THE LEGISLATIVE AND ETHICAL CHALLENGES SURROUNDING THE DNA ANALYSES OF ARCHAEOLOGICAL HUMAN REMAINS IN TURKEY

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TURKEY: A RICH REPOSITORY OF ANCIENT-DNA

Map of Turkey, (created on ArcGIS Pro by Elifgül Doğan)

For millennia, Anatolia has been a bridge for migrating human populations and has witnessed the domestication of different animals and plants whose genomes are the source of many research projects.

Currently, 207 archaeological excavations, 224 rescue excavations and 135 archaeological survey projects are being conducted in Turkey.

The vast collection of archaeological human remains collections within Turkey range from the Paleolithic era to World War I and present a great research potential that can shed light on the history of this region and the human populations that inhabited it. As part of the Fertile Crescent, Turkey is a rich repository for ancient-DNA (a-DNA).

To study this rich history, the first ancient-DNA laboratory was established in 2012 at the Middle Eastern Technical University in Ankara with the support of the Scientific and Technological Research Council of Turkey (TUBITAK). Currently, this is the only ancient-DNA laboratory in Turkey.

CHALLENGES OF DNA RESEARCH: LEGISLATION AND LABS

The management and study of archaeological human remains in Turkey has many challenges, most which originate from limited legislation, religious beliefs, and the lack of professional frameworks. The Ministry of Culture and Tourism (MoCT) in Turkey has no specific standards and guidelines concerning the excavation, study or display of archaeological human remains.

The current heritage law (2863) defines archaeological human remains (and other artifacts) as "state properties" and does not permit archaeologists to send human remains abroad for scientific analysis. The only exception to this law is if it can be proven that these analyses cannot be done in labs in Turkey. With only one ancient-DNA research lab and 431 excavation projects, this law considerably restricts researchers from carrying out DNA analyses efficiently.

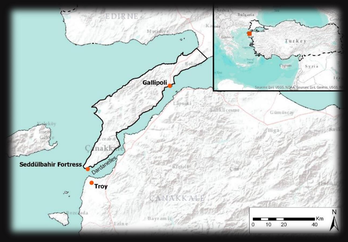
The state "ownership" of archaeological human remains also poses ethical questions and provides no legal mechanism for community-based decision-making processes such as repatriation, a process which usually relies on DNA analyses.

A CASE STUDY OF WORLD WAR ONE (WWI) HUMAN REMAINS: SEDDÜLBAHİR, GALLIPOLI

One particularly important region where DNA analysis would be extremely useful is the WWI battlefields of the Gallipoli Peninsula. Here unidentified human remains pose a great challenge to heritage professionals and government authorities due to diverse repatriation legislation of the Turkish, British, Australian, New Zealand and French nations.

DNA studies have been conducted successfully around the world on the remains of the war dead found in former WWI battlefields, and preliminary steps to include this type of research are now being taken at Seddülbahir on the Gallipoli Peninsula.

Seddülbahir Fortress and French soldiers after the bombardment of WWI, (archive of Thys-Şenocak)



Map of Turkey, showing the location of the fortress of Seddülbahir, (created on ArcGIS Pro by Petrus J. Gerrits)

The Galinier Cemetery, Seddülbahir Fortress. Source: ÇATAB

Aerial photo of the Seddülbahir Fortress in 1922 with the Galinier cemetery outlined in red. Source: (ÇATAB)

French Grave 6. This soldier's remains were discovered in 2017. Photograph by the Directorate of Çanakkale Wars and Gallipoli Area (ÇATAB).

Aerial photo of the Seddülbahir Fortress and the area of the Galinier cemetery outlined in red where the French graves were discovered. Source: ÇATAB.

Fifteen French WWI graves containing human remains were discovered and exhumed at the Seddülbahir Fortress on the Gallipoli Peninsula in 2017. Only two sets of remains were identifiable through grave artifacts.

DNA analyses can help identify the remaining soldiers and facilitate the reburial and repatriation of human remains. The French Ministry of Defense is now negotiating with the Turkish Ministry of Culture and Tourism and the possibility of DNA analysis is being initiated.

DNA research is instrumental not only for identifying the remains of the fallen soldiers at Seddülbahir, but it also enables the team to recognize the possible stakeholders other than the state and to introduce new concepts such as repatriation and stakeholder engagement into Turkish heritage management practices.

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