

Lifeways of the Early Medieval Slavs:

A Bioarchaeological¹ Examination of Diet and Health of the Human Remains from Three Cemeteries North and South of the Karawanken Mountains

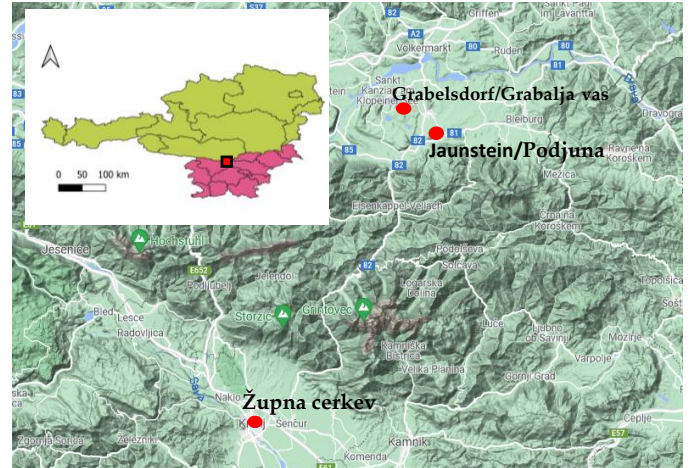
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¹ The term "bioarchaeology" in the framework of this project is used according to the definition of Buikstra (1977), which exclusively refers to the study of human skeletal remains from archaeological sites.

Background

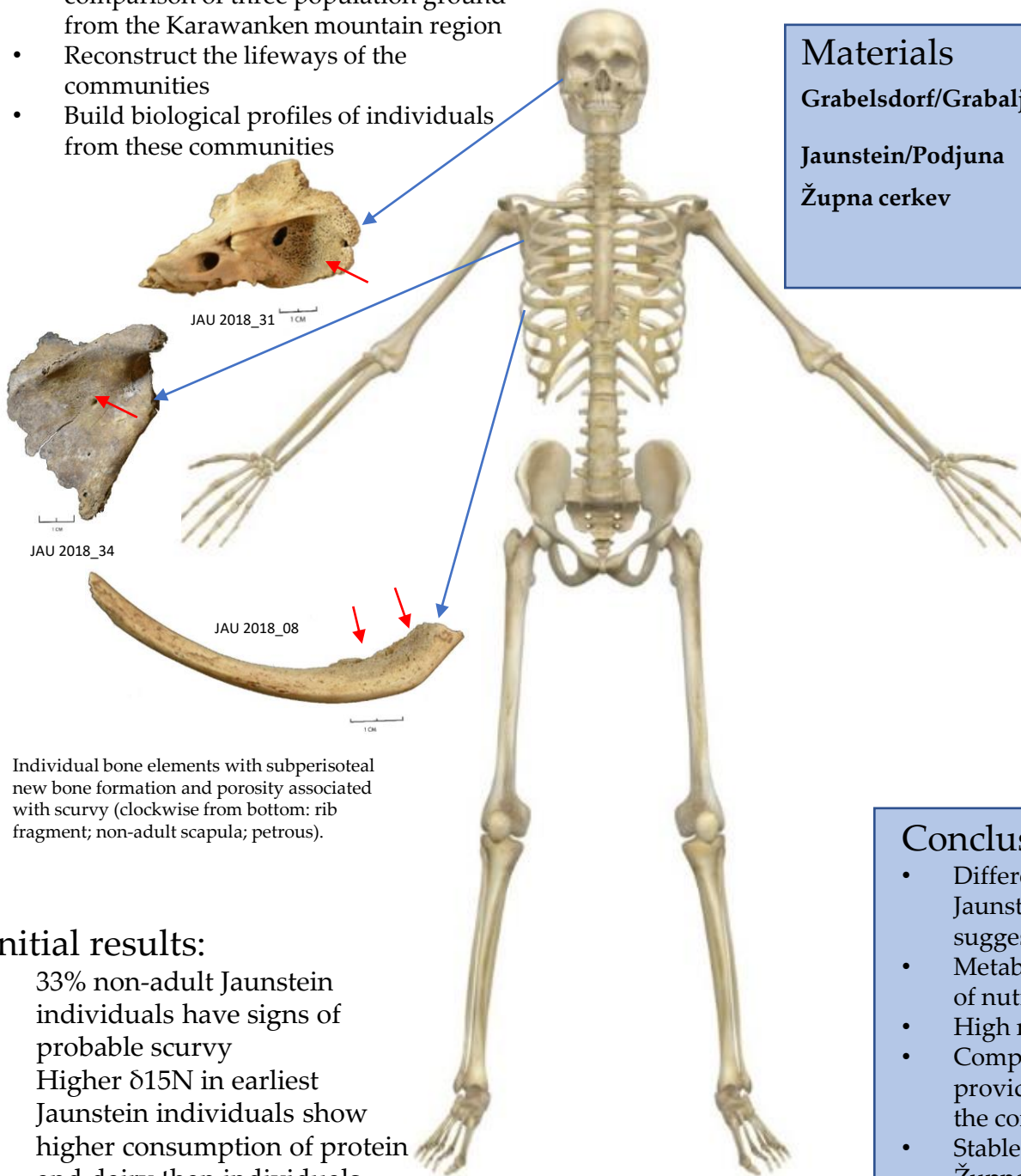
The transitional period (7th-10th c. CE) after the fall of the Roman *Noricum* (6th c. CE) resulted in various cultural groups settling the Eastern Alpine region in southern Austria and northern Slovenia. All information in this region comes from cemeteries. Archaeological human remains can provide insight into health, diet, and lifeways of individuals and communities.



Study area and sites

Aims and research goals

- Produce an intra- and inter-site comparison of three population ground from the Karawanken mountain region
- Reconstruct the lifeways of the communities
- Build biological profiles of individuals from these communities



Individual bone elements with subperiosteal new bone formation and porosity associated with scurvy (clockwise from bottom: rib fragment; non-adult scapula; petrous).

Initial results:

- 33% non-adult Jaunstein individuals have signs of probable scurvy
- Higher $\delta^{15}\text{N}$ in earliest Jaunstein individuals show higher consumption of protein and dairy than individuals from the high Medieval period

Materials

Grabelsdorf/Grabalja vas

12 individuals

Jaunstein/Podjuna

130 individuals

Župna cerkev

150 individuals

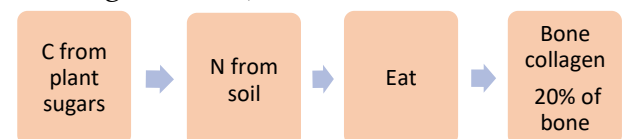
6th 7th 8th 9th 10th 11th 12th 13th c. CE

Methods

Macroscopic analysis: sex, age-at-death estimation, stature, metric measurements, pathological stress indicators, trauma.

Molecular analysis:

- Stable isotope analysis (Carbon, $\delta^{13}\text{C}$, and Nitrogen, $\delta^{15}\text{N}$)= diet reconstruction



- Ancient DNA (aDNA) analysis using mitochondrial DNA for reconstruction genetic make-up and migration patterns

Conclusions/Future Steps

- Differences in diet visible overtime at Jaunstein/Podjuna and Grabelsdorf/Grabalja vas could suggest higher dependence on grains
- Metabolic diseases such as scurvy could be due to lack of nutrition obtained from a grain based diet
- High mortality rate for non-adult individuals
- Completion of macroscopic data collection will provide an encompassing picture on health and diet of the communities
- Stable isotope analysis of Grabelsdorf/Grabalja vas and Župna cerkev will provide comparison for Jaunstein results
- aDNA analysis will help illustrate the genetic make-up of the communities