iNEAL
newsletter

Issue 1, May 2021

Welcome to the 1st issue!

Dear reader,

After a relatively short period of brainstorming and fruitful meetings, we are thrilled to present the 1st issue of the iNEAL newsletter! With this issue, we are laying a flexible foundation for subsequent issues. We have structured the newsletter to inform you about the latest developments in the iNEAL project, to introduce you to projects, people and participating institutions or sites, and to recommend work that our members find interesting and worth taking the time to read, listen or watch.

In this first issue we focus mainly on the **COST Action Project CA19141 - Integrating Neandertal Legacy: From Past to Present.** After the address by the Action Chair, we introduce you to the iNEAL project and its goals, we spotlight the Action Chair Prof. Ivor Janković, and we offer you a brief insight into the institution behind both - the Institute for Anthropological Research (INANTRO) in Zagreb.

We also offer you three excellent recommendations for articles worth reading and explain the secret behind the correct spelling of the term Neandert(h)al.

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Since we want to give everyone the opportunity to contribute, we have included an open section where anyone can present a topic of their interest. For a project like iNEAL, which covers so many different topics and involves many people from different backgrounds, we have also decided to include explanations of terms and expressions that may be familiar to some but unfamiliar to others. Given the diversity of people and topics, we are sure there will be no shortage of interesting content.

Tamara Leskovar, editor-in-chief

COST is supported by the Horizon 2020 Framework Programme of the European Union

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CA19141 iNEAL INTEGRATING NEANDERTAL LEGACY: FROM PAST TO PRESENT

Chair's address

Dear colleagues, dear friends,

It is my greatest pleasure to say a few words regarding our Action for this first issue of our official Newsletter – the first of many more to come. To begin with, I would like to thank you all for joining this COST Action.

Some of you contributed to the first drafts of the proposal, others heard about it at a later time and decided to join us. The idea behind all COST Actions is to become a growing, living organism, thus creating a network of all interested parties, scholars and non-scholars alike, around a common theme. At present, partners from 27 European countries and over 50 people are involved in the Action, and by the end of it in the year 2024 we hope to have many more.

Our group consists of scholars and professionals of many trades, including, but not limited to paleoanthropologists, prehistoric archaeologists, zooarchaeologists, geneticists, biologists, paleontologists, specialists in dating techniques and geochronology, museum studies, paleoenvironment, stable isotope analysis, and so on. Our hope is to grow and involve anyone with an interest and knowledge that may help us reach our goals.

Over the years, I've had the pleasure of working on various aspects of Neandertal legacy with many of the scientists that are a part of this Action. Indeed, what may have initially started as a scientific and professional collaboration has become a long-lasting friendship. I have no doubt in my mind that by the end of the Action, my circle of friends, and yours too, will get a lot wider.

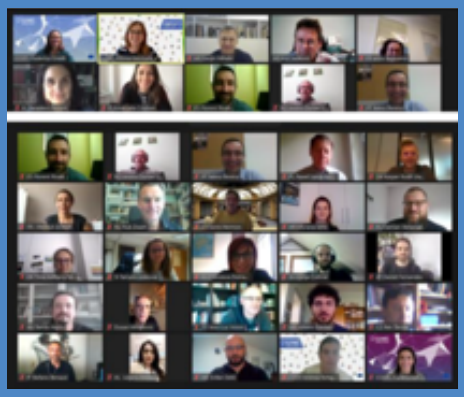
For the time being, the global pandemic is preventing us to meet in person. However, our meetings in the virtual setting have proved to be very fruitful so far. I wish us all the very best and a little patience until we can sit down together and enjoy each other's company while discussing the legacy of our long-lost friends – Neandertals.

Ivor Janković

Knowledge Box: Neandert(h)al?

Actually, both are ok. In the early 20th century, Germans standardized their spelling and dropped the silent h from many words (among them from Thal, meaning valley). Some scholars prefer to follow the new spelling while others opt for the traditional one. However, we do have to bear in mind that the use of taxonomic terms is not affected by this, and the binomen *Homo neanderthalensis* established in 1864 by William King still stands (or *Homo sapiens neanderthalensis* if we accept them as a subspecies of our own species – but that is a matter for another Knowledge Box).

News



The first Management Committee meeting of the **COST Action Integrating Neandertal Legacy: From Past to Present – iNEAL (CA 19141)** was held on October 15th and 16th 2020. The dates mark the official start of the 4-year long project focused on the legacy of the Neandertals.

Through a combined scientifically based and geographically inclusive approach, the project aims to create a growing inclusive database, to promote dialogue among scientists, to create guidelines for research, to establish a solid base for better understanding of Neandertals, and to disseminate and present the Neandertal legacy to the public.

In March, the leader of Working Group 2, Francesca Romagnoli, was invited by the University of Siena and the Universitary Museums in Siena (Italy) to give a talk on Neanderthals to the general public.

In her talk, she discussed cultural evolution, behavioural complexity in Neanderthals, and a critique of the concept of "behavioural modernity". The lecture is in Italian and is available on YouTube: https://www.youtube.com/watch?v=OLVKF__m72U&t=21s

News

ERC Advanced Grant awarded to our Action member!

Our WG1 leader, Professor Katerina Harvati-Papatheodorou from the Institute of Archaeological Sciences at the University of Tübingen and the Senckenberg Centre for Human Evolution and Palaeoenvironment of the Leibniz Association has received an Advanced Grant from the European Research Council (ERC). For her research project "Our first steps to Europe: Pleistocene Homo sapiens dispersals, adaptations and interactions in South-East Europe" (FIRSTSTEPS), she will receive funding of 2.58 million euros over the next five years. Her project partner is another member of our COST iNEAL Action, Professor Stefano Benazzi of the University of Bologna, for whose collaboration the ERC is providing a further 0.72 million euros.

In the FIRSTSTEPS project, Harvati and Benazzi will explore the traces that may have been left by early *Homo sapiens* in Europe some 200,000 to 30,000 years ago in the southeast of the continent. This region is thought to play a key role in the dynamic process of encounters between various early human groups, their dispersal and evolution. In the FIRSTSTEPS project, Harvati plans to further investigate the hypothesis of this unexpected European chapter in the history of early *Homo sapiens*, both through new data from field research and by examining existing collections and finds from previous excavations that date to the period between 200,000 and 30,000 years ago. The project will bring together specialists from across the region, and innovative methods from virtual anthropology and paleogenetics to state-of-the-art excavation and dating techniques.

In addition to Katerina Harvati and Stefano Benazzi, several other colleagues from our COST iNEAL Action will take part in this project, namely Vangelis Tourloukis, Dušan Mihailović, and Ivor Janković.

EAA KIEL 2021 SESSION:
COST ACTION: INTEGRATING NEANDERTAL LEGACY:
FROM PAST TO PRESENT (iNEAL)
Session proposers: Mihelić, Sanjin & Leskovar, Tamara

iNEAL COST Action is organizing a session on the 27th Annual Meeting of the European Association of Archaeologist in Kiel.

Under the theme "The new normality of heritage management and museums in post-Covid times", a regular session (#500) Integrating Neandertal Legacy: From Past to Present will be held.

With 14 oral presentations and two posters, a vigorous dialogue among Neandertal scholars from different countries and disciplines is to be expected.

The iNEAL Action

Neandertals are the first human population that can be truly recognized as a pan-European phenomenon. Since the discovery in a small cave in the Neander valley in Germany in 1856 (thus giving us both scientific and colloquial name for this ancient group of humans) the sites with their skeletal remains and/or cultural finds have been discovered all over Europe (and parts of Asia) and cover a period of more than 250 000 years. This resulted in a vast accumulation of various types of data.

However, in over the 150 years of Neandertal research, scientific methods, technological and methodological aspects, theory and practices developed often at a different pace, and sometimes in different trajectories, in different countries. The result is that it is often difficult to evaluate and compare various datasets dealing with Neandertal legacy.

Likewise, for numerous reasons there are problems related to access to data and information for various sites and finds. In addition, research questions asked by different groups and scholars from not only different disciplines, but sometimes from same disciplines but different traditions and different countries often are difficult to compare, even if their goal may be the same. Recent decades saw a rapid rise in communication of scientists from, for example, former "Eastern" and those from the "Western Bloc". However, this is very much still based on individual connections and related to specific analyses and work. Thus, in order to compare data on various aspects of Neandertal legacy from Europe, it is crucial to build a long-term network of scientists that, in turn will help create a usable and inclusive, inter- and multidisciplinary database and data sharing platform for all interested in Neandertals.

In addition, iNEAL Action will promote dialogue between scientists (with special attention given to early career investigators), and invite scientists from all relevant fields and disciplines, beyond the core group (such as scientists interested in dating methods and chronology, paleoenvironmental analysis, palynology, trace analysis etc.). In such a way, datasets will be created with a specific purpose of inclusiveness, thus providing data from various disciplines that can be incorporated to create a more detailed picture of Neandertals in temporal and spatial dimensions.

Another important aspect of the iNEAL Action is promoting awareness among various stakeholder groups of the importance of Neandertal heritage as an asset in education, tourism as well as other broader socio-economic spheres. At present, a lot of effort is being invested in research, presentation and interpretation of Neandertal heritage sites and other tangible remains like museum exhibits, however, there is a palpable lack of networking at higher-order levels, as well as across the stakeholder spectrum, which this Action aims to remedy.

The intention is to build on the existing initiatives, including localized success stories in the heritage sector, like the Mettmann Neanderthal Museum, or the Krapina Neanderthal Museum, as regards musealised sites or interpretative centres and museums, to collaborative endeavours like the Ice Age Europe platform, which brings together a number of partners across Europe, even if its remit is somewhat broader in terms of temporal extent.

What all these efforts are lacking is the inclusion of stakeholders other than academia, i.e. those that would create a more tangible link with real life: local communities, local and regional governments, private sector, SME's, tourism sector etc., who have long been disenfranchised in matters of management of archaeological heritage in general, and Neandertals in particular. In education, primary and secondary-school curricula in many countries might greatly benefit from more elaborate and school-children friendly didactic tools, which are at the core of the Action's agenda.

In summary, iNEAL will bring together a wide variety of researchers, both from different countries, as well as from different fields of research in order to:

1. get a more detailed and much broader insight into various aspects of Neandertals (biology, including genomics, cultural aspects, geographic, environmental settings etc.) across space and over time;

2. create a data sharing platform, making it easier to detect data of interest, as well as identifying major gaps, resulting in new research questions, collaborations and projects;

3. stimulate international collaboration of scientists and create a wide network and platform for communication;

4. build a new outreach platform between scientists and scientific research and other interested parties (general public, small and medium enterprises, local communities, tourist workers etc.) creating a positive environment and basis for integrating Neandertal legacy into present;

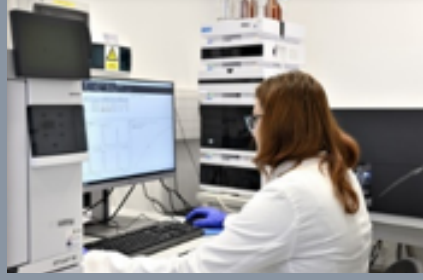
5. address the career development of early career investigators. Through participation in working groups, a number of short-term scientific missions and training schools, they will get training in various disciplines and develop a firm understanding of specific current practices that will help them in their future research.

Partners in the spotlight

Ivor Janković was born in Zagreb in 1971. Always interested in the past, he got his M.A. in Archaeology from the University of Zagreb (focusing on Palaeolithic archaeology) in 2001. Realizing that in order to properly study past human populations we need to understand both biological as well as cultural aspects, he turned his focus to biological anthropology and got his M.A. at the Northern Illinois University, USA, and his PhD from the University of Zagreb in 2009.

His scientific interests are human evolution, particulary biological and cultural adaptations during the Middle and Late Pleistocene and Palaeolithic archaeology. His research included various scientific analyses of archaeological and anthropological material that were published in over 70 scientific papers and chapters and over 30 professional papers and several books.

He led a scientific project entitled „Archaeological investigations of the Late Pleistocene and Early Holocene in the Lim Channel" and a current project entitled „Prehistoric hunter-gatherers in Istria and adjacent regions: Patterns of Late Pleistocene lifestyle and mobility", both financed by the Croatian Scientific Foundation. As a strong believer in popularization of science, he co authored four museum exhibitions: Human Odyssey, Neandertal Trail, ARCHAEOLIM, and Life and Death in Prehistory and wrote a children's book on the topic of human evolution. He taught numerous classes on Human evolution at the University of Zagreb, and is an adjunct Full Professor at the Department of Anthropology at the University of Wyoming, USA. For his work, he received the Award and Medal „Dragutin Gorjanović-Kramberger" of the Croatian Anthropological Society, and the Award and Medal „Josip Brunšmid" of the Croatian Archaeological Society.



Visit our partners

INSTITUTE FOR ANTHROPOLOGICAL RESEARCH

The Institute for Anthropological Research is located in the Croatian capital of Zagreb. It was established as an independent research institute since 1992.

The main topic of scientific interest of our Institute are humans – as anthropology is the study of humanity (this is exactly what this term that comes from ancient Greek means - *anthropos* = human, *logos* = story). However, to better understand humans, we need to turn our attention to both biology and cultural/social aspects of what we are, in both space and time. The Institute thus employs a very wide range of scientists from various fields of science: biological anthropologists, medical doctors, biologists, archaeologists, ecologists, sociocultural anthropologists, geneticists, psychologists, and many others. Only in such an inter- and multidisciplinary way can we try to understand what we are, our past through millions of years of evolutionary changes and cultural development, down to the problems of today's populations, such as complex diseases.

The Institute has received numerous research grants, including European Commission framework FP5, FP6, FP7, and HORIZON 2020, COST, NIH, Wenner Gren, and Croatian Science Foundation among others. Our scientists regularly publish in top scientific journals, and recently we started a new scientific journal entitled Journal of Bioanthropology.

Recently, and thanks to the grant from the European Fund for Regional Development, we were able to establish a new Centre for Applied Bioanthropology with four new laboratories: Laboratory for Molecular Anthropology, Laboratory for Evolutionary Anthropology and Bioarchaeology, Laboratory for Chemical Analytics, and Laboratory for Microbial Ecology.

Although the Institute is not a part of the University, our scientists are involved in higher education and teach courses at several Croatian and foreign universities, mentor students and young researchers, give public presentations and promote the results of the scientific work to the general public.

Interested in learning more about the Institute?
https://inantro.hr/en/homepage-eng/

Recommendations

Recommendation #1

The IntCal20 is the newest update of the radiocarbon calibration curve. The whole volume appeared in summer 2020. The leading publication by Reimer et al., Radiocarbon 62, no. 4 (2020): is available as open access (https://www.cambridge.org/core/journals/radiocarbon/article/intcal20-northern-hemisphere-radiocarbon-age-calibration-curve-055-cal-kbp/83257B63DC3AF9CFA6243F59D7503EFF#.YG68lZ3hT3c.link). The data set is also available via the calibration software: https://c14.arch.ox.ac.uk/oxcal.html, http://calib.org/calib/

The calibration curve is currently extended to 55 cal kBP. The last 10 kcalBP is of interest to chronologies of the late Neanderthal sites, which are dated using the radiocarbon method.

Recommendation #2

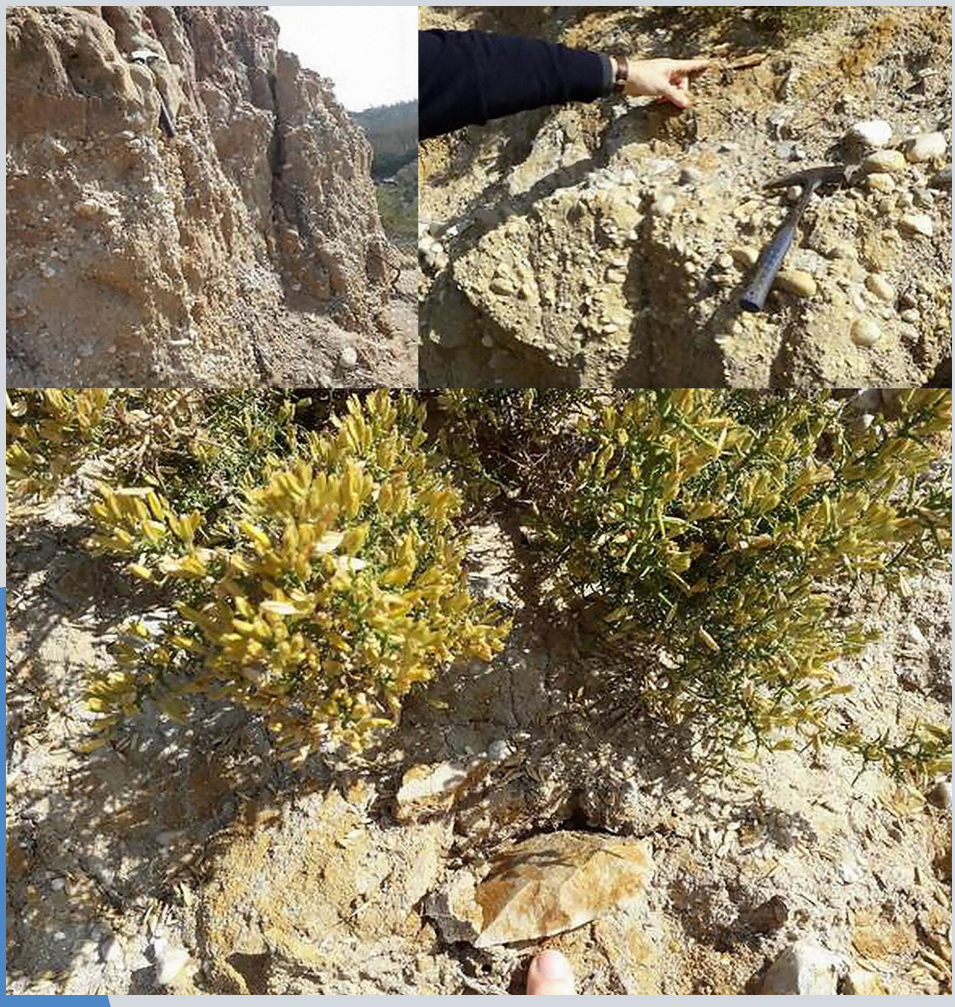
'A global environmental crisis 42,000 years ago' by Cooper et al., Science 371, no. 6531 (2021): 811-18. (https://science.sciencemag.org/content/371/6531/811.abstract) have measured 14C signal in Kauri fossil wood to reconstruct the production rate of the cosmogonic isotope of carbon. The production of 14C is modulated by geomagnetic field therefore, a high production observed 42 kBP ago was associated with the Laschamp Event LE (a short geomagnetic reversal, time of low geomagnetic field). Moreover, based on global chemistry-climate modeling, the authors hypothesize that LE impacted the climate and that a connection exists between the LE and the demise of the Neanderthal.

Recommendation #3

"Paleoecology and Paleoart: Landscapes of the Middle Pleistocene Neanderthals in Bolomor Cave, Eastern Iberia." by Amorós et al., (https://www.sciencedirect.com/science/article/abs/pii/S0277379121000330?via%3Dihub) is an artistic representation of the research results. In this paper, the paleoart depicts reconstructed vegetation near the Bolomor Cave, which was occupied by the Neanderthals from before 350 000 to after 120 000 years ago.

Did you know?

River terraces are deposits of clay, sand and gravel that rivers created in their margins. These gravels are made of hard rocks good to produce stone tools. Their quality relied on being predictable about what was going to append during knapping and on having cutting edges hard enough to accomplish the tasks at hand. At the same time, river terraces were near the water where animals gathered to drink, which were (and are still today) hotspots for carnivores and hunter-gatherers to hunt. Often these days, river terraces only have stone tools, but this is because rocks resist better than bone through time. In sites where faunal remains are preserved one can find bones with marks of hunting and savaging. For decades, terraces were hard to date, but today is possible to measure when a buried grain of sand caught sunlight for the last time in the last half a million years.



T4 terrace of River Tejo at Alpiarça with artefacts sitting on the top of the gravels.

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