

The human population of Sardinia

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The population of Sardinia can be safely dated back only to the Neolithic. Evidence of earlier Palaeolithic and Mesolithic population is at present slight and uncertain and in any case skeletal remains are lacking. Thus, we can only speak of Sardinian protohistory, although it is still not clearly defined chronologically. The Sardinian Neolithic goes back to approximately 6,000 B.C. (ATZENI, 1980-81) and in any case before 2,000 B.C. (LILLIU, 1980), although older datings have been made on some obsidian artifacts (ALCIATI, 1978).

This research aims first at defining more or less measurable skeletal material preserved at the Institute for Anthropological Sciences of the University of Cagliari and at the Sanna Museum in Sassari, dated from the Neolithic to the Nuragic (around 509 B.C., with the conquest of Sardinia by the Carthaginians, it may be said that protohistory passes to history). Second, this paper describes existing protohistorical skeletal remains, limited to some cranial characteristics and stature, determined on the basis of single long bones.

The Sardinian skeletal material has been divided into five chronological groups, according to the datings of Atzeni, Lilliu and Germanà:

- Ancient and Middle Neolithic;
- Recent Neolithic;
- Copper Age;
- Ancient, Middle and Recent Bronze Age;
- Nuragic Age.

For each group, the data reported here refer to all or some measurements of fully-grown adult crania, preserved at Cagliari. The following cranio-facial indexes were calculated: horizontal cranial I., height-breadth I., height-length I., cranial capacity according to Manouvrier, upper facial, right and left orbital, mid-orbital, maxillo-alveolar, palatine, gnathic, nasal, and fronto-parietal, and the percentages of skull forms observable from the norma verticalis. Lastly, data on stature according to Manouvrier and deduced from the length of single long bones are also processed, in several cases by direct measurement. The results obtained for each of the series according to sex are shown in the tables which, as well as means and standard deviations, also show the summation of single values and their sample numbers.

These data show that the Bronze Age population stands out from the others, being mesocranial instead of dolichocranial, leptorrhine instead of mesorrhine in males, and eurhienic and brachystaphyline instead of meso-leptenic and mesostaphyline in females.

Examination of the Sardinian protohistorical skulls also reveals their state of preservation. Some are not as well preserved as those, for example, of Su Cungiareddu de Serafini and Serra Crabiles (Copper Age) or Monte D'Accoddi (Bronze Age).

As regards stature, the sexes show differences: in males stature increased from the Neolithic to the Eneolithic, decreased in the Bronze Age, and increased again in the Nuragic age, while in females, it increased from the Neolithic to the Bronze Age and remained unchanged in the Nuragic. It was also observed that average male statures in the Nuragic have only now been reached and exceeded by the Sardinian population, while at the end of the last century they were still lower.

Further studies, within the same or similar national research, will aim at reporting data on post-cranial skeletons and then at systematically applying a further method of absolute dating. The Cagliari research group, in collaboration with the Institute of Physics of the University of Turin, has begun absolute dating of Sardinian protohistorical sites, using ceramic thermoluminescence techniques. This research is still in its initial stages, and data cannot yet be reported.

Table 1 - Means and standard deviations of some skull characteristics and stature in the five male series examined.

Indexes	Middle Neolithic	Recent Neolithic	Eneolithic	Bronze	Nuragic
Horizontal cranial index	—	71,93 ± 5,49 (n = 27)	74,36 ± 4,92 (n = 40)	75,16 ± 5,58 (n = 25)	72,78 ± 4,00 (n = 37)
Upper facial index	—	54,17 ± 2,84 (n = 9)	51,65 ± 2,13 (n = 13)	55,14 ± 2,77 (n = 12)	55,35 ± 2,83 (n = 7)
Middle orbital index	—	74,21 ± 4,70 (n = 12)	76,82 ± 6,20 (n = 17)	79,55 ± 2,60 (n = 6)	77,15 ± 5,41 (n = 14)
Nasal index	—	49,73 ± 7,66 (n = 18)	47,46 ± 3,78 (n = 19)	44,79 ± 3,98 (n = 12)	48,92 ± 7,20 (n = 23)
Skull capacity (Manouvrier)	—	1477,86 ± 138,31 (n = 22)	1528,82 ± 109,83 (n = 28)	1546,33 ± 125,60 (n = 9)	1481,64 ± 146,11 (n = 25)
Stature	161,7 (n = 9)	162,8 (n = 71)	165,2 (n = 12)	162,2 (n = 14)	165,2 (n = 70)

Table 2 - Means and standard deviations of some skull characteristics and stature in the five female series examined.

Indexes	Middle Neolithic	Recent Neolithic	Eneolithic	Bronze	Nuragic
Horizontal cranial index	—	73,59 ± 3,71 (n = 22)	75,62 ± 3,71 (n = 34)	75,62 ± 3,34 (n = 20)	77,91 ± 4,81 (n = 21)
Upper facial index	51,68 (n = 1)	57,71 ± 3,51 (n = 7)	52,83 ± 2,89 (n = 11)	48,89 ± 2,31 (n = 3)	54,52 ± 1,78 (n = 4)
Middle orbital index	—	78,50 ± 4,08 (n = 11)	78,10 ± 4,73 (n = 18)	78,58 ± 4,57 (n = 6)	81,12 ± 5,01 (n = 9)
Nasal index	45,30 (n = 1)	51,98 ± 7,54 (n = 15)	48,89 ± 3,59 (n = 18)	51,79 ± 2,45 (n = 7)	48,76 ± 4,08 (n = 14)
Skull capacity (Manouvrier)	—	1388,75 ± 114,00 (n = 8)	1456,00 ± 106,75 (n = 22)	1463,17 ± 48,56 (n = 6)	1354,56 ± 142,00 (n = 16)
Stature	148,1 (n = 6)	151,7 (n = 70)	152,2 (n = 8)	153,5 (n = 11)	153,5 (n = 46)

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