



# Bioarchaeology Workshops

Human skeletal remains: from Excavation to the Lab

WORKSHOP 1

LECTURE

Course instructor: Dr Annamaria Diana

IAFS June-July 2022

# Introduction to Bioarchaeology

## 1. A few introductory and historical notes

**Bioarchaeology** is a complex discipline investigating the contextual analysis of human skeletal remains recovered from archaeological excavations. Its development is closely related to the history of beliefs about the death and the history of the study of human remains. The use of the term 'Bioarchaeology' in relation to the study of human skeletal remains from the archaeological context is recent and changes from country to country, or even from Department to Department.

Humans have shown curiosity for the dead very early in evolutionary history through mortuary practices and rituals.

- The first recorded dissections of human bodies were conducted by **Herophilus of Chalcedon** and **Erasistratus of Cos** in the first half of the third century. In the Greco-Roman, Arabic, and early Judeo-Christian world, dissection as a practice was frowned upon because it violated beliefs about the afterlife.
- From the beginning, skeletal studies were focused on both the exploration of human physiology and anatomy and on the study of human variation, adaptation, and evolution. Early anatomical work on human variation had its roots in the Aristotelian belief that Nature was organized hierarchically as a continuous chain.
- Between the fifteenth and sixteenth century, authorities in some countries allowed surgeons to take the bodies of hanged criminals to use for dissection.
- While the demand of medical schools and practitioners for bodies grew with time, the public were opposed, sometimes with violent displays, to the use of cadavers for anatomical research. In the 1820s, the infamous **William Burke** and **William Hare** in Edinburgh committed a series of murders with the aim of supplying study subjects to anatomist Robert Knox.
- Between the eighteenth and nineteenth century, Christian beliefs and Colonialism were instrumental in influencing theories about human 'species', 'sub-species' and 'races'.
- **Johann Friedrich Blumenbach** (1752–1840) suggested that human variation derived from a primordial type that originated from the Caucasus Mountains.
- In the United States, **Samuel George Morton** (1799–1851), a physician from Philadelphia, introduced studies on craniometry and the classification of people by typology.
- **Franz Boas** (1858-1942) strongly opposed simplistic, hereditarian interpretations of human variations.

## 2. Terminology and definitions

**Human Osteology/Human Skeletal Biology/Physical Anthropology** study human skeletal remains through the detailed analysis of the record of anthropometric, morphological, and pathological data from individual skeletons and the group/population they belong to.

**Forensic Osteology/Forensic Anthropology** is a sub-discipline of physical anthropology that applies the techniques of osteology and skeletal identification to problems of legal and public concern.

**Forensic Archaeology** is the application of archaeological theories and practices to a forensic context.

**Taphonomy** is the study of the processes that lead to the decomposition of the body after death.

**Funerary (or mortuary, burial) practices** are aimed at destroying or preserving the body of a deceased.

**Inhumation** is the internment of a body in a grave.

A **primary burial** is the result of a 'simple funeral, single ceremony' where the body is laid in its natural anatomical integrity. In a **secondary burial** human remains are manipulated in two stages.

**Cremation** is the practice of deliberately reducing a body to ashes by burning it.

**Mummification** is a process that allows the preservation of a body's soft tissues in a dehydrated state.

## References/General bibliography

Aufderheide, A.C. and Rodríguez-Martín, C. 1998. *The Cambridge Encyclopaedia of Human Palaeopathology*. Cambridge University Press.

Bass, W.M. 2005. *Human Osteology: A Laboratory and Field Manual*. Fifth Edition. Special Publication No.2 of the Missouri Archaeological Society. Columbia, Missouri.

Brothwell, D.R. 1981. *Digging up Bones*. Third edition. British Museum (Natural History). Oxford University Press. Oxford.

Brickley, M. & McKinley, J. 2004. Guidelines to the Standards for Recording Human Remains. BABA0 & IFA. (Available electronically on: <http://www.archaeologists.net/modules/icontent/inPages/docs/pubs/humanremains.pdf> ).

Buikstra, J.E. & Ubelaker, D.H. 1994. *Standards for Data Collection from Human Skeletal Remains: Proceedings of a Seminar at the Museum of Natural History, Organized by Jonathon Haas*. Arkansas Archaeological Survey Research Series No. 44. Fayetteville, Arkansas.

Chamberlain, A. 2006. *Demography in Archaeology*. Cambridge Manuals in Archaeology.

Cox, M. & Mays, S. (eds.) 2000. *Human osteology in archaeology and forensic science*. Greenwich Medical Media.

Duday, H. 2009. *The Archaeology of the Dead. Lectures in Archaeoethanatology*. Oxford and Oakville: Oxbow Books.

Hillson, S. 2005. *Teeth*. Cambridge University Press.

- Hoppa, R.D. and Vaupel, J.W. (eds) 2002. *Paleodemography: Age Distributions from Skeletal Samples*, Cambridge: Cambridge University Press
- Katzenberg, M.A. & Saunders, S.R. (Eds.) 2008. *Biological Anthropology of the Human Skeleton*. Second Edition. Wiley-Liss, Inc: New York.
- Larsen, C.S. 1997. *Bioarchaeology: Interpreting Behaviour from the Human Skeleton*. Cambridge Studies in Biological Anthropology 21. Cambridge University Press.
- Larsen, C.S. 2000. *Skeletons in Our Closet: Revealing Our Past Through Bioarchaeology*. Princeton University Press.
- Lewis, M. 2007. The bioarchaeology of children: Perspectives from biological and forensic anthropology, Cambridge studies in biological and evolutionary anthropology, 50. Cambridge; New York: Cambridge University Press.
- Mays, S. 2010. *The Archaeology of Human Bones*, London; New York: Routledge.
- McKinley, J.I. & Roberts, C. 1993. *Excavation and Post-excavation Treatment of Cremated and Inhumed Remains*. Institute of Field Archaeologists Technical Paper Number 13.
- Moore, K.L. & Agur, A.M.R. 2002. *Essential Clinical Anatomy*, Second edition. Lippincot Williams and Wilkins, Baltimore.
- Ortner, D.J. 2003. *Identification of pathological conditions in human skeletal remains*. 2nd ed. San Diego: Academic Press.
- Reitz, E.J. and Wing, E.S. 2008. *Zooarchaeology. Second Edition*. Cambridge University Press.
- Roberts, C.A. 2009. *Human Remains in Archaeology: A Handbook (CBA Practical Handbook)*. Council for British Archaeology.
- Roberts, C. and Manchester, K. 2010. *The Archaeology of Disease*. Stroud: The History Press.
- Schaefer, M., Black, S., Scheuer, L. 2009. *Juvenile Osteology: a Laboratory and Field Manual*. Elsevier Academic Press.
- Schwartz, J.H. 2007. *Skeleton Keys: An Introduction to Human Skeletal Morphology, Development and Analysis*. Second Edition. Oxford University Press.
- Scott, G.R. & Turner, C.G. 1997. *The Anthropology of Modern Human Teeth: dental morphology and its variation in recent human populations*. Cambridge Studies in Biological Anthropology. Cambridge University Press.
- Stone, R.J. & Stone, J.A. 2011. *Atlas of skeletal muscles – 7th edn*. McGraw-Hill.
- Van Beek, G.C. 1983. *Dental morphology: an illustrated guide*. Wright.
- White, Tim D. & Folkens, P.A. 2000. *Human Osteology*. 2<sup>nd</sup> edition. Academic Press.
- White, Tim D. & Folkens, P.A. 2005. *The Human Bone Manual*. Academic Press.