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EDGG Event

"Broadening the horizons of grassland science for the Anthropocene"

Oulu, Finland, 6-10th July 2025

Second call, registration and further information:

https://edgg.org/egc2025

Semi-natural Grasslands have developed into biodiverse habitats as a consequence of anthropogenic activity, such as extensive agriculture, so they are inextricably linked to the Anthropocene period. In Finland, as in much or the Palaearctic Region, the amount of semi-natural grassland habitat (meadow) peaked during the early 19th century. By the late 1800s, a large-scale transition was already underway, with grasslands being converted to fields for the production of arable crops. Now, only small remnants remain of formerly extensive grasslands, and several grassland types, as well as many of their plant and insect species, are highly endangered. Today these habitats are dependent on conservation work by farmers and such organizations as Parks and Wildlife Finland, regional Centres for Economic Development, Transport and the Environment (ELY Centres) and a number of NGOs.

For the historical 20th Eurasian Grassland Conference (EGC2025), we wanted to invite participants to a location that will be novel and exotic for the majority of EDGG members. To fulfil that goal, we invite you to attend the first ever EGC conference in the Nordic region, even taking you to within a stone's throw of the Arctic Circle. The venue for the conference will be the University of Oulu, where we will be hosted by the Biodiverse Anthropocenes programme, which is led my Marko Mutanen. For those who are unfamiliar with the EDGG, this conference will give you the opportunity to become involved in a large and highly active network of people working on the conservation of grassland biodiversity. The conference programme will include all of the familiar elements, such as diverse workshops in which you can learn new skills, an ice-breaker event, Grassland Party, charity auction, and a diverse range of inspiring plenary presentations from internationally acknowledged experts. There will be a mid-conference excursion to the island of Hailuoto and finally, the traditional post-conference excursion will take us to the beautiful Oulanka river valley in the northeast of Finland.

Registration

Registration and abstract submission for the conference are now open via an online form, also accessible via this QR-code. The deadline for submission of abstracts is 15th June, one week before the early-bird registration deadline.

***Tibellus oblongus* on *Trollius europaeus*. Photo: S. Venn.**

The final prices of the registration fees are:

		Early bird	Full price	Last minute
Deadline		15th June	22th June	6th July
Normal price	IAVS	170	210	250
	non-IAVS	220	260	300
Student	IAVS	140	170	210
	non-IAVS	180	210	250
Accompanying person		100	100	100
Post-conference excursion			250	

Thanks to funding granted by the Biodiverse Anthropocenes programme of the University of Oulu, and Nordic OIKOS, we have been able to keep the registration fees to a reasonable level and also offer attractive social events and even include some surprises in your visitor packs. As per previous years, travel grants provided by the International Association for Vegetation Science (IAVS) will be available for IAVS members of limited mean. You can indicate eligibility for a travel grant in the conference registration form.

Scientific programme

The main theme of the conference will be "**Broadening the Horizons of Grassland Science for the Anthropocene**". This includes both biogeographical and scientific horizons. The programme will include presentations from regions and grassland systems that will hopefully be unfamiliar to many of you. We hope to receive many submissions that challenge our current perceptions and boundaries of grassland science and advances in familiar disciplines, as well as updates on grassland habitats that we have learnt about in previous EGC conferences. The topics of the conference sessions will be **1. Boreal Grasslands, 2. Grassland Biodiversity, 3. Grassland Conservation and Management, 4. Grasslands and People, 5. Grassland Ecology, 6. Citizen Science, 7. Taxonomy and Systematics of Grassland Taxa, 8. Urban Grasslands, 9. Genomics** and **10. Miscellaneous Grassland Topics**. In addition to the more scientific sessions, we will also include sessions on practical aspects of grassland management and conservation, aimed at stakeholders, conservation organizations and other relevant organizations.

6th July	Workshops, Icebreaker event
7th July	Registration, Opening ceremony, Day 1 of scientific programme
8th July	Day 2 of scientific programme
9th July	Mid-conference excursion to Hailuoto, Grassland Party
10th July	Day 3 of scientific programme, General Assembly of EDGG, Prizes, Closing ceremony
11-13th July	Post-conference excursion to Oulanka National Park

Workshops

The conference will commence with a number of workshops on Sunday 6th July. The topics of these will be:

- Academic writing
- Meadow butterflies of northern Finland
- Metabarcoding
- Citizen Science

There will probably be some interaction between the workshops on butterflies and citizen science. If you are interested to participate in any of these workshops, then please remember to arrange your travel and accommodation so that you will arrive in Oulu on Saturday 5th July.

Further details about the workshops and registration for them will be posted on the conference web-page shortly.

***Aricia sicias*, Kiiminki, Finland. Photo: V. Dincá.**

Plenary presentations

Nepal's Alpine Grasslands: A Legacy at Risk, and a Future to Secure

Shanker R. Barsila, Agriculture and Forestry University, Bharatpur, Nepal

High alpine grasslands in Nepal are unique ecosystems that support local communities' livelihoods, regulate water cycles, and preserve distinctive biodiversity. In addition to providing vital grazing areas for pastoral communities, these grasslands are home to iconic species of wild animals. Despite their ecological benefits, overgrazing, invasive species, climate change, and unsustainable land use practices are posing constant threats to these grasslands. Climatic change is causing shifts in vegetation patterns and increased vulnerability to extreme weather events such as droughts and floods. These shifts disrupt the delicate balance of alpine ecosystems, reducing productivity and affecting species distributions. Livestock overgrazing have been known to further worsen soil erosion, decreases plant diversity, and encourages the spread of alien species. These delicate ecosystems are further threatened by growing infrastructural development and human invasion. The dynamics of climate change consequences, especially in relation to species migration and ecosystem shifts, must be better understood in future research in order to maintain Nepal's alpine grasslands. For grassland management to be sustainable, research on the socioeconomic effects of overgrazing and the function of traditional pastoral practices is essential. Furthermore, in order to inform management techniques, it is essential to research the dynamics of invasive species and their ecological effects. Other important research topics include evaluating adaptive management techniques and looking into the possibilities of community-based conservation methods. Filling in these research gaps could help improve conservation efforts, give local communities sustainable means of subsistence, and guarantee the alpine grasslands of Nepal's long-term resilience.

Tracing the past to preserve biodiversity for the future: exploring past grassland extent, present-day patterns, and the role of people in conservation

Sara Cousins, Stockholm University, Sweden

My talk covers three themes: exploring past grassland extent, present patterns, and the role of people and their livestock. Global threats to plant diversity vary in scale and can interact, amplifying or mitigating their effects. Habitat alterations and landscape change endanger species-rich grasslands directly and indirectly when isolated plant populations become increasingly isolated from both pollinators and dispersal vectors. To protect and restore grassland plant diversity today, it is necessary to understand the extent and timing of major habitat changes in the past. Many grassland plants are long-lived and take time to disappear, so plant communities can respond slowly to change a so-called 'time lag' or 'extinction debt'. On the positive side, it may be possible to reverse detrimental changes while the plants and seeds are still around.

I have explored habitat change effects on grassland plant communities by combining methods across different biodiversity scales—genetic analyses, field experiments, and landscape studies using historical maps, aerial photos, and modeling. Each approach has challenges, which I'll discuss to help others avoid similar pitfalls. Conserving fragmented grasslands requires understanding functional connectivity and plant dispersal between isolated habitats. Ecologists often prioritize spatial data, overlooking the role of people, livestock, and management in shaping species-rich landscapes. A key question remains: Can grassland biodiversity be preserved and restored with only a few managers?

The love of dung beetles & the inadvertent restoration of calcareous grassland

Sally-Ann Spence, Oxford University Museum of Natural History

Just how important are dung beetles in our livestock systems and what are they doing beyond removing dung? We generally don't think of the tiny insect communities based around the dung piles in our pastures and these include our dung beetles. But what if we lose these beetles? What effect would it have on our livestock, pastures, soil and farm biodiversity? To answer these questions and more, Sally-Ann started to farm livestock around dung beetles implementing small changes in her management decisions that had much wider benefits for the landscape, livestock and biodiversity in general. From this grew a project that saw her inadvertently restoring calcareous grassland and finding ever more unconventional ways of putting dung beetles in the limelight.

Involving citizens in doing science: how collaborative research is changing the interface between science and society

Andrea Sforzi, Maremma Natural History Museum, Grosseto, Italy

We live in an extremely complex world, characterized by a high level of uncertainty. Problems such as global warming, deforestation, war conflicts and the loss of biodiversity are not unconnected, but they are the symptoms of a fundamental defect in our way of perceiving ourselves as a planetary species. In order to work concretely on the implementation of the sustainable development objectives, it is necessary for this awareness to become central to our way of thinking and acting. The growing attention to the issues of active citizenship and the involvement of non-experts in the process of creating scientific knowledge encourage us to move forward in this direction. The keynote aims to outline the lines of development of citizen science in Europe, taking into account the progress made and future prospects. There are elements of innovation and development, but also challenges and critical issues to be faced. The impetuous advance of tools such as artificial intelligence equally presents us with potentially idyllic horizons, but not without risks. Combining prospects of participation and inclusiveness with forms of data collection inspired by the scientific rigor of data and protocols represents a great potentiality. Sectors that were once underrepresented are experiencing a moment of growth, which corresponds to the need to identify different solutions, oriented towards new challenges. A rather "new" approach that needs to be described and experimented.

Treeless ecosystems in the North: role of climate and land use change in shaping the past and future of the region

Isabel C. Barrio, Agricultural University of Iceland

The colder regions of the planet are characterized by treeless environments. Tundra ecosystems cover vast regions at high latitudes and high elevations globally, but are threatened by ongoing climate and land-use changes. As a result of warming temperatures, species typical of southern latitudes and lower elevations are spreading north and upward, a process known as borealization. The borealization of tundra ecosystems can be manifested in different ways, from advances in treeline and range expansions of boreal herbivores, to more subtle increases in encroachment of tall shrubs. This shift in the boundary between the boreal forest and the tundra biome implies large structural changes, which will have wide-ranging consequences for the functioning of these ecosystems, from feedbacks to regional climate, changes in biodiversity and trophic dynamics and impacts to local livelihoods. Given the key role of herbivores, and more specifically megafauna, in maintaining extensive and highly productive grasslands during the Pleistocene, the so-called "mammoth steppe", it has been suggested that grazing management could be a tool to mitigate some of the ongoing trends and preserve tundra ecosystems. During this presentation, I will highlight some of the ongoing work of two international research initiatives, the Herbivory Network and the Nordic Borealization Network, to coordinate research across this region and increase our understanding of the functioning of these cold ecosystems.

Spiders in grasslands: using eDNA metabarcoding to reconstruct spider trophic guilds and arthropod communities

Majid Moradmand, Oulu University, Finland and University of Trier, Germany

Arthropods are the most diverse group of animals and play a key role in terrestrial ecological networks. Arthropod biodiversity is declining worldwide, and a massive decline of arthropods in European grasslands and forests has recently been reported. Spiders are the main arthropod predators in grasslands, where they have a critical impact on insect populations. Therefore, understanding trophic interaction networks through novel methodologies is crucial. When an organism interacts with its environment and other organisms, it leaves behind a trace of its DNA, known as environmental DNA (eDNA). Arthropod eDNA can be recovered from a variety of environmental samples, such as plant compartments and spider gut contents. In recent years, the eDNA metabarcoding approach has revolutionized our understanding of biodiversity assessment, ecological interaction networks, and biomonitoring. Through a series of case studies, I will present recent results focusing on plant-arthropod interactions and reconstructions of spider trophic guilds by analyzing the spider web and gut content.

Rethinking Degradation: Diversity, Grazing, and Conservation in Anatolia's Ancient Grasslands

Didem Ambarlı, Middle East Technical University, Ankara, Türkiye

Dry grasslands in Anatolia have one of the longest histories of human land use in the world. Shaped by more than 10,000 years of continuous interaction, these landscapes offer few clues about their original, natural state—whether grasslands or adjacent woodlands. As a result, understanding their potential vegetation, biodiversity, and ecological dynamics presents a significant challenge for researchers. Long-standing assumptions, such as the idea that lowland *Artemisia* dwarf shrub steppes or slope-dwelling, cushion-forming *Astragalus* thorn steppes are the result of degradation due to overgrazing, deserve critical re-examination. Located within the Irano-Anatolian Biodiversity Hotspot, these grasslands are exceptionally rich in endemic plants and butterflies, yet their diversity patterns remain an ecological puzzle. Recent quantitative studies across various grassland types reveal extremely high species turnover over short distances. Alpha diversity peaks notably in ecotones, while conventional vegetation surveys fall too short in representing the community diversity at the gamma scale. Contrary to the meta-analyses on grazing effects under dry conditions, moderate grazing appears to support higher levels of diversity. In contrast, the cessation of grazing often leads to the dominance of *Stipa* species, resulting in species-poor communities. Similarly, large-scale afforestation—the primary conservation strategy in many semi-arid regions—tends to reduce plant and bird diversity, though butterfly communities appear less affected. To preserve the unique biodiversity of Anatolia's dry grasslands, conservation strategies must move beyond afforestation and embrace steppe-specific approaches tailored to these ancient, dynamic landscapes.

Travel and accommodation

Information on travel and accommodation can be found from the conference website. This includes very reasonably priced group accommodation opportunities at the Nallikari holiday village, adjacent to beaches and located 5.5 km from the conference venue. Nallikari offers cottage studios for 1-5 people and Poiju Villas for 4+2 people. **If you would like to take advantage of this offer, please contact them by 3rd June at the latest**.

Also Hostel Cafe Huvila offers female, male and mixed dormitories for 6 people.

Social programme

The social programme will include an ice-breaker welcome event on Sunday 6th at the Botanical Museum. The main social event will be the Grassland Party on Wednesday 9th, which will take place at Maikkula Mansion. This will include a full dinner, unplugged musical entertainment provided by the local band Frosty River and a charity auction. All participants in the conference are invited to bring something to be sold at the auction. Preferably something small and easily transportable; foods and drinks have always been popular. The objects can be anything connected with grasslands, though that is not an essential requirement. The main purpose of the auction is fun, and also to raise funds to support Ukrainian researchers who have been displaced, or otherwise affected, by the Russian invasion.

Mid-conference excursion

The mid-conference excursion will take us to the island of Hailuoto, which lies in the Gulf of Bothnia at a distance of 53 km from the city of Oulu. Hailuoto includes some notable wetlands, including Kirkkosalmi, which is renowned as a valuable birding sites. The soil of Hailuoto is mainly sandy and clay-sandstone. The highest point of the island, at 31m a.s.l., is situated on a 15 km long esker ridge that runs across the island, which also has some paraboloic dunes. The most diverse habitats on Hailuoto are coastal meadows and dry heath forests, some of which are dominated by lichens. Transportation to Hailuoto will be via coach and a ferry connection to the island itself. At the end of the afternoon, transportation will be provided to the venue of the Grassland Party.

Typical landscapes from Hailuoto. Photos: M. Peregrym.

Post-Conference Excursion

The Post-Conference Excursion will take us to the Oulanka National Park, which is located near the town of Kuusamo, in Kainuu, NE Finland. We will stay at Oulu University's Oulanka Research Station and visit a diverse range of grassland habitats, as well as bog meadows, which are peat-bogs that have been managed for hay production. In the evening, there will be an opportunity to enjoy a relaxing sauna and a refreshing dip in the river. There will also be an opportunity to visit the nearby Visitors Centre of the park. The National Park is located along the Oulanka and Kitka river valleys, and it is well-known for the Bear's Round (Karhunkierros) hiking trail, which will take us to sites along the river. There will also be a possibility of canoeing to some of the sites.

The landscape here is dramatically different from that in the Oulu region, being rugged and rocky, with dramatic hills and canyons. The river valleys are sandy, and there are a variety of wet and dry riparian flood meadows along the meandering rivers. The river valleys are typically bounded by rocky outcrops, which can rise to as much as 380 m a.s.l. There are a number of dramatic canyons and rapids along the River Oulanka in particular. In addition to wet and dry riparian flood meadows, there are also bog meadows and mineral meadows. The area is renowned for it's orchids, including the Venus's slipper (*Calypso bulbosa*) and the Lady's Slipper (*Cypripedium calceolus*). The meadows of this region are generally dominated by globeflower (*Trollius europaeus*). Other typical plant species include *Dianthus superbus*, *Silene tatarica*, *Erigeron acris* subsp. *decoloratus* and *Elymus alaskanus*, as well as various species of moonwort (Ophioglossaceae). This region is also notable for insects. The green snaketail dragonfly *Ophiogomphus cecilia* occurs abundantly along the river. The violet copper (*Lycaena helle*), which you can see in the conference logo, a butterfly of semi-natural grasslands which has declined dramatically throughout Europe, and is included in the EU Habitats Directive Annex II and Annex IV, can still be seen in Oulanka. Also a number of regionally rare beetle species occur here.

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Wet meadow dominated by sedges at Alaniemi, on the Oulanka river. Photo: S. Venn.

Siirranniitty flood meadow in early June, with meadow plants reappearing as the flood water withdraws. Photo: S. Venn.