



MEDIEVAL “CRISIS” POPULATIONS ADULT OSTEOLOGY WORKSHOP

TRANSYLVANIA, ROMANIA
June 4 - July 1, 2017

As the 15th century ends, the battle for Europe begins! The heroes (and their legend) that held back the Ottoman East have died: Vlad Dracula the Impaler in 1476; Holy Stephan the Great in 1504; Skanderberg in 1468. The fall of Constantinople in 1453 and the European defeat at the Battle of Mohacs in 1526 opened the way for the Ottoman expansion into Europe. By 1529, Suleiman the Magnificent has conquered southeastern Europe, and the Ottoman troops were battering the walls of Vienna.

The aim of this project is to evaluate how major global political events physically impact local populations. For that purpose, we will analyze the human remains from four different cemeteries from central Transylvania, around the city of Odorheiu Secuiesc, dating from the 16-17th centuries, in relative geographic proximity to one another but from different settled environments.

The collection we will study is housed at the “Haaz Rezso” Museum in Odorheiu Secuiesc, in the heart of Transylvania. This summer’s workshop is designed to conduct an exhaustive osteological survey as well as to select bones to be brought back for stable isotope analysis.

Participants will receive intensive daily lectures on theory and method in osteology before conducting direct research on the bones. The aim of the workshop is for the participants to acquire the necessary skills to conduct a full osteological research project, culminating in podium presentations in the *2017 Fifth International Student Osteology and Bioarchaeology Colloquium* in Odorheiu Secuiesc.



Duration: 4 weeks (mandatory)

Team size: 15-20 (introductory/intermediary level)

Costs: US\$2395 for 4 weeks. It includes:

- museum registration, taxes, fees and most lab gear
- security clearance and access to the study collection
- housing in a hotel near the “Haaz Rezso” Museum
- breakfast and dinner, Monday to Friday
- lectures and labs

TO APPLY: www.archaeotek-archaeology.org

CONTACT US: archaeology@archaeotek.org

MEDIEVAL CRISIS POPULATIONS ADULT OSTEOLOGY RESEARCH WORKSHOP

TRANSYLVANIA, ROMANIA
JUNE 4 – JULY 1, 2017

MORE INFORMATION AND APPLICATION PROCEDURE:

www.archaeotek-archaeology.org
archaeology@archaeotek.org



Historical Background

As the 15th century ends, the southeastern European frontier collapses in front of the Ottoman Turks. The heroes (and their legend) that held back the Eastern invaders have died: Vlad Dracula the Impaler, prince of Wallachia in 1476; Holy Stephan the Great, prince of Moldavia in 1504; Skanderberg (Iskender Bey), lord of Albania in 1468. The fall of Constantinople in 1453 and the united European defeat at the great Battle of Mohacs in 1526 opened the way for the Ottoman expansion into Europe. By 1529, Suleiman the Magnificent has conquered southeastern Europe, the Kingdom of Hungary collapsed and the Ottoman troops were battering the walls of Vienna. The Ottoman expansions was finally checked in 1683, when the arrival of King Jan III Sobieski of Poland's heavy cavalry charge under the walls of besieged Vienna broke the Ottoman army and won a crucial victory.

Transylvania was never invaded by the Turkish armies. The Saxon fortresses and the Szekely armies held the Ottomans armies at bay successfully. With the collapse of the Kingdom of Hungary in 1526, its Transylvanian territories became a political battlefield between European and the Ottoman backed princes until the Principality of Transylvania was born as an autonomous political entity in 1570. In 1600, Michael the Brave, with the support of the Transylvanian Szekely armies, beat the Ottoman and their supporters and realized the first union of the three Romania principalities into one kingdom.

Archaeological Contexts

Bögöz (RO: Mugeni) is among the largest and oldest villages along the Küküllő (RO: Târnava Mare). It sits in the wide Bögöz Basin, found at the middle of the river's central section, which due to its features is suitable for agriculture, and the surrounding hills for animal husbandry and orchards. It sits at a mere 11 kilometers from Udvarhely (RO: Odorheiu Secuiesc). Its first written account dates back to 1333. Its Catholic inhabitants convert to the Reformed faith following the Reformation.

Archaeological excavations around the church in 2009 and later in 2012 have shown that the monument itself must have been erected some time during the 12th century and was significantly modified in the late 15th and early 16th century. The cemetery (223 excavated graves) surrounding the church was used until the end of the 19th century, first by Catholics and then, from the 16th century by members of the Reformed Church.

Kányád (RO: Ulies) is one of the villages found in the small valleys between the hills stretching along the Küküllő River. The village was established in a small depression. The first written reference to Kányád dates back to 1333, but the archaeological excavations conducted at its church suggest that the first church was built some time during the 12th century. Its inhabitants deal mostly with animal husbandry (cattle and sheep) and agriculture.

The settlement's first church, built during the course of the 12th century, suffered numerous modifications and was finally demolished in 1791. The archaeological excavations of 2006-2007 yielded 61 graves.

Máréfalva (RO: Satu Mare) lies in the valley of Fenyéd Creek, at the foot of the Cekend Plateau, being a typical mountain foot village. Its name is first mentioned in 1566, but according to the evidence uncovered by archaeological excavations conducted at its church, the first church was built during the Romanesque period (13th century). Its inhabitants constantly remained with the Catholic faith. The village's surrounding area is highly unfavorable for agriculture and so the inhabitant's main activities are animal husbandry and logging. The archaeological excavations were conducted in 2007-2008, inside the medieval church's sanctuary area, and yielded 32 graves.



Telekfalva (RO: Teleac): The first written source dates its foundation back to 1566. However, according to archaeological evidence, it seemed to have occurred much earlier, probably in the 13th century. The village is crossed by two creeks, Nyír and Bedő, which flow from the area around Nyír and respectively Telek and Szeged. It sits in a small closed valley. Today, its inhabitants live off livestock (cattle and sheep), agriculture (corn and cereals) and fruit cultivation (plums and apples), and following the Reformation, they chose to switch from Catholicism to the Reformed faith.

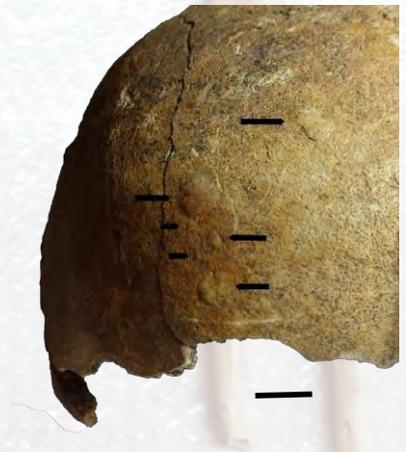
In Telekfalva (RO: Teleac) we do not know of any medieval church. Its Reformed church was built during the period of the Principality, sometime after 1613. The entire interior of the church revealed 70 graves containing the remains of one adult and 69 children. One of the skeletons, a woman, had her hand severed at the wrist. The excavated segment of the cemetery was used only for a few decades, as shown by the coins found in these graves.

Patakfalva (RO: Valeni): The lost church of Patakfalva, our current excavation site, is the sister church of the one in Telekfalva. Our excavation has demonstrated that it is significantly older, built around the 10-11th c. AD, on top of a migration period tumulus. Our ongoing excavation has yielded the well preserved skeletal remains of over 200 individuals, ranging from pre-natal to advanced elderly. It also served the Telekfalva community until they built their own church around 16-17th c.

Workshop Description

The aim of this project is to evaluate how major political events physically impact local populations. For that purpose, we will analyze the human remains from the four different cemeteries from central Transylvania (Romania), dating from the 16-17th centuries. The four communities that were chosen for this purpose are in relative geographic proximity to one another but vary in their settled environment from low valley flood plain to hill top occupation.

The research itself has three distinct stages. The first one will address the four communities individually in order to assess the internal specific characteristics of each population. The second stage will evaluate the degree to which these discrete populations are integrated into a larger Transylvanian-Szekely population. And finally, we will evaluate how the political changes that impacted Transylvania during the 16-17th centuries have physically affected these populations, and to what degree and why there were differential changes within and between the four discrete populations during those events.



The osteology workshop will address these research questions and train our participants to conduct extensive osteological surveys. The goal is to achieve a better understanding of these populations and the changes that affected them by examining who they were, how they lived, and their adaptive strategies to outside stresses.

It is also designed to train our participants to conduct proper research under field conditions. This entails the intensive acquisition of the skills and knowledge required to fulfill the expectations of a genuine research project. As students become more familiar with the questions that the osteological collection allows to address, they will choose a research topic they will address in small groups. The last day of the workshop, each group will present their results in a formal way at the **Third International Student Colloquium on Osteology and Bioarchaeology**, in Odorheiu Secuiesc.

The collection that we will study is housed at the “Haaz Rezso” Museum in Odorheiu Secuiesc, Harghita County, in the heart of Transylvania. This summer’s workshop is designed to implement an exhaustive osteological survey as well as to select bones to be brought back for stable isotope analysis. Participants will receive an intensive 2h lecture daily on theory and method in osteology prior to working on the bones. They will be taught how to clean and reconstruct bones, determine age, sex, stature, identify pathologies, trauma and take standard measurements. They will be introduced as well to various osteological conservation problems aiming at properly evaluate bone quality for further analysis. This survey of bioarchaeological theory and method, coupled with hands on data gathering, is aimed at providing the students the analytical tools needed for the interpretation of the data they collect.

Although a basic knowledge of human anatomy and morphology is preferred, this laboratory workshop session is intended for both inexperienced and more advanced students. The workshop comprises daily intensive lectures on human anatomy (including determination of sex, age, stature and ancestry), biomechanics pathology, group discussions, laboratory work, bone restoration and analysis, leading to individual and group research projects and presentations. Daily mandatory readings will accompany the specifics of each lab day.



Project Objectives

Paleodemography

1. To create a comparative base line for late medieval populations in order to evaluate changes through time and adaptive responses to socio-political and economic historical events.
2. To establish the skeletal biology of individuals and populations from medieval Transylvania:

Estimation of:

- a. Sex
- b. Age
- c. Stature
- d. Ancestry

Identification of discrete and idiosyncratic traits:

- a. Dental nonmetric variation
- b. Cranial nonmetric variation
- c. Postcranial nonmetric variation

3. To establish the skeletal health of individuals and populations from medieval Transylvania:

Paleopathology:

- a. Congenital disease
- b. Dental disease
- c. Joint disease bone
- d. Infectious disease
- e. Metabolic and endocrine disease
- f. Neoplastic disease
- g. Trauma

Paleonutrition:

- a. Isotopic reconstruction of diet
- b. Malnutrition related disease
- c. Nutritional deficiency related alterations

Taphonomy

4. Identification of post-mortem alterations on bones
 - a. Identification of funeral practices: post-mortem treatment of bodies
 - b. Identification of burial practices: primary, secondary and tertiary burials
 - c. Identification of animal and/or vegetal alterations
5. Evaluation of conservation state and bone quality for analysis

MZ

Student Involvement

One of our goals in teaching an intensive research workshop is to provide our participants with the opportunity to formally submit an original and valid contribution to science. At the end of each workshop, all students and participants will present their research results at the **2017 Fifth International Student Colloquium on Osteology and Bioarchaeology** hosted by the Haáz Rezső Múzeum. Our participants are further encouraged to take their research to the next level and bring their contributions to the podium at the **American Association of Physical Anthropologists, American Association of Forensic Sciences, Society for American Archaeology, Canadian Association of Physical Anthropologists** and **Paleoanthropology Society** meetings and conferences, getting well deserved recognition as co-authors of the various papers. Check out our participants' past contributions on: <http://www.archaeotek-archaeology.org/scientific-contributions>



Research Team

1. Project Director: Dr. Jonathan Bethard (University of Southern Florida)
2. Project Coordinator: Prof. Andre Gonciar (Director, Archaeological Techniques and Research Center, ArchaeoTek – Canada)
3. Research team: Dr. Zsolt Nyaradi (Expert Archaeologist – Haaz Rezso Museum of History and Ethnography, Odorheiu Secuiesc, Central Transylvania, Romania)

Bibliography

- Bass, W.M. 1995. *Human Osteology: A Laboratory and Field Manual*. 4th Ed. Missouri Archaeological Society Inc.
- Byers, N. 1997. The relationship between stress markers and adult skeletal size. *American Journal of Physical Anthropology*, 24(Suppl.): 85-86.
- Demjén, A., A. Sófalvi, & Zs. Nyáradi. 2008. Cercetarea bisericilor medievale în scaunul Odorhei (jud. Harghita). *Arhaologia Medievală* 7:79-97.
- Houghton, P., B.F. Leach, D.G. Sutton. 1975. The estimation of stature of prehistoric Polynesians in New Zealand. *Journal of Polynesian Society*, 84:325-336.
- Hrdlička, A. 1939. *Practical Anthropometry*. AMS Press, New York, 231pp.
- Mays, S. 1998. *The Archaeology of Human Bones*. Routledge, New York.
- White, T.D. 2000. *Human Osteology*. Academic Press, New York.
- White, T.D., & P.A. Folkens. 2005. *The Human Bone Manual*. Elsevier Academic Press: San Diego.

