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PEOPLE Ы Ш CONNECTED

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#### University of Nest Bohemia – Alma mater to thousands of students

Statistical evidence proves that the University of Nest Bohemia is one of the most successful universities in the Czech Republic. Ne do, however, have a more visible criterion: the admirable successes of our students in many technical fields, humanities, arts, and the field of health care. We do our best to nurture our students' talents and abilities.

Ne do not close ourselves off to the surrounding world. Every student has a chance to build his/her own study programme according to their interests, to get excellent language training, study abroad, get involved in research programmes, and put their knowledge to the test.

And we will be equally happy if our students remember the students' festivals, victories in sports, open-air concerts, or just moments spent with friends drinking draught beer. We prepare our students for life in all its fullness.

#### The Department of Archeology

The Department of Archeology provides education especially in prehistoric, medieval and modern archeology. Many of its teachers are prominent scientists. Our graduates gain a deep understanding of the artefact heritage of the past and its significance for modern humanity and at the same time acquire a wide range of knowledge and skills not provided by other social sciences. One of our main goals is to educate specialists for work in archeology and related disciplines and the preparation of students for further education in archeology.

The Department of Archeology is a research center similar to those of Nestern European universities. It develops research in theoretical and practical archeology, deals with problems of archaeological methodology, spatial and non-destructive archeology, the creation of complex archaeological databases and the processing of spatial archaeological data using geographic information systems.

#### Universytet Przyrodniczy we Nrocławiu

Zakład Antropologii Uniwersytetu Przyrodniczego we Wrocławiu powstała l października 2009 roku. Funkcjonuje jako jednostka Instytutu Biologii Środowiskowej na Wydziale Biologii i Hodowli Zwierząt. Zaklad zajmuje okazały budynek z wieloma pomieszczeniami dydaktycznymi i pracowniami. Działalność dydaktyczna rozpoczęła się wraz z powstaniem jednostki v roku akademickim 2009/2010 i utworzeniem na kierunku Biologia studiów stacjonarnych drugiego stopnia o specjalności Biologia człowieka. Od października 2014 r. uruchomione zostały pierwsze w Polsce 3-letnie studia licencjackie na kierunku Biologia człowieka, a od roku akademickiego 2017/18 2-letnie studia magisterskie z trzema ścieżkami dydaktycznymi: Środowisko pracy i BHP, Antropologia kryminalistyczna oraz Antropologia biomedyczna.

Główne zagadnienia oraz tematy badawcze, którymi zajmują się pracownicy Zakładu Antropologii to:

 Przebieg ontogenezy w zależności od czynników środowiskowych

• Badania ludzkich populacji pradziejowych oraz historycznych

• Biologia współczesnych populacji ludzkich

• Ergonomia korekcyjna oraz ergonomia koncepcyjna

- Biologiczne aspekty kryminalistyki
- Paleontologia
- Archeologia

#### The Department of Anthropology

The Department of Anthropology of the University of Life Sciences in Wrocław was established on October 1, 2009. It functions as a unit of the Institute of Environmental Biology at the Faculty of Biology and Animal Science. The Department occupies an impressive building with many teaching rooms and studios. The didactic activity began with the establishment of the unit in the academic year 2009/2010 and the creation of full--time second-cycle studies in the field of Biology, specializing in Human Biology. From October 2014, the first 3-year bachelor's studies in the field of Human Biology were launched in Poland, and from the 2017/18 academic year, 2-year master's studies with three educational paths: Nork environment and OHS, Forensic Anthropology and Biomedical Anthropology.

The main issues and research topics that the employees of the Department of Anthropology deal with include:

- The course of ontogenesis depending on environmental factors
- Studies of prehistoric and historical human populations
- Biology of modern human populations
- Corrective ergonomics and conceptual ergonomics
- Biological aspects of forensics
- Palaeontology
- Archeology

Organisation team



- l. Mgr. Jana Caisová
- 2. Mgr. Katarzyna Graja
- 3. Mgr. Lada Heřmanová
- 4. Mgr. Katarzyna Król
- 5. Mgr. Klementyna Mackiewicz
- 6. Mgr. Markéta Pešková
- 7. Mgr. Kristýna Straková



- 8. Mgr. Atilla Vatansever
- 9. Dr hab. Barbara Kwiatkowska, Prof. Uczelni
- 10. Dr Jacek Szczurowski, Prof. Uczelni
- ll. Dr hab. Dariusz Nowakowski
- 12. Mgr. Aneta Gołębiowska-Tobiasz Ph.D.
- 13. Dr Paweł Konczewski
- 14. Dr Agnieszka Tomaszewska

12-13

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# Preventation of projects



#### Alicja Kotuła, Nrocław University of Environmental and Life Sciences, Poland

Anthropologist, master's student in human biology at the Nroclaw University of Environmental and Life Sciences. My scientific interests are primatology, chronobiology and the influence of biological rhythms on human functioning. Periostitis on the example of a find from the site at St. Nicholas Church cemetery (Libkovice, Czech Republic)

Periostitis is an inflammation of the periosteal layer of a bone caused by trauma or pathological processes. When inflammation occurs, a new layer of tissue is superimposed onto the original periosteal layer in a poorly organised manner and has a porous appearance. The causes of periostitis are varied and its occurrence can be used as an index of health of historical population. The aim of my study is to present the changes that periostitis causes on bone material on the example of the femur of an individual from the cemetery at the Church of  $\mathcal{S}t$ . Nikolas in Libkovice. I will discuss the case of an individual from the cemetery at St. Nicholas Church on whose femur there were inflammatory lesions. The standard scale to for scoring osteoperiostitis (Steckel, 2006) was used to determine the severity of periostitis. The examined bone was 5th level of advancement where the periosteal reaction involved over half of the diaphysis with cortical expansion. The cause of periostitis in this case is not fully known but an analysis of the intensity and prevalence of this phenomenon in the population from the cemetery by the church of St. Nicholas will make it possible to assess the state of health of the inhabitants of the former village of Libkovice.

Keywords: periosteum, inflammation, femur



mgr Alicja Tomaszewska, Nroclaw University of Environmental and Life Sciences, Division of Safety Engineering

Alicja Tomaszewska is a student at Nroclaw University of Life Sciences. She studies Safety Engineering. Her main interests are workplace ergonomics, OSH and the use of VR technology in education. She has participated in several conferences related to workplace safety and in excavations in the defunct village in Libkovice. She is a member of the Student Scientific Society Bezpiecznik.

#### Risk exposure assessment of anthropologists musculoskeletal disorders using EMG

The purpose of this paper is to introduce the basics of the EMG method and to present the results of own measurements using this technology. Surface electromyography with a set of surface electrodes is a non-invasive way of measuring the electrical function of muscles, which allows to prepare an ergonomic risk assessment in a more advanced way. An anthropologist involved in bone material examination during work must adopt a specific posture. Classical methods of occupational risk assessment shows that with this type of work there is a strain on the musculoskeletal system and postural correction is recommended. The presentation will show whether simple photo analysis is as effective as direct measurements using advanced EMG technology.



Dr Łukasz Kuta, Nroclaw University of Environmental and Life Sciences, Division of Safety Engineering

Doktor Łukasz Kuta as researcher works at Nrocław University of Environmental and Life Sciences. He graduated PhD from agricultural engineering institute. His interests include ergonomics, occupational health and safety, occupational risk and workplace design. He conducts research in this area.

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Kinga Gielarowska, University of of Environmental and Life Sciences in Nroclaw, Institute of Environmental Biology, Department of Anthropology

Anthropologist, student of Human Biology at the Nroclaw University of Environmental and Life Sciences. Among other things, interested in primatology with a special attention to the analysis of behavioral and morphological similarities between Homo sapiens and other Primates. In free time, participates in digital art and marketing courses. Plans to bring her passion, knowledge and skills to educate on environmental matters. Compression fracture or spondylolisthesis - spinal pathology from the cemetery at St. Michael's Church in Libkovice (northwestern Czech Republic)

Vertebral changes seen on skeletal material most often include degenerations due to improper posture, physical work, or involve changes with age. Rarely, pathological changes due to developmental abnormalities or trauma can be observed. The aim of this presentation is to present the results of the analysis of skeletal material from the burial of a mature-aged woman in the Libkovice cemetery (No. 3137). The first lumbar vertebra with a pathologically altered shape was examined. The collapsed anterior part of the vertebral body with an unaltered back formed a wedge shape. The upper anterior edge of the vertebral body moved beyond the vertebral column and formed a rim. Next, a discussion of similar cases from historical and contemporary materials described in the literature was conducted. The probability of a compression fracture or spondylolisthesis was analyzed. The cause of this type of change was considered to be spinal trauma.



#### Mgr. Klára Hanáková, University of Nest Bohemia

Doctoral studies in the University of Nest Bohemia // Archaeologist in Museum in Cheb. She is a medieval and post-medieval researcher with a specialization in landscape archaeology. She studies the evolution of selected landscapes (the western part of Ore Mountains) in the past periods. The topics of the study are for example settlement development (with its social-economical issues), mining or industry areas, etc

# The Analysis of visibility from the castle in Kraslice

This paper was about the analysis of visibility from the castle in Kraslice and two other tower houses (standing nearby) and their analysis of visibility. The main question was, if the tower houses and the castle existed at the same time (did not) and what they could view.



#### MSc. Klementyna Mackiewicz, University of Nest Bohemia

The biological anthropologist, graduate of the University of Environment and Life Sciences in Nrocław (Poland). Currently a PhD candidate at the University of Nest Bohemia in Pilsen (Czechia). The specialist in the cremation burials analyses. The member of Odyssey Project (Cyprus), Tel Tsaf Research Project (Israel) and research of Castrum Novum (Italy). The supervisor at Tel Yaqush Research Project (Israel) from German Archeological Institute and Penn Museum. Assessment of the changes in the pars petrosa ossis temporalis under the influence of high temperature during the cremation process

The petrous parts of temporal bones, because of the density, show high biomechanical strenth even exposed to destructive conditions and can preserve very well even in cremation graves. That may be useful for the development of new methods for the anthropological analyses, such as biological sex estimations. The main aim of the study was to determine the degree of shrinkage of pars petrosa ossis temporalis under the influence of high temperature during the cremation. In modern crematorium in Prague (Czech Republic), an experiment was conducted by burning 15 dry human temporal bones and a fresh pig's heads. The cremation lasted 45 minutes and the temperature reached 1000°C. Nine measurements were collected from each bone before and after the combustion process, and the significance of the dimensional changes was assessed.



#### Julia Hochman, University of Life Sciences in Nrocław

Julia Hochman is a student of safety engineering at the University of Life Sciences in Nrocław. Her main focus is on AR, VR as a tool as well as ergonomics of tools and occupation. She is a member of the student science club Bezpiecznik which influences her research. Her interests also include environmental safety.

# Ergonomics, and directions for improving archaeological tools

The work of an archaeologist involves, among other things, excavations on which different tools are used depending on the activities carried out. Performing such activities involves the proper selection and technique of using specialized tools. The market is abundant in various solutions offering many types of hand tools for the work of an archaeologist. The purpose of our work is to introduce the principles of using different types of shovels and spades. Therefore, we will discuss selected types, construction and proper technique of their use in daily work, which are aimed at minimizing the risk of accidents and injuries, while maintaining the efficiency of excavation work. It will present issues related to the ergonomic design of shovels and spades, their responsible use in the context of occupational health and safety, and reflect on directions for improving the use of these key tools in the archaeologist's work.



#### Paulina Nalacik, University of Life Sciences in Nrocław

Paulina Nalacik is a student of Economics at the University of Life Sciences in Nroclaw. She focuses on integrating economic sciences with aspects of ensuring safe working conditions. As a member of the student science club Bezpiecznik, she aims to demonstrate that young people can contribute to scientific and social progress.

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#### Pavlína Schneiderwinklová, Západočeská univerzita v Plzni

Education: 09/2023 - present PhD. Archaeologist, Department of Archaeology, University of Nest Bohemia, Czechia, Dissertation: The Jáchymov deposit in the field of archaeology, Supervisor: Doc. PhDr. Pavel Vařeka, Ph.D.

09/2002 - 09/2004 Mgr. Archaeologist (First Class Hons), Department of Archaeology, University of Nest Bohemia, Czechia, Dissertation: Settlement and mining activities in the urban area Kašperské Hory, Supervisor: Doc. Mgr. Karel Nováček, Ph.D. 09/1999 - 06/2002 Bc. Archaeologist, Department of Archaeology, University of Nest Bohemia, Czechia, Dissertation: Development of the settlement in the eastern part of Slavkovský les, Supervisor: Doc. Mgr. Karel Nováček, Ph.D.

#### Projects:

2016 - 2018 "ArchaeoMontan 2018" - cross-border transdisciplinary and multi-methodical research from fields Montan and Landscape Archaeology, History, Archives, Remote Sensing, Cartography, Geophysics and Geology). I was a participant in the working group from National Heritage Aim of Loket, we were carrying out archaeological excavations on the Czech side Nest - the Ore Mountains.

#### Employment position:

2023 - present Researcher Pilsen The Department of Archaeology, Faculty of Arts, University of Nest Bohemia Analysis of archaeological research, carrying out excavations remains of medieval and Early Modern settlements and mining areas.

# Archeology of water technologies. Bohemia, the 15. and the 16. century

The monumental water channels were the phenomen of 15th and 16th centuries. These were essential objects in fish breeding and tin production areas. They were founded for watereconomy (hydroeconomy) of mines and tin processing objects. However, some of them were later rebuilt into another structures depending on landscape transformation. Excavations and reserches of these objects are important for studying archaelogical remains of water technologies. The study is based on studying historical and archaeological sources and nondestructive landscape survey of the Earth. The aim of this work is to evaluate its imprint and importance in future. At the same time it is important to highlight its ecological aspects in the surrounding landscape.



Tomáš Kroupa, University of Nest Bohemia in Pilsen

The author is a PhD candidate of Archaeology at the University of Nest Bohemia in Pilsen. His main focus is the archaeology of the northwestern Brdy region in Central Bohemia and landscape archaeology. Iron, Coal and Charcoal - Crafts and the Industrial Revolution in the Northwestern Brdy Mountains

The contribution focuses on the topic of documentation and evaluation of the relics of historical use of forest in the northwestern Brdy region in Central Bohemia. It also sums up the results of the land-use analysis comparing 19th century and contemporary map sources, demonstrating the impact of the historical industry on today's settlement structure.



#### Mgr. Katarzyna Graja Contact: katarzyna.graja@up%r.edu.pl

She has been working at the Department of Anthropology at the Nroclaw University of Environmental and Life Sciences since 2016. Currently, he is finishing his doctoral disertation entitled "Variation in the proportions of the faces of boys and girls aged 9-19." Her research focuses on the analysis of facial proportions and facial dimorphism in adolescence based on the analysis of biometric face photographies. Her other science interests concern human motor skills and human sexuality. In addition, he deals with the study of prehistoric populations in terms of morphological analyzes and the assessment of the biological state of the population. He is the tutor of the Student Scientific Society of Anthropologists "Juvenis".



Editors

#### Mgr. Atilla Vatansever Contact: atillav@kar.zcu.cz

He graduated with a master's degree in Archeology from the Department of Archeology at the University of Nest Bohemia in Pilsen. He is currently continuing his studies at a doctoral study program in Pilsen, specializing in the Neolithic period in the Middle East and the process of Neolithization into secondary and tertiary areas. He currently works as an Academic Staff at the Department of Archeology, Faculty of Philosophy, University of Nest Bohemia in Pilsen. He has participated in professional archaeological internships: Kaymakçı Archaeological Project, Koça University Research Center in Istanbul Anatolian Civilizations (ANA-MED) and the Ministry of Culture and Tourism of the Republic of Turkey (Turkey) and Museo del Mare e della Navigazione Antica (Santa Severa), research of the defunct city of Castrum Novum (Central Lazio, Italy). Significant projects include: Spatial arrangement and typology of Kordun castles in the context of Central European castelology, Urban culture of Persia and Byzantium vs. the world of nomads of the North Caucasus region in the light of non-destructive archaeological research and Archeology of the coast between Pyrgi and Castrum Novum (Lazio, Italy). Foreign expeditions include research at the Treblinka Extermination Camp (Poland), research into the sacred mountain Sulajman-Too (Kyrgyzstan), the defunct Roman city of Castrum Novum (Italy). research into the castles of Otmič, Krstina, Furian, Plaški and Klokoč (Croatia), residential tepe Ak-jar (Kyrgyzstan). Research in the Czech Republic includes the internment camp in Lety u Písku, and research into the uranium ore mining camps Elijah II. and Nikolaj, research of partisan camps Žákova hora, Tisůvka and Kamenný vrch.

#### KAR 2023

The Department of Archeology University of Nest Bohemia

