Bajcsibhegy (WENGER 1966) | 1.377 |
| Gynesdias (T. RENDES–TOTTI 2000) | 0.611 |
| Holiare (Gellér) (MALA cit. ROSING–SCHWIDETZKY 1977) | 0.373 |
| Jánoshida-Tőképapusza (WENGER 1953) | 1.021 |
| Kassa-Zseshe (HERZOG 1984) | 0.251 |
| Kaposvár 61-es út 26. lelőhely [Kaposvár, Road 61, Site 26] (based on the unpublished remeasurement data of ÉVINGER)²⁸ | **0.054*** |
| Kaposvár-Fészerlakpuszta (based on the unpublished remeasurement data of ÉVINGER)²⁹ | **0.148*** |
| Kecel I. (LIPTÁK 1954) | 0.715 |
| Kereki-Homokbánya (based on the unpublished remeasurement data of ÉVINGER)³⁰ | **0.100*** |
| Keszthely, Lipp féle feltárás [V. Lipp’s excavation] (VARGA et al. 2003) | **0.200*** |
| Keszthely-Város (based on the unpublished remeasurement data of ÉVINGER)³¹ | **0.121*** |
| Kékesd (WENGER 1968) | 0.700 |
| Kiskőrös-Város (LIPTÁK 1983) | 0.526 |
| Kiszombor (BARTUCZ 1984) | 0.680 |
| Langobards – merged series (Hungary and Austria, 5th–7th centuries) (cit. ROSING–SCHWIDETZKY 1977) | 0.242 |
| Lesencetomaj (BIRO 1999) | 0.355 |
| Loibersdorf (GREFEN–PETERS 1987) | 3.201 |
| Madaras-Tğlaveći (LIPTÁK–MARCΣIK 1976) | 1.289 |
| Moravica (Bácskossuthfalva) (CZEKUS 1985) | 1.046 |
| Nové Zámky (Ersekújvár) (VLADAROVA et al., cit. ROSING–SCHWIDETZKY 1977) | **0.229** |
| Pókaszepetk (based on the unpublished remeasurement data of ÉVINGER)³² | 0.604 |
| Sáflók-Küli (SUSKOVICS 1993) | 0.599 |
| Solymár (FERENCZ 1983) | 0.344 |

²⁸ The original metric data providing publication: ÉVINGER–BERNERT 2005.
²⁹ The original metric data providing publication: WENGER 1977.
³⁰ The original metric data providing publications: WENGER 1975, FÖTHI 1988.
³¹ The original metric data providing publication: WENGER 1975.
³² The original metric data providing publication: BOTTYÁN 1975.
³³ The original metric data providing publication: BERNERT 2003.
Roman period cemeteries of Esztergom-Bánomi dűlő and Tác-Margittelep. The other series fall outside of this threshold, and thus, connect to Somogyszil-Dögkúti dűlő more loosely.

With regard to the geographical distribution, the close analogies of the late Roman period population of Somogyszil-Dögkúti dűlő are all from Transdanubia, with a single exception (Tiszaderzs). With respect to the dating of these series, parallels can be found both in the Roman and in the Avar period. Viewed in a broader perspective, this indicates a continuity in the selected cranial measurements from the Roman into the Avar period on the territory of Transdanubia. On a theoretical level, this result may suggest a significant continuity of the local populations, or it may indicate that a large part of those groups that probably immigrated and settled down in the territory during the 5th–8th centuries possessed similar craniometric features as the locals had, or the combination of the two. However, with the present analysis, this question cannot be answered.

REFERENCES

ALEKSEYEV–DEBETS 1964 = V. P. ALEKSEYEV–G. F. DEBETS: Kranio metry. Methods of Anthropological Research. Akademiya Nauk, Moskva 1964.

BARTUCZ 1936 = L. BARTUCZ: A Kiszombori gepida temető koponyái (Die Gepiden-Schädel des Gräberfeldes von Kisombor). DolgSzeged 11 (1936) 178–204.

BARTUCZ–FARKAS 1957 = L. BARTUCZ–GY. FARKAS: Zwei Adorjaner Gräberfelder der Awarenzeit aus anthropologischem Gesichtspunkte Betrachtet. ActaBiolSzeged 3 (1957) 315–347.

BERNERT 2003 = Zs. BERNERT: Anthropological analysis of the Avar Period cemetery of Kereki-Homokbánya (Kereki Sand pit). AnnHN 95 (2003) 125–309.

BERNERT 2005 = Zs. BERNERT : Paleoantropológiai programcsomag [A software package for paleoanthropology]. Folia Anthropologica 3 (2005) 71–74.

BIRO 1999 = A. BIRO: Lesencetomaj-Piroskereszti Keszthely-kulturás temető embertani rekonstrukciója [Anthropological examination of the Keszthely culture site of Lesencetomaj-Piroskeresz]. – Diss., ELTE Embertani Tanszék, Budapest 1999. [Manuscript]

Table 11.
Penrose distance between the male cranial series of Somogyszil-Dögkúti and other comparative series (cont’d)

| Male cranial series | Penrose distance (size and shape) C² |
|---------------------|-------------------------------------|
| Sükösd-Ságod (KÖHHEGY–MARCŚKI 1971) | 0.542 |
| Széchenyi (TÓTH 1961) | 0.336 |
| Szeged-Fehértó (LIPTÁK–VÁMOS 1969) | 0.738 |
| Szeged-Kundonub (LIPTÁK–MARCŚKI, 1966) | 0.463 |
| Szeged-Makkoserdő (VÁMOS 1973) | 0.678 |
| Szekszárd-Palánk (LIPTÁK 1974) | 0.382 |
| Szentes-Kaján (WENGER 1955) | 0.925 |
| Tiszaderzs (based on the unpublished remeasurement data of ÉVINGIER)¹³ | 0.213* |
| Tiszavárkony (LIPTÁK 1955a) | 0.727 |
| Toponár 40-es Őrház (Toponár, watchman’s house No. 40) (based on the unpublished remeasurement data of ÉVINGIER)¹⁴ | 0.075*** |
| Úllő I. (LIPTÁK 1955b) | 0.625 |
| Úllő II. (LIPTÁK 1955b) | 0.710 |
| Vár-Kavicsbánya (FERENCZ 1981) | 0.334 |
| Virt (HANÁKOVÁ et al 1970) | 0.194*** |
| Zalakomár-Lesvári dűlő II. (ÉRY 2001b) | 0.076*** |
| Želovec (Zsály) (HANÁKOVÁ–STLÓUKA. 1974) | 0.154*** |
| Zvolňaxing (SZELVÁSSY 1980) | 0.256 |

³³ The original metric data providing publication: LEDEZELTER 1957.
³⁴ The original metric data providing publication: WENGER 1974.
Acta Archaeologica Academiae Scientiarum Hungaricae 70, 2019

BOTTYÁN 1975 = O. BOTTYÁN: Pókaszepetk kora-avarkori temetőjének antropológiai értékelése (The anthropologic research of the Pókaszepetk’s (SW-Transdanubia) cemetery from the early Avar Period). AnthrH 14 (1975) 5–56.

BURGER 1979 = A. SZ. BURGER: Das spätromische Gräberfeld von Somogyzsíl. FontArchHung. Akadémiai Kiadó, Budapest 1979.

CZEKUS 1985 = G. CZEKUS: A moravicaí (Stara Moravica) avar temetői csontvázmaradványainak embertani jellemzője [Anthropological Examination of the Human Skeletal Remains from the Avar Period Cemetery of Stara Moravica]. Doktori értekezés, Szabadka 1985. [Diss., manuscript]

DEZSŐ 1968 = GY. DEZSŐ: Bágyogszovát avarkor népességének embertani jellemzése (An anthropological analysis of the Avar-Period population of Bágyogszovát). Arrabona 10 (1968) 79–92.

DRAVECZKY 1965 = B. DRAVECZKY: Somogyzsíl-Dögkúti dűlő. RegFüz I/18 (1965) 33.

DRAVECZKY 1966 = B. DRAVECZKY: Somogyzsíl-Dögkúti dűlő. RegFüz I/19 (1966) 26.

DRAVECZKY 1967 = B. DRAVECZKY: Somogyzsíl. RegFüz I/20 (1967) 40–41.

ÉRY 1966 = K. ÉRY: The osteological data of the 9th century population of Ártánd. AnthrH 7 (1966) 85–114.

ÉRY 1973 = K. ÉRY: Anthropological data to the Late-Roman population at Pécs, Hungary. AnthrH 12 (1973) 63–114.

ÉRY 1981 = K. ÉRY: Anthropologische Analyse der Population von Tokod aus dem 5. Jahrhundert. In: Die spätromische Festung und das Gräberfeld von Tokod. Hrsg.: A. Mócsy. Akadémiai Kiadó, Budapest 1981, 223–263.

ÉRY 1990 = K. ÉRY: Anthropological studies on an early Avar period population at Bačko Petrovo Selo (Yugoslavia). 2.: Analysis of the data. AnthrH 21 (1990) 33–55.

ÉRY 1992 = K. ÉRY: Útmutató a csontvázaleletek feldolgozásához (Posztgradulális szakképesség jegyzete) [A Guide to the Study of Human Skeletal Remains for Postgraduate Anthropologists (For postgraduate anthropology course)]. ELTE Embertani Tanszék, Budapest 1992. [Manuscript.]

ÉRY 1998 = K. ÉRY: Length of Limb Bones and Stature in Ancient Populations in the Carpathian Basin. Humanbiológia Budapestiensis 26. Department of Biological Department, Eötvös Loránd Univ., Budapest 1998.

ÉRY 2000 = K. ÉRY: Anthropological studies on a Late Roman Period population at Tác-Margittelep. AnnHN 92 (2000) 347–453.

ÉRY 2001a = K. ÉRY: Further anthropological investigations on an early Avar period population at Csákherény-Orondpuszta. Alba Regia 30 (2001) 37–60.

ÉRY 2001b = K. ÉRY: Késő avar kori népesség Zalakomár határából (Late Avar Period skeletal population in the vicinity of Zalakomár). ZalaiMúz 10 (2001) 141–150.

ÉRY et al. 1963 = K. ÉRY – A. KRALOVÁNÉSZKY – J. NEMESKéri: Történeti népességek rekonstrukciójának reprezentációja (A representative reconstruction of historic populations). AnthrK 7 (1963) 41–90.

ÉVINGER–BERNERT 2005 = S. ÉVINGER–Zs. BERNERT: Anthropological investigation of the Avar Period cemetery of Kaposvár Road 61, Site No. 26 (Hungary). AnnHN 97 (2005) 261–319.

FARKAS–MARCISIK 1984 = GY. FARKAS–A. MARCISIK: Avar period anthropologic findings from Backa-Topolca site (Yugoslavia) (Publication of data). ActaBiolSzeged 30 (1984) 191–205.

FEREMBACH et al. 1979 = D. FEREMBACH–I. SCHWIDETZKY–M. STLOUKAL: Empfehlungen für die Alters- und Geschlechtsdiagnose am Skelett. Homo 30 (1979) 1–32.

FÉRENCE 1981 = M. FÉRENCE: Some data to the paleoanthropology of the Avar Period’s population in Hungary. AnthrH 17 (1981) 23–67.

FÉRENCE 1983 = M. FÉRENCE: The Avar-age cemetery at Solymár. AnthrH 18 (1983) 9–41.

FÖTHI 1988 = E. FÖTHI: The anthropological investigation of the Avar-age cemetery of Fészerlak. AnthrH 20 (1988) 31–53.

FRÄTER 1993 = E. FRÄTER: Embertani és szerológiai vizsgálatok Budapest III. Kaszás dűlő, Raktárrét római kori népességén (Anthropological and serological studies on a Roman Period Population at Kaszás dűlő, Raktárrét, Budapest). AnthrK 35 (1993) 39–60.

GRIFFEN–PETERS 1987 = S. GRIFFEN–PETERS: Anthropologische und zoologische Auswertung. In: Das awarische Gräberfeld von Leobersdorf, Nö. Hrsg.: F. Daim. Verlag der OAW, Wien 1987, 79–323.

HANÁKOVÁ–STLOUKAL 1974 = H. HANÁKOVÁ–M. STLOUKAL: Antropologický výzkum pohřebiště ze 7.–8. století v Želovcích (Anthropological Erforschung des Gräberfeldes aus dem 7.–8. Jahrhundert in Želovce). SIA 22/1 (1974) 129–188.

HANÁKOVÁ et al. 1976 = H. HANÁKOVÁ–M. STLOUKAL–L. VYHNANEC: Kostry ze slovansko-avarského pohřebiště ve Virtu [Human skeletal remains from the Slavic-Avar cemetery of Virt]. SbNM 32/2–4 (1976) 57–113.

HORVÁTH et al. 2018 = F. HORVÁTH–A. MÍHÁCSI-PÁLFII–S. ÉVINGER–Zs. BERNERT: Barbarisiert Römer – Romanisierte Barbaren? Interpretationsmöglichkeiten der fremden Komponente am Beispiel des Gräberfeldes von Somogyzsíl. Antaeus 35–36 (2018) 39–65.
Acta Archaeologica Academiae Scientiarum Hungaricae 70, 2019

THE ANTHROPOLOGICAL ASSESSMENT OF THE SOMOGYSZIL CEMETERY

165

Huszár–Schranz 1952 = Gy. Huszár–D. Schranz: A fogszuvasodás elterjedése a Dunántúlon, az újkőkortól az újkorig [The frequency of (dental) caries in Transdanubia from the Neolithic to the Modern Age]. Fogorvosi Szemle 45 (1952) 3–38.

Iscan et al. 1984 = M. Y. Iscan–S. Lotfi–R. Wright: Age estimation from the rib by phase analysis: White males. Journal of Forensic Sciences 29 (1984) 1094–1104.

Körhegyi–Marcsik 1971 = M. Körhegyi–A. Marcsik: The Avar-Age cemetery at Sükösd. AASzeged 14 (1971) 87–94.

Lamendin et al. 1992 = H. Lamendin–E. Baccino–J. F. Humbert–J. C. Tavernier–R. M. Nossintchouk–A. Zerbilli: A simple technique for age estimation in adult corpses: The two criteria dental method. Journal of Forensic Sciences 37/5 (1992) 1373–1379.

Lehzelter 1957 = V. Lehzelter: Beschreibung der Skelettreste von Tiszaderzs. CraHung 2 (1957) 3–59.

Lipták 1954 = P. Lipták: Les Averse des environs de Kecel. BiolKozl 2 (1954) 159–180.

Lipták 1955a = P. Lipták: A Duna–Tisza közé antropológiájának főbb kérdései a VII–VIII. században [Major Questions of Anthropology Concerning the 6th–8th Century Populations of the Danube–Tisza Interfluve]. Diss, Budapest 1955. [Manuscript].

Lipták 1955b = P. Lipták: Recherches anthropologiques sur les ossements avares des environs d’Ullő. ActaArchHung 6 (1955) 231–316.

Lipták 1974 = P. Lipták: Anthropological analysis of the Avar-Period population of Szekszárd–Palánkpusztta. ActaBiolSzeged 20 (1974) 199–211.

Lipták 1983 = P. Lipták: Avars and Ancient Hungarians. Akadémiai Kiadó, Budapest 1983.

Lipták–Marchik 1966 = P. Lipták–A. B. Marchik: Szeged-Kundomb avar kori népességének embertani vizsgálata (Die anthropologische Untersuchung des Gräberfeldes Szeged-Kundomb aus der Awarenperiode). AnthrK 10 (1966) 13–56.

Lipták–Marchik 1976 = P. Lipták–A. Marchik: A Madaras–Téglavető melletti avar temető csontvázmáradványainak ember- taní jellemzése (Anthropologische Charakteristik der Skelettreste aus dem awarischen Gräberfeld bei Madaras–Téglavető). Camunia 4 (1976) 115–140.

Lipták–Vamos 1969 = P. Lipták–K. VAMOS: A “Fehértó-A” megnevezésű avar kori temető csontvázmáragyáinak embertani vizsgálata (Anthropolische Untersuchung des Skelettmaterials des awarischen Gräberfeldes von „Fehértó-A”). AnthrK 13 (1969) 3–30.

Martin–Saller 1957 = R. Martin–K. Saller: Lehrbuch der Antropologie. I. Gustav Fischer Verlag, Stuttgart 1957.

Meindl–Lovejoy 1985 = R. S. Meindl–C. O. Lovejoy: Ectocranial suture closure: A revised method for the determination of skeletal age at death based on the lateral-anterior sutures. AJPA 68 (1985) 57–66.

Merczi 2001 = M. Merczi: Embertani adatok a Dunakanyar (Visegrád-Diós) késő római kori népességéhez (Anthropological data to the Late Roman Period population of the Danube Bend – Visegrád-Diós). AnthrK 42 (2001) 33–44.

Merczi 2008 = M. Merczi (2008): A Castellumtemető (Esztergom-Bánoni dülő) népességének embertani vizsgálata – Anthropologische Analyse der Bevölkerung des Kastellgräberfeldes in Esztergombánon Flur. In: H. M. Kelemen: Esztergombósa római temetői – Die Spätromischen Gräberfelder von Esztergombánon. Libelli archaeologici SerN 3. Magyar Nemzeti Múzeum, Budapest 2008, 403–478.

Nemeskéri et al. 1960 = J. Nemeskéri–L. Haránsány–Gy. ACSÁDIE: Methoden zur Diagnose des Lebensalters von Skelettfinden. Anthropologischer Anzeiger 24 (1960) 103–115.

Ottner 2003 = D. J. Ottner: Identification of Pathological Conditions in Human Skeletal Remains. Academic Press, Amsterdam, etc. 2003. – 2nd ed.

Penrose 1952 = L. S. Penrose: Distance, size and shape. Annals of Eugenics 18 (1952) 337–343.

Podani 1997 = J. Podani: Bevezetés a többváltozós biológiai adatfeltárás rejtelmeibe avagy „Mit kezdjünk azzal a rendetet adattal?” [An Introduction to the Multivariate Statistical Analyses used in Biological Research – “What can we do with those myriads of data?”]. Scientia Kiadó, Budapest 1997.

Rösing-Schwdetzky 1977 = F. W. Rösing–I. Schwdetzky: Vergleichend-statistische Untersuchungen zur Anthropologie des frühen Mittelalters (500–1000 n.Z.). Homo 28 (1977) 65–115.

Schinz et al. 1952 = H. Schinz–W. Baensch–E. Friedl–E. Uehlinger: Ossifikationstablelle. In: Lehrbuch der Röntgen-Diagnostik. 1–4. Hrsg.: H. Schinz. Thieme, Stuttgart 1952. – 5. Aufl.

Schour–Mässler 1941 = J. Schour–M. Mässler: The development of the human dentition. Journal of American Dental Association 28 (1941) 1153–1160.

Schwdetzky 1967 = I. Schwdetzky: Erfahrungen mit dem Penrose-Abstand. Homo 18/3 (1967) 140–144.

Shivold 1990 = T. Shivold: Estimation of stature from long bones utilizing the line of organic correlation. Human Evolution 5 (1990) 431–447.

Sukovics 1993 = Cs. Sukovics: Siófok–Kilíti avar kori népességének embertani vizsgálata (Anthropological evaluation of the population of Siófok–Kilíti living in the Avar Period). AnthrK 35 (1993) 61–81.

Stloukal–Hanáková 1978 = M. Stloukal–H. Hanáková: Die Länge der Längsknochen altslawischer Bevölkerungen – Unter besonderer Berücksichtigung von Washstumsfragen. Homo 29 (1978) 53–69.

Szilvássy 1980 = J. Szilvássy: Die Skelette aus dem awarischen Gräberfeld von Zwölfaxing in Niederösterreich. Anthropologische Forschungen 3. Wien 1980.

Acta Archaeologica Academiae Scientiarum Hungaricae 70, 2019
RENDES–TÖTH 2000 = K. T. RENDES–G. TÖTH: Gyenesdiás avar kori népességének kraniometriai értékelése (Cranio-
metric evaluation of the Avar Period population of Gyenesdiás). – In: A népvándorlásforsk kutatóinak kli-
enci di konferenciája : Eger, 1998. szeptember 18–20. Eds: T. P. Petercsák, A. Várádi. Heves megyei
régészeti közlemények 2. Eger 2000, 467–472.

THOMA 1978 = A. THOMA: Distance et forma entre groupes. Bulletins et Mémoires de la Société d’Anthropologie
de Paris 5/13 (1978) 15–22.

THURZÓ 1984 = M. THURZÓ: Metrische Merkmale der menschlichen Skelettreste aus dem slawisch-awarischen
Gräberfeld (?–9. Jh. u.Z.) in Košice-Sebastovce (bez. Košice–Stadt), Ostslowakei. AInA 3 (1984)
1–262.

TODD 1920 = T. W. TODD: Age changes in the pubis bone. I.: The male white pubis. American Journal of Physical
Anthropology 3 (1920) 285–334.

TÖTH 1961 = T. TÖTH: The cemetery of Szebény I (8th century) from the Avar epoch. AnnHN 53 (1961) 571–613.

ÜBELAKER 1989 = D. H. ÜBELAKER: Human Skeletal Remains, Excavation, Analysis, Interpretation. Taraxacum,
Washington 1989.

VARGA et al. 2003 = P. VARGA–ZS. BERNERT–G. GYENIS–E. FÖTHI: Multivariate statistics on Roman and Migration
Period populations of the Carpathian Basin. Anthropologie 16/1–2 (2003) 135–144.

VARGA et al. 2005 = P. VARGA–ZS. BERNERT–E. FÖTHI: Antropológiai adatok a Keszthely–Dobogó római kori temetőhöz
[Some anthropological data to the research of the Roman Period cemetery of Keszthely–Dobogó].
In: IV. Kárpát–medencei Biológiai Szimpozium, 2005. október 17–19. Előadáskötet. Ed.: Z. Korsós.
Budapest 2005, 193–196.

VÁMOS 1973 = K. VÁMOS: „Szeged-Makkoserdő” avar kori népességének embertani vizsgálata (Die anthropologi-
ische Untersuchung der awarenzeitlichen Bevölkerung von „Szeged-Makkoserdő”). AnthK 17 (1973)
29–39.

WEDEL–GALLOWAY 2014 = V. L. WEDEL–A. GALLOWAY (eds): Broken Bones. Anthropological Analysis of Blunt Force Trauma.
Thomas Books, Springfield, IL 2014. – 2nd ed.

WENGER 1953 = S. WENGER: L’anthropologie du cimetière de Jánoshida–Tótképapusza. AnnHN 4 (1953) 231–244.

WENGER 1955 = S. WENGER: Szentes-Kaján népvándorlás kori népességének embertani tipusai (VII.–VIII. század)
[Types anthropologiques de Szentes-Kaján provenant du VIIe–VIIIe siècles]. AnnHN 6 (1955)
391–410.

WENGER 1957 = S. WENGER: Données ostéométriques sur le matériel anthropologique du cimetière d’Alattyán-
Tulat, provenant de l’époque avar. CraHung 2 (1957) 1–55.

WENGER 1966 = S. WENGER: Anthropologie de la population d’Előszállás–Bajcsihégy provenant des temps avar.
AnthrH 7 (1966) 115–206.

WENGER 1968 = S. WENGER: Data to the anthropology of the Avar Period population of the Transdanubia (The anth-
thropology of the Avar Period cemetery at Kékesd). AnthrH 8 (1968): 59–96.

WENGER 1974 = S. WENGER: Déldunántúl avarkori népességének embertani problémái (On the anthropological prob-
lems of the Avar Age populations in the Southern Transdanubia). AnthrH 13 (1974) 5–86.

WENGER 1975 = S. WENGER: Paleoanthropology of population deriving from the Avar Period at Fészerlak–puszta.
AnthrH 14 (1975) 57–110.

WENGER 1977 = S. WENGER: Analyses anthropologiques de nouvelles découvertes de Keszthely (Transdanubie)
provenant de l’époque avar. AnthrH 15 (1977) 125–190.

Open Access. This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0
International License (https://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution,
and reproduction in any medium, provided the original author and source are credited, a link to the CC License is
provided, and changes – if any – are indicated. (SID_1)