

Introduction

Several open-access craniometric databases are available in the Internet. The best known is that by W.W. Howells [1973, 1989, and 1995] (<https://web.utk.edu/~auerbach/HOWL.htm>), which is widely used by craniologists. It spans vast territories of Africa, Western Europe, Southern Asia, Oceania and aboriginal America, whereas European Russia and adjacent territories are underrepresented.

Another well known database is that by P. Brown (<http://peterbrown-palaeoanthropology.net/resource.html>). Apart of cranial measurements, it includes dental, osteometrical, and somatological characteristics of recent Asian and Australian populations as well as data on early humans and chimpanzees. Measurements of several hundred South American crania are presented by A. Ross (<https://sites.google.com/a/ncsu.edu/craniometrics-database/database>).

Several free-access databases on other systems of morphological traits are also available online. They include dental metrics compiled by J.-L. Voisin, S. Condemi, M.H. Wolpoff, and D.W. Frayer (<http://anthropologicaldata.free.fr/webteeth/tablesandbibliography.html>); osteometric data presented by B. Auerbach (<https://web.utk.edu/~auerbach/GOLD.htm>); and cranial nonmetric data by N. Ossenberg (<http://library.queensu.ca/data/cntd>).

Also, a number of online resources relating to high resolution 3D cranial and postcranial models are available online. Access to these data offers opportunities for a wide range of morphological studies comparable to those using original materials. However, the access to these databases is limited.

Here we present a database that includes measurement made by several Russian physical anthropologists, and that will hopefully be useful not only for specialists in population history but also for those who focus on skeletal biology. It will likewise be helpful for those who apply statistical methods for studying admixture. We hope that this publication will be the first in a series relating to various systems of traits.

This database includes measurements of 3139 crania (2209 male and 930 female) representing 17 ethnic groups. The samples, dating to 17th–20th centuries, mostly to 19th century, were collected in European Russia, Finland, Estonia, Latvia and Belorussia. Locations of the largest series are shown on the map (fig. 1). Both modern and obsolete names of sites and regions are used. Most samples from the Russian Federation are owned by Peter the Great Museum of Anthropology and Ethnography (Kunstkamera), Saint-Petersburg. Several collections are housed at other institutions

in Russia, Ukraine and Finland. These include Udmurt and Kazan State Universities, Kirov Military Medical Academy, Odessa National Medical University, Institute of History, Language and Literature of the Ufa Scientific Center of RAS, and Helsinki University. Several series have been reburied.

Measurements follow standard techniques described by V.P. Alexeyev and G.F. Debetz [1964]. Most cranial landmarks and measurements match those described by R. Martin [Martin, Saller, 1957]. Landmarks used for calculating nasomalar and zygomalar angles approximately match those used by W.W. Howells for chords and subtense measurements. The frontomolare anterior landmark used by W.W. Howells does not coincide with frontomolare orbitale used by R. Martin and by Russian craniometrists (Howells regarded NFA as nearly corresponding to M77). Another problematic dimension is upper facial height (M48), rather vaguely defined in Martin's textbook. While Howells used the anterior prosthion as a lower landmark, the Russian practice is to use the lower prosthion (=alveolare), usually situated 2-3 mm below.

Whenever postcrania were available, sex was determined on the basis of pelvic morphology, otherwise cranial criteria were used [Alexeyev, Debetz, 1964]. Age was estimated on the basis of suture closure and dental attrition [White, Folkens, 2005]. In rare cases, sex and age were ascertained from documental evidence.

The following age cohorts were used: juvenis (juv.) – individuals with erupted second permanent molars and without speno-occipital synostosis; adultus (ad.) – 20-35 years, maturus (mat.) – 35-55; senilis (sen.) – above 55. The codes «ad.-mat.», «mat.-sen.» were used in cases of transitional age and correspond approximately to 30-40 and 50-60 years. Cases where locating landmarks is difficult because of poor preservation are marked red. Measurements of orbital width and canine fossa depth are marked blue if they were taken on the right side because of poor preservation of the left side.