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RISE – Research and Innovation Staff Exchange

D2.1 : Training in field methods, genetic data production and post-processing, data storage and analytical methods

PUBLIC REPORT

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Deliverable D2.1 of WP Training in field methods, genetic data production and post-processing, data storage and analytical methods

This document gives an overview of the training activities of the OCSEAN project, first summarizing the original deliverable, giving a visual overview of workshops, then more detailed background and information about the events and tasks. The appendix has a concise visual summary of the events with links to the relevant web resources. All tasks were completed.

Deliverable description: Training in field methods, genetic data production and post-processing, data storage and analytical methods. In the end, there will be i) at least 20 staff from TC partners become proficient in language documentation ii) at least 5 staff from TC partners become proficient in the standard use of population genetic analysis softwares iii) at least 3 staff from TC partners become proficient in aDNA handling, extraction, processing, and analysis iv) at least 3 staff from TC partners become proficient in anthropometric data collection and analysis v) at least 3 staff from both beneficiary and TC partners become proficient in phylogenetic analysis.

In summary, there will be seven workshops to be held at Beneficiary organizations, and eight workshops to be held at TC partner organizations.

Graphic overview (Figure 1) of workshops (WS) within WP2, in total there were eight WS at Beneficiary institutions during two Summer Schools – Uppsala 2022 and Tartu 2024 which were respectively three- and two-month long events with several WSs. Uppsala had four and Tartu Summer School had three WSs. One workshop for archaeological data modelling was held in Pühajärve, Estonia. Third Country events were on linguistic fieldwork and language documentation with six events and two archaeology field schools.

8 Workshops at the Beneficiaries



8 Workshops at the TC Partners

Comparative and Historical Linguistics	+ Denpasar	INDONESIA 2023
	+ Alor	
	+ Kupang	
Sustaining Linguistic Heritage: Language Documentation Workshop	+ Davao	PHILIPPINES 2023
	+ Ifugao	
Archaeology Practical Fieldwork Instruction	+ Panhutonga	PHILIPPINES 2023
	+ Vanua Levu	
Linguistics - orthography of Abui language	+ Alor	INDONESIA 2024

Figure 1. Graphic overview of OCSEAN workshops 2022 - 2024

1. Introduction

OCSEAN is a MSC RISE staff exchange program, with the main aim of bringing together research from archaeology, biological anthropology, genetics, and linguistics to further elucidate the complex mid-to-late Holocene history of Island Southeast Asia (ISEA) and Oceania. In doing so, one of the main objectives is to build an inclusive and fair scientific network of researchers and institutions from the EU and Third Country partners. The emphasis is on training the TC partners for data collection and analyses, so the data collection is led and undertaken locally by local researchers and members of cultural group members themselves and enhances local analysis capacities.

This initiative enhances research opportunities within the EU and Third Countries in the core disciplines of OCSEAN, strengthens the transferrable skills of participants, advances their careers, and fosters a collaborative environment for future partnerships. As a result, the training activities will have a lasting impact on local expertise and contribute directly to the project's broader goals, including the re-evaluation of human dispersals in the ISEA and Oceania, while addressing a range of locally significant questions. Additionally, many of the training events serve as data collection and/or analysis sessions, as participants actively gather or analyze data during the training. For instance, when indigenous speakers are trained in language data collection, they also serve as informants, and when transcription techniques are taught, actual data is transcribed.

2. Training events

Training is at the core of OCSEAN. The main aim is to prepare local researchers for data collection, curation, post-processing, archiving and analyses in the main fields of OCSEAN (T2.1-T2.5). Besides capacity building, training events serve in building the research network and foster long-lasting connections between participants. Thus, the main training events at the Beneficiary institution were designed as extended training periods, allowing Third Country participants to spend more time together as a group while engaging in a diverse program of learning modules across several fields. This also helps to see the challenges of transdisciplinary research compared to field-specific studies. Training events at the Third Country partners focused on two subjects – linguistic documentation (T2.1) and archaeological methods (modified T2.4), as a response to the requests from local participants and stake holders. Importantly, training events have also covered topics on career building, grant application, job interviews, academic writing, academic communication and using film as documentation medium, to give participants a range of transferrable skills. Several of these were delivered by University of Tartu (UTartu) researchers in months 58-61 at Davao Medical School Foundation Inc (DMSFI), Udayana University (UNUD) and Ifugao State University (IFSU). OCSEAN's training and networking actions (WP2) have included workshops, lectures, seminars, and conferences.

At the **start of the project in 2020**, all preparations were done for the OCSEAN 3-month capacity building training in linguistic data collection, management, and archiving. The invited participants were 35 people from various institutes and universities in the Philippines, Indonesia, and Papua New Guinea. The training, named *Training in Linguistic Data Collection*, was to take place at Leiden University (ULeiden), The Netherlands from 11 May – July 20, 2020. Due to the Covid-19 caused global lockdowns this event was cancelled.

Eventually OCSEAN was extended for two years due to the pandemic, but the hiatus also drastically changed the academic landscape and staff at OCSEAN partners.

Then actions resumed in 2022 with the major training event held by Uppsala University (UUppsala). **Uppsala Summer School** was held from June to September, attended by 50 participants, including ESRs, ERs, indigenous community members, and cultural workers from Indonesia (UNUD and Universitas Kristen Artha Wacana (UKAW)), the Philippines (IFSU and DMSFI), and Papua New Guinea (University of Papua New Guinea (UPNG)). During the summer school, all main disciplines offered modules with thorough overviews of both theory and practice – linguistics field methods, data collection, management, and archiving (T2.1), anthropometrics and archaeology (T2.2), Statistics and Population Genetics (T2.3), laboratory techniques (T2.4). Summer school main organizer was UUppsala, closely aided by UTartu, UTübingen and training events were taught by researchers from UUppsala, former ULeiden members, UTartu, University of Tübingen (UTübingen), Germany and University of Toulouse (UToulouse), France.

In 2023, smaller-scale workshops were conducted locally. A networking and training event, aimed more for the ER level attendees, was held in Pühajärve, Estonia, where “**Workshop on Modelling Archaeological Data**” (T4.1, T4.4) organized by Dr Phillip Endicott from UTartu. This event brought together partners and other researchers from the fields of archaeology, genomics, and data modelling to discuss the opportunities of modelling in archaeology, the necessary data formats and pitfalls in digitizing existing data. This work was continued during the secondment of Dr. Sébastien Plutniak from UToulouse to the University of Auckland (UoA) with Prof. Ethan Cochrane from the UoA.

In addition, Archaeological excavations, and a Field School in Surigao del Norte, Philippines, in summer 2023 represented another collaboration that emerged from dialogues between local researchers from St. Paul University and the OCSEAN community (T2.2, T3.3, T3.4). Three different sites were excavated while participants put their skills into practice and familiarized themselves with different archaeological methods.

Five additional workshops on documenting languages (T2.1) took place from April to June 2023 in the Philippines and Indonesia, led by former ULeiden trainers Dr. George Saad and Dr. Owen Edwards. These workshops provided participants with a comprehensive overview of how to collect and process linguistic data on a target language: lexical data (OCSEAN-tailored 1228 wordlist) and textual data. Participants learned how to transcribe data and how to archive and store it in an accessible and transparent way. Teaching was delivered through seminars, supervised practice sessions, and unsupervised project work. All training events included ethics aspects (WP6) of linguistics research. These events widened the capacity building at TC partners and among indigenous communities and local researchers to equip them for pursuing their own projects of collecting linguistic data in their countries and communities to describe, preserve, and revive local languages (T4.2).

In 2024, a more focused linguistic workshop on the Abui language in Alor was held driven by the local need to harmonize orthography. This WS was led by Adolfina Moybeka and organized by the local researchers and participants of the earlier linguistic training in Uppsala and in Alor. In July 2024, an archaeology field school took place in Fiji, co-organized by Prof



Frank Thomas University of South Pacific (USP), Prof Patrick Nunn from the University of Sunshine Coast, Australia, Dr Phillip Endicott UTartu and Fiji Museum.

The **main event in 2024, however, was the Tartu Summer School**, where 48 OCSEAN partners from the Philippines, Indonesia, and Papua New Guinea gathered for an extended period of two months, aimed to be a period of extensive data curation and analyses, but also several training WS were held. Notably, OCSEAN TC partners who work closely with local cultural groups and indigenous communities expressed interest in learning frameworks and methodologies to study cultural aspects beyond linguistics and wordlists. As a result, more emphasis than originally planned was given to cultural and heritage studies, leading to the design of a cultural heritage workshop (with modules on folkloristics and ethnobotany) held in Tartu. Besides that, workshops on Archaeogenetics (T2.3) linguistic data curation, archiving and analysis (T2.1, T4.1), were held.

Table 1 eight workshops were held with the TC partners and eight at the Beneficiaries. Summary of OCSEAN Workshops 2022 – 2024, TC – Third Country partner, BEN – Beneficiary. The original aim was 7 workshops at Beneficiaries, and 8 at Third Country partners.

OCSEAN Workshops Title	Location	TC	BEN	Dates	Main Instructors/Organizers	Field	Participants	
							No	Who
Linguistic Field Work Practices, Language Documentation	Uppsala, Sweden	1		20.06. - 15.07. 2022	Hanna Fricke, George Saad	Ling	49	ER, ESR, cultural workers, community members
Population Genetics	Uppsala, Sweden	1		22.08. - 02.09. 2022	Max Larena, Mattias Jakobson	Gen	49	ER, ESR, cultural workers, community members
Anthropometrics & Anthropology	Uppsala, Sweden	1		25.07. - 12.08. 2022	Hugo Reyes-Centeno	Anth	49	ER, ESR, cultural workers, community members
Archaeology of ISEA	Uppsala, Sweden	1		25.07. - 12.08. 2022	Hugo Reyes-Centeno	Arhc	49	ER, ESR, cultural workers, community members
Modelling in Archaeology	Pühajärve, Estonia	1		08.03. - 10.03. 2023	Phillip Endicott	Arhc	10	ER, ESR
Comparative and Historical Linguistics	Alor, Indonesia	1		25.04. - 29.04. 2023	George Saad, Owen Edwards, Phillip Endicott	Ling	25	ESR
Comparative and Historical Linguistics	Kupang, Indonesia	1		01.05. - 05.05. 2023	George Saad, Owen Edwards, June Jacobst, Thress Tamelan	Ling	25	ESR
Comparative and Historical Linguistics	Denpasar, Indonesia	1		08.05. - 12.05. 2023	George Saad, Owen Edwards, Phillip Endicott	Ling	30	ESR, university staff
Sustaining Linguistic Heritage: Language Documentation Workshop	Davao, Philippines	1		29.05. - 02.06. 2023	George Saad, Sheila Labos	Ling	14	ESR, community members
Sustaining Linguistic Heritage: Language Documentation Workshop	Ifugao, Philippines	1		13.06. - 16.06. 2023	George Saad	Ling	15	ESR, teachers, staff
Archaeology Practical Fieldwork Instruction I	Panhutonga, Philippines	1		9.07 - 29.07. 2023	Hugo Reyes-Centeno	Arhc	10	students, community members
Linguistics - ortography of Abui language	Alor, Indonesia	1		24.04. - 27.04. 2024	George Saad, June Jacob, Adolfina Moybeka	Ling	15	primary and secondary school teachers, ESR, community elders
Archaeogenetics	Tartu, Estonia	1		08.-10.07. 2024	Kristiina Tambets, Mari Tõrv, Lehti Saag	Gen	46	ER, ESR, cultural workers, community members
Linguistic Data Curation, Databasing & Analyses	Tartu, Estonia	1		15.07.-09.08. 2024	Georg Saad, Hanna Fricke	Ling	46	ER, ESR, cultural workers, community members
Cultural Heritage (Folkloristics & Ethnobotany)	Tartu, Estonia	1		25.-28.06. & 01.-05.07. 2024	Merili Metsvahi, Raivo Kalle, Renata Sõukand	Cult	46	ER, ESR, cultural workers, community members
Archaeology Practical Fieldwork Instruction II	Vanua Levu, Fiji	1		20.07.-02.08. 2024	Frank Thomas	Arhc	14	ESR, ER, community members

8 8

In addition to the larger events listed above, several seminars, workshops, and lecture series were held during the secondments of EU members to the TC partners. These events provided additional knowledge on the main disciplines, built data management and analytical skills, and developed participants' soft skills—especially important for the career development of the ESRs.

In October 2023, an ethnographic fieldwork workshop with forum at Ifugao State University, the Philippines, and an Ethnolinguistic lecture series in Taiwan (T2.1, T5.1, and 5.2) took place (WP2 and WP5). In October and November 2024 shorter WSs on Data analyses with R and career building tips for ESR were given by UTartu secondees to the Philippines (DSFM) and Indonesia (UNUD). Also workshops on using documentary film as a medium for research and outreach were delivered in UNUD and IFSU by UTartu secondee Lodewyk Barkhuizen, in November 2024 – January 2025.

3. Overview of the Linguistics training

TASK 2.1	Training in linguistic field methods	Uppsala, will host training of language documentation. Participants will be local linguists and cultural workers, from TC partners (IFSUPhilippines, UUdayanaBali, UKAWTimor, UPNG, ASinica), who are indigenous speaker themselves. The training will take place in Uppsala and last for three months, which is adequate for acquisition of basic necessary skills in language documentation. Shorter training events will be organized at the TC partners in Indonesia and the Philippines.
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AIM: i) at least 20 staff from TC partners become proficient in language documentation

RESULT: goal is met. Close to 50 participants (IFSU, UNUD, UKAW, UPNG) with in-depth training in language documentation from Uppsala Summer School and followed up by Tartu Summer School 2024. Due to extended lockdowns, fieldwork in Taiwan was considered impossible. In addition, about 150 participants in the shorter local 2–3-day long WSs got training in field linguistics ethics, techniques, data collection, and community engagement.

Linguistic data collection was the major effort of fieldwork within OCSEAN. The initial step was to train local fieldworkers (Task 2.1) in linguistic fieldwork practices, ethics, making recordings, collecting of metadata, wordlist and textual data, data management, phonology and IPA transcription, digitizing transcriptions with ELAN, archiving linguistic data in a transparent way, and last but not least applying for fieldwork grants. For this, the initial training was organized in Uppsala, as part of the Summer School of 2022, altogether a three-month long event, where the first month was dedicated to the in-depth training in language documentation (Program in Appendix). Summer School was organized as soon as possible post pandemic lockdowns and was the actual kick-off of OCSEAN. Due to the extended lockdown of Taiwan, fieldwork there was not deemed possible, so the training was attended by the fieldworkers affiliated with the Ifugao State University (IFSU), Udayana University (UNUD) and University of Papua New Guinea (UPNG).

Five training events took place in Indonesia and the Philippines for wider capacity building locally. The last workshop on the time series, Summer School Tartu, concentrated mainly on curating the data for further analyses and archiving, doing initial analyses and summarizing the results of individual projects in the academic writing sessions.

In total, about 200 participants (Table 1) received an overview on how to collect and process linguistic data on a target language. At the workshop in Denpasar the focus was besides the already mentioned topics also on historical linguistic reconstruction. Thirty participants completed several assignments recognizing cognates, identifying sound correspondences, and reconstructing proto forms. The Abui language orthography workshop stemmed from the interest and need of local researchers and stakeholders as an extension of Abui language

documentation. In addition to dedicated capacity building training and conducting further research, the local organizers have further lectured on the importance of local language documentation and preservation among school and university students. This has resulted in several BA theses of the field or compiling teaching materials in local language.

4. Overview of Anthropometrics and Archaeology training

TASK 2.2	Training in anthropometrics	Dr. Hugo Reyes-Centeno of UTuebingen will head the training for anthropometric data collection. Participants will be from TC partners (DMSPhilippines, IFSUPhilippines, UPNG) that will have direct access to ethnic groups included in the study, such as Papuans, Negritos, Cordillerans, Manobos, and Sama sea nomads.
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AIM: iv) at least 3 staff from TC partners become proficient in anthropometric data collection and analysis

RESULT: Goal is met. During Uppsala Summer School Anthropology and Anthropometrics WSs all participants (50) got trained in the anthropometric data collection and analysis and introduced to the methods of Archaeology, in addition 2 staff from UPNG has been trained by Dr Francois Ricaut from UToulouse

Introduction to archaeology and anthropometry started in 2022 at Uppsala. During the training that lasted 3 weeks from July 25th until August 12th the participants received a comprehensive overview of current research in paleoanthropology and community archaeology taking place in Southeast Asia. Methods of archaeology were practised in two field schools.

The archaeological field school in the Philippines **was implemented as a response to the priorities established by the local academic community, as well as input from other local stakeholders such as government entities and community members.** We prioritized their interests in field archaeology in place of what we had originally envisioned for data collection of anthropometric data on living individuals. We also recognized that the permitting for archaeological work could be secured within the OCSEAN project timeline, whereas data collection on living individuals required additional approvals that could delay the project. There is an anthropometrics component to findings on one of the sites excavated, but at a much smaller scale than originally envisioned.

So, the **Archaeology Field School in Panhutongan** took place in July 2023 led by Prof Hugo Reyes-Centeno (University of Tübingen and University of Kentucky). The school was organized both the Saint Paul University of Surigao campus (1 week) as well as at the site of Panhutongan (3 weeks), approximately 22km southeast of the campus of SPUS and conveniently located within the grounds of the Panhutongan Elementary School. The field school matriculated six (N=6), including one indigenous member of the Mamanwa community. The team comprised fourteen (N=14) individuals in total. The professional development team comprised four (N=4) community members from the local tourism,

education, and indigenous government sectors. The Field School was followed by excavations in Kandingan Cave, in Placer Municipality and Escalon Cave.

Between July 20 and August 2, 2024, a team from the University of the South Pacific and The Fiji Museum took part in archaeological research on Vanua Levu, Fiji, in the Provinces of Bua and Macuata. This field school had three students from USP, four staff from the Fiji Museum and was led by Dr Frank Thomas (USP). One of the aims, besides exploring the shell deposits, was to train local students in archaeological methods during Field School.

Theoretical and data analytical topics were discussed in a three-day long **Archaeology Data modelling Workshop** in March 2023 organized by Dr Phillip Endicott in Pühajärve Estonia. This event brought together experienced researchers from several partners (UToulouse, UBristol, UTartu, Simon Fraser University, University of Auckland), guests from the University of Utah and also local and guest ESRs participated.

5. Overview of training in Population Genetics, Phylogeny and Laboratory techniques

TASK 2.3	Training in Statistics and Population genetics	Uppsala, UTartu, UBristol and UToulouse will be mainly responsible for conducting training in population genetics analysis. This would include handling basic popgen softwares such as Plink, Admixture, Treemix, Admixtools, RFMix, Malder, Eigensoft, MSMC, Finestructure, and Globetrotter. UBristol, headed by Dr. Dan Lawson, will conduct trainings in statistical analysis, which will include the use of CLARITY software.
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AIM: ii) at least 5 staff from TC partners become proficient in the standard use of population genetic analysis softwares.

RESULT: Goal is met. During Uppsala Summer School participants were introduced to the main population genetic methods and they could learn about their own genetic ancestry and of their respective countries. Methods were recapped during the Summer School in Tartu concentrating on applications in aDNA studies. Main in-depth training took place during several long-term secondments to Uppsala from IFSU and DMSF where fewer TC researchers were integrated to the lab environment practicing both wet-lab techniques for data generation, population genetics and statistical analyses methods under the supervision of Dr Max Larena. More than 40 participants got an overview of the methods. During secondments from PNG to UToulouse Dr Francois Ricaut and Dr Nicolas Brucato have had individual training of PNG staff. In total 5 staff members from TC became proficient in the use of the methods and good practices in population genetics.

TASK 2.4	Training in laboratory techniques	Ancient DNA facilities at Uppsala and Tartu will serve as training centers for proper handling, extraction, and processing of aDNA, for participants from Udayana, UPNG and IFSUPhilippines. In addition, Toulouse and Tartu will also conduct trainings on the extraction, processing, and analysis of modern DNA (including mtDNA and Y chromosome), with the aid of experts from Innsbruck.
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AIM: iii) at least 3 staff from TC partners become proficient in aDNA handling, extraction, processing, and analysis

RESULT: The goal is met with alterations. Basic training in laboratory techniques of DNA extraction was introduced to all participants during Uppsala Summer School, aDNA handling was performed by IFSU researchers under the supervision of Max Larena from Uppsala during the dedicated visits from the Philippines partners. In Tartu the Summer School Archaeogenomics module gave a theoretical overview of the lab processes due to the large number of participants and restrictions of the clean lab. UPNG researchers have got lab training in Toulouse.

TASK 2.5	Training in Phylogenetics	Under guidance from Prof Simon Ho of Sydney, Uppsala, Tartu and Toulouse will conduct training in phylogenetics together with researchers from Davao, IFSUPhilippines and UPNG, sharing expertise on ISEA and Papuan mtDNA and Y chromosome. Prof. Ho will also host visitors at Sydney to be trained in phylogenetics analysis.
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AIM: v) at least 3 staff from both beneficiary and TC partners become proficient in phylogenetic analysis

RESULT: The goal is met with alterations. Due to Prof Ho not being able to travel to Tartu, a dedicated training event under his supervision did not take place. Uppsala hosted several researchers from the Philippines partners IFSU and DMSFI for long term secondments and during these visits TC partners learned also phylogenetic methods to analyze mtDNA and Y chromosome data. During the archeogenetics training in Tartu phylogenetics methods were introduced and UPNG staff was trained by Toulouse. Beneficiary staff in Tartu and Toulouse have been working with phylogenies for several years so they conducted the one-on-one trainings.

6. Summary

All the goals, tasks, and objectives of WP2—Training in field methods, genetic data production and post-processing, data storage, and analytical methods—were successfully achieved. Some tasks (T2.4 and T2.5) were slightly modified, but this did not affect the overall objectives. More workshops were conducted than initially planned, resulting in a significantly larger number of participants trained, particularly in linguistics. In response to the interests and needs of local communities and researchers, there was a shift away from a focus on the anthropometrics of living individuals, with greater emphasis placed on archaeological excavation, and heritage studies – the preservation and promotion of local culture and values, and the introduction of ethnobotanical research methods.



Oceanic and Southeast Asian Navigators

APPENDIX - concise visual summary of workshops

Uppsala Summer School 2022

Linguistic Field Work Practices, Language Documentation, Uppsala 2022, Hanna Fricke, George Saad, Owen Edwards

Excerpts from Learning outcomes and introduction of the wordlist modules

LEARNING OUTCOMES

At the end of the workshop, participants will have a comprehensive overview on how to **collect and process linguistic data** on a target language: lexical data (long wordlist) and textual data.

Participants will learn how to transcribe the data, and to **archive and store** it in an accessible and transparent way.

ADDITIONAL LEARNING OUTCOMES (CONTINUED)

On completion of the course the student **MAY** be able to:

- understand the basics on how to apply for research funding
- understand the basics on how to design a field methods course in their home institution

LEARNING OUTCOMES (CONTINUED)

On completion of the course the student shall be able to:

- record linguistic data according to best practice modern standards
- be familiar with recording devices
- collect metadata about the language and consultants
- collect informed consent for use of the data
- collect and transcribe a wordlist on a "foreign" language
- collect, transcribe and translate a short (3–5 minute) text on a "foreign" language
- archive linguistic data in an accessible way
- access and interpret archived lexical data

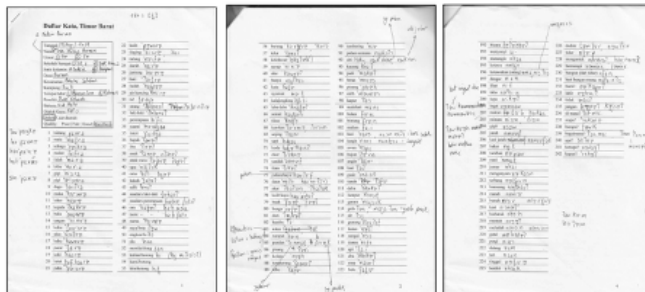
WHAT IS A WORDLIST?

A list containing a series of words, typically alongside a translation into another language:

English	Indonesian
➤ head	kepala
➤ hand	tangan
➤ cat	kucing
➤ dog	anjing

A wordlist can be any length (200-300 words), but the longer the better (600-1200 words)!

EXAMPLE



<https://www.ocsean.eu/post/linguistic-workshop-held-at-uppsala-university>

Excerpts from Fieldwork Ethics and Community relations modules

The learning process and motivation for linguistic fieldwork are also summarized in the first OCSEAN video: <https://vimeo.com/804868688>

OUTLINE

PART I: Intro

Fieldwork Ethics

- Community relations
- Informed consent
- Acknowledging and compensating participants

Metadata

- Metadata needed for each recording session
- Metadata needed for each participant
- How and when to collect metadata
- How to store metadata

PRINCIPLES OF COMMUNITY RELATIONS

- Protection of the autonomy of human subjects
 - ➔ Informed consent before collecting data
- Minimization of risks for participants
- Appropriate acknowledgment and compensation of the participants



Recording an Adang speaker on the island of Alor in eastern Indonesia

OUTLINE (CONTINUED)

PART II: Demonstration

- Information sheet and consent forms
- Paper metadata sheet
- Demonstrate collection of informed consent and metadata

COMMUNITY RELATIONS



Recording elderly speakers on the island of Rote in eastern Indonesia



Recording a wordlist with a speaker of Central Lembata in eastern Indonesia.

INFORMED CONSENT

- Written and/or
- Orally on a recording
- Both forms must fulfil the same standards.



INFORMED CONSENT: TYPICAL FORMULATIONS

I feel good about talking about my language with you and I know and understand that:

- *what I say can be recorded and other people may listen or watch it;*
- *if I want to, I can say to you: 'Do not show to other people what I told you.';*
- *if I want to, I can say to you: 'Don't use my name.';*
- *I can stop teaching you about my language any time;*
- ...

INFORMATION ON THE CONSENT FORM

- Information about and goals of the research project
- Willingness to participate
- Permission to use the data
- Permission to make the data publicly available
- The option to remain anonymous
- The right to withdraw the consent anytime



Recording Abui speakers on the island of Alor in eastern Indonesia

ACKNOWLEDGEMENT AND COMPENSATION OF PARTICIPANTS

- Thank speakers and the community in papers and other publications
- Compensate participants for their work
 - Payments
 - Gifts



A cultural survey interview with Kaera speakers on the island of Pantar, eastern Indonesia

Anthropology and Anthropometrics, Uppsala 2022, Hugo Reyes-Centeno

<https://www.ocsean.eu/post/a-workshop-on-anthropology-archeology-and-community-heritage>

The workshop gave a thorough overview of anthropometrics, especially of Dental Anthropology to prepare the participant for potential fieldwork (replaced by Archaeology field school in Surigao del Norte and excavation of Escalon Cave driven by local stakeholders' interest)

What is dental anthropology?

Introduction to Dental Anthropology

Dr. Hugo Reyes-Centeno

OCSEAN Summer School
Uppsala, 28 July 2022

: the analysis of human teeth, variation dental phenotypes

Agriculture

- Population increase + sedentary lifestyle = overcrowding and disease
- Periosteal reaction
 - Staph infection
- Diseases of the Neolithic**
 - Treponematoses (syphilis, yaws)
 - Tuberculosis, measles, mumps, cholera, flu, smallpox

Table 4.1. Primate Dental Formulae

The major primate groups are distinguished dentally by the number of incisors, canines, premolars, and molars.

	Upper	Lower
Tarsiers	2/1/2/3	1/1/2/3
Lemurs	2/1/2/3	2/1/2/3 (although there is much variation with lemurs)
Loxises	2/1/2/3	2/1/2/3
New World Monkeys	2/1/2 or 2/1/3	2/1/2 or 2/1/3
Old World Monkeys	2/1/2/3	2/1/2/3
Apes and Humans	2/1/2/3	2/1/2/3

Why study anthropology?

- Primates: 65-80 million years
- Humans: 5-7 million years
 - with tools: 3 million years ago
 - with symbolic art: 50,000 years
 - with agriculture
 - with writing: 5,000 years
- Moon landing: 1969
- Webb telescope: 2021

What is anthropometry?

Decolonization

- process of independence from colonial power(s)
 - economic, social, cultural, educational
 - hybrid systems
- (in anthropology): empowerment of communities being studied
- (in archaeology): engagement of descendant communities and communities in sites under study

Who were the first humans?

What is anthropometry?

Community Engagement

- Education, training
 - Uni-directional
 - Bi-directional
- Co-design of research

Who are modern humans?

LEARNING OUTCOMES

By the end of the consortium, participants will have a well-rounded understanding of the current research in paleoanthropology, heritage preservation, and community archaeology taking place in Southeast Asia.

On completion of the course the participants should be able to:

- Describe the current paleoanthropological explorations in Southeast Asia
- Explain the current research in population and paleo-genetics in Southeast Asia
- Describe the relationship between populations genetic and linguistic research
- Understand indigenous epistemologies in relation to colonial systems of knowledge
- Explain the different methods of digitization being used in archaeological surveying and heritage preservation

CONTENT

- Paleoanthropology:** An overview of the pre-AMH discoveries in Southeast Asia as well as presentations on population genetics, linguistics, and anthropometry.
- Community Archaeology:** This topic covers subjects such as indigenous mythologies, mortuary practices, maritime trade networks, and epistemologies, archaeology of colonial sites, and subjects pertaining to environmental archaeology.
- Heritage Preservation:** This covers methods of cultural heritage management, preservation, digital heritage preservation, and their relevance to local communities.

Archaeology, Uppsala 2022, Hugo Reyes-Centeno

<https://www.ocsean.eu/post/a-workshop-on-anthropology-archeology-and-community-heritage>

Instruction was given via a number of visiting speakers in seminar and lecture form, in addition to a number of laboratory tours, practical exercises, and group work and presentations. As part of their educational excursion, the participants visited the UNESCO World Heritage Sites of Drottningholm, Falun Mine, and Birka Archeological Site.

1. **Paleoanthropology:** An overview of the pre-AMH discoveries in Southeast Asia as well as presentations on population genetics, linguistics, and anthropometry.
2. **Community Archaeology:** This topic covers subjects such as indigenous mythologies, mortuary practices, maritime trade networks, and epistemologies, archaeology of colonial sites, and subjects pertaining to environmental archaeology.
3. **Heritage Preservation:** This covers methods of cultural heritage management, preservation, digital heritage preservation, and their relevance to local communities.

Hugo Reyes Centeno, James Keppeler, and John Peterson served as facilitators. Other invited speakers included: Stephen Acabado, University of California, Los Angeles (UCLA), USA Noel Amano, Max Planck Institute for the Science of Human History, Germany Francisco Datar, University of the Philippines Philipp Endicott, Musée de L'Homme, France Macario Lacbawan, Uppsala Univeristy, Sweden John Ljungkvist, Uppsala University, Sweden Neil Price, Uppsala University, Sweden Nicole Revel, Musée de L'Homme, France

Introducing methods and planning fieldwork

Methods

- Archaeological excavation
 - 1x1 meter squares
 - Sediment removed & artifacts recorded at 2cm increments and screened
 - Stratigraphic profiles recorded, photographed, and sampled for completed squares
 - Artifacts cataloged using Nat'l Museum standards
 - Finished squares will be backfilled
- Analysis of skeletal remains
 - Pathologies related to health & subsistence changes
 - DNA Testing and C14 dating
- Analysis of Material remains
 - Uses of pottery, tools, and elements of subsistence
 - Typological Sequencing, impressions
 - Digitization and heritage preservation

Escalon Cave

- Background
 - Discovery of human remains in the 1980s
 - 14C dated to 2692 ± 39 years BP (uncalibrated)
 - DNA indicated Austronesian descent



Amoslog Cave

- Background
 - Briefly surveyed by Dr. Eusebio Dizon in 1980s
 - 2022 visit identified both archaeological and osteological remains on surface
 - High promise for prehistoric cultural remains



Escalon Cave

- Potential for further human & material remains
- Approval from Surigao City Office of City Mayor
- Goal:**
 - Determine occupational timeline and human activity patterns



Amoslog Cave

- Permits from Placer currently processing
- Goal:**
 - Determine occupational timeline
 - Establish chronology of shell midden
 - C14 date human cultural remains



Population Genetics WS, Uppsala 2022, Overview of the Workshop by Max Larena

<https://www.ocsean.eu/post/probing-the-human-past-through-a-population-genetics-workshop>

Teaching was given in the form of lectures, seminars, group discussions, research facility and museum visits, and group project work. Also, wet-laboratory practices were introduced.


The workshop was divided into the following topics:

1. The human genome: A basic introduction on the structure of the DNA and how it is organized and inherited from one generation to the next.
2. Application and Methods in Population Genetics: Basic concepts in population genetics as well as a summary of methods used in investigating the human past.
3. Human history: Human demographic history starting from migration out of Africa, interaction with Neandertals and Denisovans, introduction of Agriculture, and spread into New Found Lands
4. Phenotypic variation in human populations, ethical principles and the history of race biology: A review of the current ethical framework for human studies and a historical overview that addresses the history of race biology.

The facilitators include Maximilian Larena, Ma. Junaliah Kels, and Concetta Burgarella. Other invited speakers include: Ivany Jocelyn Argueta Mejia, Magnus Lundgren, Mattias Jakobsson, Carina Schlebusch, Torsten Günther, (Uppsala University, Sweden), Hanna Edlund, (Forensics Unit, Sweden) and Nicolas Brucato, (Toulouse University, France).

Population Genetics Workshop

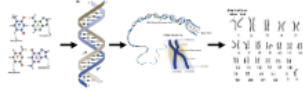
Maximilian Larena
Human Evolution, Department of Organismal Biology
Uppsala University, Uppsala, Sweden



Learning outcomes


On completion of the course the student shall be able to:

Give an overview of the human genome and its patterns of inheritance.



Central Aim:


To gain a comprehensive overview and insight regarding human origins and evolutionary history.



Learning outcomes

On completion of the course the student shall be able to:


Give an overview on modern human origins, diversity, and past migrations.



Learning outcomes

On completion of the course the student shall be able to:


Be familiar with ethical principles in human genetic studies.



Learning outcomes

On completion of the course the student shall be able to:

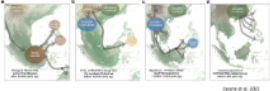
Explain how paleontology, archeology, anthropology and linguistics can be combined with genetic data to enhance the understanding of the human past.



Learning outcomes

On completion of the course the student shall be able to:


Summarize the most important findings in human evolution and prehistory.



Course Content

The course is divided into the following topics:

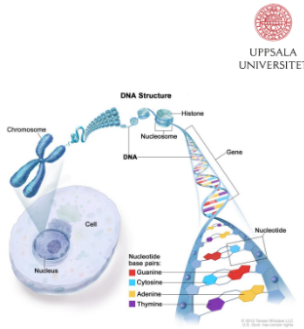
1. The human genome
2. Application and Methods in Population Genetics
3. Human history
4. Phenotypic variation in human populations, ethical principles and the history of race biology.



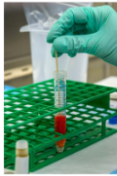
Materials from the DNA extraction and lab practices by Ivany Argueta, Uppsala 2022

DNA extraction

- Routine procedure and starting point
- Free DNA from the cell
- Separate the DNA from cellular fluid and proteins
- Purifies DNA
- Genetic analysis



DNA Sources



Blood, hair, saliva, etc



Bacteria, animal and plant tissue



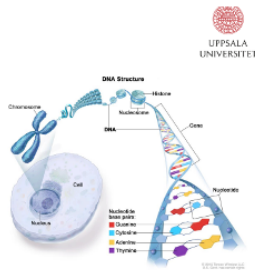
Archival and Frozen tissue



Ancient tissues

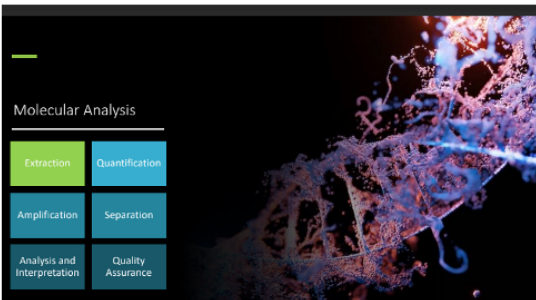
DNA extraction

- Free DNA from the cell
- Separate the DNA from cellular fluid and proteins
- Purifies DNA
- Genetic analysis



Nanodrop quantification

- Assess DNA and RNA quantity and purity
- UV spectrophotometer
- Absorbance of UV light
- Required 1 – 2 microliter
- No other reagents required
- Quick and easy



What does it measure

Concentration

ng/μL

Purity

Protein

260/280

Salt

260/230

Modelling in Archaeology, Pühajärve 2023, led by Dr Phillip Endicott

<https://www.ocsean.eu/post/workshop-on-modelling-archaeological-data-8-03-10-03-2023-p%C3%BChaj%C3%A4rve-estonia>

Workshop was organized after the Mid-Term meeting of OCSEAN. It was a three-day event, with 15 participants, ER and ESR from partner organizations and guests.

Phillip Endicott [University of Tartu, Estonia](#) ER

Francois-Xavier Ricaut [University of Toulouse, Department Evolution & Biological Diversity, France](#) ER

Martin Bodner [Institute of Legal Medicine, Medical University of Innsbruck, Austria](#) ER

Gaston Rijo de Leon [Institut Pasteur, Université de Paris, CNRS UMR2000, Human Evolutionary Genetics Unit, Paris, France](#) ESR

Hugo Reyes-Centeno [University of Tübingen, Germany & University of Kentucky, USA](#) ER

Sébastien Plutniak [CNRS & University of Tours, France](#) ER

Daniel Lawson [University of Bristol, UK](#) ER

Mark Beaumont [University of Bristol, UK](#) ER

Bayazit Yunesbayev [University of Tartu, Estonia](#) ER

Adrian Bell [University of Utah, USA](#) ER

Dave Burley [Simon Fraser University, Canada](#) ER

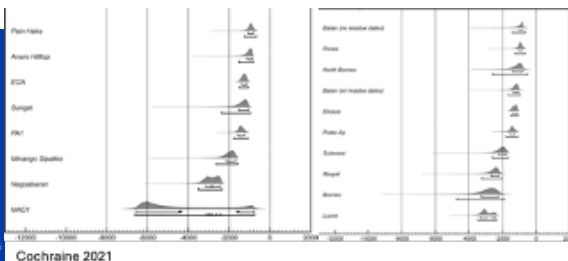
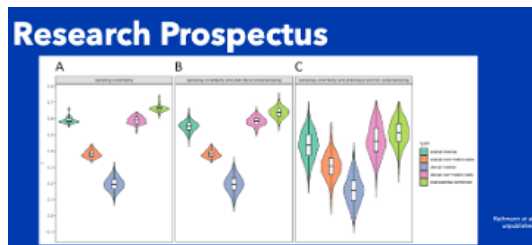
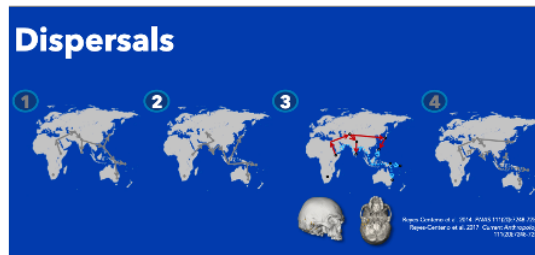
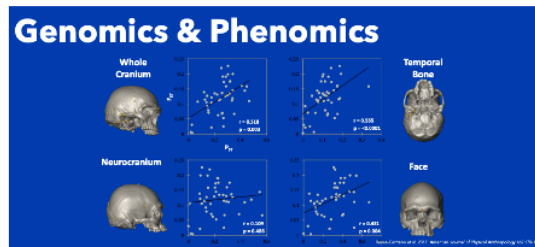
Ethan Cochrane [University of Auckland, New Zealand](#) ER

Aivar Kriiska [University of Tartu, Estonia](#) ER

Maris Niinesalu-Moon [University of Tartu, Estonia](#) ESR

Ragi-Martin Moon [University of Tartu, Estonia](#) ESR

Workshop on Modelling Archaeological Data 8.03 - 9.03	
Wednesday 8.03	Presentations
9:30	Session 1: Archaeology and (3 x 20 mins).
10:30	Tea/coffee break
11:00	Session 2: Archaeology, Anthropology and Modelling (3 x 20 mins).
12:00	Lunch
14:30	Session 3: Population Genetics (3 x 20 mins)
15:00	Tea/coffee break
16:00	Session 4: Statistical Models for single and joint data sets (3 x 20 mins).
17:00	Finish Day 1
18:00	Dinner
Thursday 9.03	Discussions
9:30	Session 5 Discussion on methodology
10:30	Tea break
11:00	Session 6 Problems and Challenges
12:00	Lunch
14:30	Session 7 Available resources
15:00	Tea/coffee break
16:00	Session 8 Future Directions
17:00	Finish Day 2
18:00	Dinner
Friday 10.03	Lab and Archive visits in Tartu
9:30	Departure to Tartu
10:15	Department of Archaeology, Labs and Archives, University of Tartu
11:30	lunch
	Institute of Genomics - introduction of ancient DNA lab, Estonian Biocenter, Estonian
12:30	Genome Center



Program and slides from the presentations, Reyes-Centeno, Cochraine

Linguistic Workshops in Indonesia 2023, George Saad, Owen Edwards

<https://www.ocsean.eu/post/ocsean-linguistic-workshops-in-alor-may-2023>

<https://www.ocsean.eu/post/ocsean-linguistic-workshops-in-indonesia-and-the-philippines-april-june-2023>

Led by Adolfina M.S Moybeka as the team leader, accompanied by Simon Daniel Lanma, both OCSEAN members, run a **Workshop on documenting Alor local languages**. It was held on May 24-29, 2023 at Tribuana University of Kalabahi - Alor. The goal of the workshop was to provide practical training in language documentation for people from Alor with an interest in their local languages and who have the potential to play a major role in documenting these languages. The workshop consisted of two parts. First, intensive classroom tutorials provided basic training in community ethics, transcription and annotation, orthography development, and data management/archiving. The workshop included two days of field study by five different teams. One of the greatest challenges for documentary linguistics is the lack of capacity, especially in regions where language endangerment is most severe. It is our hope that the workshop participants, especially the students, will continue in their efforts to document local languages and preserve the rich linguistic heritage of Alor.



Team; Phillip Endicott, George Saad, Owen Edwards, June Jacob†, Thersia Tamelan, Simon Daniel Lanma are having picture after the workshop with Rector of Tribuana Univeristy, Kalabahi (Alvonso F Gorang) and the Dean of Teachers Training and Educational Sciences (Antonius A. Saetban).



Linguistic Workshops in the Philippines 2023, George Saad

<https://www.ocsean.eu/post/ocsean-linguistic-workshops-in-indonesia-and-the-philippines-april-june-2023>

<https://www.ocsean.eu/post/workshop-on-language-conservation-through-documentation-in-davao-city-the-philippines-may-29-june>



Davao



The Davao City linguistics workshop was organized in collaboration with the Ateneo Internationalization for Mindanao Office, Department of Anthropology and Uppsala University, Sweden. There were 14 participants in attendance representing different indigenous ethnolinguistic groups of the Philippines - Bagobo Tagabawa, Umajamnon, Higaonon, Tagakaulo, Sama, Maguindanao, Tausog, Kagan, Butuanon, Tandaganon and Iranun.

Language documentation workshop in Ifugao had local university staff participating in a 2-day long workshop in June 2023. Participants learned the fieldwork good practices, community engagement to facilitate local researchers in undertaking their own project.



Archaeological Field School in Panhutonga, Philippines, 2023, Hugo Reyes-Centeno

<https://www.ocsean.eu/post/archaeological-excavations-in-panhutonga-surigao-del-norte-philippines-july-august-2023>

<https://www.ryanlucashenderson.com/images/mindanao-island-excavations-2023>

<https://heva.as.uky.edu/content/uk-spus-archaeology-field-school>

Between July 9 and 29, 2023, the Archaeological Field School in collaboration with St Paul University Surigao and University of Kentucky took place in Surigao del Norte, Philippines, led by OCSEAN secondee Hugo Reyes-Centeno (the University of Tübingen and University of Kentucky). The local researchers and community members got to re-excavate the site at Panhutonga Elementary School and practice digging, recording and other archaeological methods.



Core excavation team, Panhutongan Elementary School teachers, and local government officials during a town hall at the beginning of the project (right) and a Field Day Workshop with community members at the end of the field school (left).



Aerial drone-photography view at the final excavation day at Panhutongan Elementary School, July 2023. Credit: James Keppeler.



The Field School was followed by excavations in Kandingan Cave, in Placer Municipality and Escalon Cave, outside of Surigao city in August 2023.

Abui orthography workshop in Alor 2024, Adolfinia Moybeka

<https://www.ocsean.eu/post/ocsean-wokshop-on-abui-language-orthography-and-the-preparation-of-teaching-materials-in-abui-april>



In April 2024 students from Tribuana University, teachers of local primary and secondary schools and Abui's elders gathered with the aim of developing participants' skills in Abui orthography and preparing teaching materials. The workshop was led by Adolfina Moybeka with the team of researchers from Tribuana University in collaboration with Universitas Kristen Artha Wacana.



Archaeology Practical Fieldwork Instruction II, Fiji 2024, Frank Thomas

Dedicated to addressing questions related to two shell midden deposits and training local students in archaeological methods during the field school, between July 20 and August 2, 2024, a team from the University of the South Pacific (USP) and The Fiji Museum took part in archaeological research on Vanua Levu (Fiji) in the Provinces of Bua and Macuata.

<https://www.ocsean.eu/post/exploring-rokodavutu-shell-deposits-along-the-bua-river-and-nakorovatu-in-otubelu-bay-july-20-augu>



Stratigraphic profile at Rokodavutu (Note: layer 5 is where the shell midden is identified)



Decorative Lapita pottery from Nakorovatu



Cleaning pottery in the field

The University of South Pacific, the University of Tartu and the University of Sunshine Coast, Australia collaborated in the preparation of this field school. Participants were from USP, local communities and Fiji Museum. There are no formal archaeology curricula in USP, therefore such field schools serve as the main mode of teaching archaeological practices.

Linguistic Data Curation, Databasing & Analyses, Tartu 2024 Hanna Fricke and George Saad

<https://www.ocsean.eu/post/linguistics-data-curation-and-analyses-workshop-july-august-ocsean-summer-school-tartu-2024>

The major effort of OCSEAN Summer School Tartu 2024 was to bring together again people who were initially trained in Uppsala 2022 Summer Training Course. Now, many of them back from their fieldwork seasons, participants were guided by Associate Professor George Saad and Hanna Fricke in data curation, to prepare the data for archiving and further analyses. Professor Marian Klamer from Leiden University helped to work on orthography guides and Jesse Daniel Holmes from the University of Tartu facilitated the transcriptions. Curating wordlists entails a lot of tedious manual work which was a huge undertaking. Conventions of file naming, data formats, doing and checking transcriptions, preparing local orthography guides were the major tasks. During these workshops, participants relied also on each other's expertise, so experienced researchers from Indonesia and the Philippines formed groups to jointly work on datasets and aid others. In addition, some data collection on Papuan languages took place on-site. UTartu Assoc. Prof. Miina Norvik introduced other linguistic databases.

In parallel, Associate Professor Djuddah Leijen from the University of Tartu taught Academic Writing classes where Summer School participants could reflect on their writing, but most of all, write their article drafts, review them in writing groups, learn to ask and give feedback in a more formal way.

<p>WELCOME BACK TO THE OCS LINGUISTICS MODULE: DAY 1</p> <ul style="list-style-type: none"> Personal introduction Recap from Uppsala Wordlist inventorization Goal setting Overview and schedule of the workshop <p>RECAP & REFLECTION: WHAT DID WE DO IN UPPSALA?</p> <ul style="list-style-type: none"> Have you done linguistic fieldwork since Uppsala 2022? Did you apply the methods you learned in Uppsala? <ul style="list-style-type: none"> Gathering consent Wordlist collection on paper Recording the wordlist Transcription Data management What did you learn? What were the challenges? 	<p>FINAL PRODUCTS</p> <ul style="list-style-type: none"> Complete the wordlists (recording, transcription in excel, ELAN) Archive recorded and transcribed wordlists at Paradisec Add wordlists for Taiwan languages from dictionaries to dataset Combined dataset with all wordlists Complete a picture dictionary Academic paper (first draft) <p>LEARNING OUTCOMES</p> <ul style="list-style-type: none"> Learn how to do linguistic analysis with ELAN & FLEX. Building a corpus in FLEX Learn how to compare wordlists for historic reconstruction Refresh knowledge on data management, transcription and archiving Improve data coding and data analysis skills Improve academic writing skills Develop peer review skills and assist eachother with data analysis and write-up
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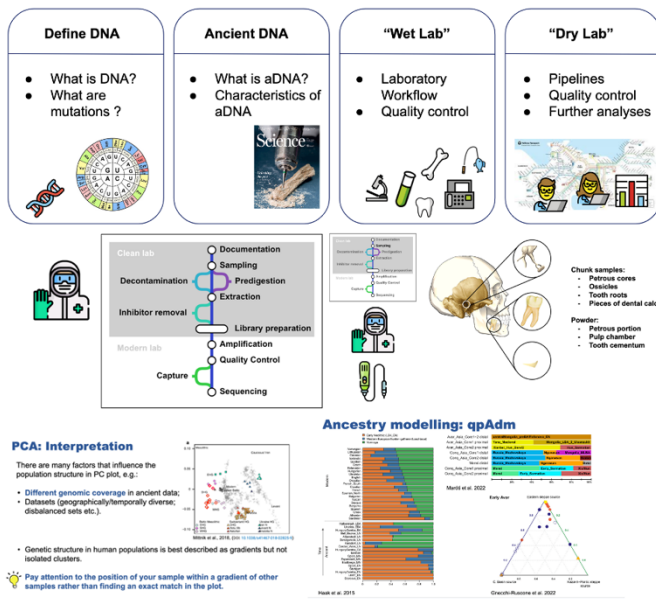


Archaeogenomics Tartu Summer School, Kristiina Tambets, Lehti Saag

<https://www.ocsean.eu/post/archeogenomics-workshop-ocsean-summer-school-2024>

The Archaeogenomics workshop was led by Prof Kristiina Tambets, Assoc Prof Mari Tõrv, Assoc Prof Alena Kushniarevich, Research Fellow Lehti Saag and Junior Researcher Kadri Irdt all from the University of Tartu, Estonia and facilitated by Biancamaria Bonucci, Stefania Sasso and Erkin Alacamil. The workshop was given in the form of lectures, practical group work and site visits.

This workshop gave an introduction to interdisciplinary research of the human past with integration of archaeology, genetics, (and linguistics) in the study of (pre)history. During the workshop participants were introduced to the standard research tools used in human population genetics and metagenomic analysis.



Mari Tõrv gave an overview how the third Scientific Revolution in Archaeology (the strontium/DNA revolution) introducing to archaeology prehistoric population genomics and migrations has transformed previous relative knowledge into absolute knowledge.

During group work participants used the learned skills to combine the data of archaeology, anthropology and genetics to create the interdisciplinary stories of the past, also limitations and challenges of interdisciplinary research were discussed.



Visit to Estonian Biobank facilitated by Steven Smit, groupwork and finishing seminar.

2024 Tartu Summer School Heritage studies – Folkloristics and Ethnobotany, Merilie Metsvahi, Art Leete, Raivo Kalle and Renata Sõukand

<https://www.ocsean.eu/post/folkloristics-module-22-28-june-ocsean-summer-school-tartu-2024>
<https://ocseansummertartu.edublogs.org/2024/06/>

Prof Merili Metsvahi gave an overview of Folkloristics and neighboring disciplines, visits to rich collections of the Estonian National Museum and the Estonian Literary Museum were introduced as data sources, heritage preservation institutions and active sites of heritage sharing. Participants composed projects for promoting their own heritage. Also, principles of documentary film were practiced.



Thinking of ideas how to popularize the one's own heritage with inventive projects like games, videos and books.



How to frame a shot when doing a documentary can make a huge difference in how the subject is perceived by viewer. Seminar by Lodewijk Barckhuizen



Visiting one of the largest archives of folklores in the world - Estonian Literary Museum. Learning about archiving and bookkeeping.



First seminar in Estonian National Museum with Prof Merili Metsvahi and Katrin Alekand who guided one of the tours

<https://www.ocsean.eu/post/ethnobotany-module-august-1-august-5-ocsean-summer-school-tartu-2024-heritage-studies>

Prof Renata Sõukand and Dr Raivo Kalle gave a thorough overview of the principles and rigor of Ethnobotany as a discipline. There were several practical sessions to learn the best practices of fieldwork, research ethics, ways to analyze data, importance of community inclusion and local informants. Participants could practice their skills on the field trip.

OCSEAN SUMMER SCHOOL TARTU 2024 29.06 - 05.08 2024 – ETHNOBOTANY Main Plan



Associate Professor **Renata Sõukand**, Department of Environmental Sciences, Informatics & Statistics, Università Ca' Foscari Venezia



Dr **Raivo Kalle** – Senior Researcher, Estonian Literary Museum, Estonia

WHERE? – Riia St 23, room 217

LUNCHES are on your own for coffee breaks and lunches we will use the space in the 217 and next to it – Atrium is booked the whole week by another conference.

Monday 01.07.24 Introduction

Getting to know each other

What is Ethnobotany?

A brief history of the discipline (from European perspective)

Who are the ethnobotanists?

Who should conduct ethnobotanical studies?

Which journals publish ethnobotanical works?

Ethics in Ethnobotany

GROUP WORK

10:00 – 12:00 Introduction, history of Ethnobotany

12 – 13 LUNCH (on your own) – we'll use the space in the 217 and next to it – Atrium is booked the whole week

13:00 – 14:15 Introduction, What is Ethnobotany

14:15 – 14:30 break

14:30 – 15:30/16:00 Independent Group work

Tuesday 02.07 Methodology I

Methodology Anthropological methods in Ethnobotany

Emic and etic approach

Planning and conducting of fieldwork

Free Listing – pro and cons

Quantitative and qualitative methods

Documentation

Wednesday 03.07 Methodology II

Methodology: Botanical and linguistic methods

Herbarium as the connector between emic and etic

Over- and under-identification

Preparing herbarium specimens

How do you write down a name in an unknown language?

The importance of the name and description of a plant

Thursday 04.07 Practicals

Out of Classroom with practical exercises

Friday 05.07 Data analyses

Data analysis: problems and possibilities, future directions

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 872207.



Other training activities with the Third Country partners

Heritage studies, 2023, Philippines Prof Merili Metsvahi from the University of Tartu had workshops and lectures in Heritage Studies, introduction to folkloristic field work and mapping local challenges in this field

<https://www.ocsean.eu/post/navigating-the-heritage-studies-october-2023-cordillera-of-the-philippines>

Ethnolinguistic lecture series, 2023, Taiwan. Prof George van Driem from the University of Bern gave a series of lectures on the ethnolinguistic landscape of Island Southeast Asia

<https://www.ocsean.eu/post/ethnolinguistic-lecture-series-in-taiwan-october-2023>

Tartu Summer School ended with a local conference to give participants a floor to practice their scientific communication skills.

<https://www.ocsean.eu/post/ocsean-2024-summer-school-tartu-conference-is-approaching-15th-16th-august-2024>

Using R for Data Manipulation and Analyses with R and soft-skills WS for ESR

Davao Medical School Foundation Inc in the Philippines and Udayana University, Indonesia, 2024 October-November, Kertu-Liis Krigul and Natalia Pujol-Gualdo

Workshops on **using documentary film as a medium for research and outreach** were conducted in UNUD and IFSU by UTartu secondee Lodewyk Barkhuizen, in November 2024 – January 2025.

Kertu-Liis Krigul and Natalia Pujol-Gualdo secondments to Davao Medical School Foundation Inc & Udayana University, October-November 2024

How to use R for Data Manipulation and Analyses for ESR
Soft-skills for ESR

#OCSEAN2024 #RAnalysis #R
#PrincipalComponentAnalysis #PCA #Statistics
#DoResearchWithUs at the Center for Research and Development Davao Medical School Foundation, Inc. (DMSF PHILIPPINES)

