PROGRAM & ABSTRACT BOOK

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https://www.czu.cz/

&

Society for Ethnobotany

https://ethnobotany.org/

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WELCOME

Dear colleagues and friends,

It is my pleasure to welcome you to the 2025 annual meeting of the Society for Ethnobotany. We are very grateful to our hosts at the Czech University of Life Sciences and the many others whose hard work made this conference possible. Prague has long been a nexus of ideas and cultures, making it a fitting backdrop for the work we do as ethnobotanists. This meeting offers space for us to reflect on human-plant relationships in all their complexity, with workshops on Sunday, three days of presentations (Monday-Wednesday) topped off by the Distinguished Ethnobotanist lecture and banquet Wednesday, and an exciting (if not inebriating) slate of field trips on Thursday.

In addition to being intellectually stimulating, these meetings are equally important as spaces to reconnect and support one another. Many of us correspond, collaborate, read each other's papers, and otherwise engage throughout the year in a virtual capacity, but I find it so important to have the chance to share a meal, laugh, and build connections, even if for a few days a year. It's always a joy to see familiar faces and reconnect with longtime colleagues. At the same time, I encourage all of us to extend that warmth to those who are new to SEB. Let's make this a welcoming space for everyone to feel included and inspired. This is especially important for students, who often find their footing in the field through the connections and encouragement they receive at their first conference.

Many of us straddle multiple fields and as a result sometimes find ourselves on the fringes of our departments, perhaps not anthropological enough for the die-hard anthropologists or botanical enough for the dyed-in-the-wool botanists. To me, these meetings are a space where we can embrace our expansiveness as a strength and operate from the shared recognition of the value of traditional knowledge.

Whether this is your first time joining SEB or your fifteenth, I hope you'll find inspiration here—and leave with new questions, collaborations, and friendships.

Alex McAlvay

SEB President

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Annual Meeting of the Society for Ethnobotany – SEB 2025

SEB 2025 ORGANIZERS

Society for Ethnobotany

Czech University of Life Sciences Prague

SUPPORTERS

České pole

Prague 6 City District

LOCAL ORGANIZING COMMITTEE

Vendula Ludvíková - Czech University of Life Sciences Prague (co-chair)

Partrick Van Damme – Czech University of Life Sciences Prague (co-chair)

Lucie Grošaftová - Czech University of Life Sciences Prague

Tomáš Kudera - Czech University of Life Sciences Prague

Johana Rondevaldová - Czech University of Life Sciences Prague

Vladimír Verner - Czech University of Life Sciences Prague

LOCAL ORGANIZING TEAM

Kateřina Berková (Czech University of Life Sciences Prague), Barbora Motýlová (Czech University of Life Sciences Prague), Lukáš Pacek (Czech University of Life Sciences Prague)

PROGRAMME COMMITTEE

Partrick Van Damme (Czech University of Life Sciences Prague), Alex McAlvay (New York Botanic Garden) Ladislav Kokoška (Czech University of Life Sciences Prague), Zbyněk Polesný (Czech University of Life Sciences Prague)

SOCIETY FOR ETHNOBOTANY BUSINESS OFFICE SUPPORT

Rob Brandt, Heather Cacanindin, Tricia Jackson, and Amelia Neely

SEB 2025 AWARDS

2025 Distinguished Ethnobotanist Award Winner

Dr. Rajindra Puri is a distinguished Senior Lecturer in Environmental Anthropology and Director of the Centre for Biocultural Diversity at the University of Kent. With an educational background from Middlebury College in Vermont, the University of Hawai'i at Manoa, and the School of Anthropology and Conservation at the University of Kent, Dr. Puri's work focuses on the human ecology of rainforest valleys in Indonesian Borneo. His research meticulously documents traditional ecological knowledge within the Penan Benalui and Kenyah Badang communities, particularly their hunting practices. Additionally, Dr. Puri investigates the causes and consequences of the trade in wild animals and plants, developing innovative theories and methods for applied conservation anthropology.

Dr. Puri is celebrated not only for his research but also for his dedication to teaching. He has mentored numerous Ph.D. and master's students, maintaining a high teaching load while achieving a significant number of publications and citations. His efforts have significantly promoted the discipline of environmental anthropology in Europe, earning him recognition as a distinguished educator and scholar. Through his leadership at the University of Kent, Dr. Puri continues to advance our understanding of biocultural diversity and its critical role in conservation.

Dr. Puri will present the Distinguished Ethnobotanist Lecture at the closing banquet of SEB 2025.

GENERAL INFORMATION

BRIEF GUIDE TO PRAGUE

Looking at the map we can find that Prague really is a focal point; the heart and centre of the continent. However, Prague is not only the geographical heart of Europe, but also a place where for centuries different nations were mixing and different cultures were merging, influencing each other. Those who walk through Prague, walk through the history of Europe and its cultural richness

For more than one thousand and one hundred years, visitors to Prague have been trying to give Prague a suitable name: stone Prague, golden Prague, magic Prague, hundred-spired Prague, Prague, mother of the all cities... each of these names highlights one of its many attractive features.

Hundred-spired Prague – as this name suggests, Prague is the city of architectural treasures. It might be impossible to count all the large and small spires of Prague’s churches, palaces and houses. This city has been developing for more than one thousand years, and over the course of time many memorable buildings have been built. In spite of often having been destroyed over time, Prague has been able to keep its grand architectural legacy. It excels in Romanesque monuments and it is known as a world-renowned work of Gothic city planning. The re-catholicization of the country was accompanied by a remarkable development of the Baroque style. Hundreds of artists, mainly from Italy and Germany, gave Prague its Baroque appearance, which the city has been preserving since that time. The countenance of Prague reflects every cultural period and every artistic style.

The name Magic Prague is known all over the world. Doctor Faust's Prague, Golem's Prague - this name was given to the city after the mythical clay giant symbolizing Jewish magic. Rudolphian Prague - after Emperor Rudolf II, who contributed to its reputation to a great extent. This emperor of alchemists, the admirer of occultism and Maecenas gathered in Prague one of the biggest collections of art of that time.

The remains of this collection, which are still preserved in Prague, are remarkable. However, the emperor left behind something that cannot be taken from the city - the atmosphere of mystery.

THE CZU CAMPUS

The Conference takes place in the campus of Czech University of Life Sciences Prague (CZU). The campus is about 20-minute drive from the city centre. The campus is situated in the northwest suburb of Prague – in the city district Suchdol. It is a quiet garden-suburb with a few small, protected areas near-by. Due to its location, Prague is a very good starting point for field excursions across the whole Bohemia.

The modern campus offers a concentration of all services and facilities in one place. There are six Faculties with classrooms and lecture theatres, two congress halls, students' dormitories, Menza (a student restaurant), restaurants and bars, parking etc. All these facilities are within 10 minutes by foot around the campus. There are 2 hotels in the immediate vicinity of the campus.

ADDRESS
Czech University of Life Sciences Prague (Česká zemědělská univerzita v Praze)
Kamýcká 129, 165 00 Praha 6 Suchdol,
Czech Republic

GEOGRAPHICAL LOCATION
50°7'49"N 14°22'24"E

INFORMATION ABOUT TRANSPORT

The reference point for making your way to the CZU campus is the **Dejvická A** metro station. After you make your way to the **Dejvická** station via any of the methods specified below, take bus number **107** (heading to Suchdol) or **147** (heading to Výhledy) and go to the "**Zemědělská univerzita**" stop. Here you will find the entrance to **CZU**.

Metro
The Prague Metro network consists of 3 lines designated by letters and differentiated in colour. Green colour (Depo Hostivař station - **Dejvická station** – Nemocnice Motol **line A**), yellow colour (Černý most station - Zličín station – line B), red colour (Háje - Letňany station – line C), with transfers possible at Muzeum station (lines A and C), Můstek station (lines A and B), Florenc station (lines B and C). Metro operates daily from 05:00 to 24:00. The time interval between train departures is approximately 2 to 4 minutes during the workday rush hours, and from 5 to 10 minutes during off-peak hours.

To reach the CZU campus, you should travel to **Dejvická station** and then to change to a bus.

Buses
At **Dejvická** take a bus number **107** or **147** and get off at the bus stop **Zemědělská univerzita** or Kamýcká (if you are accommodated in hotel Carl Inn or in hotel Elio Garni). The stop is announced on the bus public address system and you can also read it on the digital display. This journey takes around 10 minutes. Daytime operation is from 04:48 to 00:18 (the last trip).

Night-time service is provided by bus number **909** (Vítězné náměstí bus stop – 00:57; 01:57; 02:57; 03:57;).

Trams
The daytime and night-time operation of trams is similar to bus operation. Night-time operation is from 00:30 to 4:30 and is provided by tram numbers 91 to 99 with traffic intervals 30 minutes from Monday to Friday and 20 minutes on Friday and weekend. Use tram number 91 (Dejvická or Vítězné náměstí stop).

Prague City Transport Fares
Travelling by city transport is possible only with a valid ticket.

Passengers must obtain their tickets before entering the Metro system. The ticket is valid only if marked in the validation appliance. Tickets can be bought in majority of buses and trams (online payment by credit card) at selected Metro stations or in "Dopravni podnik" Information Centres, hotels, at newsstands, travel bureaus, department stores, etc. Single tickets can also be bought from the ticket machines located at Metro stations or near some stops of surface transport. The ticket is possible to buy also from your cell phone. Send SMS message in format DPT31 (valid for 30 minutes) – cost 31 CZK, DPT42 (valid for 90 minutes) – cost 42 CZK, DPT120 (valid for 24 hours) – cost 120 CZK, DPT330 (valid for 3 days) – cost 330 CZK to number 902 06.

Transfer ticket (90 min): 40 CZK
Discounted (seniors from 60 to 70 years): 20 CZK
Transfer ticket (30 min): 30 CZK
Discounted (seniors from 60 to 70 years): 15 CZK
Children 0 to 15 years: free of charge
Seniors from 70 years: free of charge
1 day ticket: 120 CZK/ 60 CZK (discounted)
3 days ticket: 330 CZK/ discounted not provided

Timetables online are available at the webpage: https://idos.idnes.cz/pid/spojeni/

Transport - taxi
You will find taxis in front of hotels (although these are generally more expensive) and at other key locations in the city. You can request a taxi at the reception desk.

Selected Nonstop Taxi Dispatching Offices
AAA Radio Taxi - phone +420 222 333 222, +420 140 14
City taxi - phone +420 257 257 257
Profitaxi – phone +420 261 314 111

Phone app – Uber, Bolt, Liftago
You can also use services of Uber, Bolt or Liftago via the app on your phone. Uber and Bolt can be driven by a driver without taxi licences, so they are much cheaper than Liftago. The price for one kilometre varies between 10 – 30 CZK.

Transport to the hotels
CZU Campus Hotel: Take the bus (Suchdol direction), by bus **107 or 147, Zemědělská univerzita** stop
CZU Dormitories: Take the bus (Suchdol direction), by bus **107 or 147, Zemědělská univerzita** stop
Hotel Elio Garni: Take the bus (Suchdol direction), by bus **107 or 147, Kamýcká** stop
Hotel Carl-Inn: Take the bus (Suchdol direction), by bus **107 or 147, Kamýcká** stop

Parking at CZU campus
The CZU campus has hundreds of parking spots available to those who make their way to CZU via car. To get past the barriers, you need to ring the CZU security and say that you are a participant of the SEB 2025. We recommend large car park P1 to the left of the main entrance to the campus, which is immediately next to the dormitories.

PRACTICAL INFORMATION

Telephone
Country code: +420

Important telephone numbers:

Emergency **112**
Ambulance **155**
Police **158**
Fire Service **150**
Municipal police **156**
Emergency road service **1230, 1240**
General information **12 444**

Medical care service
Contact the Registration desk if you need a pharmacy or if you have a non-emergency health problem. You can reach a 24-hour pharmacy at Prague 6 – Vítězné náměstí 13 (Dr. Max), +420 225 574 363 (10 minutes by bus from campus – Dejvická station – bus numbers 107, 147 in direction from the University campus).
During the workdays there is also a pharmacy, practitioner and dentist available nearby the Campus (contact the Registration desk for further information).

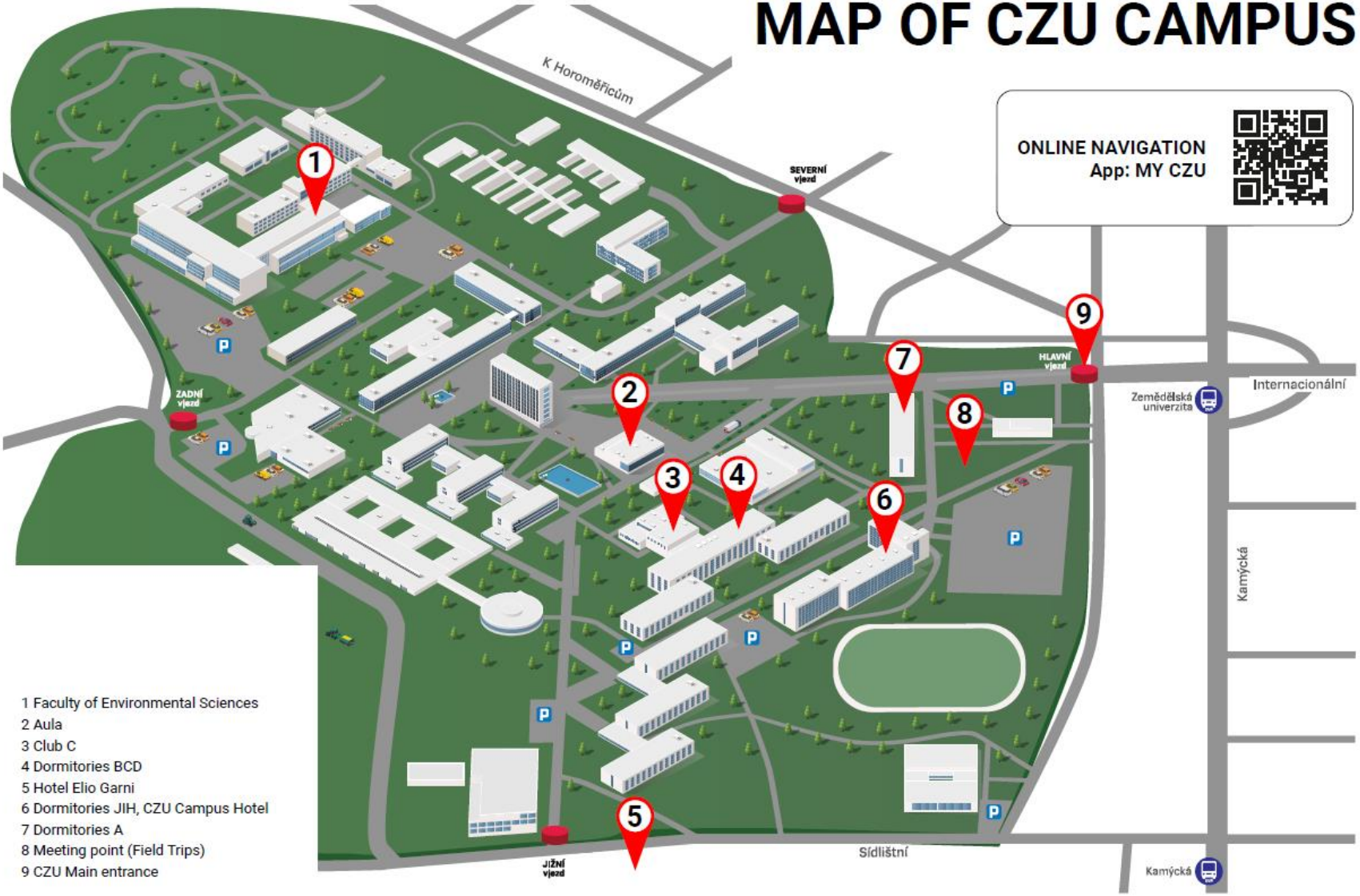
Bank and currency exchange
The currency is the Czech crown (Kč / CZK). Banknotes are in denominations of CZK 5000, 2000, 1000, 500, 200 and 100. Coins are in denominations of CZK 50, 20, 10, 5, 2 and 1.

Delegates may change foreign currency in CZU campus (Library building; open hours 8:00 – 12:00 and 13:00 -15:00) or at the airport upon arrival to Prague or at the city centre, also at many exchange bureaus, railway stations or in most of the hotels. International credit cards are currently accepted for payment in most places (hotels, restaurants and shops). Credit and debit cards can be used withdraw money from ATMs.

ATM machines
There are 2 ATMs situated in the Campus and many other downtown. Both are situated in the students' dining hall (Menza building).

Insurance
The organisers of the Conference recommend the participants to arrange their own insurance for health, travel and property. The organisers will not accept any liability for personal injury or for loss of, or damage to, property.

MAP OF CZU CAMPUS



CONFERENCE INFORMATION

Registration desk

Registration will be possible in AULA Building before the start of the conference:

Sunday, June 08 14:00 – 21:00

The Conference bureau/registration desk (*MCEV I building, room Z 115*) will be open as follows:

Monday, June 09 8:15 – 18:00
Tuesday, June 10 8:30 – 18:00
Wednesday, June 11 8:00 – 18:00

A cashier service is available at registration desk for onsite registrations, payments and/or purchase of social events and tour tickets. Please note that only a limited number of tickets for additional events may be available.

CONFERENCE VENUE

All science events will be held in the Campus of Czech University of Life Sciences Prague, Kamýcká 129, Prague 6 – Suchdol. Most of the programme will be situated in the Faculty of Environmental Sciences building (MCEV I) – parallel sessions, posters, workshops, exhibition, coffee breaks and lunches. The Welcome Ceremony and plenary session on Monday will be held in AULA building.

Parallel sessions
All oral presentations will be held in the lecture rooms of the Faculty of Environmental Sciences building (MCEV I) Z I, Z II according to the daily schedule.

PRESENTATION UPLOAD – Speakers
To ensure smooth running of the conference, please upload your PowerPoint or PDF presentation ahead of time using the link below:
SEB 2025 oral presentations

Instructions:

Accepted formats: .ppt, .pptx, or .pdf
Name your file as: LastName_Date of Presentation
Please make sure all media (videos, animations, fonts) are embedded or included.
Deadline: at the latest, the day before your scheduled talk.

Uploading your presentation in advance helps avoid technical issues and delays during the sessions.
If you encounter any issues or need to update your file later, feel free to contact us at registration desk.
Thank you!

POSTERS
The poster session will be located in the hall of the Faculty of Environmental Sciences building. Stands for posters are marked with numbers which will be available on the conference website and in the Program book below (Chapter List of posters). Organising staff will help you there if requested.

The stands for posters will be available from Monday 08:30 to Wednesday 18:00.

If you'd prefer not to travel with your poster by plane or train, we offer the option of local printing with pickup at the registration desk. To submit your poster for printing, please upload your PDF file using this link: POSTERS

Important instructions:

- Your file must be in PDF format, ideally sized A0 or A1.
- Name your file clearly: LastName_FirstName_Poster.pdf
- Only one file per upload.

Standard printing (3–5 business days): $33 Express printing (within 24 hours): $45

MESSAGE BOARD

A message board is located at the Registration desk. Please feel free to post messages, flyers, job openings, etc. That may be interesting for other meeting participants.

PHOTO CORNER

You can also take a photo in our photo corner as a memory for the SEB 2025. The photo corner is located in the main venue hall in the rest area.

CLOAKROOM

A cloakroom with the possibility of storing small luggage (lockable lockers) is available in AULA building during the Opening Ceremony and Welcome Reception on Sunday evening and at the registration desk for the rest of the conference.

INTERNET ACCESS

Free Wi-Fi connection will be provided for all SEB 2025 participants. The square at the Campus and AULA, MCEV I and FTZ building are equipped with wireless internet.

Internet Access Instructions

To connect to the internet, first connect to the wireless network named (SSID) CZU-guest.
Once connected, open your internet browser. When you try to load any website, a welcome (login) page will automatically appear. On this page, enter the following username and password:

Network name (SSID): CZU-guest
User name: SEB2025
Password: seb2025

DRESS CODE

Welcome Reception	business casual
BBQ	comfortable clothes and shoes
Dinner on the Boat	casual
Field Trips	comfortable clothes and shoes
Other	casual

DELEGATE IDENTIFICATION
Admission to the scientific sessions and other events is permitted only to those wearing the official Conference badge.
Individuals who lose their badge will be required to pay a fee to obtain a replacement badge (300 CZK).

BADGE COLOUR CODE

Organising staff	orange
Participant	green
Accompanying person	blue

A number of helpers (organising staff) will be available at all times and will be happy to assist with participant´s queries. Helpers can be identified by their **orange staff T-shirt**.

MEALS

All refreshments will be served on porcelain and glass in accordance with the ecofriendly principles of a sustainable Annual Meeting. There will always be a choice of meals for delegates without special dietary requirements, for vegans, vegetarians and for delegates with special dietary requirements (gluten free, lactose free).

Coffee during the breaks
In the morning and also in the afternoon, coffee and small refreshments will be served for SEB 2025 participants at the area of sessions will be held in the hall of MCEV I.

Coffee breaks include coffee or tea, mineral water and **one piece** of a sweet desert **or** one piece of breadstuff **or** fruit.

NOTE: Please do not take dishes out of the building or bring them into the lecture rooms!

Lunches

Buffet lunches will be served for SEB 2025 participants at the area of sessions in the hall of MCEV I on Monday, Tuesday and Wednesday.

Restaurants and other places to eat in/close to the CZU campus:

- Bistro u Ledňáčka - offers breakfasts, snacks and drinks (MCEV building in CZU campus)
- Aula Café – offers small snacks and drinks (in CZU campus)
- Club C – offers dishes and drinks (in CZU campus)
- Na farmě - offers typical Czech dishes from local products, soups, meat and pizza (in CZU campus)
- Hotel Carl Inn – offers typical Czech lunches, soups, meat and pasta.
- Crêperie Café Girafe – it has a Mediterranean style, offers pancakes in many ways, pasta and salads, etc.

SOCIALS EVENTS

Opening Ceremony and Welcome Reception

Time and date: 17:00 - 21:00 on Sunday 8th June 2025
Price: Included in the registration fee for participants and registered accompanying persons.
Transfer: no transfer will be provided - the event is held in the CZU campus.

The opening ceremony will be held in AULA building. The welcome cocktail and light buffet will be served there. You will have a chance to make friends and renewal, acquaintances and join fellow delegates.

Unformal Evening in the Campus Pub Na farmě

Time and date: 19:00 – 23:00 on Monday 9th June 2025
Location: Na farmě pub, CZU campus
Transfer: no transfer will be provided - the event is held in the CZU campus.
Price: individually, at own expense

Dinner on the boat

Time and date: 19:00 – 22:00 on Tuesday 10th June 2025
Location: Vltava river (Prague City Centre)
Meeting point: Parking Dormitory A 19:00, Dejvická metro station (final bus stop from Suchdol) 19:15
Transfer: by public transport, volunteers will take you there
Price: 65 USD

Our volunteers will take you from the "Dormitory A Meeting point" by public transport to the Vltava River where an air-conditioned pleasure boat awaits you. You will receive a welcome aperitif, while a hot and cold buffet with a wide choice of dishes will be available. Accompanied by traditional Old Prague accordionist, you will be taken on a two-hour cruise along the Vltava, offering fantastic views of the river, lined by well-lit historic monuments such as Rudolfinum, Charles Bridge, majestic Prague Castle and more.

BBQ party

Time and date: 19:00 – 22:00 on Wednesday 11th June 2025
Location: CZU campus, MCEV I
Price: 50 USD for professionals and accompanying persons
30 USD for students

Participants are welcome to an open-air party in front of the MCEV I building (in case of rainy weather inside). The evening will be followed by live music. The BBQ will be held in ethno style. We will grill sausages, pull potatoes from the ashes, taste buckwheat and traditional cabbage and pork traditional Czech dumplings and much more like grilled meat and grilled vegetable, fresh salads, fruits. And of course, Czech beer and university wine will be served.

FIELD TRIPS

Two field trips will be organized on **Thursday 12th June**.

Field trip 1: Žatec

Meeting point: 12:30, Parking Dormitory A

Afternoon visit to the town of Žatec, where the hop museum is located.

The excursion includes a visit to the unique Renaissance building which houses the Malt house gallery presenting the history of malt production and also to the Hop & Beer Temple, a former warehouse, where you can take a guided tour through a labyrinth, where you will wander among the hop bales.

At the end of the excursion there is a tasting in the restaurant "U Orloje", the so-called tasting board including 4 types of beer, each 1.5 dcl.

https://www.chchp.cz/en/

Field trip 3: Museum of Slivovitz

Meeting point: 13:15, Dejvická metro station (final bus stop from Suchdol, Exit E7, map)

Afternoon visit to the Slivovitz Museum located in historic centre of Prague.
The tour consists of four main parts, with a 5D virtual reality show in the third part.
During the guide guests can learn about the rich history of Rudolf Jelinek, see an interesting projection and also experience the aforementioned exclusive 5D show with virtual reality.
Subsequently, there will be a tasting of the slivovitz (non-alcoholic version with plum lemonade is possible).

https://slivovitzmuseum.com/

SCIENTIFIC PROGRAM SCHEDULE

List of sessions

Topic	Date	Time	Room
African Ethnobotany	09 June	14:00-16:00	ZII
Agrobiodiversity & food security 1	09 June	11:30-13:00	ZII
Agrobiodiversity & food security 2	11 June	14:00-16:00	ZII
Biocultural Stewardship 1	09 June	16:30-18:00	ZI
Biocultural Stewardship 2: Forests and Trees	10 June	14:00-15:30	ZI
Economic botany & Equitable Commercialization	09 June	16:30-18:00	ZII
Ethnocuisines	11 June	9:00-11:00	ZI
European Ethnobotany	11 June	14:00-16:00	ZI
Global Research Initiative Mapping Edible Biodiversity of Indigenous and Underutilized Foods to Support Human and Planetary Health: Lightening talk by Good Food Fellows	09 June	14:00-16:00	ZII
Historical Ecology	11 June	11:00-13:00	ZII
History and Theory in Ethnobotany	10 June	14:00-15:30	ZII
Island Ethnobotany	09 June	14:00-16:00	ZI
New approaches to in research and dissemination of ethnobotanical knowledge	11 June	9:00-11:00	ZII
Traditional Medicine and Ethnopharmacology 1	09 June	11:30-13:00	ZI
Traditional Medicine and Ethnopharmacology 2	11 June	11:00-13:00	ZI
Urban Ethnobotany	09 June	14:00-16:00	ZI

QUICK PROGRAM OVERVIEW

Sunday 8 June	Monday 9 June	Tuesday 10 June	Wednesday 11 June	Thursday 12 June
	9.00-11:00 Key note/ Plenary session 11.00-11:30 coffee break 11.30-13.00 1st Session – lectures	9.00-13.00 Teaching Tuesday Workshops	9.00-10:30 5th Session – lectures 10.30-11.00 coffee break 11.00-13.00 6th Session – lectures	Free morning for networking
	13.00-14.00 Lunch	13.00-14.00 Lunch	13.00-14.00 Lunch	
14:00 – 17:00 Registration	14.00-16.00 2nd Session – lectures 16.00-16.30 coffee break 16.30-18.00 3rd Session – lectures	14.00-15.30 4th Session – lectures 15.30-16.00 coffee break 16.00-18.00 Poster Session	14.00-16.00 7th Session - lectures 16.00-16.30 coffee break 16.30-18.00 SEB Members Business Meeting	12.00-20.00 various excursions
17:00 – 21:00 Welcome ceremony & Welcome Cocktail Reception	19:00 - Unformal Evening in the Campus Pub Na Farmě & Student Social Offsite	20:00 – 22:00 Dinner on the boat	19:00 – 22:00 BBQ party	

DETAILED SCIENTIFIC PROGRAM

June 09th 2025, Monday

9:00 – 11:00	**Plenary talks**	Room: **AULA**
9:00-9:20	Building The Periodic Table of Food Initiative: The world's most comprehensive, standardized database on food composition **John de la Parra**	
9:20-9:40	From Plant to Patient: A Historical Perspective and Review of Selected Medicinal Plants in Dermatology **Cassandra Quave**	
9:40-10:00	Quo vadis Ethnobotany? From "traditional" research to "modern" studies **Rainer Bussmann**	
10:00-10:30	Chili peppers (Capsicum spp. as the soul of multiethnic Mexico): Learning from reciprocity to build a committed and collaborative ethnobotany **Araceli Aguilar- Mid-Career Award**	
10:30-11:00	Development of traditional fiber-based livelihood enterprise to the village communities in Indian Himalayan region **Munesh Kumar - Mid-Career Award**	

11:30-13:00	**1a. Traditional Medicine and Ethnopharmacology 1**	Room: **ZI**
11:30-11:45	Ghost pipe then and now: the influence of digital media on the medicinal use of *Monotropa uniflora* in the U.S **Savannah Grace Anez**	
11:45-12:00	Ethnobotanical Insights into Medicinal and Food Uses of Lamiaceae in the Mediterranean Region: A Systematic Review and Meta-Analysis **Fuencisla Cáceres**	
12:00-12:15	A systematic review on medicinal plants used for treating psychotic disorder in Nigeria **Lawal Ibraheem Oduola**	
12:15-12:30	Rau M´ and Oncology: Exploring Madecassic Acid as a Bridge Between Tradition and Therapy **Cutler Cannon**	
12:30-12:45	Ethnobotanical and ethnopharmcological researches on medicinal plants with anti-osteoprotic function **Luping Qin**	

11:30-13:00	**1b. Agrobiodiversity & food security 1**	Room: **ZII**
11:30-11:45	Enset ethnobotany in the Ethiopian Highlands; varietal diversity, uses, cultivation and changes in living memory **Philippa Ryan**	

11:45-12:00 Ethnobotany of Sorghum Variety Mixtures: Traditional Knowledge, Agroecological Resilience, and Food Security
Alex C McAlvay

12:00-12:15 Genomic analysis reveals local adaptation and vulnerability to climate change of the African orphan crop finger millet (*Eleusine coracana*)
Margaretha Antonia Veltman

12:15-12:30 Bridging Farmer Knowledge, Research and Policy: The Case of Grain Mixtures in Ethiopian Agriculture
Morgan L. Ruelle

12:30-12:45 Traditional Plant Knowledge: Beacons of hope during climate change storms among pastoralist communities in the Karamoja region, northeast Uganda
Emiel De Meyer

12:45:13:00 Traditional use of medicinal and wild edible plants in Goro district, Ethiopia: implications for the rural health care system and food security
Moa Megersa Guta

14:00-16:00 2a. Part 1. Urban Ethnobotany | Part 2. Island Ethnobotany Room: **ZI**

14:00-14:15 Plants and People of Vanuatu Program. Part 1. Biocultural Studies
Michael J. Balick

14:15-14:30 Plants and People of Vanuatu Program. Part 2. Kastom Forest Conservation
Gregory M. Plunkett

14:30-14:45 124 Years of Pacific Ethnobotanical and Biocultural Research at The New York Botanical Garden
Matthew Pace

14:45-15:00 An island within an island: Ethnobotany of Alguer (Sardinia)
Joan Vallès

15:00-15:15 Characterization of Local Botanical Knowledge in Indo-Pakistani and Bangladeshi Immigrant Shops in Santa Coloma de Gramenet, Barcelona: An Urban Ethnobotany study
Jeremias Pedro Puentes

15:15-15:30 The invisible tropical tuber crop: edible aroids (Araceae) sold as 'tajer' in the Netherlands
Qiong Fang

15:30-15:45 Medicinal plant use in a context of coloniality: perspectives from the Congolese community in Belgium
Emiel De Meyer

15:45-16:00 Characterization of Kavalactones in 13 varieties of Kava using High Performance Liquid Chromatography coupled to Tandem Spectrometry
Jeremaia Koroijiuta

14:00-16:00 2b. Part 1: Global Research Initiative Mapping Edible Biodiversity of Indigenous and Underutilized Foods to Support Human and Planetary Health: Lightening talk by Good Food Fellows | Part 2: African Ethnobotany Room: **ZII**

14:00-14:15 Global Resarch Initiative Mapping Edible Biodiversity of Indigenous and Underutilized Foods to Support Human and Planetary Health: Lightening talks by Good Food Fellows
Kevin Cody

14:15-14:45 **Lightening talks by Good Food Fellows**

14:45-15:00 The most ancient forms of medicinal plant use can still be witnessed in southern Africa
Ben-Erik van Wyk

15:00-15:15 Medicinal ethnobotany of the Lobedu culture in the Modjadji area, Limpopo Province, South Africa
Lawrence Mataha

15:15-15:30 A vanishing legacy: Reviewing the fragile medicinal ethnobotany of Eastern Pondoland, South Africa
Sibulele Patricia Fili

15:30-15:45 Why biocultural diversity in Zambia deserves attention of ethnobiological research?
Zbynek Polesny

15:45-16:00 Leveraging the Role of Underutilized Wild Plant (*Urtica simensis*) in Sustainable Food Systems: Nutritional Quality Evaluation, Innovative Product Development, and Popularization
Tadesse Gebregiyorgis

16:30-18:00 **3a. Biocultural Stewardship 1** Room: **ZI**
10-minute sessions with a 30-minute discussion until 18:00

16:30-16:40 Declining use of totora (*Schoenoplectus californicus* subsp *tatora*) in Lake Titicaca
Daniel Villar

16:40-16:50 Developing a First Foods monitoring program to support biocultural conservation and tribal sovereignty in the interior Pacific Northwest, USA
Bryan A Endress

16:50-17:00 Role of biocultural and ethnobotanical knowledge in transforming rangeland science, management and governance
Maren Peterson

17:00-17:10 Ethnoecological research on cultural keystone species in cross-border telecoupled systems
Christine van der Stege

17:10-17:20 Stewardship practices in wild plant and mushroom foraging
Christoph Schunko

17:20-17:30 Stewardship practices enhance Nature's contributions to people
Giulia Mattalia

16:30-18:00 **3b. Economic botany & equitable commercialization** Room: **ZII**

16:30-16:45 A Quantitative Ethnobotanical Study of the Mangroves Used by the Locals of Del Carmen, Siargao Island, Philippines
Cecilia B. Moran

16:45-17:00	Why has maize become popular in Africa? A case study of mountain farmers in Ethiopia Forgotten plants: valorization of forest foods for sustainable land management **Takeshi Fujimoto**	
17:00-17:15	Forgotten plants: valorization of forest foods for sustainable land management **Judit Català Altés**	
17:15-17:30	The Biocultural Diaspora of Tea in the 21st Century: Cultivation in the UK and the USA **Aurora Prehn**	
17:30-17:45	Edible flowers: The distinction between food and decorative uses **Erika Oberholzer**	
17:45-18:00	Leveraging the Role of Underutilized Wild Plant (*Urtica simensis*) in Sustainable Food Systems: Nutritional Quality Evaluation, Innovative Product Development, and Popularization **Tadesse Gebregiyorgis**	

June 10th 2025, Tuesday

9:00 – 13:00	**Teaching Tuesday Workshops**	
9:00-10:00	Shifting Ground, shifting plants: An In-Place Diaspora Methods Bazaar Workshop Leaders: **Jeffrey Wall and Lore Van Praag**	Room: **204 Herbarium FTZ**
9:00-12:00	Wild Edible Plants of Prague Workshop Leaders: **Łukasz Łuczaj**	Room: **Z 115**
9:00-12:00	25th Annual Biocultural Collections Meeting Workshop Leaders: **Jan Salick** Meeting point Dormitories A 9:00 and 9:20 Dejvická metro station (final bus stop from Suchdol, Exit E7, map)	See ← for meeting point
10:00-12:00	Eye to Plant: The Use of Drawing in Ethnobotany Workshop Leaders: **Lindsay Sekulowicz**	Room: **204 Herbarium FTZ**
11:00-12:00	Exploring Ethnobotany through Creative Technologies Workshop Leaders: **Laura (Lori) Bystrom**	Room: **Z 120**
12:00-13:00	Virtual Reality Simulation of Field Ethnobotanical Research Workshop Leaders: **Tomáš Kudera**	Room: **Z 120**
14:00-16:00	**4a. Biocultural Stewardship 2: Forests and Trees**	Room: **ZI**
14:00-14:15	Forest farming in the USA: supporting cultural revitalization and sustainable livelihoods through an agroforestry practice **Karam Sheban**	
14:15-14:30	Agroforestry, livelihoods, and knowledge: the dynamic role of chagras in a shifting socioecological landscape **Aoife Kate Pitts**	

14:30-14:45 Between Harvest and Care: Environmental Identities and Timber Knowledge in the Colombian Pacific
Ana Maria Garrido Corredor

14:45-15:00 Traditional Management of Wild Soil-enhancing Leguminous Shrubs in Milpa System by Wixárika Communities
Marco Zanghi

15:00-15:15 Sustainable use of trees and shrubs as building materials and fuel in the Shaqadud area: evidence of resilience of arid communities in central Sudan
Ikram Mohammed

15:15-15:30 Assessment of Tree Species Diversity and Composition in Forestry Research Institute of Nigeria Herbal Garden, Ibadan, Oyo State
Ibraheem Oduola Lawal

14:00-16:00 **4b. History and Theory in Ethnobotany** Room: **ZII**

14:00-14:15 Czech contributions to 19th century Mexican ethnobotany – Benedikt Roezl
Robert Bye

14:15-14:30 Hot and cold in the New World
Heike Vibrans

14:30-14:45 Etymology of latin plant names: a new approach
Michel Chauvet

14:45-15:00 Myths of the pristine - from "natural" vegetation to "ancestral" knowledge of edible plants
Rainer Bussmann

15:00-15:15 Starch in the foodways of late precolonial Florida: Identification and interpretation in an under-studied area
Neil Duncan

16:00-18:00 **Poster Session** **Poster Area**

June 11th 2025, Wednesday

9:00-10:30 **5a. Ethnocuisines** Room: **ZI**

9:00-9:15 Andorran Ethnomycology: Culinary Uses
Canolich Alvarez Puig

9:15-9:30 Ethnobotanical foods with biocultural relevance, including rituals associated to them, in the Berguedà district (Catalonia, Iberian Peninsula
Maria Orriols Vernet

9:30-9:45 Maize in the Brazilian Amazon
Esther Katz

9:45-10:00 Gastronomic heritage and the invisible diversity of chili peppers in Mexican cookbooks and digital media
Araceli Aguilar-Meléndez

10:00-10:15 African Cereal-Based Beers: Nutrition, Culture, and the Future
Toni Johnson

10:15-10:30 Chili peppers of the American continent: selection, uses, cultural practices
Esther Katz

9:00-10:30 5b. New approaches to in research and dissemination of ethnobotanical knowledge Room: **ZII**

9:00-9:15 Botanical Ethnoknowledge Index: A New Quantitative Assessment Method for Cross-Cultural Analysis
Naji Sulaiman

9:15-9:30 Universal Access to the knowledge of Morelos herbalism, Mexico
Gimena Pérez Ortega

9:30-9:45 Amazonian Smellscapes: The Healing Forest sensed by Indigenous People
Kimberly Castro

9:45-10:00 Designing Health: Historical and Ecological Perspectives on Plant-Based Biomaterials for Healthcare Innovation
Julien Antih

10:00-10:15 The plant awareness construct: an inter-disciplinary approach to explore human-plant relationships
Benno Dünser

10:15-10:30 Digitizing Biocultural Collections and Community Engagement at the New York Botanical Garden
Kenneth R. Otero Walker

11:00-13:00 6a. Traditional Medicine and Ethnopharmacology Room: **ZI**

11:00-11:15 An inventory of medicinal plants in sub-Saharan Africa
Sibonelo Glenton Mbanjwa

11:15-11:30 Selection of usnic acid-containing medicinal lichens is phylogenetically clustered in relation to enantiomer composition
Maonian Xu

11:30-11:45 Ethnobotanical Study in the Purépecha Culture in Municipality of Chilchota, Michoacán, Mexico
Eduardo Alberto Lara Reimers

11:45-12:00 Investigating the *in vitro* anticancer potential and phytochemical constituents of *Cheilanthes hirta* Swartz. extracts
Lisa Valencia Buwa-Komoreng

12:00-12:15 Medicinal Plants Used by the Cubeo in Folk Medicine in the Colombian Amazon
Juan Carlos Copete Maturana

12:15-12:30 Rediscovering *Diosma hirsuta*: Insights into the Original Cape '*Buchu*'
Ryan David Rattray

11:00-13:00 6b. Historical Ecology Room: **ZII**

11:00-11:15 Integrating Ethnobotany and Historical Ecology: A Holistic Approach to Stewardship Histories in Mowachaht-Muchalaht (Nuu-chah-nulth) Hahoulthi, Canada
Chelsey Geralda Armstrong

11:15-11:30 təmtəmíxʷtən – A sə̓lilwətaɬ History of Connection and Reclamation
Ginevra Toniello

11:30-11:45 Cedar Management of the Tluwis7ath: Forest Ethnoecology of Nootka Sound, Vancouver Island, Canada
Jacob Earnshaw

11:45-12:00 Conquest ecologies in comparative perspective: plant and animal bioprospecting under the Amazonian "drogas do sertão" and maritime fur trades
Matthew Abel

12:00-12:15 Cultural development has narrowed the range of tree utilization in reference to Wakasa area, Japan
Junko Kitagawa

12:15-12:30 Ancient Maroon rice songs suggest secret rice cultivation during slavery in Suriname
Tinde van Andel

12:30-12:45 Reconstructing the introduction of African *Sorghum* into the Caribbean through herbarium genomics
Margaretha Antonia Veltman

14:00-16:00 7a. European Ethnobotany Room: **ZI**

14:00-14:15 Saint John's bouquets: species composition and protection against evil in the southern Netherlands
Isabela Pombo Geertsma

14:15-14:30 The citizen science and ethnomycology of *Aureoboletus projectellus* - is a new invasive mushroom species adopted and spread by mycophilous fungi gatherers in Poland?
Łukasz Łuczaj

14:30-14:45 Wormwood (*Artemisia absinthium* L.) in Switzerland, a clandestine history
Blaise Pascal Mulhauser

14:45-15:00 The Knowledge and Perceptions of Recreational Anglers Related to Alien Plant Species in Freshwater Ecosystems: A Case Study From Hungary
Viktor Löki

15:00-15:15 The Evolution of modern foraging in Slovenia: Educators, Social Media, and Conservation
Živa Fišer

15:15-15:30 Functional and Biological Diversity of Wild Edible Plants in Italy: Advances from the FuD WE PIC Project
Emanuele Genduso

15:30-15:45 Records of rare and interesting edible uses of some plant and fungi species in Continental Croatia
Ivana Vitasović-Kosić

15:45-16:00 The development of farmers' home gardens and plant use in Lienz (Austria) over the recent century
Christian R. Vogl

14:00-16:00 **7b. Agrobiodiversity & food security 2** Room: **ZII**

14:00-14:15 The role of NUS (Neglected and Underutilized Species) plants in local agrobiodiversity and food in the Region Rioplatense of Argentina
Jeremias Pedro Puentes

14:15-14:30 Diversity and Ethnobotany of Cultivated Plants around the World
Chunlin Long

14:30-14:45 Leveraging Food Composition Data for Human and Planetary Health Solutions
John de la Parra

14:45-15:00 Evaluating the Nutritional Composition of Moringa Stenopetala Collected from Southern Ethiopia to Support Sustainable Product Development
Teshome Assefa Gebeyehu

15:00-15:15 Navigating Indigenous food research: an Australian perspective
Melita Low

15:15-15:30 Campesinos, Yams, and Remanent Gardens: Entangled Tactics in Mampuján Agroforest Landscapes
Ana Maria Garrido Corredor

15:30-15:45 Cultural, ecological, and political factors underlying differences in wild edible plant use between rural Lango and Acholi communities in Northern Uganda
Emiel De Meyer

16:30-18:00 **8. SEB Members Business Meeting** (all SEB members welcome!) Room: **ZI**

19:00-22:00 **Distinguished Ethnobotanist Special Lecture and Banquet** **MCEV I**

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Presenter: **Laura Bystrom**

3 Advances in Ethnobotany of the Catalan Linguistic Area: Ongoing Research and Future Prospects
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4 From tradition to genomics: an interdisciplinary approach to identify *Capsicum chinense* Jacq. cultivars in mainland Guadeloupe
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8 Honokiol Confers Neuroprotection Against Ischemic Stroke Through Regulation of Glutamate Signaling
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9 Multidirectional cultural influence revealed in folk-traditional use of non-native plants in the UK
Presenter: **Tara Henderson**

10 Snakebite treatment in the context of Cashinahua traditional medicine in the Purus province of the Peruvian Amazon
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11 The mechanism of Shudihuang-Shanzhuyu herb pair in prevention and treatment of diabetic osteoporosis via PI3K/AKT pathway
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12 The prevalence of the traditional herbal medicine use among hospital patients in southwest Kenya
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13 Pharmacological properties of *Platycarpha glomerata* extracts-(Thunb.) Less – a plant used to treat and manage elephantiasis
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Presenter: **Maite Lascurain-Rangel**

15 Connecting the biocultural heritage framework to paleoecological methods for studying landscape management in pre-Columbian Costa Rica
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16 Urban Ethnobotany: Wild Plant Diversity in Traditional Markets of Jakarta Metropolitan Area, Indonesia
Presenter: **Afni Atika Marpaung**

17 Global Policy Development for the Conservation, Use and Exchange of Wild Food Plants by Indigenous Peoples and Local Communities
Presenter: **Madeline Medrano**

18 Exploring Indigenous Knowledge and in vitro regeneration protocol for the Conservation of *Hypoxis schimperi*
Presenter: **Silvia Christopher Mganga**

19 Diversity and Economic Value of Dye Plants in Thailand: A Case Study of Community Enterprises
Presenter: **Nooduan Muangsan**

20 Wild edible mushrooms and ways of cooking them in the Republic of Congo
Presenter: **Sydney Thony Ndolo Ebika**

21 A fifteen-year study of *Tilia americana* L. var. *mexicana* (Schltdl.) for the treatment of the Central Nervous System
Presenter: **Gimena Pérez Ortega**

22 Local English herbalism: diachronic change
Presenter: **Lucy Reed**

23 Spatial ethnobotany: mapping wild food foraging locations to facilitate human-plant interactions in cities
Presenter: **Christoph Schunko**

24 Botany education researchers and ethnobotanists are logical allies to foster human-plant interrelationships
Presenter: **Christoph Schunko**

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Presenter: **Naji Sulaiman**

30 Market survey of most local medicinal species in major cities of Colombian Andes
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32 The ethnobotany of homegardens at tropical and sub-tropical sites studied by BOKU University
Presenter: **Christian R. Vogl**

33 More than twenty-five years of ethnobotanical research in homegardens in Eastern Tyrol (Lienz), Austria
Presenter: **Christian R. Vogl**

34 Traditional knowledge for maintaining the health of pets and livestock – ethnoveterinary studies from German-speaking countries
Presenter: **Christian R. Vogl**

35 Untargeted metabolomics predicts the medicinal plant genotype with higher pharmaceutical potential: an example of Icelandic *Huperzia species* (Lycopodiaceae)
Presenter: **Maonian Xu**

36 Polysaccharides from Fermented *Cordyceps sinensis* Attenuates Hypercholesterolemia via Modulation of Gut Microbiota and Bile Acid Metabolism
Presenter: **Lumeng Yao**

37 Gathering and Consumption of Semi-Domesticated Plants in Tanzania: with Special References to *Ceratotheca sesamoides*
Presenter: **Haruna Yatsuka**

38 Mechanisms and motivations of medicinal plant use against dysmenorrhea
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Last updated 5-29-25

2025 SEB Annual Meeting Abstracts

Posters | Oral Presentations

Posters

In alphabetical order by presenter last name

ID: 15 Poster **Leveraging Role of Underutilized Foods towards Sustainable Food system in Ethiopia: The Case of Anchote (***Coccinia abyssinica)*
All Authors: Esayas Abrha esayasabrha@ymail.com, Alganesh Tola alguto1999@gmail.com, Paulos Getachew p_getachew@yahoo.com, Endale Amare endale.amarek@gmail.com
Presenter: Esayas Abrha
Institution: EIAR

The study will explore the nutritional potential of underutilized foods (UFs) in enhancing food security and sustainability. Ethiopia being the second most populous country in Africa and having a huge biodiversity of crops faces a recurring food deficit, leading to stunted, underweight and wasted children. Underutilized plants can mitigate food and nutrition insecurity by providing vitamins, minerals, dietary fibers, and bioactive compounds. Despite their nutritional value, UFs are often overlooked due to social taboos, labor-intensive processing, environmental factors, and traditional management methods. By incorporating a variety of UFs into agriculture and food systems, the country can reduce hidden hunger, promote food diversity, and contribute to environmental sustainability. The study will focus on UFs like: Anchote by evaluating their nutritional composition, and sensory quality, Inclusion of Anchote could promoted diversified diets, support sustainable food systems, and empower local communities. In conclusion, underutilized plants (Anchote) can mitigate food and nutrition insecurity Hence, this research could provide valuable insights for policymakers, food-producers, and consumers to leverage the potential of UFs (Anchote) in creating a more sustainable and equitable future of food. **Key words:** UFs, Food-Security, bioactive-compounds Anchote, food system

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ID: 72 Poster **Exploring ethnobotany and phytochemistry through creative technologies: A case study with the Vaccinium Berry Collective**
All Authors: T'uy't'tanat -Cease Wyss ceasefire66@gmail.com, Joolz Thornton joolzthornton@gmail.com, Laura Bystrom l.bystrom@bathspa.ac.uk
Presenter: Laura Bystrom
Institution: Bath Spa University

As younger generations adopt modern lifestyles and new technologies, traditional botanical knowledge (TBK) is often lost. Creative technologies, such as VR/AR and other immersive experiences can capture the attention of a range of audiences and engage them in topics about TBK, as well as conservation, climate action and phytochemistry. Our project entitled "the Vaccinium Berry Collective" consists of an interdisciplinary team, which includes an indigenous artist/activist and matriarch of the Skwxwu7mesh, Sto:lo people; a creative technology technician and a nutritional scientist/phytochemist. The overall aim of this collective is to develop immersive experiences that can encourage preservation of TBK of Vaccinium spp. by demonstrating their uses, preparation methods, chemistry and their impact on people and the environment. Our first project involved presenting a lecture and a VR experience that showcased the ethnobotanical uses and chemistry of red huckleberries (*Vaccinium parvifolium*) to Environmental Humanities Master's students from the University of Parma and Bath Spa University. Feedback from the event indicated that most people already thought TBK was very important. However, after the event, 20% and 30% more students thought that plant chemistry was very relevant to their health/wellbeing and played a vital role in plant resilience, respectively. Future work aims to explore the impact of these experiences further in a range of different contexts.

ID: 49 Poster **Advances in Ethnobotany of the Catalan Linguistic Area: Ongoing Research and Future Prospects**
All Authors: Fuencisla Cáceres fcaceres@ub.edu, Maria Orriols, Canòlich Álvarez, Jacint Altimiras, Judit Català-Altés, Teresa Garnatje, Raquel González, Jon Marín, Montse Parada, Ester Sala, Joan Vallès, Sílvia Ysamat, Airy Gras
Presenter: Fuencisla Cáceres
Institution: University of Barcelona

Traditional knowledge in rural areas of industrialized societies is rapidly declining, making ethnobotanical research urgent and essential for documenting and preserving this valuable heritage. Additionally, returning this knowledge to local communities is both an ethical duty and a key strategy for its conservation. The Catalan linguistic area stands as one of the most extensively studied European regions in ethnobotany, and there is still ongoing and foreseen research. The 'Ethnobotany of the Catalan Countries' website (https://etnobotanica.iec.cat) serves as a platform to explore traditional plant knowledge gathered since 1990. This poster presents an updated overview of the territories studied and those currently under research, while also identifying gaps in ethnofloristic studies. Currently, the open-access database hosts nearly 80,000 plant name entries, 55,000 medicinal use records, and around 30,000 food-related entries (apart from a separate dataset on plant-based beverages), with an additional 30,000 records on other plant uses, harmful or toxic effects and other information is set for inclusion within the next two years. This extensive dataset not only conserves cultural and botanical heritage, but also provides an accessible resource for future generations. Moreover, recent efforts have focused on meta-analytical studies comparing regional plant uses and

examining broader ethnobotanical trends. A novel phylogenetic approach has also been introduced, aiming to identify key evolutionary nodes where traditional plant knowledge is concentrated. By integrating these perspectives, among others, we seek to deepen our understanding of plant use patterns and their implications for human well-being.
*FC and MO contributed equally.

ID: 87 Poster **From tradition to genomics: an interdisciplinary approach to identify Capsicum chinense Jacq. cultivars in mainland Guadeloupe**
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Presenter: Bausivoir Céline
Institution: UMR CNRS 3038, Faculté de Pharmacie, Paris Cité

In Guadeloupe, Capsicum chinense Jacq. holds significant cultural and agricultural values[1]. Among well-known varieties, “Bondamanjak” and “7 Courts-Bouillons” are widely used locally, yet their morphological similarities and several vernacular naming often create confusion[2,3]. In this context, we report the first ethnobotanical study aiming to clarify the local diversity of C. chinense cultivars, integrating traditional knowledge with morphological and genetic analyses.

A survey combining semi-structured interviews and free listing was conducted with 119 residents to generate descriptors for C. chinense identification[4]. A focus group with local producers then refined these descriptors[5]. In parallel, a preliminary phenotyping study on the two studied varieties under controlled conditions was performed[6]. Genetic analyses involving PCR amplification and sequencing of plasmid markers (rbcL and rpoB) from cultivars sourced from the same farmer were also implemented[7].

The results revealed that 82.4% of participants use Capsicum primarily for culinary purposes, while 12.2% reported medicinal uses, particularly for digestive (5 reports), circulatory (3) and respiratory ailments (3). Descriptors were collected including fruit shape, color and pungency. Producers confirmed fruit shape and appearance of the fruit skin as keys descriptors. Phenotyping suggested developmental differences, supporting local expertise in varietal recognition. Genetic analyses confirmed both cultivars as C. chinense, but the plasmid markers did not differentiate them at the cultivar level.

These data highlight the richness of local ethnobotanical knowledge and underscores the need for detailed phenotypic characterization. By integrating scientific and traditional perspectives, this study contributes to preserve the agrodiversity and to support local farmers in maintaining endemic varieties.

ID: 112 Poster **Ethnobotanical Diversity in Northern Europe**
All Authors: Chen Chi-Chuan chichuan1020@gmail.com, Kangasjärvi Saijaliisa saijaliisa.kangasjarvi@helsinki.fi
Presenter: Chen Chi-Chuan

Institution: University of Helsinki

Traditional ethnic plants have played a vital role in human life, particularly in daily nutrition and healthcare. Many European countries, such as Italy, Spain, Greece, and Germany, have long-standing traditions of ethnobotanical applications, where plant-based knowledge is deeply embedded in local culture. While the Nordic countries have lower biodiversity due to their high-latitude climates, they possess unique plant species and traditional knowledge. This study focuses on ethnobotanical knowledge in the Nordic countries, particularly the use of wild plants for food and aromatic purposes. By compiling newly published ethnobotanical literature from journals, books, handbooks, monographs, and authoritative sources, this research aims to document and analyze the knowledge and applications of Nordic ethnic plants. By compiling and structuring disappearing ethnobotanical data, it not only enhances the understanding of northern ecosystems and traditional practices but also preserves valuable knowledge for future generations. This result is part of a cooperative project with our partner company, Arctic Farming Oy, contributing to research on sustainable plant-based resources in northern regions.

ID: 136 Poster **From tradition to medicine: The potential anticancer activity of *Ranunculus parnassifolius***
All Authors: Airy Gras agras@ub.edu, Màrius Mumbrú mariusmumbru@ub.edu, Maria Orriols mariaorriolsv@ub.edu, Joan Vallès joanvalles@ub.edu, Teresa Garnatje tgarnatje@ibb.csic.es
Presenter: Airy Gras
Institution: Universitat de Barcelona

Bioactive natural products, particularly plant secondary metabolites, are widely recognized for their therapeutic potential in preventing and treating various types and stages of cancer. It is well documented that phytometabolites from the Ranunculaceae family demonstrate promising anticancer effects. *Ranunculus parnassifolius*, a high-mountain species, is the most cited plant against cancer in the Catalan linguistic area's ethnobotanical prospections. However, no specific research focusing on anticancer activity for this species exists.

In order to assess the anticancer potential of *Ranunculus parnassifolius*, the phytochemical composition of this species was analyzed in search of two phytometabolites, anemonin and berberine, both known for their anti-inflammatory and anticancer activities.

Based on the patterns of these two molecules and using multiple reaction monitoring (MRM) of targeted mass spectrometry analysis, the presence of these phytometabolites was confirmed in this species. Consequently, other molecules related to anemonin with the same anticancer properties, protoanemonin and ranunculin, can be confirmed in *Ranunculus parnassifolius*.

The big majority of studies focused on this type of compounds is to date centred in Asian species of Ranunculaceae. This study reports their presence in a European representative of the family, reinforcing the position of this family among those promising in the search for new antitumoral drugs.

ID: 128 Poster **Sacred Groves of Gond tribes and their potential as biocultural conservation sites**
All Authors: Nishanth Gurav gurav@ftz.czu.cz, Abdul Kareem abdul.kareem@tdu.edu.in, Zbynek Polesny polesny@ftz.czu.cz
Presenter: Nishanth Gurav

Institution: Czech University of Life Sciences Prague

Introduction: Sacred groves are protected forest patches across the world yet their role in biodiversity conservation remains poorly understood. In India they cover diverse ecosystems ranging from mangroves and fresh water swamps to several forest types. These forest patches are protected by local communities across India as part of their sociocultural practices. Gond people are one of the oldest tribes in India and known to practice the tradition of sacred groves. Chhattisgarh state has the highest population of Gond tribes but studies have not understood the complex nature of these ancient plant sanctuaries. This study aims to understand the structure of Sacred groves and analyze their capacity as living plant repository of the region.
Methods: The study was conducted over a span of 8 months between 2023-2024 comprising of 2 field visits. The data were collected through interviewing informants selected by snowball and purposive sampling. Fieldwork involved focus group discussions, household interviews and 'walks in the woods' method. Plant identification was based on photographs and taxonomic field surveys.
Results: 24 sacred groves were documented consisting of 72 species including herbs, shrubs, trees and lianas. Among these were 43 medicinal and 12 species of biocultural importance. *Erythrina resupinata,* a rare species recorded in a single grove, represents a new addition to the regional flora. The study shows that there are 4 types of sacred groves based on the habitat and specific sociocultural practices. These practices involve strict rules against harvesting of plants and therefore serve as a protected biocultural reserve.

ID: 176 Poster **Honokiol Confers Neuroprotection Against Ischemic Stroke Through Regulation of Glutamate Signaling**
All Authors: Lizhu Han hanlz72@163.com
Presenter: Lizhu Han
Institution: Zhejiang Chinese Medical University

Ischemic stroke remains a leading cause of mortality and disability worldwide, yet effective therapeutic options are limited. Traditional Chinese Medicine (TCM) represents a valuable reservoir for discovering novel neuroprotective compounds. In this study, we screened 30 small molecules derived from TCM for anti-inflammatory and neuroprotective activities. Honokiol (HKL), a bioactive compound extracted from *Magnolia officinalis*, demonstrated significant protective effects against glutamate-induced injury in PC12 cells and oxygen-glucose deprivation (OGD) in SH-SY5Y cells. To investigate the underlying mechanism, a biotinylated HKL probe was synthesized for proteomic screening, leading to the identification of sirtuin proteins as potential targets. Binding between HKL and sirtuins was validated through surface plasmon resonance, CETSA, and pull-down assays, confirming a direct interaction. Mass spectrometry analysis suggested that HKL covalently modifies cysteine residues within key regulatory domains, potentially influencing sirtuin activity. Moreover, HKL treatment preserved mitochondrial integrity and modulated mitochondrial homeostasis under ischemic conditions. To address HKL's limited bioavailability, glycosylated derivatives and HKL-loaded liposomal formulations were developed, both exhibiting favorable pharmacological properties for future investigation. Collectively, these findings suggest that HKL exerts neuroprotective effects against ischemic stroke through modulation of sirtuin-mediated pathways, offering a promising strategy for therapeutic development. Future research will focus on in vivo validation and formulation optimization to enhance clinical translation.

ID: 26 Poster **Multidirectional cultural influence revealed in folk-traditional use of non-native plants in the UK**
All Authors: Tara Henderson th540@kent.ac.uk
Presenter: Tara Henderson
Institution: University of Kent

How often do we think about cultures such as the UK as exerting influence on other cultures compared to how often we think about other cultures influencing the culture of the UK? This paper explores the results of a free list that was conducted as part of a PhD project that asked pagans in the UK what plants they use in ritual. That free list covered over half the counties in England as well as receiving answers from Northern Ireland, Scotland, and Wales. While most of the listed plants were expected based on previous studies on plant use in the UK, the most interesting insight was that there are a number of non-native plants among the most listed in the free list, which implies a certain level of cultural significance being attributed to those introduced plants. While historically there is a perception that cultural influence is predominately flowing from the UK outward to other locations, this is a clear indication that cultural influence has also flowed into the UK from outside. In what manner do we think about that influence, meaning do we view this as a positive or negative influence? Considering this multidirectional flow of cultural influence hidden in the plants that are actively being used challenges us to face our internal biases and is an important aspect of humanity to remember when navigating an ever-changing world.

ID: 157 Poster **Snakebite treatment in the context of Cashinahua traditional medicine in the Purus province of the Peruvian Amazon**
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Presenter: Jana Horackova
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Introduction: This study documents the diversity of medicinal plants used by the Cashinahua (also known as Huni Kuin) of the Curanja River, as well as describe and compare their uses with pharmacological and phytochemical records from previously published studies. The ethnic has been studied to a limited extent from an ethnobotanical perspective. The study area is in the Ucayali region in the eastern part of the central Amazon, where ancestral knowledge and wilderness richness are preserved due to the limited accessibility of the region. Methodology: The study was conducted over a span of 11 months between 2010-2015 comprising of 4 field visits. The data was collected through interviewing informants selected by purposive sampling. Followed by identification, data was collected using 'walks in the woods' method, participant observation and semi structured interviews with 20 respondents (10 men and 10 women) deemed specialists in their community's knowledge of medicinal plants. Plant identification relied on specimen collection. Results: A total of 467 medicinal plants were documented, belonging to 253 genera and 99 botanical families. Of these, 79 were identified as either unreported or rarely cited in the context of medicinal use or phytochemical analysis. The Acanthaceae family was found to be the most represented. Leaf use was predominant, accounting for 93.56% of all recorded uses. The health problem which was reported most frequently was venomous bites; the treatment of which is the subject of this presentation. It was found that there are locally valuable species whose medicinal potential has not yet been studied.

ID: 175 Poster **The mechanism of Shudihuang-Shanzhuyu herb pair in prevention and treatment of diabetic osteoporosis via PI3K/AKT pathway**
All Authors: Si-jing Hu hsj960321@163.com
Presenter: Si-jing Hu
Institution:

Diabetic osteoporosis (DOP) is a complication of diabetes characterized by reduced bone mass and increased fracture risk. Shudihuang (Rehmanniae Radix Praeparata, RR) and Shanzhuyu (Corni Fructus, CF) form a classical herb pair known as RR-CF in traditional Chinese medicine (TCM) for nourishing Yin and tonifying the kidney and have long been used for the treatment of diabetes and OP in TCM clinical practise. However, the potential mechanism underlying the preventive and therapeutic effects of RR-CF on DOP has not been clarified. This study aimed to explore the protective effects of RR-CF on bone loss caused by diabetes and elucidate the underlying action mechanism. Treatment with RR-CF extracts for 10 weeks improved the bone microstructure and mineral density in the T1DM rats (by injecting streptozotocin), and decreased the level of urine deoxypyridinoline and serum carboxyl terminal peptide of type I procollagen. The network pharmacology analysis identified cornuside, hydroxygenkwanin, acteoside, catalpol and echinacoside as the potential active components of RR-CF against DOP by interacting with the key node genes such as AKT1, EGFR, TNF, MMP9 and HSP90α. Further GO and KEGG enrichment analysis suggested that the therapeutic effects of RR, CF and RR-CF seemed to be related to the regulation of hormones, inflammation and metabolism, as well as signaling transductions of PI3K-AKT, IL-17, TNF, MAPK and estrogen signaling pathways. RR-CF promoted osteoblast differentiation and bone formation in the MC3T3-E1 cells by regulating PI3K-AKT signaling pathway. RR-CF herb pair inhibits bone loss caused by high glucose by regulating the PI3K-AKT signaling pathways.

ID: 119 Poster **The prevalence of the traditional herbal medicine use among hospital patients in southwest Kenya**
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In Kenya, diseases such as tuberculosis, HIV, and malaria belong to the top 10 leading causes of death. Although treatments exist, few people have access to recommended treatment due to the limited availability and high costs of the drugs. As an alternative, traditional herbal medicines are used for the management of serious diseases in Kenya, but the prevalence of their use is not sufficiently known. Therefore, we decided to investigate typical aspects of traditional herbal medicine use among hospital patients. The data were collected by staff of the Itibo Health Centre in southwest Kenya using semistructured questioners from 95 respondents. According to sociodemographic characteristics, married 43 years old woman with secondary education belonging to the Kisii ethnic group and protestant church working as a farmer was the typical respondent in the survey. The result showed that 89% of respondents previously visited traditional medicine practitioner (mainly herbalist 76.5%), who was diagnosing their health problem preferably via physical body examination (60%) accompanying by asking the questions (29%). The plant-based treatment was the most frequently recommended for

the diagnosed health problem (91.8%), mainly in form of orally administered preparations (76.5%). More than sixty percent of respondents mentioned that treatment was successful. Because of high prevalence use of the herbal medicine, southwest Kenya can be suggested as a promising region for further ethnobotanical and ethnopharmacological research. In the future, the compounds isolated from local herbal medicines can be used for development of novel pharmaceutical drugs and low-cost plant-derived medicines.

ID: 44 Poster **Pharmacological properties of *Platycarpha glomerata* extracts-(Thunb.) Less – a plant used to treat and manage elephantiasis**
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Presenter: Siphamandla Lamula
Institution: University of Fort Hare

Platycarpha glomerata (Thunb.) Less. has recently became a plant species of interest to re-searchers due to its biological activities and less toxic effects. Therefore, the aim of the study seeks to evaluate the in vitro anticancer potential and phytochemical constituents of *P. glomerata* plant extracts. Phytochemical screening and FTIR were carried out using standard methods. The antioxidant activity was accessed by determining its ability to scavenge the DPPH radical, and nitric ox-ide radical, whereas the anticancer activity against prostate (DU-145 and PC-3), Human T-Lymphocyte (SKU-T), gastric adenocarcinoma (AGS), and human prostatic epithelial (PNTA1) cell line was evaluated using the MTT assay. The phytochemical analysis revealed the presence of tannins, flavonoids, saponins, steroids, terpenoids, and cardiac glycosides. The FTIR spectrum for the aqueous extract displayed characteristic peaks for O-H, C=O, C = C, and = C - H stretch. The aqueous, ethanol and methanol extracts showed significant dose-dependent DPPH radical scavenging capacity. The aqueous, ethanol and methanol extracts showed minimum NO scavenging activity of 4.3%, 9.6 % and 11.7 % at 2500 µg/mL. The water extract demonstrated good activity against *S. aureus, E. coli* and *B. pumilus* with the MIC of 0.195 mg/mL, respectively. The ethanol and methanol extracts significantly reduced the percentage proliferation of DU-145, PC-3 and SKU-T cells at 100 µg/mL. These extracts demonstrated strong dose-dependent DPPH and NO scavenging, antibacterial and cell proliferation inhibition activities. The strong bioactivity of the *P. glomerata* makes it a good candidate for isolation and identification of active compounds for anti-cancer and related illnesses.

ID: 38 Poster **Quelites, Mexican vegetables, a biocultural heritage that persists**
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The 'quelites' have great nutritional, cultural, and economic importance in Mexico; they are vegetables, generally young and tender annual herbs, flowers, inflorescences, sprouts, and stem tips of perennial plants. Previous studies argue that around 500 species are currently consumed in the country. Indigenous peoples and peasants have a vast knowledge of collecting and consuming quelites based on a great diversity of management systems, ecological regions, and sociocultural environments. This research consisted of a bibliographic review and field and herbarium work to compile, systematize,

and analyze the species of quelites consumed in the state of Veracruz. The state was divided into three zones —north, center, and south— each with a Priority Biocultural Region. The results suggest the use of 176 species of quelites, 163 are prepared in stews, and 34 are eaten raw; 83 are collected in the wild, 57 are cultivated, and 36 are incipiently managed; 137 are of American origin, 27 are introduced, and 12 are endemic to Mexico. A total of 114 species were recorded in the northern zone, 69 in the center, and 89 in the south. The most commonly used plant structures are leaves (95 species), flowers (49), stems (36), and apical meristems (14). The quelites face several challenges, such as the decrease in their availability caused by changes in eating habits, the loss of traditional knowledge, the application of herbicides on crops, and the deterioration and decline of vegetation.

ID: 167 Poster **Connecting the biocultural heritage framework to paleoecological methods for studying landscape management in pre-Columbian Costa Rica**
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Presenter: Maria Lopez
Institution: University of Arkansas

The study aims to provide a theory-and-method approach for studying human-plant interactions from a historical perspective in archaeological sites of Costa Rica, and for this purpose, a systematic literature review was conducted to explore correlations between the conceptual framework of biocultural heritage (BCH) and the study scope of paleoecological investigations on anthropogenic disturbances in landscapes. To address knowledge gaps on historical and spatial approaches, this paper strengthens the BCH framework with paleoecological research methods for studying spatiotemporal changes of anthropogenic landscapes. The literature review was conducted to compile the last 10 years of paleoecological studies (from 2014 to 2024), based on pollen and phytolith analyses, which explored anthropogenic disturbances in different locations around the world. A two-step selection process was conducted to collect relevant paleoecological studies. The first filter was the literature search conducted in all the collections of the Web of Science, which was delimited to research articles published in English language. A qualitative analysis was implemented to synthesize the data collected from relevant publications selected during the systematic literature search. Barcharts in the ggplot2 package from RStudio were used to illustrate BCH elements and sub-elements in relevant publications. Paleoecological studies provided a solid theoretical and methodological baseline to address memories and integrated landscape analysis in biocultural heritage. Also, the literature review illustrated investigation topics such as agroforestry systems that currently represent a promising theoretical alternative to understand production systems in pre-Columbian societies in which agriculture subsistence was not a predominant practice.

ID: 55 Poster **Urban Ethnobotany: Wild Plant Diversity in Traditional Markets of Jakarta Metropolitan Area, Indonesia**
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Presenter: Afni Atika Marpaung
Institution: Jagiellonian University

The Jakarta Metropolitan Area (JMA), Indonesia's capital region, is located within Sundaland, one of the world's biodiversity hotspots. Due to rapid urbanization, the city is now home to diverse ethnic

groups, making it a vibrant and dynamic melting pot of cultures. Each ethnic group has distinct traditions, many of which include the use of wild plants. Traditional markets serve as key hubs for trade and valuable repositories of local knowledge. This study aims to document the diversity of wild plants sold in traditional markets of JMA. Ten of the largest traditional markets were visited, and ethnobotanical data was collected through semi-structured interviews with market sellers and buyers. A total of 115 wild plant species belonging to 56 families were recorded during surveys conducted in 2023-2024. The most represented plant families were Zingiberaceae, Fabaceae, and Anacardiaceae. The most common plant life forms are trees, herbs, and shrubs. Leaves were the most frequently sold plant parts, with Musa acuminata (Musaceae) exhibiting the highest utility. Pasar Anyar Bogor exhibits the highest diversity (77 species) and Pasar Rumput is the lowest (51 species). UPGMA clustering based on Jaccard similarity grouped markets mainly by geographic location. Markets located farther from Jakarta showed greater species diversity and unique species, likely due to local ecosystems and harvesting practices. Our findings highlight the key role of traditional markets in ensuring food security and preserving cultural heritage and the need to promote sustainable harvesting and trading practices

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ID: 148 Poster **Global Policy Development for the Conservation, Use and Exchange of Wild Food Plants by Indigenous Peoples and Local Communities**
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Presenter: Madeline Medrano
Institution: University of Guelph

Wild Food Plants (WFPs), with edible parts (e.g., leaves, fruit, and tubers), grow in natural and semi-natural ecosystems independent of human management, such as planting, fertilization, and weeding. A subset of WFPs are Crop Wild Relatives, which serve as a potential source of genetic information for crop enhancement and are important to agrobiodiversity. Indigenous Peoples and Local Communities (IP&LC) globally rely on and benefit from traditional food systems that include WFPs. The Food and Agriculture Organization estimates that around one billion people incorporate WFPs into their diets. For instance, WFPs are a large contributor to the diet of IP&LC in India, Indonesia, and Latin America and are often eaten when food from other sources is unavailable. Several global policy domains have addressed the conservation, use, and exchange of WFPs, such as the Convention on Biological Diversity or the International Treaty on Plant Genetic Resources for Food and Agriculture. This project will address the agency of IP&LC in these global policy domains. We have used a set of criteria to determine the extent to which these policies address self-determination, informed consent, the integration of knowledge systems, and community participation. This project explores the agency of IP&LC in these global policy domains and the extent to which the criteria have been met over time between policies. This project then proposes decolonial pathways that strengthen Indigenous-led systems of conservation governance for the conservation, use, and exchange of WFPs.

ID: 125 Poster **Exploring Indigenous Knowledge and in vitro regeneration protocol for the Conservation of *Hypoxis schimperi***
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Presenter: SILVIA CHRISTOPHER MGANGA
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Hypoxis schimperi is a culturally significant medicinal plant widely used in traditional African healing systems for treating ailments such as infections, inflammation, and cancer. Its ethnobotanical relevance, rooted in Indigenous knowledge systems, highlights its role not only as a therapeutic agent but also as part of broader cultural and spiritual practices. However, increasing demand and environmental pressures have led to the overexploitation of wild populations, raising urgent concerns about their long-term availability. This study explores the interface between traditional knowledge and plant biotechnology by optimizing an *in vitro* regeneration protocol aimed at conserving *H. schimperi*. Guided by ethnobotanical insights regarding its use, availability, and cultural value, corms were cultured on media supplemented with varied plant growth regulator combinations. The most effective regeneration was observed with 1.5 mg/L BAP and 0.5 mg/L NAA, leading to vigorous shoot and root formation. This biotechnological approach supports the sustainable propagation of *H. schimperi*, reducing pressure on wild populations while preserving the plant's traditional uses. The study illustrates how integrating Indigenous knowledge with modern conservation tools can contribute to safeguarding both biodiversity and cultural heritage.

ID: 13 Poster **Diversity and Economic Value of Dye Plants in Thailand: A Case Study of Community Enterprises**
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Presenter: Nooduan Muangsan
Institution: Suranaree University of Technology

The Dye Plant Inventory List Project, conducted from January to August 2023, aimed to explore dye plant species, their economic potential, and sustainable utilization. The study prioritized informed consent and field data collection, emphasizing species identification, color extraction techniques, and economic value across the supply chain. A total of 139 species from 115 genera and 54 families were documented, with Fabaceae (26 species), Combretaceae (7 species), and Rubiaceae (7 species) being the most represented families. Frequently used species included *Pterocarpus macrocarpus, Diospyros mollis, Mangifera indica, Biancaea sappan*, and *Bixa orellana*. Among 32 communities, the Ban Na Tang Ancient Silk Weaving Group utilized the highest plant diversity (31 species), followed by Rim Khong Khemarat Floating Market Community Enterprise (29 species) and Weaving Community Enterprise Indigo-Dyed Cotton-Silk Ban Kut Ta Klai (27 species). The dominant dye colors were brown (63 species), green (35 species), and red-pink (33 species), with *P. macrocarpus, D. mollis,* and *M. indica* demonstrating high color variability. Most dye plants were locally sourced, though some, including *Indigofera tinctoria* and *Maclura cochinchinensis*, were externally acquired. Economic evaluations highlighted *Strobilanthes cusia*, *Indigofera tinctoria*, *Pandanus amaryllifolius*, and *Mangifera indica* as the most profitable dye plants. Among these, *Strobilanthes cusia* generated the highest annual economic value at 150,730 Euros annually. To ensure sustainability, the study

recommended (1) expanding markets for natural dye products, (2) improving product quality, and (3) promoting community-based learning and creative tourism.

ID: 40 Poster **Wild edible mushrooms and ways of cooking them in the Republic of Congo**
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Presenter: NDOLO EBIKA Sydney Thony
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Documenting traditional knowledge on wild mushrooms and how they are cooked fully rely on gathering information from people using them in countries where such a work has never been done in the past. Although some species are considered edible, caution should be paid into how to cook them. In this poster, we present results obtained through ethnomycological surveys carried out for a cumulative period of 10 years in three localities of the Republic of Congo. Sixty-seven species of wild mushrooms are edible in the Congo and are classified into two main groups according to how they should be cooked: mushrooms that need to be boiled before cooking and those not required to be boiled. The results indicate that, of the 67 species, only one species needs to be boiled, rinsed and added to the recipe for cooking whereas the others are cleaned with water and cooked. In the latter category, it has been reported that some parts of the fruiting body such as the volva and cuticle of the cap and stipe have to be removed before cleaning and cooking the mushroom. Such a caution to be taken before cooking some mushrooms shows that, although a species can be cited as edible by local communities, it might contain toxins that must be washed away first. Thus, it will be crucial to pay attention to how mushrooms should be cooked during ethnomycological surveys and to study the nutritional values of those species requiring particular caution before cooking.

ID: 106 Poster **A fifteen-year study of *Tilia americana* L. var. *mexicana* (Schltdl.) for the treatment of the Central Nervous System**
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Presenter: Gimena Pérez Ortega
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In Mexico, *Tilia americana* L. var. mexicana (Schltdl.) is found in *Abies*, *Quercus, Pinus-Quercus*, and montane cloud forests. It is known by various names depending on the culture that uses it, such as *sirimu, tz'irimo*, pata de vaca, haya, wasimia, achique, tilia, tila de hoja, yaca, among others. The main uses of this plant in Mexico related to the central nervous system (CNS) include nervous breakdown, "calmar los nervios", "nervios encogidos" headaches, as a sedative, for insomnia and convulsions. In 2008, we conducted studies comparing samples obtained from markets and wild collections, evaluating their anxiolytic and sedative effects in mice. The results confirmed the traditional medicinal uses reported in Mexican herbal medicine. More than fifteen years after these investigations, our objective was to understand the ethnopharmacological advances in the study of *T. americana* var. *mexicana* and its effects on the CNS. We reviewed from 2008 to the present using search engines such as PubMed, Google Scholar, SciELO, Redalyc, and university thesis repositories, using as keywords the scientific name of the species along with: CNS, anxiety, sedation, phytochemistry,

ethnopharmacology, and ethnobotany. The results show evaluations of the hydroalcoholic extracts of the species; the methods used include behavioral models with mice and convulsion induction using pentylenetetrazol. The secondary metabolites involved in the anticonvulsant, neuroprotective, anxiolytic, and antidepressant actions are flavonoids, such as quercetin and kaempferol, with the mechanisms of action identified as GABAergic and serotonergic.

ID: 63 Poster **Local English herbalism: diachronic change**
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Presenter: Lucy Reed
Institution: University of Reading

To investigate the evolution of medicinal plant knowledge and practice in England we compared new, contemporary survey data on the locally harvested medicinal plants of English lay and professional herbalists with two historic sources. The first is the *Old English Herbarium*, an Old English translation of four Latin texts including the *Pseudo-Apuleius Herbal*, a popular medical text throughout the Middle Ages. The second is David Allen and Gabrielle Hatfield's *Medicinal Plants in Folk Tradition: An Ethnobotany of Britain and Ireland*, a compilation of oral records collected from around the 16th to early 20th centuries.

The medicinal plants shared between these sources were identified. Therapeutic applications were categorised and compared, with therapeutic application and mode of preparation explored as evidence of continuity of use.

Despite biases in the source materials we found continuities in use, in terms of plants used for the same body categories and, in some cases, for the same therapeutic application with the same or similar mode of preparation. Further our results suggest that, in terms of health needs, overall flora and the most broadly useful plants, local herbalism in present-day England has more similarities with the folk medicinal flora of the modern period than that of the medieval period as represented by the *Old English Herbarium*.

ID: 117 Poster **Spatial ethnobotany: mapping wild food foraging locations to facilitate human-plant interactions in cities**
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Presenter: Christoph Schunko
Institution: BOKU University

Urban dwellers forage wild foods in many cities worldwide, which fosters human-plant interactions, and material and immaterial contributions to people. Yet, urban foraging is rarely considered in urban green space management and spatial planning, and pathways to support urban foraging largely unknown. In this study, we therefore aimed to understand the characteristics and spatial distribution of urban green spaces selected for foraging by urban dwellers. We conducted online and face-to-face surveys with 458 respondents in Vienna, Austria and mapped respondents' indications of foraging locations for eight wild food species. Results revealed 1239 foraging locations, most of them located in forest and meadow landscapes, parks and urban green space mosaics. Patterns of foraging hotspots

were lifeform dependent, with foraging locations of shrubs and trees being more frequent and more dispersed across the city than foraging locations of herbaceous species. Foraging locations were significantly more often located on larger and less intensively managed urban green spaces, whereas vegetation structure of urban green spaces, dog access, foraging regulations and centrality were unrelated from foraging frequencies. Taking into account these results in urban green space management and spatial planning could facilitate human-plant interactions in cities.

ID: 140 Poster **Botany education researchers and ethnobotanists are logical allies to foster human-plant interrelationships**
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Presenter: Christoph Schunko
Institution: BOKU University

Botany education researchers have developed the concept of plant awareness since the early 20th century to draw attention to the preferential treatment of animals over plants in biology education and better understand the circumstances that lead to different levels of attention, knowledge and attitudes towards plants. Over the same period, ethnobotanists have been concerned with understanding human-plant interrelationships in overlapping domains of study. Yet, interaction and cross-fertilisation between plant awareness research and ethnobotany have remained rare. In this contribution, we explore the similarities and differences between the two disciplines and highlight cooperation potential. We find that the two disciplines are largely complementary, with much cooperation potential for innovating plant awareness research through i) recognising Indigenous and local knowledge systems, ii) expanding to study populations in rural areas and the Global South, iii) using research methods that are adapted to culture and place, and iv) recognising the contribution of out-of-school learning to plant awareness. We argue that botany education researchers and ethnobotanists are logical allies and complementary partners for better understanding and fostering human-plant interrelationships.

ID: 36 Poster **Native American use of *Abies* species from Western North America**
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Presenter: William N. Setzer
Institution: Aromatic Plant Research Center

The foliage of *Abies* (fir) species has been used in traditional medicine by Native American tribes throughout their ranges to treat coughs, colds, and other pulmonary maladies. In this work, the essential oils of *Abies* species growing in the western United States were obtained by hydrodistillation and analyzed by gas chromatographic methods. The species studied include *Abies amabilis* (Pacific silver fir), *Abies concolor* (white fir), *Abies grandis* (grand fir), *Abies lasiocarpa* (subalpine fir), *Abies magnifica* (California red fir), and *Abies procera* (noble fir). The major components found in all *Abies* species were alpha-pinene, camphene, beta-pinene, delta-3-carene, limonene, beta-phellandrene, and bornyl acetate. The biological activities of these major essential oil components generally include anti-inflammatory effects, antibacterial activities against respiratory pathogens, and antinociceptive

activities. The observed biological activities of the major components, therefore, accounts for the traditional uses of *Abies* species to treat respiratory ailments.

ID: 134 Poster **The Commercial Trends and Food Safety Considerations of Edible *Rhododendron* Flowers in Southwest China and the Himalayas**
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Presenter: Yinxian Shi
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Southwest China and the adjacent Himalayan region are the global largest distribution center of *Rhododendron* plants, and the region is also the cradle of flower-eating culture of *Rhododendron*. This fact is unexpected, given that numerous *Rhododendron* species are commonly known to be poisonous. Flowers from various *Rhododendron* species have been reported for food uses in Southwest China in the 1980s. In recent years, the consumption of wild edible *Rhododendron* flowers is developing towards commercial collection and deep processing, at the same time, the food safety issue of *Rhododendron* flowers has attracted widespread attention. Which is an urgent problem to be solved in the field of wild plant resource utilization, market supervision and medical and health care. In our study, 1) we explored the typical motivators of the consumption of *Rhododendron* flowers in the region by conducting field survey in Southwest China. The results showed that the consumption of *Rhododendron* flowers is widely shared by the areas with resources distribution. The motivators including gastronomic tour development, indigenous economic benefit and local food culture rooted in traditions. Which enhanced our understanding of the social-economic value of *Rhododendron* flowers, 2) basing on the epidemiological investigation of the *Rhododendron* flowers poisoning event, we did association research of "species-chemicals-toxicity-processing" to reveal the process and mechanism of *Rhododendron* flowers poisoning, to provide scientific basis for the quality control, construction of food safety evaluation system and clinical diagnosis of *Rhododendron* flowers toxicity.

ID: 77 Poster **Herbs, Healing, and History: Exploring the Herbarium of Johann Brehe from 1595**
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Presenter: Jarmila Skružná
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Our contribution will introduce a forgotten Renaissance herbarium dated to 1595. It was created by Johannes Brehe, a barber-surgeon from Uberlingen near Lake Constance. This hortus siccus was recently found in the Muzeum Broumovska, Broumov (Braunau), Czech Republic, to which it came from the collections of the local Benedictine monastery. It turned out to be the oldest hortus siccus known in collections in the Czech Republic (Skružná et al. 2022). In the context of other Renaissance herbaria, it is unique, as it contains handwritten notes on the medicinal use of plants - it thus represents an original distinct genre between a medical treatise and a collection of dried plants.

We will primarily focus on the medical aspect of the herbarium. Our aim is to uncover the sources that Brehe used in his work and situate his text within the context of Renaissance *materia medica*,

particularly the concept of determining the medicinal properties of plants based on their elemental composition, as well as other contemporary theories. Furthermore, we will examine this text with other components of the herbarium. How does it connect with the dried specimens and their representation? Is there any correlation with the accompanying illustrations of animals, landscapes, and other elements featured within the herbarium?

ID: 43 Poster **Biocentrism in the Anthropocene: Co-Creating Ethnobotanical, Climate-Smart Agroforestry Systems**
All Authors: Abby Snyder snyder.lynn.abi@gmail.com
Presenter: Abby Snyder
Institution: AgroForest Project

Agroforestry systems have emerged as effective tools for sustainable agriculture, yet their potential to preserve biocultural diversity remains understudied, particularly in West Africa. This research examines the integration of ethnobotanically significant plant species into existing agroforestry systems in Togo, where only 8.5% of land area remains forested and climate change threatens both ecological and cultural preservation. Through a decade-long participatory research initiative, we investigated how the incorporation of community-identified plant species and traditional ecological knowledge into agroforestry systems can simultaneously address climate resilience and biocultural conservation. The study employed mixed-methods approaches, combining ethnobotanical surveys, participatory mapping, and ecological monitoring to document both the biological and cultural significance of selected species. This project explores opportunities to integrate culturally significant plants into agroforestry systems to not only enhances biodiversity and carbon sequestration but also strengthens local knowledge systems and community engagement in conservation efforts. The system's longevity and community adoption suggest its viability as a model for sustainable agriculture that bridges scientific and traditional ecological knowledge. This research contributes to the growing body of evidence supporting the integration of cultural ecosystem services into agroforestry design, offering insights for similar initiatives in tropical forest contexts globally. This project emphasizes the importance of embracing diverse knowledge systems, exemplified by the Ewe proverb "Gbedokpɔ wɛ nỏ wa nu," in developing climate-resilient agricultural practices that preserve both ecological and cultural heritage.

ID: 114 Poster **Shifting Herbal Knowledge: The Ecological and Cultural Dynamics behind Plant Use Changes in the Southern Occitan Alps**
All Authors: Naji Sulaiman n.sulaiman@unisg.it, Mousaab Alrhmoun, Andrea Pieroni
Presenter: Naji Sulaiman
Institution: University of Gastronomic Sciences

This study examines changes in medicinal and wild food plant knowledge in the Alpine Southern Occitan area, focusing on temporal and cultural shifts. Drawing from ethnobotanical data from the Maira Valley (1970, 2022), Stura Valley (2004), and Grana Valley (2011), we explore dynamics in plant use and how ecological, socio-economic, and cultural changes may have generated them. A total of 308 plant taxa were recorded. A notable decline in Asteraceae and Lamiaceae utilization by 2022 was reported, suggesting a remarkable erosion of traditional ecological knowledge (TEK). Conversely, the use of families like Brassicaceae and Amaranthaceae increased, possibly due to socio-economic

factors. This study also found, in recent years, a decrease in medicinal plant uses and an increase in reliance on food system-related plants. Logistic regression models highlighted altitude (600-1,600 masl) as a key factor in plant diversity use, with older participants showing more diverse ethnobotanical knowledge. This study highlights the resilience and transformation of plant knowledge in response to socio-economic and environmental changes in the Alpine area.

ID: 108 Poster **Market survey of most local medicinal species in major cities of Colombian Andes**
All Authors: Zuzana Razkova xrazz002@studenti.czu.cz, Zbynek Polesny xrazz002@studenti.czu.cz, Vladimir Verner vernerv@ftz.czu.cz
Presenter: Vladimir Verner
Institution: Czech University of Life Sciences Prague

The Colombian Andes, one of the world's biodiversity hotspots, are home to many plant species used in traditional medicine. They provide health to local communities and carry the traditional knowledge associated with their use. Local markets are important places where cultural knowledge and biodiversity meet. However, little is known about the commercialization of medicinal plants. The study was conducted in five large Colombian cities in the Andes to explore the use and economics of local species, examining the socio-economic background, marketing challenges, and knowledge of vendors. A total of 30 vendors were interviewed in the five study sites. The most important local species were *Equisetum bogotense*, *Myrcianthes leucoxyla*, and *Juglans neotropica*, used for 13 categories. The highest agreement, based on the Informant Consensus Factor (ICF), was found for the endocrine system (ICF=0.98) and the urinary system (ICF=0.97). The highest Utility Value (UV=2.40) and Informant Agreement Ratio (IAR=0.90) were obtained for *E. bogotense*. *E. bogotense* was the most profitable with a daily margin of COP 2,000. *M. leucocyla* generated the highest profit per amount sold (COP 3,600). Most vendors (83%) sold herbs as their main occupation, and 73% acquired their knowledge from family members. After the Covid-19 pandemic, respondents reported increased attention from customers (37%) and increased sales of medicinal plants (59%). These findings should help the government and other stakeholders to support the development of the medicinal plant market chain in Colombia, for example by involving youth collectors and traders and supporting sustainable harvesting of local species.

ID: 95 Poster **Ethnobotanical monitoring in an agroecological landscape element: The case of rural farmers homegardens in Lienz (Austria) and its link to the surrounding landscape mosaic**
All Authors: Christian R. Vogl christian.vogl@boku.ac.at, Brigitte Vogl-Lukasser brigitte.vogl-lukasser@boku.ac.at
Presenter: Christian R. Vogl
Institution: BOKU University

Homegardens are agroecosystems heavily influenced by humans and are considered a hotspot of agricultural biodiversity and related knowledge and practice worldwide. However, homegardens are rarely a site for systematic, repeated data collection, analysis and determination of changes in ecosystem components (e.g., plant diversity, crop varieties) or related knowledge and practices. When monitoring agrobiodiversity in homegardens, additional data on historical, social and cultural science variables, such as those commonly used in ethnobotany, help with a better understanding of changes. An ethnobotanical monitoring during two survey periods (1998 & 2018) and a comparison with oral

history on horticulture and farming for the period 1930-1960 on the status of rural farmers homegardens (FHGs) in an alpine region of Austria (Lienz district) shows that homegardens have an unexpectedly high dynamic in the diversity of cultivated, tolerated and non-tolerated plant diversity (cultivated crops and wild plants). with different uses and changing preferences of gardeners showing dynamic links to the surrounding agricultural landscape from the recent history to the present. Homegardens are indispensable for assessing the agroecological history of the district of Lienz and for in situ conservation of local biocultural legacy, such as crops, their local accessions and their uses.

ID: 137 Poster **The ethnobotany of homegardens at tropical and sub-tropical sites studied by BOKU University**
All Authors: Christian R. Vogl christian.vogl@boku.ac.at, Brigitte Vogl-Lukasser brigitte.vogl-lukasser@boku.ac.at, Marten Ahrendt marten.ahrendt@students.boku.ac.at
Presenter: Christian R. Vogl
Institution: BOKU University

Research in the ethnobotany of homegardens investigates the dynamic interactions between people and plants within urban and rural garden settings, with a focus on the practical use, symbolic importance, and ecological role of homegardens. Ethnobotany of homegardens is an interdisciplinary field that integrates insights from e.g. ethnology, botany, and ecology. Since 1995, BOKU University and the Institute of Organic Farming (IFÖL) have been engaged in the study of homegardens worldwide. We show here a summary of this research from Mexico, Greece, Costa Rica, Cuba, Spain and Austria on topics such as 1) Function of the homegarden from the gardener`s perspective; 2) Diversity of plants (cultivated and non-cultivated) and plant use in homegardens; 3) Changes in management, plant composition, and importance of homegardens; 4) Influence of higher level dynamics (e.g., climate change, extreme weather events, structural changes in agriculture) on homegardens; or 5) Role of homegardens in in situ-conservation of biocultural diversity, including local accessions of traditional crops and their use. Homegardens provide essential resources, such as food, medicinal plants and utility items. Additionally, they play roles in the in-situ conservation of rare plants and local accessions, offer opportunities for supplemental income through product sales and serve as social and recreational spaces. However, empirical studies on the relationships between cultural knowledge, biological diversity and sustainable practices in homegardens remain scarce, especially regarding the dynamics of these systems due to environmental and socio-economic changes.

ID: 138 Poster **More than twenty-five years of ethnobotanical research in homegardens in Eastern Tyrol (Lienz), Austria**
All Authors: Brigitte Vogl-Lukasser brigitte.vogl-lukasser@boku.ac.at, Christian R. Vogl christian.vogl@boku.ac.at, Marten Ahrendt marten.ahrendt@students.boku.ac.at
Presenter: Christian R. Vogl
Institution: BOKU University

In Eastern Tyrol (Lienz district), homegardens are small-scale, multifunctional agroecosystems located near the farmers' homesteads, integrating a diversity of plants with multiple uses. In 1998, in Lienz, research on homegardens using ethnobotanical methods started and is still going on in 2025 on various topics, including plant diversity and use, functions and structural elements of homegardens, gardeners' response to weather extremes, use of organic gardening practices, the role of "weeds" or neighbours'

perceptions of the services provided by homegardens. This poster provides an overview of the topics studied and selected results. In Lienz, homegardens provide essential material and non-material services known as the co-production of "Nature Contributions to People" (NCPs). Plants are used as food, medicine, fodder or for ornamental and ritual purposes. These homegardens also serve as sites for the in-situ conservation of traditional crops or local accessions, and as social spaces for the transmission of knowledge or the representation of status, preferences and other non-material needs of the managers. These homegardens are agroecosystems, that show adaptations to the alpine climate and social, economic and cultural dynamics. They represent a unique and dynamic biocultural interface that deserves to be studied in-depth even for another 25 years.

ID: 145 Poster **Traditional knowledge for maintaining the health of pets and livestock - ethnoveterinary studies from German-speaking countries**
All Authors: Theresa Schlittenlacher theresa.schlittenlacher@fibl.org, Michael Walkenhorst michael.walkenhorst@fibl.org, Christian R. Vogl christian.vogl@boku.ac.at
Presenter: Christian R. Vogl
Institution: BOKU University

While interest in medical solutions to the global antibiotics crisis is growing, the legal possibility of simplified registration of herbal veterinary medicinal products is dwindling. An urgently needed basis for the preservation of herbal remedies in veterinary medicine is the empirical knowledge of animal owners and veterinarians as well as from historical written sources. From 2011 to 2022, we conducted 9 systematic surveys on the ethnoveterinary knowledge of farmers in Switzerland, Bavaria and Austria. In addition, these data were compared with historical veterinary pharmacology data from 1850-1960 for the German- and French-speaking regions. Open, semi-structured interviews were used to collect detailed information on formulations, applications, dosage and satisfaction of the treatment. A total of 203 plant species and their use in animals (over 3000 use reports in total) were reported in all studies. The most frequently mentioned animal species were cattle and the most common indication areas: disorders of the gastrointestinal tract and skin. There were certain regional peculiarities for each country for recorded plant species, e.g. applications of *Juniperus sabina* for disorders of the urogenital tract, only reported in the canton of Valais. Of particular interest for further veterinary research are 22 plant species that were mentioned independently of each other in Bavaria, Austria, Switzerland and the historical literature. Such as *Matricaria chamomilla*, *Camellia sinensis*, *Coffea arabica*, *Achillea millefolium* and *Linum usitatissimum*.

ID: 174 Poster **Untargeted metabolomics predicts the medicinal plant genotype with higher pharmaceutical potential: an example of Icelandic *Huperzia* species (Lycopodiaceae)**
All Authors: Maonian Xu maonian@hi.is
Presenter: Maonian Xu
Institution: University of Iceland

The plant family Lycopodiaceae produce unique bioactive alkaloids called *Lycopodium* alkaloids. The alkaloid huperzine A (hupA) is a one of the most potent natural acetylcholinesterase inhibitors with high pharmaceutical potential, which was first isolated from Chinese *Huperzia selago*. Previous studies have shown large variations of hupA among Icelandic *Huperzia* specimens, and it is interesting to investigate the alkaloid profiles in relation to plant genotypes. The current study included 96 *H.*

selago specimens collected all around Iceland and aimed to characterize the overall variation of their hupA contents and alkaloid profiles using high performance liquid chromatography-photodiode array detection (HPLC-PDA) and ultrahigh performance liquid chromatography-mass spectrometry (UPLC-MS) methods. Genotypes were recognized using chloroplast DNA barcoding, and polyploidy levels were determined by flow cytometry. Our results reveal genotype-specific patterns of alkaloids as well as quantitative variations of hupA in Icelandic *H. selago*, which tends to be related to polyploidy levels - higher polyploidy level in proportional to higher hupA contents. The study emphasizes the need for genotype-level phytochemical knowledge and has broad implications to plant chemotaxonomy and natural product discovery and exploitation. It highlights the utility of integrating plant barcoding and metabolomics in selecting taxa of high pharmaceutical interest.

ID: 177 Poster **Polysaccharides from Fermented *Cordyceps sinensis* Attenuates Hypercholesterolemia via Modulation of Gut Microbiota and Bile Acid Metabolism**
All Authors: Lumeng Yao yaolumeng0927@163.com
Presenter: Lumeng Yao
Institution:

Cordyceps sinensis (“Dong Chong Xia Cao” in Chinese), a precious ethnic medicine deeply rooted in Tibetan (Zang) and Chinese traditional medicine, is a fungus parasitizing hepialid larvae. For centuries, it has been revered as a tonic and therapeutic agent in multi-ethnic medical systems (e.g., Tibetan medicine for lung-kidney disorders). To address wild resource depletion, fermented substitutes like *Paecilomyces hepiali* Chen (Cs-4) have been developed, with Jinshuibao capsule (a Cs-4 formulation) clinically used against hyperlipidemia, though its active components and mechanisms were unclear. Here, we identified CSP-W-2, a heteropolysaccharide from Cs-4, as the key bioactive substance. CSP-W-2 elevated serum tauro-conjugated bile acids (TCDCA, TDCA, TUDCA), reducing weight and lipid levels in mice. This effect was mediated by gut microbiota modulation: CSP-W-2 suppressed *Lactobacillus* (a bile salt hydrolase (BSH)-producing bacterium), thereby inhibiting BSH activity. Reduced BSH increased conjugated bile acids, which dual-regulated FXR signaling, inhibiting intestinal FXR-FGF15 while activating hepatic FXR-SHP. This shift upregulated bile acid alternative synthesis enzymes, boosting hepatic bile acid production and fecal excretion of bile acids, ultimately lowering cholesterol. By linking Cs-4's lipid-lowering effects to CSP-W-2 and the gut microbiota-bile acid-FXR axis, this study bridged traditional ethnic medicine with modern pharmacology. It validated the scientific basis of ethnic medicinal practices while offering strategies to sustainably harness *Cordyceps sinensis* derived therapies for metabolic diseases.

ID: 161 Poster **Gathering and Consumption of Semi-Domesticated Plants in Tanzania: with Special References to** *Ceratotheca sesamoides*
All Authors: Haruna Yatsuka harunainafrica@gmail.com
Presenter: Haruna Yatsuka
Institution: Tsuda University

A wide variety of edible plants are gathered and consumed in Africa. Some of them are in so-called "semi-domesticated" stages, where their reproduction is controlled by people or their growth is encouraged by people. One of such species, *Ceratotheca sesamoides* (Pedaliaceae) is a popular edible plant among rural communities in the African savanna regions. For example, in Central Tanzania,

people often use the leaves as a sticky side dish. I conducted my ethnobotanical research among the Sandawe people in the Central Tanzania and the Hadza people in Northern Tanzania. The Sandawe gather *C. sesamoides* from their crop fields in the rainy season and then dry and store it. It grows naturally in their fields, and while they pull up some plants during weeding, they protect others. On the other hand, the Hadza actively gather several herbs among the remains of pastoralist settlements or in environments disturbed by livestock. *C. sesamoides* is also gathered in such environments and cooked and eaten as a side dish. In this presentation I would like to consider the gathering and consumption of semi-domesticated plants, using the use of *C. sesamoides* by the Sandawe and the Hadza as a specific case study.

ID: 50 Poster **Mechanisms and motivations of medicinal plant use against dysmenorrhea**
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Presenter: Berber Zandstra
Institution: Wageningen University and Research

Background: Dysmenorrhea (painful menstruation) negatively impacts the lives of many women on a global scale. For centuries, women across the world have relied on medicinal plants to treat dysmenorrhea. For an industrialized country like the Netherlands, however, data on such plant use is almost absent. This study aimed to document which plant taxa women in the Netherlands use to treat dysmenorrhea and their motivations behind plant choice.
Methods: Semi-structured interviews and online surveys were conducted among women who used and advised plants to treat dysmenorrhea. Respondents were recruited via social media and snowballing. Literature research was conducted to investigate what phytochemicals are related to alleviating dysmenorrhea in the Netherlands and abroad.
Results: Our 156 respondents mentioned 87 plant taxa to treat menstrual pain. *Alchemilla* spp., *Achillea millefolium* L., *Matricaria* spp., *Rubus idaeus* L., *Salix* spp., *Cannabis sativa* L. and *Zingiber officinale* Roscoe were the most used and advised plant taxa. Familiarity, experienced positive effects and availability were the most important motivations reported for choosing specific plant taxa. Experienced side effects as a result of painkillers were often mentioned as a reason to use herbal medicine.
Conclusions: This study is a valuable addition to current knowledge about medicinal plant use to alleviate dysmenorrhea. The reported plant taxa were similarly used in other countries and contained a wide variety of mechanisms of action, which indicates that dysmenorrhea can have different treatments. Gaining more insight in women's healthcare choices and motivations is vital in securing high-quality and suitable, personalized healthcare.

Oral Presentations

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ID: 33 Special Session **Conquest ecologies in comparative perspective: plant and animal bioprospecting under the Amazonian "drogas do sertão" and maritime fur trades**
All Authors: Matthew Abel mwabel@smu.edu
Presenter: Matthew Abel
Institution: Southern Methodist University

This paper examines the comparative ethnoecology of plant and animal trading in the colonial Americas to argue for renewed focus on the social organization of labor as a lens for understanding the relationship between history, politics, and environment. Bioprospecting, or the search for biological materials for the purpose of commercial exploitation, played a decisive role in the European colonization of Amazonia and the Pacific Northwest: two rainforest environments where archaeologists today underscore the importance of indigenous management in shaping aquatic and terrestrial ecologies. Over the past thirty years, historical ecologists have radically transformed our understanding of pre-colonial society in both regions. However, they have paid substantially less attention to the relationship between indigenous land-use patterns and the forms of political organization that both articulated and conflicted with European settlement under colonization. Drawing together archaeological, historical, and ethnobotanical datasets, we explore the importance of institutional factors in guiding the integration of indigenous land-use practices along emerging networks of commercial exploitation. In doing so, this paper builds on prominent interpretive frameworks in historical ecology while highlighting the limitations of "management" as an analogy for understanding human-environment relationships during periods of intensifying exploitation and rapid social change.

ID: 139 **Reproducibility of antimicrobial activity data for selected plant species traditionally used in South Africa to treat skin infections**
All Authors: Tesleem Olatunde Abolarinwa tesleemabolarinwa@gmail.com, Ben-Erik Van Wyk bevanwyk@uj.ac.za
Presenter: Tesleem Olatunde Abolarinwa
Institution: University of Johannesburg

This study assessed the reproducibility of antimicrobial activity data for a selection of plant species traditionally used to treat skin infections across different testing settings. Air-dried plant material from 63 plant species traditionally used to treat skin infections were extracted with dichloromethane and tested against seven skin pathogens. The tests were conducted in two different laboratories over three consecutive days using the same plant samples collected from the same location. The MIC values obtained were compared within the laboratory, between different laboratories, and with those reported in the literature for reproducibility. Out of the 63 plant species, 43 exhibited moderate antimicrobial activity (MIC < 0.5 mg/mL) against at least one pathogen. More species (29) were active against bacteria than fungi (24), with 15 species showing activity against both. Further analysis revealed that plant species collected from the same location showed 15% inconsistency in MIC results within the same laboratory, while 25% inconsistency was observed between laboratories. In contrast, literature

reports showed much higher inconsistency (82%) for the same species collected from different locations. Statistical analysis revealed no significant difference in MIC values within the same laboratory (*p*-value ~ 0.9368). These findings suggest that biochemical and biogenetic differences between samples and provenances within the same species, as well as variations in experimental protocols may contribute to inconsistencies in the results of antimicrobial activity studies of plant extracts.

ID: 200 Chili peppers (*Capsicum* spp. as the soul of multiethnic Mexico): Learning from reciprocity to build a committed and collaborative ethnobotany
All Authors: Araceli Aguilar-Meléndez chilesyculturas@gmail.com
Presenter: Araceli Aguilar-Meléndez
Institution: Universidad Veracruzana

My ethnobotanical research has been deeply shaped by the knowledge, experiences, and teachings of field collaborators—women and men who generously share their time, stories, and wisdom. Rather than applying a fixed methodology, my approach has evolved through attentive listening, long-term engagement, and mutual learning in diverse cultural and ecological settings. These interactions have allowed me to develop a research framework grounded in reciprocity, respect, and contextual understanding. By centering the voices and perspectives of local actors, my work seeks not only to document plant knowledge and practices, but also to contribute to collaborative and socially committed ethnobotany.

One of the clearest expressions of this commitment has emerged through my work with chili peppers (*Capsicum* spp.), particularly in understanding the deep cultural meanings embedded in their diversity. Indigenous and non-Indigenous rural communities have preserved numerous landraces—often referred to as "invisible" chiles due to their absence from official classifications and commercial markets. These overlooked varieties serve as powerful symbols of cultural resistance and as enduring markers of local identity. Collectively, they form a living archive of biocultural heritage sustained through everyday culinary practices, seed exchange networks, and intergenerational knowledge transmission.

ID: 152 Gastronomic heritage and the invisible diversity of chili peppers in Mexican cookbooks and digital media
All Authors: Araceli Aguilar-Meléndez chilesyculturas@gmail.com
Presenter: Araceli Aguilar-Meléndez
Institution: Universidad Veracruzana

Mexico is recognized as a center of origin and diversification for *Capsicum annuum* var. *annuum* and *C. frutescens*. In addition, two other domesticated species - *C. chinense* and *C. frutescens* - have been introduced into the country's agricultural and culinary systems. Based on extensive ethnobotanical fieldwork conducted over the past 25 years, at least 90 ethnoraces of *C. annuum* var. *annuum* have been identified.With the recent recognition of traditional Mexican cuisine as Intangible Cultural Heritage by UNESCO, new questions have emerged: Who are the custodians of chili pepper seeds and the culinary practices that surround them in multiethnic Mexico? Where and how is this knowledge expressed and transmitted? To explore these questions, we analyzed the "Traditional and indigenous Cookbooks" collection by CONACULTA", as well as a curated selection of videos available on

Youtube. In total, 78 cookbooks and 500 YouTube videos were reviewed. The study compared data from three sources across the national territory: 1) the diversity of chili peppers documented through fieldwork and existing references; 2) the diversity of chili peppers featured in the cookbooks; and 3) the diversity represented in YouTube videos. Contextualized within at least 10 emblematic national Mexican dishes, the findings reveal that neither the cookbooks nor the YouTube videos effectively communicate the rich ethnobotanical context of chili pepper diversity. Despite their potential as platforms for cultural transmission, both media sources largely fail to establish meaningful connections between culinary practices and the biocultural knowledge embedded in chili pepper ethnoraces across Mexico.

ID: 79 **Andorran Ethnomycology: Culinary Uses**
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Institution: University of Barcelona

Ethnomycology focuses on the study of human practices and uses of fungi. While this knowledge is typically documented using ethnobotanical methods, it goes unnoticed as per publications. This oral communication aims to present the findings on ethnomycological culinary uses derived from the project *Andorran Ethnobotany: Traditional Knowledge, Plants, and Fungi.* Andorra is characterized as a mycophile country due to its tradition of mushroom hunting, mainly for culinary purposes. Therefore, we aim to analyse the culinary data from 127 interviewed Andorran residents to enhance its value from both an ethnomycological and ethnoculinary perspective. The surveys recorded 1.142 culinary use reports (UR) from 39 edible fungal taxa and based on cultural knowledge, ten of these were identified as ethnotaxa. Half of the UR provided details on preservation or preparation methods, in some cases, from typical Andorran dishes. For example, cooking *Marasmius oreades* in oil for an omelette on a public holiday, preparing a traditional stew for a special occasion or air-drying them for off-season use. The remaining half of the UR only indicates that the mushroom is edible. Additionally, 148 culinary mixtures were recorded, providing details on preparation or preservation methods from 20 fungal taxa and 20 plant taxa. Over half of these mixtures were made to preserve the mushrooms. The compilation of Andorra's culinary ethnomycological data demonstrates their importance in the territory. This knowledge enhances local gastronomy and enables further studies, like nutritional analysis of popular mushrooms.

ID: 16 **Ghost pipe then and now: the influence of digital media on the medicinal use of *Monotropa uniflora* in the U.S**
All Authors: Savannah Grace Anez sga5169@psu.edu, Eric Burkhart epb6@psu.edu, Joshua Kellogg jjk6146@psu.edu
Presenter: Savannah Grace Anez
Institution: Penn State University

Monotropa uniflora L., commonly known as "ghost pipe," is a plant with a long history of traditional medicinal use in the United States. More recently, ghost pipe has become popular as a medicinal plant on social media and the internet. Despite this recent popularity, there is no current literature

documenting the medicinal uses, preparation practices, or economic trade for ghost pipe. To fill these knowledge gaps, we conducted one of the first targeted studies of the digital ethnobotany of this medicinal plant utilizing a digital survey within the United States. Results show that social media and the internet were the primary source of information and learning for respondents. Notably, respondents overwhelmingly reported consuming ghost pipe in tincture form and for pain management. Both findings appear to be recent developments, as there is limited indication from the historical record that ghost pipe was primarily prepared and used in these ways. These results suggest that the internet has emerged as an important platform not only for learning and sharing ghost pipe ethnobotany, but also for developing new traditions and practices. These survey results highlight the contemporary need to understand ghost pipe ethnobotany within an increasingly influential digital world.

ID: 121 **Designing Health: Historical and Ecological Perspectives on Plant-Based Biomaterials for Healthcare Innovation**
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Presenter: Julien Antih
Institution: Université de Montpellier

The Droguier of Montpellier, housed at the Faculty of Pharmacy, contains over 10,000 plant specimens, including medicinal drugs, textile fibres, and natural pigments. Many were acquired during Colonial Exhibitions held in Marseille and Paris (1906, 1922, 1931), where plant-based materials from former French colonies were showcased for industrial use (Cornish & Nesbitt, 2014). Pharmacists at the faculty assembled a collection particularly rich in fibrous and dye-producing plants. Today, the droguier holds one of France's largest collections of cotton species (Gossypium spp.). It also features plants from today's overseas territories—Guadeloupe, Martinique, Réunion, and New Caledonia—including abacá (Musa textilis Née) and sisal (Agave sisalana Perrine), as well as a significant set from the Annamite region in Vietnam. Dye-producing species include indigo (Indigofera tinctoria L.) and woad (Isatis tinctoria L.). These materials are regaining attention for their biomedical and regenerative potential.

Historical ethnobotanical collections offer a unique resource for sustainable healthcare innovation by bridging ethnobotany, materials science, and biomedicine (Fabricant & Farnsworth, 2001). Fibres like Cannabis sativa L. and Linum usitatissimum L. show antimicrobial properties in wound care, while polysaccharide-based biomaterials (e.g., cellulose, alginate) are explored in tissue engineering and drug delivery (Li et al., 2023). Botanical dyes such as indigo and curcumin are being studied for use in antibacterial hospital textiles and smart dressings (Ghosh et al., 2025).

By linking historical collections with contemporary research, the Droguier illustrates how plant-based innovation can support biodiversity, ethical materials, and planetary health (Domingo-Fernández et al., 2023).

ID: 32 Special Session **Integrating Ethnobotany and Historical Ecology: A Holistic Approach to Stewardship Histories in Mowachaht-Muchalaht (Nuu-chah-nulth) Hahoulthi, Canada**
All Authors: Chelsey Geralda Armstrong chelsey_geralda@sfu.ca
Presenter: Chelsey Geralda Armstrong
Institution: Simon Fraser University

Indigenous Peoples across the Pacific Northwest of North America have actively shaped ecological communities for millennia. However, the dominant legal and scientific discourse continues to characterize these lived landscapes as wild and unmanaged. As a result, Indigenous communities and allied researchers are frequently required to substantiate the historical prevalence of land-use practices—whether in courts, regulatory agencies, or public domains—using western evidentiary frameworks.

Although written historical records are relatively rare in western North American contexts, they offer valuable insights into patterns of plant use, cultivation, and habitat modification. Despite their potential, these historical sources have been underutilized or misrepresented in ethnobotanical research. This study examines land-use and stewardship histories within Mowachaht-Muchalaht Hahoulthi over a 250-year period, beginning with the earliest written records from Spanish and British admiralty in the 1780s. Through a critical analysis of these sources, in conjunction with Mowachaht-Muchalaht botanical knowledge, oral testimonies, and oral referents, this research reconstructs a nuanced, spatially precise, and historically dynamic understanding stewardship histories, with a consideration of implications for similar research across the region.

ID: 51 **Plants and People of Vanuatu Program. Part 1. Biocultural Studies**
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Presenter: Michael J. Balick
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Vanuatu is a South Pacific archipelago of more than 80 islands. With 138 languages in a population of ca. 300,000 people, it is considered the most linguistically diverse country in the world. It is also a biodiversity dependent culture, where people who live in rural areas (ca. 75% of the population) grow or harvest much of what they use in everyday life. As is the case elsewhere in the world, plant-based traditional knowledge and local languages that encode much information about the natural world is endangered. To address this, the “Plants and People of Vanuatu” program was developed in 2014 as a partnership between the Vanuatu Department of Forests, the Vanuatu Cultural Centre, local communities, the New York Botanical Garden, and other international groups. Initially the goal was to catalog the plant and fungal species of Tafea Province (the five southernmost islands of the archipelago), while also recording the local names and traditional uses of these plants. Within a few years, the project expanded steadily and made the transition from basic research to a much broader program encompassing conservation of biocultural diversity and supporting cultural memory. Out of a total of ~4,500 plant collections, 2,492 (>55%) have ethnobotanical uses and linguistic data, based on 4,026 interviews with over 200 local experts. Our presentation will provide examples of plant-based local knowledge domains that are highly valued by the people of Vanuatu, but also rapidly disappearing, including plants used to convey messages, and as ecological calendars, weather magic, and wind lore.

ID: 25 **Myths of the pristine - from "natural" vegetation to "ancestral" knowledge of edible plants**
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Presenter: Rainer Bussmann

Institution: SMNK

Over the last decade, aspects of the use of vegetation or individual plant species, as well as the impact of global change on vegetation distribution, migration of species, and livelihoods of communities around the globe have become important focal points. The ecology of edible species, in particular as sources for potential future food plants, have become fashionable study subjects, even more so since the Covid-19 pandemic. Research has often moved from simple species inventories to detailed quantitative studies, genomics, and the elucidation of active compounds. These developments, while highly important have also led to some disadvantages. On the one hand, the focus on "modern" studies has led to a decline of knowledge on, and publications of classic taxonomic studies, and field studies, and often neglect of classic herbaria. On the other hand, the very widespread use of statistical indices both in ecology and e.g., ethnobotanical field research has led to a virtual inflation of index use, with the application of often only one index, and wrongly extrapolating on plant importance from this, or applying multiple indices, but coming to wrong conclusions, especially with regard to conservation implications or the "usefulness of plants for further development. "In this talk, we assess the myths of pristinity both with regard to vegetation units, as well as ancestral / traditional knowledge with regard to edible plant species and their possible use in the context of food security.

ID: 84 **Investigating the *in vitro* anticancer potential and phytochemical constituents of *Cheilanthes hirta* Swartz. extracts**
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Cancer, a complex group of diseases characterized by uncontrolled cell growth, remains a leading cause of death worldwide, accounting for approximately 10 million deaths in 2020. Despite advancements in chemotherapy and targeted therapies, survival rates have not significantly improved, necessitating the exploration of novel anticancer agents. This study investigates the in vitro anticancer potential and phytochemical constituents of *Cheilanthes hirta* Swartz., a fern known for its medicinal properties. The plant was collected from KwaZulu-Natal, South Africa and extracts were prepared using water, ethanol and methanol. The phytochemical and FTIR screening were carried out using standard procedures and anticancer activities of the extracts were assessed against prostate (PC-3 and DU-145), human T-lymphocytes (SKU-T) and gastric (AGS) cancer cell lines using the MTT assay. The phytochemical screening revealed the presence of tannins, terpenoids, saponins, flavonoids, cardiac glycosides, anthraquinones, phlobatannins, alkaloids and steroids. FTIR spectroscopy identified the functional groups such as hydroxyl, carboxylic acid, terminal alkynes, ketones, phenols and phosphate ions. The cytotoxicity results showed that the ethanol extract exhibited the most potent antiproliferative effects on prostate cancer cell lines, while the aqueous extract had the strongest effect on the gastric cancer cells. This study highlights the potential of *C. hirta* as a source of compounds for anticancer drug development, however, further investigation into its mechanisms of action and therapeutic efficacy is needed.

ID: 91 **Czech contributions to 19th century Mexican ethnobotany – Benedikt Roezl**
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After Mexico's aperture to scientific exploration initiated by Humboldt and Bonpland, various European botanists collected and exported its useful vegetal resources. Among those explorers, only one was Czechoslovak. Benedict Roezl (1823-1885) arrived at Mexico in 1854 and, after intermittent periods of residence, returned to Prague in 1875. Based on literature and specimens available in Mexico, an inventory was compiled of the plants collected by Roezl along with local names, uses and attributes. Conifers, orchids and succulents received most of his attention. His travels concentrated in the central and southern states with greater degrees of taxonomic diversity and endemism. Although he is credited with describing over 200 species, most have been placed in synonymy with previously published taxa. Some discrepancies may be explained by Roezl's perspective as a horticulturist focusing on variation among individual plants rather than that of a taxonomist with a collective discernment of species. He collected and exported large quantities of living plants and seeds of ornamental, oil, and fibrous plants that were distributed to commercial nurseries, botanical gardens and botanical specialists. Examples of Mexican taxa are discussed here although he collected plants from USA to Bolivia as well. In contrast to most foreign botanical explorers of the 1800s, Roezl contributed to Mexican society through collaboration with the Ministry of Development in establishing a fruit tree nursery, with the President of Mexico in the design of public gardens, as well as with Mexican authorities by holding civil governmental posts.

ID: 20 **Ethnobotanical Insights into Medicinal and Food Uses of Lamiaceae in the Mediterranean Region: A Systematic Review and Meta-Analysis**
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Presenter: Fuencisla Cáceres
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The Lamiaceae family is renowned for its aromatic properties and diverse applications in medicine and nutrition, particularly in Mediterranean traditional practices. This study synthesises and analyses ethnobotanical data on Lamiaceae species in the Mediterranean Region, focusing on their traditional medicinal and food applications to support novel therapeutic and nutritional discoveries. A systematic review and meta-analysis were conducted following the Preferred Reporting Items for Systematic reviews and Meta-Analysis (PRISMA 2020) guidelines. Data were categorised using standardised classification systems, including Plants of the World Online for botanical nomenclature, the International Classification of Primary Care (ICPC-3) for medicinal uses, and the Codex Alimentarius for food uses. Study quality and potential biases were assessed using validated tools adapted for ethnobotanical research. The review included 705 studies from 28 territories, identifying 42 genera and 611 taxa used for medicinal or food purposes, with 247 species having dual uses. *Salvia rosmarinus*, *Thymus vulgaris*, and *Mentha pulegium* were the most reported species. The digestive system was the primary therapeutic target, followed by the respiratory system and general. The top three most cited illnesses, in order, were acute upper respiratory infection, dyspepsia, and other specified or unknown diagnoses or diseases of the digestive system. For food, plants were predominantly used as herbs, spices, seasonings, and condiments, followed by non-alcoholic ("soft")

beverages, and alcoholic beverages, including alcohol-free and low-alcoholic counterparts. The findings underscore the deep-rooted connection between Lamiaceae species and Mediterranean cultures, providing a foundation for new therapeutic and nutritional discoveries, with traditional knowledge continuing to guide scientific progress.

ID: 67 **Rau Má and Oncology: Exploring Madecassic Acid as a Bridge Between Tradition and Therapy**
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Presenter: Cutler Cannon
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In Vietnam, where hepatocellular carcinoma (HCC) remains a major health concern due to chronic hepatitis infections, aflatoxin exposure, and high alcohol consumption, traditional plant-based remedies continue to play a central role in community health—most notably *Centella asiatica* (L.) Urb., or *rau má*. Long used in Traditional Vietnamese Medicine to support liver function, *rau má* is typically consumed as a decoction or applied topically. Its continued use as a household remedy reflects both cultural continuity and perceived therapeutic value. This presentation shares findings from a systematic review, conducted using PRISMA guidelines and literature searches in PubMed, Scopus, and Web of Science, focusing specifically on madecassic acid, a triterpenoid compound found in *C. asiatica*, and its potential anticancer activity against HCC. Recent studies show that madecassic acid inhibits NF-κB signaling, modulates extracellular matrix remodeling, and disrupts tumor-promoting pathways—mechanisms consistent with the traditional use of *C. asiatica* in managing inflammatory and proliferative conditions. These effects are further supported by evidence that traditional preparations of *C. asiatica* retain high levels of madecassic acid and may enhance its bioavailability compared to isolated forms. By examining madecassic acid through both ethnobotanical and pharmacological lenses, this presentation highlights how traditional knowledge can inform modern therapeutic strategies—bridging culturally rooted practices with emerging approaches to cancer treatment.

ID: 92 **AMAZONIAN SMELLSCAPES:The Healing Forest sensed by Indigenous People**
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Plant aromas, produced as phytochemical constituents, has been used by Indigenous societies as a guide to distinguish and assess medicinal properties of plants. Plant selection and use are therefore influenced by the local smell perception of Indigenous People. Congruently, Indigenous societies are also reported to possess an extensive odor vocabulary. So far, however, studies focusing on plant aromas and odor vocabularies, and how these two elements combined influence plant selection and use have been limited. Here, we explore to what degree local smell perception influences medicinal plant selection by investigating local odor terms of the Tikuna Indigenous People in relation to plant

aromas. First, we presented a series of odorants to Indigenous elders to get an overall idea of how they describe odors. Then, we conducted an ethnobotanical interview about aromatic plants growing in the nearby forest through "a walk in the woods" approach to understand the extent to which Indigenous People associate smell to plants. We find that the Tikuna Indigenous People have indeed an extensive vocabulary to describe smell characteristics; and they mostly identify odors by associating them to plants encountered in the forest. Moreover, they tend to describe an odor based on quality (*e.g.*, rich, simple, strong, weak) and quantity (*i.e.*, ambient vs one thing). To better understand the role of plant aromas and smell perception in medicinal plant selection, we proposed to integrate the results in this study with the volatile constituents profiling of the plants identified by the Indigenous People.

ID: 70 **Forgotten plants: valorization of forest foods for sustainable land management**
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The increasing vulnerability of forest ecosystems, coupled with ongoing socioeconomic transformations in rural areas, demands a reassessment of land management models. In Spain, *Quercus ilex*, *Prunus spinosa*, *Arbutus unedo*, *Rosa* spp., and *Pinus* spp. are widely distributed wild edible plants, with significant ecological value. Although their fruits and cones were traditionally harvested and consumed, this knowledge is rapidly declining nowadays, threatening food security and sovereignty. This project, funded by *Fundaci—n Biodiversidad* within Spain's Recovery, Transformation and Resilience Plan, aims to recover ancient knowledge and promote the consumption of wild fruits to strengthen rural bioeconomies, improve biodiversity and enhance the resilience of forest ecosystems. Furthermore, it seeks to improve the status of wild plants, whose nutritional potential remains largely underestimated. Forest management and fruit harvesting practices were implemented across 280 hectares in 14 plots in Catalonia, with data collected on yield and environmental indicators. A review of ethnobotanical literature led to the development of 125 food product prototypes. Following 55 tasting sessions, the 30 highest-rated products were selected according to various criteria, then subjected to nutritional analysis before advancing to a pilot commercialization phase. Focusing on ethnobotanical findings, 898 food-related records were identified for acorns, 293 for strawberry tree fruits, 176 for pine cones, 629 for blackthorn and 830 for rosehips. These fruits have been consumed both raw and cooked, and employed in the preparation of various products, including jams, liquors, and flour. The project's nutritional, economic, and environmental findings will be available by the end of 2025.

ID: 122 **Etymology of latin plant names: a new approach**
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Presenter: Michel Chauvet
Institution: retired

Etymology of Latin plant names; a new approach. Existing dictionaries are often repetitive and vague. This is due in part to the author's limited linguistic knowledge, and to the lack on consultation of the protologues and pre-Linnean authors. Going back to sources should be a requisite, and this is made easy with Internet. Most names of Dioscorides have been retained, but with the identifications of Renaissance authors. Linnaeus used to retain pre-linnean names, in particular from Tournefort and Bauhin. But he rejected "barbarian names" and admitted only names of Greek and Latin origin. Such names might have been coined during the Middle-Ages, such as Capsicum (Actuarius) or Tagetes (Pseudo-Apuleius), or came from popular names in European languages. Some of them had an Arabic origin, from Avicenna or Serapion. Others came from early descriptors of tropical plants, such as Garcia da Orta, Rheede, Rumphius, Plumier. Some names can be explained only by reading pre-linnean authors, such as Chelidonium majus, Anacardium, Diospyros. After Linnaeus, botanists discovered the overwhelming diversity of exotic plants. They coined many new names from Greek and Latin, but it was not enough. They had to rely on local names (Aublet), anagrams, and names dedicated to persons. Before Internet, going back to sources meant spending a lifetime. Now, it is easier, but scientists able to read Latin and Greek are getting rare. This is why I had a feeling of urgency. Michel Chauvet, 2024. Etymologia Botanica. Dictionnaire étymologique des noms latins des plantes. Mèze, Biotope. 792 p. (10000 words).

ID: 53 **Global Research Initiative Mapping Edible Biodiversity of Indigenous and Underutilized Foods to Support Human and Planetary Health: Lightening talks by Good Food Fellows**
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Presenter: Kevin Cody
Institution: American Heart Association/Food EDU

The Periodic Table of Food Initiative (PTFI) is transforming how we understand and apply food composition data in ways that promote human and planetary health. This mini-session features lightening talks by Good Food Fellows, individuals around the world pioneering PTFI analytical methods and research objectives focusing on underutilized foods, indigenous knowledge, and the biomolecular composition of edible plants. Good Food Fellows are part of Food EDU, a new open access educational platform featuring cutting edge science combining food, agriculture, health, and nutrition. Collectively, fellows' research highlights the importance of indigenous knowledge and underutilized foods (UFs) in shaping sustainable food systems and enhancing food security. From Ghana, we'll explore how indigenous knowledge, and spiritual beliefs influence agricultural practices and productivity. In Fiji, the shift from traditional subsistence farming to intensive export-oriented farming has led to a reliance on imported, processed foods, causing health issues like diabetes and obesity. Community mapping is being used to improve access to nutritious native foods. In Ethiopia, we'll learn how stinging nettle and other wild vegetables are being recognized for their potential to enhance food security, nutrition, and health, with efforts to document indigenous knowledge and promote their commercial use. Overall, research by the Good Food Fellows demonstrates the potential to mitigate food insecurity, inform dietary recommendations, and promote sustainable food systems by analyzing the composition of indigenous and underutilized foods.

ID: 60 Special Session **Global Research Initiative Mapping Edible Biodiversity of Indigenous and Underutilized Foods to Support Human and Planetary Health: Lightening talk by Good Food Fellows**
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Presenter: Kevin Cody
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ID: 73 **Medicinal Plants Used by the Cubeo in Folk Medicine in the Colombian Amazon**
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Presenter: Juan Carlos Copete Maturana
Institution: University of Zurich

Medicinal plants play a crucial role in the traditional medicine of the Cubeo people, who use various plants to treat and cure diseases. In this study, we conducted structured interviews with experts in medicinal plants to document the species used and their applications in folk medicine. We recorded 42 medicinal plant species. The botanical family with the most species was Fabaceae, with five species. These plants are used to treat 32 diseases, categorized into 10 groups according to the World Health Organization (WHO). The most common ailment among the Cubeo people is stomachache, accounting for 13% of reported cases. Regarding preparation methods, raw plant material was the most commonly used form (37%). The most cited routes of administration were oral (49%) and topical (39%). The most frequently used plant parts were bark and leaves (28.57%), while stems (0.19%) and heartwood (4.76%) were the least utilized. In terms of growth forms, trees were the most commonly used (42%), followed by shrubs (28.57%), whereas palms were the least utilized (2.38%). Among forest types, terra firme had the highest number of medicinal plant species (47.61%), while floodplain forests had the lowest (4.76%). Our findings highlight the diversity of medicinal plants used by the Cubeo people

and underscore the importance of further research on their chemical composition. This study paves the way for future investigations into bioactive compounds that may contribute to the development of new pharmaceuticals for global healthcare.

ID: 168 **Leveraging Food Composition Data for Human and Planetary Health Solutions**
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Presenter: John de la Parra
Institution: Rockefeller Foundation

Escalating climate events and food system processes are threatening the nutritional quality, safety, and accessibility of foods—posing risks to both human and planetary health. Food composition data—detailing the biomolecular makeup of foods—offers a powerful, underutilized resource to understand and manage these challenges. Here, we propose leveraging foodomics-enabled composition data as a novel indicator of climate effects on food quality, and as a tool to guide sustainable agriculture and nutrition strategies. We outline three core applications in a framework centered on foodomics and food systems metadata: (1) monitoring of climate impacts on food composition; (2) evidence for scaling agricultural practices that enhance food quality and ecosystem resilience; and (3) data-informed design of accessible and healthy diets from sustainable food systems. We call for globally harmonized food composition datasets integrated with environmental and cultural metadata, and investment in standardized foodomics tools, AI-enabled analytics, and equitable research infrastructure. These efforts are critical for shifting toward quality-focused food systems that equitably nourish people and protect the planet.
Keywords: food composition data, foodomics, food quality, planetary health, regenerative agriculture, sustainable diets, bioactives

Highlights
● Foodomics tracks climate impacts on food composition across time and space
● Food quality varies by climate, agriculture, and food system attributes
● Food composition data informs planetary health solutions for agriculture and diets
● Standardized foodomics tools enable scalable, globally harmonized evidence
● AI integrates complex datasets to uncover trends in food and planetary health

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ID: 29 **Traditional Plant Knowledge: Beacons of hope during climate change storms among pastoralist communities in the Karamoja region, northeast Uganda**
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Presenter: Emiel De Meyer
Institution: Staatliches museum für Naturkunde Karlsruhe

Intact mobile pastoralist systems support biodiversity conservation like no other food production system. At the same time, knowledge about this biodiversity is crucial for sustaining pastoralist livelihoods, including food and health security for both people and animals, as well as informed decision-making for navigating the landscape. However, threats to this socio-ecosystem, such as climate change, land degradation, and mobility limitations, increasingly endanger the preservation and transmission of this knowledge, weakening both ecological and cultural resilience. This study explores

the impact of mobility changes on pastoralists' capacity to use their plant knowledge to deal with the effects of climate change among Karimojong pastoralists in Uganda's Karamoja region, an area with high ecosystem integrity and rich but underdocumented biocultural heritage. Specifically, the project examines how mobility limitations impact the preservation, transmission, and application of plant knowledge, and the mechanisms by which plant knowledge and use are adapted and transformed by Karimojong pastoralists to deal with changing livelihoods, with particular attention to gender roles. This presentation discusses initial results and outlines planned research steps. The Karimojong system provides a globally relevant case study, offering insights into the interconnectedness of food production, biodiversity conservation, and adaptation strategies for pastoralist systems to contemporary challenges. Findings will inform biodiversity conservation and pastoralist management policies, facilitating the integration of biocultural heritage into effective policymaking on biodiversity conservation and climate change adaptation.

ID: 30 **Medicinal plant use in a context of coloniality: perspectives from the Congolese community in Belgium**
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Communities with a migration background often maintain aspects of their health practices, healthcare beliefs, and traditions after migration. Consequently, medicinal plants play a significant role in the healthcare practices of various communities in Western urban areas, including the Congolese community in Belgium. Although several potential reasons for this continued use have been proposed, few studies have explored it within the context of coloniality. Our research aimed to understand the lived experiences of the Congolese community in Belgium regarding their use of medicinal plants, with a focus on how coloniality dynamics shape knowledge transmission in a postcolonial setting. We conducted 21 in-depth, semi-structured interviews with individuals of Congolese descent who use herbal medicine in Belgium, and analyzed the qualitative data using reflexive thematic analysis. Our findings indicate that medicinal plant use is significantly shaped by experiences of coloniality, with epistemic injustice emerging as a key factor. Participants expressed tensions between their plant knowledge and the broader coloniality context. Their responses ranged from reinforcing their engagement with medicinal plants to abandoning their use either due to a loss of confidence in their own capacity as knowers or to avoid confrontation with patterns of coloniality. This research highlights that in contexts where migrant communities are minority groups subject to discrimination and where their country of residence has a colonial history or continues to be shaped by colonial influences, the preservation of traditions, cultural concepts, and belief systems including medicinal plant knowledge and use must be understood within the broader framework of coloniality.

ID: 31 **Cultural, ecological, and political factors underlying differences in wild edible plant use between rural Lango and Acholi communities in Northern Uganda**
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Wild edible plants (WEPs) play a crucial role in the food systems of many rural communities globally. Similarly, in Northern Uganda, they are an essential part of the food system, helping to bridge periods of food insecurity during extended droughts. Our main aim was to understand the use and significance of wild edible plants among rural Lango and Acholi communities in Northern Uganda, the differences in their knowledge, and the various drivers behind these differences. We hypothesized that different ethnic groups employ distinct strategies to cope with food insecurity, leading to variations in wild edible plant use and knowledge. We conducted focus group discussions and in-depth interviews with individuals from twelve Lango and ten Acholi communities in Northern Uganda. A greater diversity of WEPs is integrated into daily life, and their cultural significance is more pronounced in the livelihoods of Acholi communities compared to Lango communities. Our results suggest that cultural differences, ecological characteristics of the landscape, partly shaped by differences in livelihood systems, and historical political factors, such as the Ugandan Bush War, play a significant role in shaping traditional WEP use. Understanding the current role of WEPs within local food systems will inform biodiversity conservation efforts and guide their integration into sustainable food systems.

ID: 22 **Antibacterial, anti-biofilm, anti-quorum sensing activity, and cytotoxic potential of *Moringa oleifera* L. leaf extracts**

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Presenter: Zimasa Busisiwe Busisiwe Dubeni
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Ethnopharmacological relevance: *Moringa oleifera* has traditionally been used to treat various health problems, ranging from infections and skin conditions to digestive and respiratory issues. The growth of antimicrobial resistance worldwide has led to increased focus on antimicrobial stewardship and infection prevention and control (IPC) measures using medicinal plants**.** Even though *M. oleifera* with its known medicinal uses globally, detailed documentation of the anti-biofilm, anti-quorum sensing activity, and cytotoxic potential of *M. oleifera* growth is often lacking. **Aim of the study**: This study investigated the antibiofilm, anti-quorum sensing, and cytotoxic potential of *Moringa oleifera* leaf extracts. **Materials and Methods**: Biofilm inhibition against *Salmonella enteritidis* was assessed using crystal violet staining. Anti-QS activity was evaluated using *Chromobacterium violaceum*, and cytotoxicity was measured using Vero cell. **Results:** Dichloromethane, aqueous, and hexane extracts demonstrated significant biofilm inhibition (>50%) at 0.31, 1.25, and 0.63 mg/ml, respectively. All extracts exhibited anti-QS activity, with minimum inhibitory concentrations ranging from 0.04 to 0.16 mg/ml. The methanol extract was most effective, significantly inhibiting violacein production, a QS-regulated pigment. Violacein production decreased by up to 95.24% with increasing methanol extract concentrations. Cytotoxicity assays revealed the acetone extract as the most toxic, reducing cell viability at low concentrations (15.3 ug/ml). Conversely, the aqueous extract showed no toxicity. **Conclusions:** *M. oleifera* extracts effectively reduced both QS and biofilm formation, suggesting their potential as treatments for bacterial infections and as antibiotic alternatives.

ID: 83 **Starch in the foodways of late precolonial Florida: Identification and interpretation in an under-studied area**
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Institution: University of Central Florida

Archaeological plant micro-remains analyses in the southeastern United States are uncommon and in Florida, exceedingly rare, leaving a great potential for starch research to contribute information about foodways, subsistence, and exchange that cannot be understood through macroremain analysis alone. A starch grain comparative collection for the region is crucial to interpret archaeological data. Ethnohistoric sources of plant foods from the contact period are not well documented and there are no living decedents of the original Indigenous peoples prior to the contact period on the central coast due to removal and extirpation by colonial pressures. Compiling the limited ethnohistoric references of plant use along with extensive modern ethnobotanical sources based on Indigenous tribes from the north who moved to the area after colonization, we are actively building a comparative starch collection for our research at late prehistoric sites on Cape Canaveral, Florida. Preliminary studies of starch residues from pottery and several shell tools excavated at two sites have revealed a number of unknown starch types that have not yet been identified. In addition, the results have confirmed the presence of maize use in an area where debates over maize presence have been ongoing. Archaeological starch research in this region has the potential to reframe our understanding of food in precolonial Florida.

ID: 141 **The plant awareness construct: an inter-disciplinary approach to explore human-plant relationships**
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The study of plant awareness, formerly known as plant blindness, focuses on understanding the current state of human-plant relationships, addressing the perceived low awareness, especially in educational settings in the global north, and exploring methods to foster it. Although plant awareness has been developed in scienceeducation, various other disciplines, such as conservation and cognitive psychology, have started to explore the effects of the phenomenon. Beginning with the introduction of plant awareness, there has been a lack of clear definition and construct leading to a blurred research field. To increase clarity, we propose a first statistically validated construct of plant awareness. Our conceptualization of plant awareness comprises three distinct dimensions: attention, understanding, and attitudes, and we suggest corresponding assessment methods. To gain a better understanding of plant awareness and its implications for conservation and education, it is crucial to foster collaboration between different fields. This collaboration should be structured around gaining a better understanding of the construct, its dimensionality, and methods. Understanding plant awareness as an interdisciplinary research field also marks a critical shift: moving beyond the current emphasis on scientific, global knowledge systems toward a more balanced integration of indigenous and local knowledge. It highlights the need for a multidimensional approach that acknowledges and bridges local and global perspectives. Ethnobotanical methodologies and concepts offer valuable tools for advancing the assessment of plant awareness, reinforcing its status as an interdisciplinary research

interest. This presentation aims to spark discussion around the convergence of plant awareness and ethnobotany, encouraging exploration of their interconnections.

ID: 54 ***Cedar Management of the Tluwis7ath: Forest Ethnoecology of Nootka Sound, Vancouver Island, Canada.***
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Presenter: Jacob Earnshaw
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In the dense temperate rainforests of the Northwest Coast, archaeological evidence of sustained use and management of inland regions can be difficult to identify. The Nuu-chah-nulth peoples, who inhabit the west coast of Vancouver Island, have long been associated with coastal occupation, such as their great longhouse villages, iconic carved house posts, ocean-going whaling canoes and salmon-rich rivers. In this study, we examine a collection of culturally modified tree sites within the territory of the Tluwis7ath, a local group of the Mowachaht/Muchalaht First Nation, located on in Nootka Sound on Vancouver Island. These sites reveal significant insights into the traditional use of inland forests in Nootka Sound. We discuss these sites along with associated villages, aborglyphs and hunting shrines to illustrate the deep forest management practices, territoriality and belief systems of the Nuu-chah-nulth people. Additionally, we explore methods to identify these sites despite a long history of industrial logging throughout the region.

ID: 132 **Developing a First Foods monitoring program to support biocultural conservation and tribal sovereignty in the interior Pacific Northwest, USA**
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Many forbs found in the grasslands, shrublands and dry forests of the interior Pacific Northwest, USA are First Foods important to the health, diet, and culture of Indigenous people of the region. Plateau Tribes depend on 'roots' such as *Lewisia rediviva*, *Lomatium cous*, *Allium* spp. and *Camassia quamash* for subsistence and ceremonial purposes. Corms, tubers, bulbs, and newly emerging leaves from over 100 species are seasonably harvested within traditional food systems. However, information on these species' status and health is lacking and little is known about the effects of invasive species, climate change, fire, livestock grazing, or land management actions on these species. Here, we documented the proportion of forb species recognized as culturally important, evaluated how the timing of vegetation sampling affected abundance estimates, and developed and implemented a collaborative monitoring program to address information gaps, expressions of community concern, and to support tribal treaty rights and sovereignty. We found existing monitoring efforts by agencies significantly underestimated root abundance. In response, a collaborative group of tribal, university, agency, and non-governmental organization partners developed a monitoring program to address knowledge gaps and to provide valuable information to Tribes regarding the status of First Foods. We demonstrate how

this program can inspire research responsive to tribal goals and objectives, reform contemporary management practices, increase capacity of agencies who have land management responsibilities, and finally, serve as a transferrable model elsewhere.

ID: 27 **The invisible tropical tuber crop: edible aroids (Araceae) sold as 'tajer' in the Netherlands**
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Presenter: Qiong Fang
Institution: Wageningen University and Research

Edible aroids (plants from the family Araceae) are among the top five most cultivated tuber crops globally, but their consumer acceptance is hindered by acridity. Aroids contain sap that severely irritates the throat and lips if not properly processed. However, no in-depth studies exist on acridity in edible aroids and how to diminish it. We used ethnobotanical methods to document the diversity of edible aroids available in the Dutch market and how consumers handle acridity. We grew corms in a greenhouse to obtain additional morphological information and used flow cytometry to assess ploidy. We collected 73 samples and interviewed 71 people. At least three species, *Colocasia esculenta*, *Xanthosoma violaceum*, and *Caladium bicolor*, were sold under the generic name 'tajer'. Different plant parts with various forms of processing were imported from diverse geographic origins and sold mainly to immigrant customers. Interviewees mentioned various processing methods to avoid and reduce acridity. We distinguished nine cultivar groups of *Colocasia esculenta* and four of *Xanthosoma violaceum*. Both *Colocasia esculenta* and *Xanthosoma violaceum* were also cultivated in Dutch greenhouses. We present the first report on edible aroids cultivation in northern Europe and draw attention to the lack of labeling and cooking instructions.

ID: 81 **A vanishing legacy: Reviewing the fragile medicinal ethnobotany of Eastern Pondoland, South Africa**
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Eastern Pondoland, located within the Maputaland-Pondoland-Albany biodiversity hotspot, is renowned for its rich botanical diversity and deep-rooted traditional medicinal practices. However, this invaluable cultural heritage is at risk due to the limited body of published literature documenting medicinal plant use in the region. Existing research is sparse, fragmented, and often disease-specific, leaving significant gaps in understanding the full scope of ethnobotanical knowledge. This review synthesizes the available literature, documenting 146 medicinal plant species recorded across only five key publications. The Asteraceae (22%) and Fabaceae (15%) families were the most frequently cited, with plants used not only for treating physical ailments but also for spiritual, social, and mental well-being. The scarcity of comprehensive documentation poses a risk of irreversible knowledge loss, especially as habitat degradation, biological invasions, and the decline of oral knowledge transmission continue to threaten the region. By highlighting the limitations within the existing body of research, this review underscores the urgent need for further studies to fill these gaps. Protecting Eastern Pondoland's medicinal ethnobotanical heritage requires sustained efforts in documentation,

conservation, and the integration of indigenous knowledge into biodiversity management. Preserving this knowledge is crucial not only for cultural continuity but also for future healthcare and ecological sustainability.

ID: 171 **The Evolution of modern foraging in Slovenia: Educators, Social Media, and Conservation**
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Presenter: Živa Fišer
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In recent years, wild plant foraging has seen a strong revival in Slovenia. At the heart of this resurgence are foraging educators—individuals who not only share their knowledge but also help shape a growing and diverse foraging community. Today, foraging knowledge is no longer passed down solely from parents to children; instead, it often moves between peers or across generations in ways that extend beyond family lines.

These educators offer a wide range of activities, from guided walks to online courses, the latter becoming increasingly popular. Social media has become an important tool for promoting events and connecting foragers across the country. Still, many educators remain cautious, aware that these platforms are not always reliable sources of botanical knowledge.

Events like the Festival of Foraging and the wild food festival FesDivjal, first held in 2021, have become important meeting points. They foster a sense of belonging and help spread important messages about the value of nature and conservation, which is characteristic of the Slovenian foraging community.

Although the Slovenian foraging community is still informal, it shows strong potential to grow into a more organized network, similar to the Association of Foragers in the UK. The revival of foraging in Slovenia shows how traditional practices and modern tools can work together. It also underlines how education can inspire greater care for the environment and help people reconnect with the plants and ecosystems around them.

ID: 47 **Why has maize become popular in Africa? A case study of mountain farmers in Ethiopia**
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Presenter: Takeshi Fujimoto
Institution: University of Toyama

Maize has become Africa's leading cereal crop and a cornerstone of food security. Why has it become so popular in Africa? While factors such as colonial policies and the high yield of maize are often cited, this study explores another factor with the specific case of the Malo mountain farmers in southwest Ethiopia to understand this phenomenon. For 30 years, I have conducted fieldwork among the Malo, and I have observed a dramatic shift. In the mid-1990s, maize was simply a seasonal crop, primarily harvested green and consumed to make ends meet during the hungry rainy season (June–August). Its hard kernels made it difficult to process with traditional manual methods using pestle and mortar, which limited its use. However, the introduction of generator-powered grist milling machines since the late 1990s revolutionized maize consumption. Now, with more than 70 grist mills in the region, maize is mostly dried, milled, and prepared into porridge and other dishes year-round, similar

to other cereals. This change in utilization has led to an increased demand of maize and has propelled it to become the dominant crop in the Malo region.

ID: 151 **Campesinos, Yams, and Remanent Gardens: Entangled Tactics in Mampuján Agroforest Landscapes**
All Authors: Ana Maria Garrido Corredor a.garrido@ufl.edu
Presenter: Ana Maria Garrido Corredor
Institution: University of Florida

This research explores the entangled relationships between Afro-descendant campesino communities and their agroforest landscapes in Mampuján, Colombia, highlighting the role of yams and remanent gardens in practices of place-making, care, and resistance. Following the forced displacement of 245 families due to paramilitary violence in 2000, community members have navigated their histories of dispossession through multispecies relationships and agricultural practices. Drawing on ethnographic and ethnobotanical methods, this study examines the recognition of 44 yam varieties and their significance in maintaining agrobiodiversity, cultural identity, and food sovereignty. Engaging with posthumanist perspectives, it foregrounds the agency of plants in shaping social memory and territorial belonging. Through the lens of de Certeau's (1984) tactics and strategies, the paper argues that the cultivation and exchange of yam varieties, particularly the culturally significant *espino* yam, serve as both acts of resilience and forms of environmental ethics. Additionally, the persistence of remanent gardens—home gardens that survived displacement—demonstrates how plants contribute to the reconfiguration of landscapes and community identity. Rather than viewing forced displacement as a series of ruptures, this study highlights how campesinos sustain a sense of continuity through their everyday practices of farming, walking, and caring. By foregrounding these lived relationships, this research offers a perspective that not only recognizes the trauma of displacement but also reveals the creativity, dignity, and resistance embedded in the ongoing process of place-making in contested landscapes.

ID: 156 **Between Harvest and Care: Environmental Identities and Timber Knowledge in the Colombian Pacific**
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Presenter: Ana Maria Garrido Corredor
Institution: University of Florida

Timber resources remain understudied in ethnobotanical research despite their ecological and cultural importance. This study addresses that gap by asking: How do local timber managers in Bahía Málaga, Colombia, navigate the dual roles of timber harvesters and forest stewards, and what does this reveal about conflicting regimes of value, labor, and identity within conservation? In this Afro-descendant territory on Colombia's Pacific coast, timber has long been central to both subsistence and cultural life. Yet, over the past two decades, external conservation initiatives—including a REDD+ project—have reshaped how logging is perceived and governed. Combining ethnobotanical and ethnographic methods—including 40 semi-structured interviews, freelisting exercises, and participatory workshops—this research foregrounds the environmental knowledge and lived experiences of timber managers. Rather than portraying them as either extractive or protective, the study emphasizes the complexity of their environmental identities and explores how they conceptualize and enact care for

the forest. The more than 220 ethnospecies named through free lists, along with the diverse uses of forest resources beyond timber, reveal loggers as stewards with profound ecological knowledge. These findings challenge dominant conservation narratives and call for more culturally grounded interventions. Ultimately, the study advocates for conservation designs that recognize timber managers not merely as laborers, but as knowledge-holders with rights, responsibilities, and aspirations tied to both forest governance and livelihood sustainability.

ID: 144 **Evaluating the Nutritional Composition of Moringa Stenopetala Collected from Southern Ethiopia to Support Sustainable Product Development**
All Authors: Teshome Assefa Gebeyehu teshome23@gmail.com
Presenter: Teshome Assefa Gebeyehu
Institution: Ethiopian public health Institute

This study examines the proximate and mineral composition of *Moringa stenopetala* leaves collected from Sidama and the south of Ethiopia, specifically Konso, Sawla, and Arbaminch Zuria, where it is widely used in main dishes and various applications. Samples were collected from marketplaces and transported at -20 °C. In the laboratory, they were freeze-dried and ground into a powder. The nutritional quality was assessed by measuring proximate composition and essential micronutrients using AOAC methods. Results were reported on a dry weight basis. The crude protein content ranged from 28.86% to 35.26%, indicating a high dietary protein value. Vitamin C levels ranged from 118.50 mg to 135.63 mg per 100 g, potentially surpassing those of some fruits and vegetables. The crude fat content ranged from 2.05% to 2.63%, tannin levels between 3.49 mg and 13.61 mg per 100 g, indicating a lower tannin content than that of legumes and cereals. Phytate levels were also lower, ranging from 1021.61 mg to 1443.15 mg per 100 g compared to cereals and legumes. Beta-carotene content ranged from 7.04 mg to 21.57 mg per 100 g. Mineral analysis revealed high levels of calcium, phosphorus, magnesium, sodium, and potassium, along with significant amounts of zinc, copper, cobalt, manganese, and iron. Lead (Pb) and chromium (Cr) levels were minimal, ensuring the safety of the samples. These results underscore Moringa's nutritional potential as a functional food, and further research on the bioavailability of macronutrients and minerals is suggested. Keywords: Moringa stenopetala, nutritional composition, sustainable food system, Ethiopia

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ID: 61 **Leveraging the Role of Underutilized Wild Plant (Urtica simensis) in Sustainable Food Systems: Nutritional Quality Evaluation, Innovative Product Development, and Popularization**
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Institution: Ethiopian Public Health Institute

Background: Nettle plants have served as traditional food and medicinal resources in Ethiopia for generations, yet their nutritional potential remains underutilized. In Ethiopia, particularly in highland regions, these plants serve as critical food sources during scarcity. With growing challenges to food security and nutrition, these plants particularly those resilient in highland ecosystems offer untapped opportunities to diversify diets and enhance sustainable food systems. **Objective:** This study aimed to (1) evaluate the nutritional composition of the Nettle wild vegetable through proximate,

phytochemical, metabolite, fatty acid profiling and Ionomics analysis, (2) document indigenous knowledge on its use, and (3) develop an innovative food product to promote its dietary inclusion. **Results:** Proximate analysis revealed high protein (28.40-29.73%), and mineral (ash: 15.81-16.43%) content, with moderate fat (2.30-2.51%) and moisture (76.9-82.2%) levels. Additionally, multi-element profiling, phenolic content, antioxidant activity, fatty acid profiling, carotenoids, and metabolites will be analyzed using AOAC and validated methods. Indigenous knowledge on its consumption and preparation was documented to preserve cultural practices and promote wider use. A prototype flatbread fortified with nettle leaf powder will be developed demonstrating improved nutritional profile and sensory acceptability. These findings underscore the plant's potential to address malnutrition, enhance food security, and support livelihoods. The study advocates for policy and market-driven strategies to integrate underutilized wild plants into mainstream food systems.

ID: 85 **Functional and Biological Diversity of Wild Edible Plants in Italy: Advances from the FuD WE PIC Project**

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Wild edible plants (WEP) play a key role in the context of sustainability and food security, being an important resource both as gene pool for varieties of agricultural interest and a reliable food stock in historical times of famine. Although most scientific literature exploited the ethnobotanical aspects of WEP, ecological studies on broader scales about the topic are still lacking. In this study, we performed a big data analysis, combining information contained in the Italian WEP Database AlimurgITA with vegetation plots from the European Vegetation Archive available for the Italian territory, to understand the habitat preferences of WEP and evaluate the related ecosystem services. The preliminary results show that even though anthropogenic habitats and grasslands gather the highest values in terms of WEP richness, forests and shrublands are the most diversified in terms of related ecosystem services (i.e. number of species per different types of usage) retaining also high values in WEP relative frequency.n

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ID: 124 **Traditional use of medicinal and wild edible plants in Goro district, Ethiopia: implications for the rural health care system and food security**

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Abstract Since ancient times, local communities in Ethiopia have been using medicinal and wild edible plants as traditional medicine to treat various human ailments and as a source of food. This study was conducted in the Goro district to document the medicinal and wild plants used by the local community to treat both human and livestock ailments, as well as to explore the associated indigenous knowledge. Data were analyzed using family value index, preference ranking, direct matrix ranking, and fidelity level. The study identified 94 medicinal plant species and 31 wild edible plant species belonging to 86 genera and 52 families. The most commonly represented family of medicinal plants was Fabaceae, with seven species, followed by Solanaceae with six species. Most medicinal plants in the study area were herbs (35, 37.23%), followed by shrubs (33%). Leaves were the most commonly used plant part for traditional medicine preparation (47 species, 38.84%), followed by seeds (17 species, 14.05%). The family use value index showed that Anacardaceae had the highest value (FUV = 3.33). In the preference ranking exercise, *Stephania abyssinica* Walp. was the most preferred medicinal plant for treating stomachaches, while *Pappea capensis* Eckl. & Zeyh. was the most preferred wild edible plant in the area. The fidelity level analysis showed that *Ehretia cymosa* Thonn. and *Solanum incanum* L. had the highest fidelity level in treating allergies and stomachaches. The documented plants can be used as a basis for further studies in phytochemical, pharmacological, and nutritional analysis.

ID: 169 **African Cereal-Based Beers: Nutrition, Culture, and the Future**
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In many African nations, traditional beers, often characterized by low alcohol content, are crafted from a wide range of crops. Despite their nutritional richness, these beers remain understudied. Traditionally, fermentation has served as a practice to enhance nutrient availability, intake probiotics, and mitigate anti-nutritive compounds. As diets change and growing culture shifts to a focus on quantity, the importance of these traditional beers can be overlooked despite their contribution to nutritional balance as well as economic and socio-cultural well being of local peoples. The persistence of these drinks may be threatened by introduced crops, changing lifestyles, societal biases as well as global development initiatives that neglect the value of traditional foodways and crops. We provide a review of African beers, taking into account cultural contexts, fermentation processes, and nutrition. We discuss the prospects of fostering continuity and revitalizing knowledge, production, and utilization of African beers.

ID: 143 **Chili peppers of the American continent: selection, uses, cultural practices**
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Presenter: Esther Katz
Institution: Institut de Recherche pour le Développement

Chili pepper (*Capsicum* spp.) is a spice characterized by its broad spectrum of flavors and degrees of pungency. It holds a deeply rooted cultural significance across diverse societies worldwide. For thousands of years, the ethnic groups inhabiting the American continent have known, used and managed *Capsicum* species. Although chili pepper consumption is widely recognized in Mexico, it is also used throughout the rest of the continent in diverse and culturally specific ways. Some cultures have selected native chili peppers or adopted introduced domesticated ones and use them not only as food, but also as medicine and in ritual contexts, giving them substantial cultural importance. In contrast, there are cultures that do not use chili pepper at all, even though they have had the opportunity to interact with it. In countries such as Colombia, Brazil, Ecuador and Cuba, the use of pungent varieties tends to be regional or familiar. This paper presents a synthesis of data from multiple sources, offering an initial overview of the diversity of *Capsicum* species and varieties, alongside the diverse cultural practices associated with chili pepper. Tables and maps will be presented to illustrate the distribution of *Capsicum* species across different cultures in countries where chili is either native or has been introduced as a domesticated plant.

ID: 147 **Maize in the Brazilian Amazon**
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Although cassava is currently a staple food among Indigenous and “traditional” communities in the Amazon, maize was historically at least equally significant. In several cases, maize has been supplanted by cassava or rice, either through spontaneous cultural shifts or as a result of government policies. Drawing upon both ethnographic fieldwork and bibliographic sources, this paper examines the recent historical trajectory of maize consumption in the Amazon. It explores its former importance, the processes through which it has been displaced, and the contexts in which its use has been preserved. At least 90 Indigenous groups in the Amazon have been cultivating diverse maize varieties and incorporated them into their diets in a wide range of forms, including fresh cobs, flour, flatbreads, as well as fermented and unfermented beverages. The presentation will include distribution maps, tables cataloguing maize varieties, and detailed descriptions of traditional recipes.

ID: 37 **Cultural development has narrowed the range of tree utilization in reference to Wakasa area, Japan**
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Presenter: Junko Kitagawa
Institution: Fukui Prefectural Varve Museum

Human activities have been found in Five Lakes of Mikata area since ca. 13700 years ago and various tools and building materials made of trees have been found at the sites. Most are made of Japanese cedar which is distributed in the area. Other trees were also utilized, but it seems that selection of trees started from a certain time period. This is a preliminary study to make clear if people made selection of trees and when it started. The tree species that may have existed around the archaeological sites were estimated from the excavated natural trees and the results of pollen analysis. The data of excavated trees are extracted from the excavation reports of Torihama shell-mound, Kitadera site, Yuri

site, Tana site, Ego site, Kadoya site and Ushiya site distributed in Five Lakes of Mikata area from about 13700 years ago to 1200CE. Pollen of SG14 core from of Lake Suigetsu, Wakasa town, Japan was analysed to see the existence of trees. Up to ca. 5500 years ago, it seems that trees were randomly used. Many kinds of trees were processed. The number of natural trees which were not used increased from ca. 5500 years ago even though it existed around them. From Yayoi period (ca. 3000 years ago) selection of trees became common and tree species that were not previously utilized have come to used. The influence of Yamato central government and introduction of new techniques, i.e. blue bronze and iron, can be surmised.

ID: 201 Characterization of Kavalactones in 13 varieties of Kava using High Performance Liquid Chromatography coupled to Tandem Spectrometry
All Authors: Jeremaia Koroijiuta,
Presenter: Jeremaia Koroijiuta, Vincent Lal, Desta Antenehe Gedefaw
Institution: University of the South Pacific, Center of Sustainable future

Kava (*Piper methysticum*) is a traditional and commercial significant crop in the Pacific, consumed for its anxiolytic and therapeutic properties. Its bioactivity is attributed to six major kavalactones, whose solubility and extraction efficiency influence product consistency, safety, and pharmacokinetics. Despite its widespread use, limited data exist on the solubility constants (Kow) of kavalactones, which are critical for understanding their lipophilicity, bioavailability, and extraction behavior. This study employs high-performance liquid chromatography-mass spectrometry (HPLC-MS) to characterize kavalactones profiles in 13 Fiji kava varieties while systematically evaluating solvent extraction efficiency using hexane, methanol, ethanol, water, and acetone. Experimental determination of the octanol-water partition coefficient (Kow) for the six major kavalactones provides new insights into their solubility, revealing significant variations in polarity-dependent extraction yields. Initial findings indicate that nonpolar solvents favor the extraction of highly lipophilic kavalactones, while polar solvents exhibit differential recovery rates, impacting overall kavalactone quantification. By integrating mass spectrometry with solvent-solubility studies, this research refines analytical methodologies for kava standardization, contributing to quality control, safety regulations, and optimized extraction protocols. The findings provide a strong scientific foundation for enhancing kava's marketability in global nutraceutical and pharmaceutical industries while supporting Pacific Communities reliant on its trade.

ID: 172 **Ethnobotanical Study in the Purépecha Culture in Municipality of Chilchota, Michoacán, Mexico**
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Presenter: Eduardo Alberto Lara Reimers
Institution: Autonomous Agrarian University Antonio Narro

The use of medicinal plants is important for the health of the Purépecha communities of Michoacán. The inhabitants of the Purépecha plateau retain ancestral knowledge about medicinal plants used to treat dermatological conditions that has not been documented. The use of plants in Mexico is an ancestral tradition passed down through generations within families amongindigenous peoples. The

objective of this study was to record the knowledge and use of medicinal plants in Purépecha communities in the municipality of Chilchota, Michoacán, Mexico. A snowballsampling method was used, obtaining 104 ethnobotanical surveys, 55.8% women and 44.2% men.Socioeconomic data and ethnobotanical knowledge were collected. Ninety-four medicinal plants were recorded within 85 genera and 42 botanical families. The most frequently cited plants are *Ruta chalepensis* L. (7 RU), *Aloysia citriodora* Ortega ex Pers. (7 RU), and *Lepechinia caulescens* (Ortega) Epling (6 RU). The leaves are the most commonly used part in traditional medicine (49%).According to the epidemiological table in the Informant Consensus Index, diseases of the reproductive system had the highest score (FIC=0.67; 3 species), mainly affecting women. The highest number of medicinal plants was recorded in diseases of the digestive and gastrointestinal systems (FIC=0.36; 37 species), followed by diseases of the nervous system and sensory organs (FIC=0.33; 15 species). The only scientific evidence to support the use of medicinal plants comesfrom empirical knowledge. This study is the first of its kind on medicinal plants, their uses, and diseases conducted in the municipality of Chilchota, Michoacán de Ocampo.

ID: 62 **A systematic review on medicinal plants used for treating psychotic disorder in Nigeria**
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Presenter: Ibraheem Oduola Lawal
Institution: Biomedicinal Research Centre, Forestry Research In

Psychotic disorders, characterized by impaired thoughts and emotions, significantly impact individuals' well-being. In Nigeria, traditional medicine plays a crucial role in managing these disorders, with various medicinal plants employed for therapeutic purposes. This study systematically identifies, evaluates, and documents medicinal plants employed in Nigeria for treating psychotic disorders, with a focus on their ethnobotanical significance and pharmacological validation. A comprehensive literature search was conducted across databases such as PubMed, Google Scholar, and African Journals Online (AJOL) to identify relevant studies on Nigerian medicinal plants used for psychosis treatment. Inclusion criteria encompassed ethnobotanical surveys, pharmacological studies, and reviews focusing on Nigeria. Data on plant species, parts used, preparation methods, and reported efficacy were extracted and analyzed. The review identified 100 plant species from 45 families distributed across Nigeria's ecological zones. The Fabaceae family exhibited the highest species diversity, followed by Apocynaceae, Euphorbiaceae, and Combretaceae. Trees (48%) were the predominant life form, followed by shrubs (22%) and herbs (18%). Leaves, stems, and roots were the primary plant parts utilized, often prepared as decoctions or infusions. Alkaloids emerged as the most frequently reported bioactive compounds with potential antipsychotic effects. While traditional medicinal plants remain integral to managing psychotic disorders in Nigeria, further pharmacological studies are necessary to validate their efficacy and safety, potentially contributing to the discovery of novel antipsychotic agents.

ID: 163 **Assessment of Tree Species Diversity and Composition in Forestry Research Institute of Nigeria Herbal Garden, Ibadan, Oyo State. Lawal I.O., Jayeoba F.M., Balogun L.A., Odebiyi, A**
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Presenter: Ibraheem Oduola Lawal

Institution: Federal College of Forestry

The Forestry Research Institute of Nigeria (FRIN) Herbal Garden serves as a vital conservation area for medicinal and indigenous plant species. This study assessed the Tree diversity and composition within the garden using a complete enumeration method, identifying and recording tree species while measuring key growth parameters such as total height and diameter at breast height (DBH). Data were analyzed using biodiversity indices, including Shannon-Wiener Index (H' = 3.418), Simpson's Index (1-D = 0.9605), Margalef's Index (7.249), and Evenness (0.7823), indicating a high level of species richness and even distribution. A total of 39 tree species with 189 individual trees belonging to 21 families were recorded, with *Polyalthia longifolia, Ficus exasperata*, and *Gmelina arborea* being the most dominant species. The height distribution showed that most trees fell within the 5.1-15m range, while the Diameter at Breast Height distribution revealed that 41.3% of trees were within the 30.1-60.0 cm class, followed by 16.9% in the 60.1-90 cm category. The presence of ecologically and medicinally significant species highlights the garden's role in biodiversity conservation. However, threats such as habitat fragmentation and invasive species necessitate conservation strategies, including afforestation, controlled harvesting, and regular monitoring. This study provides valuable baseline data for the sustainable management of the FRIN Herbal Garden, ensuring its continued role in medicinal plant conservation and ecological stability. Keywords: Tree diversity, Composition, Ethnobotanical Indices, Conservation, Medicinal Plants.

ID: 56 **The Knowledge and Perceptions of Recreational Anglers Related to Alien Plant Species in Freshwater Ecosystems: A Case Study From Hungary**
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Presenter: Viktor Löki
Institution: HUN-REN Centre for Ecological Research

The value of recreational anglers' ecological knowledge have come to prominence in the past few decades. Their observations might be particularly important in monitoring and revealing the causes of aquatic invasions too. Although the number of registered anglers in Hungary exceeded 1 million by May 2024, little is known about their ecological knowledge. To learn more about anglers' knowledge and perceptions of alien plant species, 72 field interviews were conducted between December 2021 and May 2023 at four regularly fished freshwater bodies in Hungary: Hévíz Canal and Lakes Fényes, Balaton and Velence. During interviews, photographs of 12 alien plant species, occurring mostly at thermal water habitats, were shown to anglers as their observations on the effects of biological plant invasions were recorded. Overall, most anglers were unable to name all of the presented species, whereas those regularly fishing at thermal water habitats were able to identify correctly more of the invasive plants. Sixteen of the 72 interviewed anglers were engaged in aquaristics, two of whom confessed that a plant species (i.e., water lettuce [*Pistia stratiotes*]) and a fish species (i.e., goldfish [*Carassius auratus*]) previously held in aquaria had been intentionally released into the wild by them. Our research underlines the importance of anglers' observations about alien organisms, but anglers also have the potential to promote aquatic invasions, especially if they are aquarists too. We suggest that anglers are an untapped resource in defining and implementing conservation strategies that could counter the spread and establishment of aquatic plant invasives.

ID: 11 **Diversity and Ethnobotany of Cultivated Plants around the World**
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Presenter: Chunlin Long
Institution: Minzu University of China

This report provided information about diversity and ethnobotany of cultivated plants from 12 diversity centers around the world, based on our new book *Geography and Diversity of Cultivated Plants* edited by Karl Hammer, Miquel Esquivel and Chunlin Long, published by Taylor and Francis Press in March 2025. It is to pay tribute to Professor Hans Stubb, a key person in the history of agricultural science, who explored the historical development of cultivated plant research starting from the collection of ancient edible plants. This book emphasizes the establishment of a crop research institute in Gatersleben, where key issues were addressed in collaboration with various biological disciplines. Twelve regions of cultivated plant diversity have been identified and redefined. Each region has been analyzed based on its biodiversity and the traditional uses of medicinal plants and spices or other purposes of cultivated plants, which have become particularly important in the past decades. The text also mentions the impact of the International Plant Genetic Resources Movement and how it affects the collection and conservation of plant diversity. This book records over 6000 species and serves as an important reference for researchers and libraries, providing a comprehensive understanding of the diversity of cultivated plants and their importance in agriculture and traditional medicine. The cultivated plants from diversity centers showed great significance of ethnobotanical research and reflected the interactions between people and plants.

ID: 135 **Navigating Indigenous food research: an Australian perspective**
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Presenter: Melita Low
Institution: The University of Adelaide

In Australia, several thousand foods were actively cultivated and consumed by Indigenous people, using practices that are nourishing for the environment, for thousands of years prior to colonisation and are still being consumed today on homelands or traditional Country. Today, however, except for Macadamia nut, all the major agricultural crops grown and consumed in Australia originate from elsewhere in the world. The Periodic Table of Food Initiative is a global collaborative effort using standardised tools to catalogue the composition of the world's food supply, in particular the food diversity that is being lost to global food crops. In Australia, the Periodic Table of Food Initiative Centre of Excellence is focusing on the nutritional composition of Australian Indigenous foods and is committed to delivering an exemplar project where Indigenous and non-Indigenous Australians work together to achieve a common goal directed by, and that is beneficial for, Indigenous people. This is no easy task, in a country where colonisation had a devastating and continuing impact on many Indigenous people and laws for conducting research compliant with the Nagoya Protocol on Access and Benefit Sharing are inconsistent or absent across Australian States and Territories. In response to these challenges, the Centre of Excellence - Australia has developed best practice guidelines for undertaking Nagoya Protocol compliant research and engagement protocols for forming successful

relationships with Indigenous research partners. We hope that in addition directing our research activities, these guiding principles can serve as a resource for researchers Australia wide and potentially globally.

ID: 23 **The citizen science and ethnomycology of Aureoboletus projectellus - is a new invasive mushroom species adopted and spread by mycophilous fungi gatherers in Poland?**
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Presenter: Łukasz Łuczaj
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Aureoboletus projectellus is an American Boletaceae mushroom species which appeared on the shores of the Baltic Sea at the end of the 20th century. The mushroom was soon gathered by local communities, and fungi enthusiasts travelled from all over Poland to gather this new food item. The aim of our study was to investigate the spread of the invasive Aureoboletus projectellus and its use in mycophylic Poland through an interview-based ethnomycological survey (carried out in the field and online). We gathered 274 questionnaires. We recorded many new localities of the species inland, all over the country, far from the original sites of invasion along the Baltic Sea. It seems that the species is already well-established in Poland, and is used in similar dishes to other Boletaceae species.

ID: 103 **Medicinal ethnobotany of the Lobedu culture in the Modjadji area, Limpopo Province, South Africa**
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Presenter: Lawrence Mataha
Institution: University of Johannesburg

South Africa is one of the richest countries in terms of biodiversity and also has a diverse range of cultural groups. Indigenous plant use knowledge is poorly documented and/or preserved in scientific literature. An example is the Modjadji area, home to the khelobedu-speaking Lobedu/Balobedu people. The region was named after the enigmatic Rain-Queens, the Modjadji, who allegedly had the ability to manipulate clouds to bring rain to their people and drought to their enemies. The rich culture of the Lobedu was first documented by Krige (1940), Krige and Krige (1943, 1980) and more recently by Motshekga (2010). However, the entire literature on Lobedu medicinal ethnobotany included only 69 plant species, 76 vernacular names and 105 medicinal and magical uses. Our study represents the first quantitative ethnomedicinal study of the area and yielded a medicinal inventory of 216 plant species, 495 vernacular names and 536 use-records. A comparison of the historical data with contemporary data showed that the Lobedu indigenous plant use knowledge as recorded by Krige (1940) has faded drastically with time. The study showed that the indigenous knowledge system is dynamic, and that people readily adopt new ways to utilize the plant species in their communities to fulfil their everyday needs. It also showed that, there are still many medicinal species and medicinal uses in the Modjadji area that remain unrecorded and that a more complete documentation is urgently needed to avoid a loss of precious indigenous knowledge.

ID: 46 **Stewardship practices enhance Nature's contributions to people**
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Presenter: Giulia Mattalia
Institution: IMB-IRD

Humans actively shape landscape mosaics through species and ecosystem management. Despite their essential role in sustaining biodiversity, conventional conservation research and action often overlook these stewardship practices. To improve our understanding of biophysical stewardship practices, we propose a classificatory framework and apply it to cultural keystone species, which are considered rich in stewardship examples due to their value to people. Our analysis identified 343 instances of biophysical stewardship practices directed toward cultural keystone species and 1652 mentions of Nature's contributions to people associated with these species, including identity support, food, materials, companionship, and labour. These findings highlight the critical need to incorporate stewardship practices into biodiversity conservation frameworks to reinforce biodiversity and support the stewards themselves. Strengthening Indigenous, local and other place-based stewardship practices within scientific and policy settings (e.g., IPBES, Kunming-Montreal Biodiversity Framework) is essential for effective and inclusive conservation.

ID: 76 **An inventory of medicinal plants in sub-Saharan Africa**
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Presenter: Sibonelo Glenton Mbanjwa
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This study investigates the use of African Traditional Medicine, focusing on botanical materia medica and geographical diversity patterns across sub-Saharan Africa. It examines the diversity of medicinal plant taxa, including families, genera, and species. To collect data, the researchers used a checklist for indigenous flowering plants in Africa and resources like Plants of the World Online, along with electronic databases and relevant publications. The findings reveal 219 families, 3,643 genera, and over 10957 species, with Rubiaceae, Poaceae, and Euphorbiaceae ranking highest among the 30 most species-rich families and genera identified. The study noted a low overlap of plant families between East Africa, West Africa, and South Africa, which was expected, as family distributions are more universal. However, the specificity of genera and species used medicinally shows even less overlap across regions. Additionally, the analysis highlights South Africa and Nigeria as the leading countries in publications on medicinal plants in sub-Saharan Africa. it further indicate that African Traditional Medicine is diverse and continually evolving while exhibiting significant regional variations in therapeutic organisms.

ID: 75 **Ethnobotany of Sorghum Variety Mixtures: Traditional Knowledge, Agroecological Resilience, and Food Security**
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Many traditional farming practices leverage biodiversity to enhance resilience, yield, and the range of useful properties of crops. Variety mixtures—co-plantings of multiple varieties of a crop—are one such strategy that can confer these advantages. Current global breeding programs and extension services have largely promoted single-variety cultivation, potentially overlooking the emergent benefits of mixed systems. One of the world's most widely grown grain crops, sorghum, is traditionally grown as a varietal mixture in many parts of the world, but the cultural and agroecological dimensions of this practice have not been systematically documented. We present insights from our work with farmers in Ethiopia and India and review the literature related to this practice. Farmers in over 14 African countries traditionally grow Sorghum in mixtures, with the goal of managing climate unpredictability and pest pressures while meeting diverse end-use demands such as food, fodder, brewing, medicinal, and ceremonial applications. We share evidence of multi-year shifts in the proportions of mixtures, which may help them rapidly adapt to changing conditions and present the possibility that sorghum variety mixtures may help smooth transitions across environmental gradients such as altitudes, where farmers would otherwise have to choose between single varieties at the edges of their habitat suitability. Finally, many farmers in Ethiopia practice an "additive adoption" of introduced sorghum varieties, maintaining in-situ diversity, while introducing new traits to their populations. We call for a renewed focus on traditional mixed cropping strategies as a viable pathway to support food security and resilience in resource-limited farming systems.

ID: 104 **Sustainable use of trees and shrubs as building materials and fuel in the Shaqadud area: evidence of resilience of arid communities in central Sudan**

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Current, but also some of the past climate changes led to rising temperatures, decreasing rainfall and a decline in the diversity of ecosystems in Central Sudan, particularly in fragile pastoral areas where human land use pressures have been added. To obtain firewood and build shelters in these areas, people have relied on available trees and shrubs. In this study, an ethnobotanical survey documented the shelter and fuel plants used by five local communities around the Shaqadud area in central Sudan, and analyzed 40 charcoal samples recovered from the Shaqadud archaeological site in the same area. Information was collected in the homes of informants through focus group discussions. Thirty-eight informants were interviewed. The questionnaire covered the source of plants used and strategies for sustainable use. Ethnobotanical data were analyzed for informants' consensus factors, level of fidelity, and use values of the species used, while archaeological materials were identified and dated. The study documented the use of 66% of available trees and shrubs for construction and 83% for fuelwood. The most commonly used plant species were *Ziziphus spina christi* and *Leptadenia pyrotechnica* for construction, and *Vachellia tortilis* subsp. *radiana* and *V. tortilis* subsp. *spirocarpa* for fuelwood. The

study showed that the community was aware of the risks of uprooting plants, especially for firewood, and the importance of allowing cut branches to regenerate. Archaeological materials were identified as *Acacia* spp. dating from the 5th to 12th millennium BC, indicating the use of *Acacia* for firewood in this area since ancient times.

ID: 24 **A Quantitative Ethnobotanical Study of the Mangroves Used by the Locals of Del Carmen, Siargao Island, Philippines**
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Presenter: Cecilia B. Moran
Institution: University of Santo Tomas

The Del Carmen Mangrove Forest on the island of Siargao is the country's largest contiguous mangrove stand. Mangrove forests are known to provide economic and ecological goods and services. However, studies on the ethnobotanical uses of mangroves in Del Carmen are lacking. This study documents the ethnobotanical uses of the mangroves used by the locals of the municipality. The study was conducted in the 11 barangays of Del Carmen through semi-structured interviews, structured questionnaires and focus group discussions. At least 10% of each of the barangay's population was chosen through random, snowball and purposive sampling. The ethnobotanical indices that were computed are Use Categories (UC) and Use Reports (UR), Use Value (UV), Fidelity Level (FL) and the Informant Consensus Factor (IFC). A total of 42 mangrove species are used in the municipality as medicine, food and as materials for handicraft and construction. The study revealed that Nypa fruticans had the highest use reports and use-value among the mangrove species. Fidelity levels and the informant consensus factor among the medicinal mangrove species were also high. This ethnobotanical documentation shows that the locals of Del Carmen, Siargao have a rich and diverse traditional plant knowledge, hence, ethnobotanical studies are relevant to prevent the loss of such invaluable knowledge.

ID: 48 **Wormwood (Artemisia absinthium L.) in Switzerland, a clandestine history**
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Presenter: Blaise Pascal Mulhauser
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Few plants or drinks have aroused such intense passion as absinthe. In fact, the history of absinthe is doubly clandestine. First of all, it concerns the plant, and it is not known exactly when it arrived in Switzerland, and more precisely in the Val-de-Travers, a region in the canton of Neuchâtel (Switzerland) which is the birthplace of the drink of the same name. Absinthe is a spirit drink obtained by maceration and distillation of several species of plants, including wormwood, which gives it its distinctive character. Also known as the 'green fairy' or 'the blue', it is said to have originated from a recipe passed on to a Neuchâtel industrialist in 1797. However, only three plants are mentioned in the first recipe from the end of the 18th century: wormwood (Artemisia absinthium L.), fennel (Foeniculum vulgare) and green anise (Pimpinella anisum L.). This composition of three major medicinal plants has a very ancient reputation, since Roman absinthe wines also contained this blend. Be that as it may, these species, which grow naturally around the Mediterranean basin, show the way

forward, revealing the clandestine part of their journey northwards via the Alpine passes (Grand St-Bernard, Simplon) or the Rhône. When absinthe was banned in Switzerland in 1910, a new period of clandestine production began in the Val-de-Travers. Why only in this region? Thanks to a trick in the law that allowed pharmacists to continue selling the absinthe plant for medicinal purposes.

ID: 19 **Development of traditional fiber based livelihood enterprise to the village communities in Indian Himalayan region**
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Aim of the study In the Indian Himalayan region, many fiber plants have been used by village communities for livelihood. Among fiber plants, *Grewia optia* (Bhimal) is important fiber yielding and sources of income generation through fiber based products. **Methodology adopted** A study in the Indian Himalayan region was carried out to assess the fiber of *Grewia optiva* for developing a small-scale enterprise for the livelihood of rural communities. A few families of local inhabitants were selected, and all possible necessary facilities were provided (such as awareness meetings, exposure visits, and various levels of training) to train them to develop fiber products for income generation. **Results** During the study different village communities sruvery was carried out. Among the village communites few volunteers were selected and different levels of training programs give to train them to adopt fiber-based small-scale enterprise for livelihood and income generation. After successful completion of training programmes, villagers developed handicraft products such as baskets, slippers, purses, mats, and curtains of many designs. **Conclusion** During the training program, villagers/farmers have developed their skill for handicraft development, which has helped them to develop their small-scale enterprise for livelihood security and sources of additional income. **Keywords: Agroforestry, handicraft, fiber product, communities, livelihood**

ID: 71 **Plant based products potential from different landuse system for livelihood and income generation to the local inhabitants in Indian Himalaya**
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Aim of the study Indian Himalaya has diversity of plant species grow in different land use system and provide various plant based products i.e., fuel wood, fodder, fiber, small timber for livelihood and income generation. **Methodology** To collect the informations, a land use land cover change map was developed. The village survey was conducted using questioner survey to know the plant based product available. **Results** In the present study, land use i.e., Forest, agroforestry, agriculture, grassland and garden were reported between 700m to 3300m. The dominant species reported were; *Acacia catechu*, *Dalbergia sissoo, Terminalia spp, Pinus spp. Quercus spp Rhododendron arboreum, Myrica esculenta*, *Cedrus deodara, Abies pindrow, Betula utilis*, *Ficus spp, Psidium guajava*, *Prunus cerasoides*, *Grewia optiva*, *Oryza sativa, Triticum aestivum, Allium spp, Brassica campestris, Psidium guajava*, *Prunus persica*, *Citrus sinensis, Mangifera indica* including grasses. The dominant products used were fruits, fodder, fuel, timber, handicraft, etc. **Conclusion** It has been noticed that the production & productivity

in each land use is relatively quite low because of small land holdings & adverse -climatic conditions including over exploitation of resources and lack in management strategies. Therefore, to produce good product from the land use need improvement through awareness and management for livelihood and sustainability

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ID: 96 **Edible flowers: The distinction between food and decorative uses**
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Presenter: Erika Oberholzer
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The worldwide interest in edible flowers and the steep incline in the number of publications on the subject have been motivated mainly by the decorative appeal of the showy corollas of horticultural flowers that provided for Instagram-able culinary creations in the MasterChef era, as well as functional food and nutraceutical objectives. Garden plants with showy flowers dominated the first wave of fashion and hype. The need for new flavors, and novel prospects for gastronomic innovation led to research into lesser-known species. This search for novel decorative flowers spilled over into ethnobotany, where it led to a review of plant species with inflorescences or flowers as the edible parts. Southern African species of which the flowers have been used in ethnobotanical context have received limited attention till now. Welcome and Van Wyk (2019) provided an inventory of food plants, including species where the flowers are used as vegetables, teas, flavorings and snacks. Snack flowers are not collected but simply eaten while out in the veld, typically by children and herd boys. The flowers of 86 southern African plant species are known to be edible, of which 31 are used as snack foods. The international gastronomy sector, like any industry that depends on fashion trends and changing market preferences, expects a steady supply of innovative new floral elements with which they can elevate their creations to ever loftier heights. In addition to shape and color, the edibility, safety (acceptable daily intake), shelf life, organoleptic attributes and market acceptability need to be considered.

ID: 109 **Ethnobotanical foods with biocultural relevance, including rituals associated to them, in the Berguedà district (Catalonia, Iberian Peninsula)**
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Presenter: Maria Orriols Vernet
Institution: Universitat de Barcelona

Through cooking, we discover a lot about the customs, the traditions, the lifestyle or even the believes of our ancestors. We learn how they used to live and how they adapted to what nature provided them with to survive. Consequently, we learn about how communities chose to cultivate the varieties of vegetables and crops that best suited their needs. We focus now on traditional food plants in the Berguedà district, in Catalonia (Iberian Peninsula). The popular cuisine of this region owes its uniqueness to some plants, including crop's landraces, among them, a white race of corn (*Zea mays*) called "blat de moro d'escairar" in Catalan, mother tongue of most speakers in the region, used to cook a dish traditionally eaten on Christmas Day, which receives the name of "blat de moro escairat". Also at Christmas time, it is a tradition to use quince (*Cydonia oblonga*, called "codony") to make a variant of the typical "allioli" sauce eaten on bread or baker's cake on Christmas Eve. All the rituality

associated to these meals, destined to be eaten in family gatherings through this season, magnifies the meaning and importance of foods and their contribution to culture, although there are some plants or races (such as one of *Lathyrus oleraceus*, the “pèsol negre”) eaten without any ritual, but bioculturally significant as well. As a result of the ethnobotanical research being conducted in this Catalan region, we have selected, for the present study, the most cited plants used in traditional cooking by the informants.

ID: 130 **Digitizing Biocultural Collections and Community Engagement at the New York Botanical Garden**
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Presenter: Kenneth R. Otero Walker
Institution: The New York Botanical Garden

The NSF funded (Award # 2140478) Biocultural Diversity Collections Project at the New York Botanical Garden has been securing, digitizing and increasing access to the ethnobotanical collections of the Center for the Study of Plants, People, and Culture (formerly the Institute of Economic Botany). Although not without challenges, integrating these specimens into the Steere Herbarium of NYBG has presented unique opportunities for community outreach and engagement. Many of these opportunities have arisen through partnerships, such as with The Local Contexts Project in implementing TK and BC labels, and with other NYBG departments in collaborating to support local community members, community gardeners, and other interested persons through online group meetings and other events. In turn, these opportunities help to inform further efforts of community engagement by NYBG and other cultural institutions through identifying and increasing access to biocultural collections.

ID: 115 **124 Years of Pacific Ethnobotanical and Biocultural Research at The New York Botanical Garden**
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Presenter: Matthew Pace
Institution: The New York Botanical Garden

The Herbarium of The New York Botanical Garden holds one of the great repositories for Pacific ethnobotanical and biocultural research. This presentation will review those collections, exploring the (hidden) strengths of this collection, from Percy Wilson's 1901 visit to Singkep, Indonesia, and the collections of T.G. Yunker in American Samoa, Hawai'i, Niue, & Tonga, on to current research in Vanuatu by Michael Balick, Gregory Plunkett, and collaborators.

ID: 80 **Universal Access to the kowledge of Morelos herbalism, Mexico**
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Presenter: Gimena Pérez Ortega
Institution: Secretaría de Ciencia, Humanidades, Tecnología e I

The use of medicinal plants is one of the most widely discussed topics in ethnobotany. However, the

dissemination of this knowledge remains ineffective and lacks a novel and multidisciplinary approach, despite Mexico being one of the richest countries in terms of medicinal flora. The vegetation of the state of Morelos represents the transition between the Nearctic and Neotropical zones of Mexico, featuring pine and oak forests as well as tropical deciduous forests. Culturally, Morelos is home to more than 38 indigenous languages, with Nahuatl being the most widely spoken. In this context, the connection between biology and culture is reflected in the diverse ways plants are used for medicinal purposes. Therefore, the objective of this project was to inform the inhabitants of Morelos, Mexico, about the experiential and cultural expertness of their state's medicinal plants through radio capsules. We recorded ten radio capsules, which were broadcast during the first months of 2025 on Radio de Morelos (Universal 102.9; https://universal1029.mx/). We introduced listeners to the country's biocultural wealth and shared information about six native wild plants widely used to treat major diseases affecting Mexicans, such as cancer and anxiety. We discussed how these plants are used by traditional healers, as well as current experimental research on their agroecological cultivation and the importance of safeguarding traditional knowledge through knowledge exchange dialogues.

ID: 90 **Role of biocultural and ethnobotanical knowledge in transforming rangeland science, management and governance**
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Presenter: Maren B Peterson
Institution: Oregon State University

The UN designated 2026 as the International Year of Rangelands and Pastoralists (IYRP) to address increasing threats to semi-arid and arid systems and the people who depend upon these systems. While rangelands are ecologically defined as shrublands, grasslands, open woodlands, deserts, and tundra ecosystems, rangeland discourse identifies livestock production as the primary, and at times exclusive, global land use associated with rangeland ecosystems. Yet, millions of people (pastoral and non-pastoral) rely on "rangeland" plants for more than just forage or forage-derived products; "wild" plants are used for food, medicine, fiber, and other subsistence, commercial, and spiritual purposes. This research examines the degree to which rangeland science and management addresses non-forage plant species. Specifically, this research: 1) quantified and synthesized research addressing the use, ethnobotany, ecology, conservation, and management of non-forage plants in peer-reviewed journals dedicated to rangeland ecosystems and 2) identified and examined the exclusion of non-forage ethnobotanical knowledge and expertise in rangeland discourse, governance, and management. Results indicate an extreme deficit of papers in primary rangeland journals, with < 1% of the 4,179 articles published over the past 13 years addressing non-forage plant species. Results also indicate a lack of recognition of non-livestock-based food and biocultural systems with the rangeland discourse. The gaps within rangeland science and management highlight an opportunity (and need) to build upon ongoing decolonial efforts and collective action and identify opportunities to bridge disciplinary divides to facilitate ethnobotanical recognition and governance in rangeland-designated systems.

ID: 89 **Agroforestry, livelihoods, and knowledge: the dynamic role of *chagras* in a shifting socioecological landscape**
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Presenter: Aoife Kate Pitts

Institution: University of Georgia

Chagras, small-scale agroforestry plots, provide important resources for food, non-timber forest products, cash from market sales, and preserve agrobiodiversity and traditional knowledge while contributing to climate resiliency. The *chagras* managed by Indigenous peoples and local communities (IPLCs) around Puerto Nari-o, Amazonas, Colombia are part of a rapidly shifting socioecological, political, and economic environment. As Puerto Nari-o and the surrounding Indigenous *resguardos* (reserves) entered the global market economy, livelihood strategies changed, resulting in shifting engagement with *chagras* and the ancestral knowledge that they store, cultivate, and transfer. This work documents the knowledge, relationships, and farming strategies cultivated within *chagras* and explores how *chagras* both influence and are influenced by broader socioecological dynamics. Preliminary fieldwork has utilized semi-structured interviews, *chagra* visits and work days, and "art and herbaria" workshops. These conversations and activities have highlighted notable shifts in livelihoods and *chagra* engagement, which impact food security, biodiversity, language, and traditional ecological knowledge (TEK) transference. Future fieldwork will utilize interviews, biodiversity surveys, art workshops, and herbarium archival work to explore the impacts of the community-identified variables (school curriculums, language loss, tourism, climate change) on the *chagras* and other socioecological dynamics that they foster. This research aims to document the knowledge and more-than-human relationships that are cultivated in *chagras*, and to support community-led efforts to adapt and utilize ancestral knowledge in pursuit of healthy, culturally relevant, and stable food systems. This work also supports diverse knowledge systems and Indigenous territorial governance as policymakers seek new avenues to synergize biodiversity and agricultural production.

ID: 52 **Plants and People of Vanuatu Program. Part 2. Kastom Forest Conservation**
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Presenter: Gregory M. Plunkett
Institution: New York Botanical Garden

Plants mo Pipol blong Vanuatu (PmP) is a collaboration among the Vanuatu Department of Forests, the Vanuatu Kaljoral Senta, and the New York Botanical Garden (among others), working together with local communities. Through a pilot study on the *in-situ* conservation of a critically endangered species of palm (*Carpoxylon macrospermum*), the PmP team has worked with communities struggling with forest conservation using current national and international frameworks, which require considerable control from outside of the community, especially in the form of government certification, registration, and management — approaches that tends to work against traditional Melanesian values of self-sufficiency and self-determination. *Kastom Forest Konsevasen* (KFK) is a locally developed approach to conservation that has emerged out of the effort to protect forests and their resources while also respecting local control, local priorities, and traditional values. As owners and stewards of their natural resources, Indigenous people know best the importance that forests play in their livelihoods and culture, but local communities are learning that pressures from globalization (tourism, road construction, seasonal worker programs, international trade in crops such as kava, etc.) are heavily impacting the availabilty of important ecosystem services derived from forests (including sources of fresh water, fire wood, timber for building traditional houses, materials used in *kastom*

ceremonies, etc.). KFK seeks to provide a grass-roots approach to conservation across Vanuatu by identifying common Melanesian values of resource management, while also developing a set of local adaptations particular to each island.

ID: 154 **Why biocultural diversity in Zambia deserves attention of ethnobiological research?**
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Introduction: It is generally argued that indigenous plant agrobiodiversity can satisfy the requirement for food, medicine and materials of millions of people along with a number of ecosystem services. However, plant species with significant nutritive and medicinal values, providing materials or showing significant intraspecific variability valued by indigenous people remain neglected by science. Zambia has a diverse ecological landscape. The major savanna biome consists of sixteen vegetation types and lies in the Zambezian centre of plant endemism. Although, the country is highly ethnically and linguistically diverse it is neglected by ethnobiological research and largely unexplored. This contribution aims to analyze previous ethnobiological research in Zambia, and highlights promising untaped research contexts and directions.
Methodology: This contribution is based on literature survey complemented with field observation by the author during several short term field visits to Zambia during the last few years. The data from literature surveys and field observations were analyzed and discussed in the relevant ethnobiological contexts.
Results: Zambia has a total of 7,278 germplasm accessions conserved ex-situ including 567 crop wild relatives. The Western Province shows unique species and varietal crop diversity including wild food plants with significant nutritional potential. Their diversity is based on distinguished ecoregions and habitats including swamps, floodplains, *dambos* as well as various types of natural vegetation. The different environmental conditions determine the plant/crop species and ecotypes cultivated and wild plants collected in the natural ecosystems which are reflected in plant species used by local communities.
Keywords: ethnobotany, ethnoecology, plant agrobiodiversity, Barotse floodplains, indigenous knowledge

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ID: 86 **Saint John's bouquets: species composition and protection against evil in the southern Netherlands**
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Presenter: Isabela Pombo Geertsma
Institution: Utrecht University

Blessed bouquets and wreaths, hung around homes, have functioned as protective charms for households throughout Europe. This biocultural practice seems to be widespread, although its diversity is not yet fully understood, especially in western Europe. In the Netherlands we visited all villages where bouquets or wreaths are made and hung around the house on St. John's Day (June 24th) posing the following questions: Which plant taxa were included in the blessed bouquets? Why were these

species chosen? Why are the bouquets made? Does bouquet composition differ across villages? We interviewed 93 people and photographed 206 bouquets, identifying 184 plant taxa. The most common plants included *Rosa* spp., *Juglans regia* L., *Centaurea cyanus* L., and *Hypericum* spp. Motivations for making the bouquets included "tradition" and their beauty. They were mainly used for protection against lightning strikes. While there was a widespread tradition in the Netherlands of making these bouquets, the practice is now confined to a small region. Our interviews revealed that the bouquets were not only valued for their protective anti-lightning powers, but primarily for their role in preserving local cultural heritage.

ID: 74 **The Biocultural Diaspora of Tea in the 21st Century: Cultivation in the UK and the USA**
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Presenter: Aurora Prehn
Institution: Royal Holloway, University of London & Kew Gardens

Tea cultivation is experiencing a renaissance in Europe, and North America, with an expanding number of tea growers and producers supplying niche specialty teas to consumers globally, chiefly facilitated via the internet. This ongoing PhD research examines the new and renewed geographies of tea in the UK and the USA and the related histories of cultivation by British and American growers in the 19th century. Empirically, this research engages with craft tea growers and makers in the UK and USA on their cultivation, production, and marketing practices as well as their personal experiences and motivations to grow tea. Here, I will present recent fieldwork activities and my approach to project design, aiming to discuss the benefits and challenges of researching a plant grown, traded, consumed and beloved globally.

ID: 118 **Characterization of Local Botanical Knowledge in Indo-Pakistani and Bangladeshi Immigrant Shops in Santa Coloma de Gramenet, Barcelona: An Urban Ethnobotany study**
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The objective of this study was to characterize the local botanical knowledge associated with Indo-Pakistani and Bangladeshi immigrants in the Fondo neighborhood of Santa Coloma de Gramenet, Barcelona, Spain. The survey was carried out between 2021 and 2025, recording the products sold by these migrants. Classic qualitative ethnobotanical techniques were used, such as open observation and open-ended, semi-structured interviews with five sellers (with prior informed consent). The sellers acted as key informants due to their knowledge of the uses and properties of the plants they sell. From these interviews, ethnobotanical data were obtained on 42 plant species sold fresh. Photographic records were taken, and a reference herbarium of the sold plants was compiled. The survey was conducted in ten commercial locations in different months to cover all seasons. The interviews were transcribed and analyzed in the laboratory. The results highlight the diversity of plants that immigrants trade and their use in culinary and medicinal practices. The identified species reflect botanical knowledge linked to the traditions of their country of origin, which is disseminated within the local

community through the traded plants. This study highlights the importance of urban markets in preserving plant diversity and disseminating botanical knowledge linked to migrant traditions, as well as their contribution to urban agrobiodiversity.

ID: 123 **The role of NUS (Neglected and Underutilized Species) plants in local agrobiodiversity and food in the Region Rioplatense of Argentina**
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The simplification of agricultural systems and the loss of biodiversity have reduced crop diversity, affecting both food sovereignty and human health. Within the framework of various projects focused on the valorization of Neglected and Underutilized Species (NUS), conducted at the LEBA, different NUS species used in crops and in various culinary recipes in the study area have been documented. With prior informed consent, classic qualitative ethnobotanical methodologies were applied to record the NUS species in the work carried out across teaching, research, and extension activities. Additionally, in-person workshops were conducted where participants completed surveys on the use and knowledge of these plants. Edible weed recognition walks and seed exchanges were carried out with horticultural producers as well as the tasting of dishes made with NUS plants.

The results show that some horticultural producers grow botanical varieties that are not commercially available on a large scale, and in some cases, they are used for self-consumption. Furthermore, certain groups of people not only consume these varieties but also incorporate species that grow spontaneously in the city into their diet, many of which are considered weeds in the country. NUS species have great potential to enrich diets and strengthen food sovereignty. Their promotion not only contributes to increasing agricultural biodiversity but also improves eating habits and the health of populations. It is crucial to continue researching and promoting their integration into sustainable food systems, both in Argentina and different parts of the world.

ID: 178 **Ethnobotanical and ethnopharmcological researches on medicinal plants with anti-osteoprotic function**
All Authors: Luping Qin lpqin@zcmu.edu.cn
Presenter: Luping Qin
Institution: Zhejiang Chinese Medical University

Osteoporosis, a prevalent skeletal metabolic disorder characterized by imbalanced bone remodeling processes, manifests through excessive osteoclast-mediated resorption and insufficient osteoblast-driven formation. This pathophysiological imbalance leads to progressive bone mass loss and microstructural deterioration of trabecular networks, posing significant health risks particularly for postmenopausal women. While current pharmacological interventions demonstrate clinical efficacy, long-term medication is restricted by adverse effects including osteonecrosis and cardiovascular complications. This therapeutic dilemma underscores the urgency to explore alternative agents derived from ethnopharmacological wisdom. Our study systematically investigates the anti-osteoporotic

potential of traditional Chinese medicinal compounds through multi-disciplinary integration of phytochemical analysis, molecular pharmacology, and bone histomorphometry. By elucidating structure-activity relationships between characteristic phytoconstituents (e.g., flavonoids, saponins, and lignans) and their dual regulatory effects on RANKL/OPG signaling pathways and Wnt/β-catenin cascades, we reveal novel mechanisms underlying bone metabolism modulation. Particularly, certain bioactive components exhibit unique capabilities in synchronously suppressing osteoclast differentiation while enhancing mesenchymal stem cell osteogenic commitment. These findings not only validate traditional applications through modern pharmacological paradigms but also provide critical insights into targeted molecular interventions, laying a foundation for developing novel anti-osteoporosis agents with improved safety profiles and mechanism-based therapeutic precision.

ID: 41 **From Plant to Patient: A Historical Perspective and Review of Selected Medicinal Plants in Dermatology**
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Presenter: Cassandra Quave
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Skin conditions are a common health concern faced by patients of all ages. For thousands of years, plants have been used to treat various skin conditions, including acne, vitiligo, and psoriasis, to name a few. Today, with increasing patient preference for natural therapies, modern medicine is now more than ever incorporating age-old knowledge of herbal remedies useful in treating skin conditions into modern-day treatments. This review covers various plant-derived therapeutics (polyphenon E [sincatechins], psoralen, salicylic acid, anthralin, podophyllotoxin, and Filsuvez [birch triterpenes, oleogel-S10]) that have demonstrated scientific evidence of clinical efficacy for dermatologic disorders. The discovery, composition, history of use, and current uses in dermatology are discussed for each botanical ingredient.

ID: 78 **Rediscovering *Diosma hirsuta*: Insights into the Original Cape '*Buchu*'**
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Presenter: Ryan David Rattray
Institution: University of Johannesburg

The medicinal and ritual use of aromatic plants is an ancient global tradition. In early Mesopotamia, frankincense and myrrh, imported from southern Arabia and the Horn of Africa, were prized for ceremonial, medicinal, and perfumery purposes as early as the third millennium BCE. In southern Africa, aromatic plant use is deeply rooted in Khoe-San cultural traditions, where species collectively referred to as *buchu* were mixed with animal fat and used to anoint the body for medicinal, ritual and hygiene purposes. *Diosma hirsuta* L. (Rutaceae), a highly aromatic and endemic Cape species, was first recorded in pre-Linnaean times as the most important Cape buchu but became overshadowed by the later development of *Agathosma betulina* (P.J.Bergius) Pillans and *A. crenulata* (L.) Pillans as the main commercial species. As a result, the ethnobotanical uses and main chemical compounds of *Diosma hirsuta* (the original Cape *buchu*) have hitherto remained unrecorded and unexplored. This

study presents the first account of the contemporary use of the species, as well as its volatile and non-volatile chemistry. Major non-volatile constituents include quinic acid, myricetin 3-O-rutinoside, rutin, and narcissin, while key volatiles include linalool, limonene, β-myrcene, and β-pinene. By examining the chemical profile, we may gain insight into the historical uses of this species, particularly in fragrance, hygiene, or ritual application. These findings contribute to a broader understanding of indigenous aromatic plant use in the region and offer a framework for further phytochemical and ethnobotanical investigation into this historically significant but largely overlooked species.

ID: 116 **Bridging Farmer Knowledge, Research and Policy: The Case of Grain Mixtures in Ethiopian Agriculture**
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Presenter: Morgan L. Ruelle
Institution: Clark University

Farmers in Ethiopia continue to plant grain mixtures that incorporate multiple species and varieties, despite increasing pressure to sole-crop breeder varieties. Recent agronomic trials and ethnobotanical research strengthen the evidence that grain mixtures increase yields, enhance yield stability, and expand production to areas with marginal soil quality. Here we explore how these research findings can be communicated to key policy actors, including international donors, government agencies, and extension services. Using grain mixtures as a case study, we consider opportunities to highlight the value of farmers' traditional practices in agricultural development, including adaptive capacity for climate change. We pay close attention to the problematic ways in which science has been used to validate (and therefore call into question) farmer expertise. Building on ethics and principles of ethnobotany, we propose a framework to recognize and leverage farmer knowledge to foster resilient food systems.

ID: 66 **Enset ethnobotany in the Ethiopian Highlands; varietal diversity, uses, cultivation and changes in living memory**
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Presenter: Philippa Ryan
Institution: Royal Botanic Gardens, Kew

Ethiopia is potentially Africa's most important center of crop diversity, characterised by both the evolution and domestication of multiple vegetative species. Our project focuses especially on the major food security crop enset, or "Ethiopian false banana" (*Ensete ventricosum*), a tree-like perennial banana relative. Enset supports some of the densest populations in sub-Saharan Africa and is the staple for 20 million people. It is cultivated over a wide elevational range and ecological gradients, exists at very high biomass densities and has a deep cultural association with multiple ethnic groups. Our research is part of a NERC funded project on enset '*Evolutionary Dynamics of Vegetative Agriculture in the Ethiopian Highlands'*, which is an interdisciplinary project that integrates ethnobotany, archaeology, and genetics to study Indigenous agrobiodiversity, food security, and climate change resilience. Ethnobotanical interviews have been carried out over six field trips since autumn 2022. Here we present preliminary results on enset varietal diversity and uses, cultural role, consumption and cultivation, and about changes in living memory

ID: 120 **Stewardship practices in wild plant and mushroom foraging**
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Institution: BOKU University

Wild plant and mushroom foraging is widespread in urban and rural environments worldwide with both beneficial and detrimental effects to biodiversity. On the beneficial side, foraging often entails a diversity of practices for tending species and their habitats, supported by continued monitoring of populations. On the detrimental side, wild plant and mushroom populations can be negatively affected by foraging, leading to a declining abundance of useful wild species, disrupting ecosystem balances and degrading habitats. Given these diverging outcomes of foraging, a better understanding is needed about the enabling conditions for foraging stewardship. In this conceptual study, we understand care, knowledge and agency as constituent elements of stewardship and illustrate their dynamic influences on biodiversity outcomes of foraging using examples from case studies worldwide.

ID: 179 **Elite Cuisine: Seeds From a 19th Century Fur Trade Fort**
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Presenter: Tom Shay
Institution: University of Manitoba

Imagine a dinner menu at a fur trade headquarters in 19th Century Canada. What exotic plant foods might it include? We answer this question by reporting on the seeds from privy pits within the walls of Upper Fort Garry, a Hudson's Bay Company fort located at the junction of the Red and Assiniboine Rivers in today's downtown Winnipeg. A visitor arriving by river in the mid-1800s would have encountered high stone walls enclosing a large square**.** Near one end of the square stood the Governor's house flanked by wooden warehouses and living quarters with privies. One privy dates from 1846 to 1848, apparently for the Warwickshire's 6th Regiment of Foot, a force of several hundred sent to help bolster Britain's position in its boundary dispute with the United States over the Oregon Territory. Another is post-1848. I use the seeds from both privies to investigate the botanical cuisine of the occupants.

ID: 159 **Forest farming in the USA: supporting cultural revitalization and sustainable livelihoods through an agroforestry practice**
All Authors: Karam Sheban karam.sheban@yale.edu
Presenter: Karam Sheban
Institution: Yale School of the Environment

Forest farming is the intentional cultivation of native plants beneath a managed forest canopy. The practice, recognized nationally and internationally as agroforestry, offers a multifaceted approach to land management that harmonizes ecological health with economic viability. In the United States, this agroforestry practice can support sustainable livelihoods and facilitate cultural revitalization,

particularly among Indigenous and local communities. By integrating Traditional Ecological Knowledge with contemporary forest management techniques, forest farming enables the production of non-timber forest products (NTFPs) such as medicinal herbs, edible mushrooms, and decorative plants, diversifying income streams for farmers and communities while reducing pressure on wild plant populations. Beyond its economic benefits, forest farming plays a crucial role in preserving and revitalizing cultural practices. Many NTFPs hold significant cultural value, being integral to traditional diets, medicines, and crafts. Promoting the practice through the recognizable lens of agroforestry can support community cultural practice, while enhancing critical ecosystem services such as biodiversity, soil health, and carbon sequestration. A contemporary challenge, however, is that the term "agroforestry" is increasingly associated with tree planting initiatives. As a consequence, forest farming at risk of being excluded from funding and implementation opportunities.

Drawing on original research from my doctoral studies and my experience working for NGOs to advance the practice, this presentation will provide an overview of forest farming in the USA, from its current position in federal funding and implementation initiatives to topical research being conducted by myself and others helping to advance our collective scientific understanding of the practice and its benefits.

ID: 68 **Botanical Ethnoknowledge Index: A New Quantitative Assessment Method for Cross-Cultural Analysis**
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Presenter: Naji Sulaiman
Institution: University of Gastronomic Sciences

The scientific accuracy of ethnobotanical study has significantly grown in the past decades due to the adoption of quantitative methods, mainly represented by indices. These quantitative approaches can provide data amenable to hypothesis testing, statistical validation, and comparative analysis. Plenty of indices are applied nowadays in ethnobotany. However, none of the previously developed indices have argued for comparing general ethnobotanical knowledge between two or more human groups. Hence, this study seeks to cover this methodological gap and proposes a novel index that will provide ethnobotanists with a number representing the general ethnobotanical knowledge of a specific human group. The proposed index will enable researchers in the field to compare ethnobotanical knowledge of two or more ethnic/ religious/ cultural groups; it will also be possible to conduct a comparison within the same group, such as comparing two time periods, genders, and/or age groups. The index complexly employs several factors that can be critical when assessing ethnobotanical knowledge (e.g., total number of species reported by all participants in a particular group, mean number of species reported per participant in a particular group, and mean number of citations per species in a particular group). The index is designed to be mainly used in ethnobotany; however, it is also usable in ethnobiology and may be applicable in other studies related to traditional knowledge assessment.

ID: 21 Special Session **təmtəmíxʷtən – A sə̓lilwətaɬ History of Connection and Reclamation**
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Presenter: Ginevra Toniello
Institution: Tsleil-Waututh Nation

səl̓ilwətaɬ (Tsleil-Waututh Nation) have lived on the shores of səl̓ilwət (Burrard Inlet, Canada) since time out of mind. təmtəmíxʷtən (“the biggest place for the people”) is a prominent səl̓ilwətaɬ village, a central location in səl̓ilwətaɬ Territory and oral histories. Utilizing a multi-disciplinary approach, we explore the history of təmtəmíxʷtən throughout time, examining səl̓ilwətaɬ oral histories and traditional use studies, archaeological evidence, ethnobotany, and colonial history. Many səl̓ilwətaɬ oral histories take place near təmtəmíxʷtən, and səl̓ilwətaɬ peoples have a documented traditional occupation, cultural use, and resource harvesting in the area, highlighting the robust history. Colonial displacement and development have altered much of the landscape, leaving trace archaeological evidence of occupation and plant harvesting. Traditional use data, botanical surveys, and analysis of plant charcoal have provided initial data that allows us to start understanding the ethnobotanical landscape and provide recommendations for the revival of traditional harvesting practices. Through a partnership with the local regional government, səl̓ilwətaɬ is reclaiming stewardship over təmtəmíxʷtən and working toward reestablishing səl̓ilwətaɬ occupation and use of the area.

ID: 105 **An island within an island: Ethnobotany of l’Alguer (Sardinia)**
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Presenter: Joan Vallès
Institution: Universitat de Barcelona

In the frame of the studies our team is conducting all along the Catalan linguistic area (CLA), we present here the results of the first comprehensive ethnobotanical prospection conducted in the city of l’Alguer (for its Catalan name, in Sardinian S’Alighèra, in Italian Alghero), the name of which is derived from ‘àliga’ (*Posidonia oceanica*), a plant alive in the local traditional knowledge. This is a particularly strategic place within the CLA, since it is its most isolated territory, ca. 400 km east from Minorca. Located at the north-western coast of Sardinia, it extends, with 225,4 km^2, from sea level to 432 m, and covers from marine to inland Mediterranean landscapes. It is populated by ca. 43,000 inhabitants, one third of which speak (and a much higher percentage understand) the Catalan language, introduced in the area in 1353-1354. The prospection was carried out between 2021 and 2024, with nine visits covering all the year’s seasons. The methods used were semistructured interviews and participant observation, complemented with a few free-listing. Voucher specimens are deposited at the herbarium SS (Università di Sassari), and some non-pressed samples at the ethnobotanical herbarium section BCN-E (Universitat de Barcelona). A total of 91 interviews was performed with 108 informants, 57 men and 51 women. The results obtained, which are now being processed, concern more than 310 taxa and show a robust corpus of traditional knowledge about plant (including some fungal) biodiversity, comprising food, medicinal and a rich panoply of other tangible and intangible uses and management.

ID: 58 **Ancient Maroon rice songs suggest secret rice cultivation during slavery in Suriname**
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Presenter: Tinde van Andel
Institution: Naturalis Biodiversity Center

During slavery, music has often been used as a tool to convey secret messages. Songs of enslaved Africans have been documented extensively for the US, but less so for other plantation societies in the Americas. Here we discuss two versions of a work song known by some Maroon rice farmers in Suriname and French Guiana. While the cryptic lyrics are about *mamoo* going away to return next year or *mamoo* being killed and buried, these songs communicate that rice was being harvested or sown. They probably originated on a plantation in Suriname, where the enslaved secretly grew rice in their own food plots to plan their escape or to exchange with runaways hiding behind plantations. The use of using at least two different African terms for rice (*mamoo* and *saka*) reflects their ingenuity to communicate with each other in spite of linguistic differences and also indicates knowledge about rice that predated their transatlantic voyage, which confirms the African agency in rice cultivation in the Americas. Ancient songs about Maroon agriculture remain largely undocumented and are in danger of getting lost, but reveal an unwritten history of slavery and the successful struggle of the Maroons for freedom.

ID: 93 **Ethnoecological research on cultural keystone species in cross-border telecoupled systems**
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Presenter: Christine van der Stege
Institution: University of Victoria

The telecoupling concept recognizes that changes in social-ecological systems in one location can have profound effects on ecosystems and human well-being in distant locations. Even when focusing on a single research site, research on cultural keystone species - whether plants or animals - requires navigating treaties, national policies, and grassroots efforts. If such research is conducted across different countries (e.g. analyzing global value chains of plant products, comparing various ecosystem management approaches or, as in this case study, exploring community involvement in conservation along cross-border migratory animal routes), we must additionally adapt research approaches to different stages of decolonization and reconciliation. Drawing on examples from recent fieldwork on migratory species across Mexico, the USA, and Canada, we aim to raise awareness of these challenges, with the goal of strengthening equitable conservation efforts worldwide. Building on the fact that conservation initiatives tend to have more positive ecological outcomes when Indigenous Peoples and local communities are in primary control or work autonomously, compared to situations where they are excluded or merely consulted, we must adapt research budgets, timelines, and methods to allow for the time and space that Indigenous Peoples and local communities need to address conservation issues concerning their cultural keystone species. This will help foster long-term collaborations between Indigenous Peoples, local communities and researchers as they explore the role of cultural keystone species in global telecoupled systems together.

ID: 101 **The most ancient forms of medicinal plant use can still be witnessed in southern Africa**
All Authors: Ben-Erik Van Wyk bevanwyk@uj.ac.za
Presenter: Ben-Erik van Wyk
Institution: University of Johannesburg

Recent ethnobotanical studies revealed that some of the historical medicinal practices of the /Xam

people (the most ancient lineage of modern humans) can still be witnessed in rural parts of southern Africa: (1) The topical application of powdered aromatic plant material ("buchu powder"), mixed with fat or oil, continues as a ritual massage ("*smeer*") amongst contemporary Nama people of the Cape region. More than 50 plant species are directly or indirectly implicated as having been used as buchu, of which *Diosma hirsuta*, *Agathosma betulina* and *Pteronia aspera* are important examples. The physiological and sensual effects of (sometimes gender-specific) buchu species through massage remain scientifically unexplored. (2) Mastication was probably the only oral form of medicine administration in pre-colonial times. Medicines are still chewed over prolonged periods while hunting, foraging or herding livestock. The best example is sceletium or *kougoed* (*Mesembryanthemum tortuosum*), which has a detailed and well-recorded history of use by the /Xam, Nama and Attaqua people dating back to 1685. The implications of buccal absorption of substances from finely chewed plant materials that have been subjected to saliva remain to be studied in detail. For example, the mind-altering effects of nitrogen compounds (alkaloids and amino acids) that directly cross the blood brain barrier (thus avoiding hydrolysis by stomach acid and bypassing the liver) may well have synergistic relationships with direct biochemical activities and may contribute to restoring mental and physical imbalances. These findings provide a new perspective on the history of medicinal plant use by modern humans.

ID: 153 **Genomic analysis reveals local adaptation and vulnerability to climate change of the African orphan crop finger millet (*Eleusine coracana*)**
All Authors: Margaretha Antonia Veltman margaretha.veltman@ird.fr, Anne-Céline Thuillet, Adeline Barnaud, Yves Vigouroux
Presenter: Margaretha Antonia Veltman
Institution: Institut de Recherche pour le Développement

An important crop in arid and semi-arid regions, finger millet is valued for its nutritional composition, offering high concentrations of fibers and micronutrients, and its climate resilience, exhibiting improved biotic and abiotic stress tolerance compared to major crops. These properties have earned finger millet the reputation of a climate-smart "super food" that promises to combat food insecurity in parts of the world that suffer from malnutrition and reduced yields due to the effects of climate change. Despite this great potential, molecular studies investigating the genetic basis of climate adaptation in finger millet have not been carried out to date. Here we aim to fill this gap by providing a reference panel of more than 200 finger millet landraces sampled across its cultivation range in Africa and India. By analysing genome-wide patterns of diversity and environmental selection, we identify signatures of local adaptation and their likely environmental drivers. Using predictions of future climatic conditions based on different emission scenarios and climate models, we map the possible consequences of climate change for genome-environment associations that evolved over millennia, and identify areas where maladaptation to the environment may occur as a result. Finally, we leverage the range of diversity and adaptive potential present in this reference panel to identify candidates for assisted migration into (and out of) areas that are especially vulnerable to climate change. This could not only mitigate potential yield losses and reductions in cultivation area, but also safeguard the precious genetic resources of this underutilised crop for future use.

ID: 155 **Reconstructing the introduction of African *Sorghum* into the Caribbean through herbarium genomics**

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An emerging question within the evolution of African crops is their diffusion to other continents and adaptation to novel environments. Within the Caribbean region, traditional African crops are still grown by communities of African descent, but their precise origins and routes of introduction remain largely unknown. In this study, we explore and trace the diversity of the African cereal crop *Sorghum* in the Caribbean, through genomic analysis of 24 herbarium specimens spanning two centuries. Whole genome sequencing and comparison with geo-referenced global SNP panels show that some early specimens from the Dutch Antilles and recent ones from Suriname bear strong similarities to "guinea" landraces of *S. bicolor* from West Africa. Other specimens lacked a clear geographic signature or corresponded more closely to other (sometimes weedy or wild) races of *Sorghum*. Ethnobotanical evidence suggests that not all collected *Sorghum* was destined for human consumption; other reported uses are fodder and broom making. The genetic diversity encountered demonstrates the multiple routes through which African *Sorghum* was likely introduced to the Caribbean region, underscoring its diverse origins and complex geographic history. We hypothesise that *Sorghum* carries enduring imprints of adaptation to diverse bioclimatic regions and use patterns, which, combined with continued agroecological and cultural relevance for the African diaspora communities, are likely to maintain a high level of diversity of this orphan crop outside its native range. Increased sampling and analysis of historical and modern *Sorghum* genomes will reveal its unique genetic composition and trajectory of adaptation following its introduction to the Americas.

ID: 164 **Hot and cold in the New World**

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The hot-cold system is a folk taxonomic system widespread in Mesoamerica that classifies diseases, remedies, foods and other objects or concepts into the basic categories “hot” and “cold”. It is somewhat similar to the European humoral system or the concept of balance in Asia. The properties are intrinsic and not necessarily related to temperature. Anthropologists have widely studied the system but it has not been sufficiently integrated into ethnobotanical studies. Here, we explore the geographic and cultural scope of the system in North and Central America. The data are based on a comprehensive literature review of studies with empirical data of people, locations and some related beliefs and concepts. - The hot-cold system is used by the large majority (56) of Mexican indigenous groups, but not all (81%), mestizo and Afro-Mexican groups, most importantly in the traditional medical system, as well as 13 ethnic groups in Central America (mainly indigenous) and eight countries of the Antilles. In the three regions, the system shares general principles. However, we found some variation in the West Indies in the way heat and cold affects the body, especially the blood, which may represent a syncretism with African systems. In the United States, the system is found mainly among Mexican Americans and immigrants from Latin America, but also African Americans and European Americans. Ethnobotanical research on the hot-cold system, which is still in its infancy,

could contribute to a better understanding of the practices of selection and use of medicinal and food plants.

ID: 39 **Declining use of totora (Schoenoplectus californicus subsp tatora) in Lake Titicaca**
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Local Ecological Knowledge (LEK) is fast disappearing globally but the drivers of this loss are not fully understood. We present a case study of how even long-standing and regulated forms of LEK are vulnerable to erosion as market forces spread to regions which have historically been peripheral to global markets.We consider changes in knowledge and use of a cultural keystone species, totora, in the Altiplano of Bolivia and Peru around Lake Titicaca. Totora has been used for a variety of purposes and historically its cultivation and planting was regulated by village co-operative councils, called *ayllus*. We argue that a significant decline in the use of totora in the Altiplano along with the disappearance of the regulatory power of *ayllus* have primarily been driven by the integration of the Altiplano into the global market system, which has led to the replacement of totora with industrially manufactured goods, such as plastics and concrete. It has also undermined social bonds as individuals rather than the ayllu become the fundamental agents of economic decision-making.

ID: 102 **Records of rare and interesting edible uses of some plant and fungi species in Continental Croatia**
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Ethnobotanical studies (2022-2024) in NW Slavonia and Central Lika region have documented the remaining local knowledge of plant and fungi use amid modernization and agricultural expansion. The biocultural diversity of local varieties and semi-natural vegetation has largely disappeared, making this research essential.

Several species, including *Veratrum* sp., *Rhamnus alpinum* ssp. *fallax*, *Gentiana lutea*, and *Ribes uva-crispa*, are now rare in Lika. The use of *Chenopodium album* has vanished, but *Sorbus* species (*S. aria, S. domestica, S. torminalis*) remain part of local traditional consumption.

In NW Slavonia, *Hosta sieboldiana* leaves are still used to wrap meat with rice, *Trapa natans* is eaten like chestnuts, and *Pteridium aquilinum* shoots were once consumed as a vegetable. A newly recorded use is the consumption of young *Phragmites australis* shoots as a snack, and making flour from the species' boiled rhizomes.

Ethnoveterinary practices in Lika include use of *Helleborus dumetorum* for treating cattle and horse larynx inflammation. *Sambucus ebulus* was used for swine erysipelas, snakebite swelling in cows, and fever relief. In NW Slavonia, *Ambrosia artemisiifolia* and *S. ebulus* were given to horses to prevent blood poisoning.

A significant finding in Lika is the first recorded ethnobotanical use of *Prunus domestica* fruits infected with fungus *Taphrina pruni* as a snack. Additionally, the rare edible fungus *Sarcoscypha coccinea* was once consumed in NW Slavonia.

With traditional knowledge fading, urgent efforts are needed to document, preserve, and revive these practices, ensure cultural continuity and educate future generations on the forgotten uses of plants and fungi.

ID: 94 **The development of farmers' home gardens and plant use in Lienz (Austria) over the recent century**
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Presenter: Christian R. Vogl
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Home gardens are horticultural agroecosystems intensively influenced by humans and are considered a hotspot of biocultural legacy worldwide. An ethnobotanical monitoring during two survey periods (1998 & 2018), complemented by oral history on the time period 1930-1960, on the status of rural home gardens in the Lienz district (Austria) was realized. Farmers' home gardens are still managed manually by women, but over time some aspects have changed. In the 1960s, the gardens were small and only contained a few plant species. In 1998, they were much larger and more species-rich, since crops no longer grown in the field were now being grown in the gardens. In 2018, the gardens were similar to how they were in 1998, but there had been changes to some of their structural elements: in some gardens, fences had been removed and the gardens turned into landscaped gardens. Play areas, seating areas or raised beds had been established in the gardens. The reasons are appreciation of own products and the preservation of traditions. Gardeners acknowledged the cultural, supplying and regulatory services of gardens, but assessed the relevance of each differently. Homegardens are by no way static agroecological units, but are dynamic and individual in their appearance, composition and function. They show a trend towards becoming more individual, i.e. conversion from being a product of a homogenous local cultural script of the community into an area where gardeners define more individually the role that farmers' homegardens are expected to play for them or their family.

ID: 170 **Selection of usnic acid-containing medicinal lichens is phylogenetically clustered in relation to enantiomer composition**
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Introduction. Usnic acid (UA) is a major lichen secondary metabolite produced by multiple lineages of lichen-forming fungi, and it has two enantiomers - (+)- and (-)-UA. The lichens in the genera *Usnea* and *Evernia* have been traditionally used for antimicrobial personal care agents and cosmetic ingredients, respectively. It is not clear whether these lichens contain (+)- or (-)-UA or even a mixture. Interestingly, many other cosmopolitan lichens rich in UA were not used for herbal medicines. Methods. UA enantiomer composition in lichens was characterized with chiral liquid chromatography. Both isomers were also purified and tested against multiple cell lines and microbial pathogens.

Enantiomer composition was also mapped in a lichen phylogenetic framework to reflect its phylogenetic pattern.
Results. Our data show that the genera *Usnea* and *Evernia* stands out with dominant (+)-UA production, while others are mostly (-)-UA producing. Bioassay data show little differences in antimicrobial activity between both isomers but (-)-UA tends to be more toxic to human being. Even though there are other lichens producing (+)-UA, they are limited in either geographic distribution, morphology or biomass production.
Conclusion This study explains the reason why the lichen genera *Usnea* and *Evernia* were exploited for herbal medicines, instead of other lichens. Donimance in (+)-UA is the main factor, which is probably less toxic than (-)-UA. Other factors may include geographic distribution, morpholog or biomass production.

ID: 59 **Traditional Management of Wild Soil-enhancing Leguminous Shrubs in Milpa System by Wixárika Communities**
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Indigenous farming systems face pressure to change globally, with cascading impacts on resilience and soil health. Mesoamerican milpa systems face rapid changes or complete abandonment in many regions. To understand the potential unanticipated agroecological consequences of shifting from traditional milpas to tilled monocultures with inorganic fertilizer inputs, we are working with partners in the Wixárika community of Xatsitsarie, Nayarit, Mexico. Wixárika people traditionally manage the wild leguminous trees/shrubs ɨpa (*Vachellia pennulata*) and xɨri (*Vachellia farnesiana*) by sparing the roots and base during land preparation, allowing the plant to resprout each year, and providing multiple resources such as compost, firewood, and fodder for livestock. We have conducted structured and semi-structured interviews to gain insights into the management practices used. This is coupled with examining the population and structure of ɨpa in varying planted and abandonment aged milpas. The interviews determined that ɨpa and xɨri are important species to enhance soil nutrients and traditional uses and management practices associated with both species. They also allowed us to create models regarding the management of these shrubs and the social ecological systems affecting the practices. Our data on population and structure of ɨpa provides visualization and insight into how the succession of the milpa is influenced as a result of the traditional management of ɨpa. This study aids in understanding the role of perennial woody legumes in swidden-fallow agroecosystems across the world in the face of changing climate and social ecological systems.

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