

# Annual Report 2024



## Gothenburg Global Biodiversity Centre

Faculty of Science  
University of Gothenburg

Kate Evans & Jenny Klingberg

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UNIVERSITY OF GOTHENBURG



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Gothenburg Global Biodiversity Centre:  
Linking science & society around  
biodiversity



## Director's welcome

Jenny Klingberg, PhD



It is a privilege to work with the dedicated partners and members involved in the Gothenburg Global Biodiversity Centre (GGBC). We currently consist of 18 partner organisations in western Sweden, all working with biodiversity in different ways, and with complementary expertise and facilities within biodiversity research, teaching, collections and outreach. The partner organisations are united in a belief that by working together it is possible to more successfully increase knowledge of biodiversity, reach further and have a greater impact. GGBC continues to play a vital role as a collaborative platform, fostering research and engaging with society.

GGBC coordinates a large network of biodiversity experts, providing meetings places and stimulating communication across disciplines and professions. Through GGBC the synergies among the partner organisations are promoted, supporting the development of joint research projects and educational programmes, and an efficient interaction with citizens and stakeholders.

An important aim is to inspire and promote interdisciplinary and transdisciplinary collaborations that can lead to strategic research projects and contribute to the societal transition needed to meet the biodiversity crises challenge. Important steps in this direction have been taken during 2024 by the Action Group entitled ***Bridging the challenges in interdisciplinary research*** funded by BECC (Biodiversity and Ecosystem Services in a Changing Climate strategic research area).

During 2024, the project ***SamBio: Collaboration for biodiversity – knowledge, engagement and action***, funded by Region Västra Götaland and led by GGBC, has flourished. In this project the eighteen GGBC partners together with four additional science centres, build and spread knowledge and engagement around biodiversity in the Region of Västra Götaland with a special focus on children and youth as well as the business sector.

In this report you can read about our activities in 2024. Last but certainly not least, I would like to thank all members and partners for an intense and productive 2024. Your genuine dedication, innovative initiatives, and enthusiasm for collaboration are the driving forces behind the work of the Gothenburg Global Biodiversity Centre.



Photo credits: Magnus Gelang (top), Kate Evans



## Chair's reflection

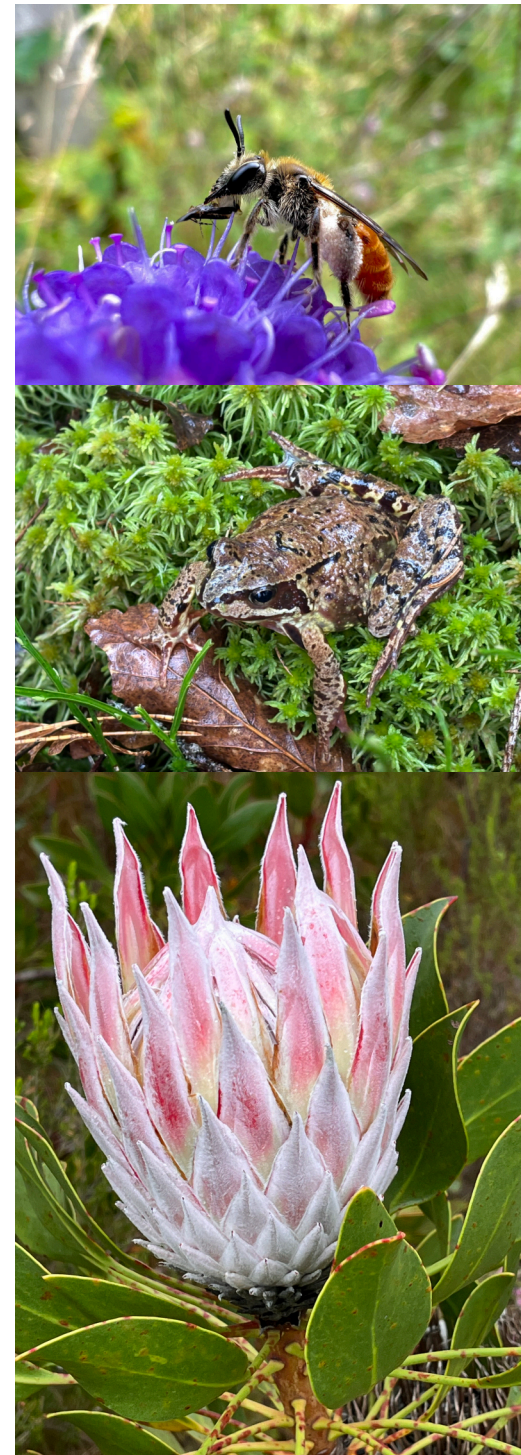
Professor Marie Stenseke



2024 was yet another vibrant year for GGBC, where a number of initiatives and actions have strengthened GGBC's role as a biodiversity arena for researchers from a range of academic disciplines as well as from society and business in southwest Sweden, in line with the long-term strategy. With SamBio as the flagship project, GGBC's partners have intensively worked together with concrete actions of science-based outreach. The collaborative work in SamBio has indeed reinforced the relations and bonds both within GGBC and also those with other societal partners. Crucial for the success of this work has been the competent and hardworking staff and GGBC's Director Jenny Klingberg's wise management. The breadth of skills among our staff has been nothing less than extremely fruitful.

Besides the concrete actions, the expansion of the activities in GGBC has also led to a recognition of the need to thoroughly reconsider the fundamental aims and character of GGBC. Through a series of meetings and workshops, the steering board has processed questions about visions, missions, target audiences, our unique selling point, branding etc. This quite demanding process, including both joint self-reflection and visionary thinking, which have been carried out in a positive collaborative spirit, Mikael Östblom's experiences and guidance in this area has been vital. Some results from the process are found in the the application for prolongation for GGBC from 2026 and onwards, that was sent in to the Faculty of Science and Technology in February 2025.

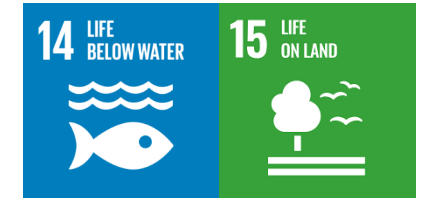
In regards to everything we have achieved during 2024, and the huge potential in the new initiatives that were started last year, exciting times lie ahead for GGBC.



**Photo credits:** William Osterman (top), Kate Evans

## Executive Summary

Kate Evans, PhD



The [Gothenburg Global Biodiversity Centre](#) (GGBC) is supported by the Faculty of Science and hosted at the Department of Biological and Environmental Sciences of the University of Gothenburg. The **main aims** of the Gothenburg Global Biodiversity Centre are to link science and society around biodiversity and enhance and accelerate biodiversity research. This addresses the ongoing biodiversity crisis and aligns with Sustainable Development Goals 14 and 15, *Life below water* and *Life on land* in connection with Agenda 2030.

The GGBC was launched on the 1st of January 2017. Throughout the years new partners have joined and in December 2024 we have increased from the 13 original partners to **18 partner organisations** from the west of Sweden. These include departments at the University of Gothenburg and Chalmers University of Technology, as well as organisations at the Region of Västra Götaland (Gothenburg Botanical Garden, Gothenburg Museum of Natural History, Naturbruksförvaltningen), the City of Gothenburg (Maritime Museum and Aquarium, Slottsskogen Zoo), and other education and conservation initiatives (Nordens Ark, Havets Hus, Väst kuststiftelsen, Universeum) and an independent research institute (IVL Swedish Environmental Research Institute).

Our reach has increased when in 2023, the project ***SamBio: Collaboration for biodiversity – knowledge, engagement and action started***. The project is funded by Region Västra Götaland (VGR) and led by GGBC. It is a three-year collaboration between 22 partners, including all GGBC partners and four additional science centres in the region.

The GGBC is led by a steering board, which is made up of representatives of the partner organisations. **Our members** are employees, and students at the GGBC partner institutions, as well as researchers/educators actively collaborating with GGBC members or partners in biodiversity research and/or outreach. In 2024 we welcomed 37 new members.

Throughout 2024, the **GGBC's member research output consisted of 129 scientific publications where GGBC affiliation was used**. GGBC researchers met regularly during the year through the activities of the Monday Meetings, in total 269 participants attended.

Throughout 2024 GGBC members took part in numerous **outreach** activities such as talks, lectures and media appearances, for example the International Day of Biodiversity, Västerhavsveckan and Vetenskapsfestivalen. The Centre maintained an active social media presence through Facebook and X (previously Twitter) with a collective following of 3461, an increase of 44% since December 2023, and sent out 9 newsletters to a mailing list of over 730 subscribers, an increase of 5%.

To end another great year, 51 members gathered at the **8th Annual GGBC Member Meeting**, held to promote research, outreach and collaboration among GGBC members. This event was supported through ongoing collaborations with the Biodiversity and Ecosystem Services in a Changing Climate ([BECC](#)) strategic research area and hosted at Natrium in the Department of Biological and Environmental Sciences, and at the Maritime Museum and Aquarium in Gothenburg.



## Taking an interdisciplinary approach

Marie Stenseke, Chair Steering Board



Following the objective in the strategy 2023-2025, to engage a wider range of academic disciplines, with a focus on bringing in competences from the social sciences and humanities, actions have been taken to get a picture of research at the University of Gothenburg and other partners of relevance for biodiversity and also to strengthen the capacity for interdisciplinary work.

During the second half of 2024, Regina Isacson carried out a thorough mapping of research and researchers of relevance to GGBC at the various departments at the University of Gothenburg during her internship at GGBC. The compilation was presented in January 2025 and will serve as a foundation for reaching out to and attracting those that are not yet partners to join GGBC.

In February 2024, GGBC, together with researchers from [BECC](#) (Biodiversity and Ecosystem Services in a Changing Climate strategic research area, at Lund and Gothenburg Universities) got funding from BECC to organise an Action Group, entitled *Bridging the challenges in interdisciplinary research*.

The purpose of the Action Group was to help researchers overcome disciplinary barriers and promote interdisciplinary applications and projects within GGBC, BECC and MERGE. In October 2024, there was an open webinar arranged, *Introduction to interdisciplinary research*, that gathered around 30 participants. In November, a two-day workshop was held, where the 12 participants were provided with tools for fruitfully recognising and integrating various approaches, theories and methodologies in biodiversity research of societal relevance. The workshop was built on the premises that the participants brought their own disciplinary cultures, perspectives and ways of doing research to the table. Together, they alerted each other on the quite significant differences between biodiversity research in the various disciplines and discussed how to build bridges between them, assisted by the interdisciplinary game [COLLAB](#) and through a concrete task to formulate a joint research project. Some of the key aspects brought forward was: pay attention to the differences; strive for pluralism; listening, respect and intellectual humbleness.

In 2025 we plan for interdisciplinary seminars, perhaps around certain themes to keep the discussions rather concrete and potentially more useful for joint funding applications or other kinds of collaborations.

Importantly, engaging a wider range of competences, will have implications also for the already active partners in GGBC. We all need to be prepared for listening and intellectual humility, recognising the limits of our disciplinary knowledge and competences. We need to acknowledge the necessity to interact with others to improve the scientific credibility and by that also the chances to appropriately contribute to the complex societal challenge of halting the loss and instead enhancing biodiversity.



Photo: Kate Evans

## SamBio: collaboration for biodiversity – knowledge, engagement, and action

Anna-Lisa Wrangé, PhD & Mikael Östblom



The second year of the SamBio project has been a very active and creative year! A lot of new collaborations have been established, and educational materials have been developed, including the on-going school program and teacher material, as well as events for the business sector and workshops and study visits to many GGBC partners.

### Sharing and co-creation

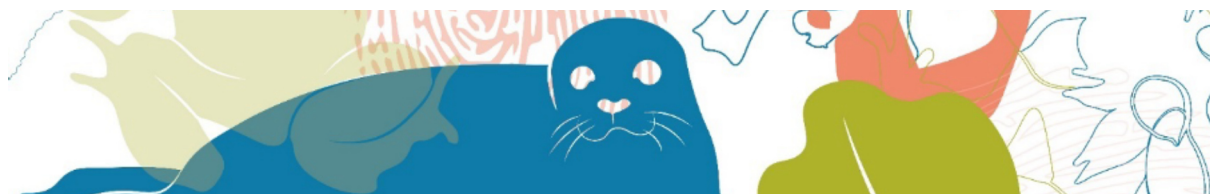
Several meetings and workshops have been arranged during the year to stimulate new collaborations and knowledge-sharing. In January the educator network visited Innovatum Science Centre where we explored the use of escape rooms and escape boxes in creating interactive lessons. This was later implemented in two escape box lessons on biodiversity for schools. At Balthazar science center we learnt how insects can be highlighted through Lego workshops and close up filming of insects and a green screen studio. At Havets Hus in March we learnt about marine biodiversity and at Universeum we discussed the power of visualising biodiversity data in VisLab and learnt about on-going research on experience-based learning performed at Universeum.

In May, we arranged an excursion in Slottsskogen followed by a workshop at the Gothenburg Natural History Museum, with the aim of exploring and learning more about species associated with old oak trees (such as insects, lichens and mosses) and discussing outdoor-based experiences of nature that can be integrated into lesson concepts around trees. By exploring the ecosystem around oaks together with researchers/experts/conservationists, the educators got to see different species and were inspired to develop pedagogical exercises for the Escape box about oaks and associated species. Experts leading the excursion were Mattias Lindholm (Västkuststiftelsen) and Oskar Gran (researcher at the Department of Biological and Environmental Sciences, University of Gothenburg) who did a fantastic job in teaching us about the fascinating diversity that is associated with old trees. Another escape box being developed in the project focuses on diversity of marine ecosystems and how the cod is connected to these environments (called: “The missing Cod(e)”).

The autumn started with a lunch-lunch meeting at Nordens Ark to kick-start the school program. It was two days of great nature experiences, inspiration from both educators and researchers at Nordens Ark about their research, outreach and conservation programs. Furthermore, it involved exchanging experience on pedagogy and outdoor education, networking and co-creating and testing educational materials.

The project group working with activities for the businesses sector also had multiple meetings and two interactive workshops to discuss initiatives and ideas aimed at the business community (e.g. events, creating networks, tools and resources). During the monthly Teams meetings inspiring biodiversity projects from business and other stakeholders were presented for increased learning and networking. For example, presentations from Heidelberg materials, Framtidens Natur- och Kulturarv, Holohouse, and Skanska presented.





To stimulate even more great initiatives, we created an internal 'initiative fund' where partners could apply for additional funding from the project, to support new collaborative initiatives that were not covered by the initial funding. Five projects were selected, involving an exhibition about seals and biodiversity (led by Slottsskogen), an outdoor learning platform connected to meadows in Skövde (led by Balthazar science center), Lesson concept bringing the sea to schools in Dalsland (led by Tjärnö Marine Laboratory) and two events for the business sector (on invasive species (led by Nordens ark) and another on marine biodiversity (led by Tjärnö Marine Laboratory).

### Biodiversity school program

During the spring, the school program was finalised and launched after the summer break. Seventeen partners from the project have contributed to educational materials on biodiversity! The program consists of around 30 lessons focusing on various concept of biodiversity, focusing on both land and sea. Several new lessons were co-created by educators and researchers from different partners, such as the 'Oak escape box', the marine escape box 'The missing Cod(e)', lessons on meadows and plants, as well as biodiversity in forests. A teaching material was developed and SamBio participated in a teacher training event in Natrium during the autumn with over 130 teachers attending.

Over 80 lessons were carried out during the autumn, reaching over 2000 pupils and more than 200 teachers. A collaboration with Naturuppdraget.se has also made it possible for schools to perform 'Nature tasks' at their schools and collect points, with gives them the chance of winning a free experiential visit (including the trip) to one of GGBCs partners during 2025!

Learn more about the school program, teacher material and planned activities [here](#):



**Photos:** The materials developed for the interactive Escape Box lesson 'The oak', where pupils (10-12year olds) explore the ecosystem around old trees and the life they support by solving puzzles, finding clues and codes, and building a cogwheel ecosystem which only works if the oak is placed in the middle.



### Biodiversity survey of companies in western Sweden

During the spring, SamBio contributed to developing a telephone survey for the business community in Västra Götaland, in collaboration with a doctoral student project within MISTRA Biopath. The aim of the study was to survey the knowledge and interest in companies in biodiversity, and their understanding on their own role in impacting biodiversity. The survey respondents were retrieved from a database of all companies in Västra Götaland with more than three employees and at least SEK 1.5 million in turnover. A proportionally stratified sample, of 2000 companies, was selected based on size, municipality, and business sector. In September 2024, the survey collection was conducted via telephone interviews where 198 micro, small and medium-sized enterprises responded to the survey. These companies are largely representative of the business community in Västra Götaland with regard to size, municipality, and the distribution of business sectors in the region.

The survey supports previous studies, that there is a limited but increasing awareness of biodiversity among companies. Many companies are concentrating their environmental work on climate issues, while there are still relatively few companies that have set concrete goals and strategies specifically linked to biodiversity, and even fewer that continuously measure and follow up on their biodiversity impact. The data and results will be published in a report in 2025.

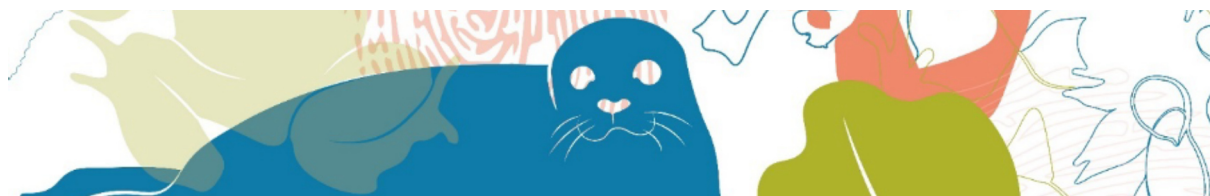
### Business breakfasts

Two breakfast seminars for the business community were held in November. The first seminar had the theme of technology for measuring biodiversity and was held at Universeum. An overview was given of different technologies such as sensors, eDNA, satellite data and AI for image recognition. Companies and researchers who provide or use different techniques to measure biodiversity presented these to about 40 participants who worked in or with the business sector. The seminar was followed by a demonstration of the visualisation lab "Vislab" at Universeum, and continued opportunity for networking and visiting the exhibitions on their own.



**Photos:** (L) Workshop with the SamBio business group to identify target groups, focus topics and activities for the coming year. (R) Business Breakfast Seminar at Universeum on the methods and technology to measure biodiversity





The second breakfast seminar focus on biodiversity in agriculture and was held at the VGR Naturbruksförvaltning school in Uddetorp. The target group here was the agriculture community in the Skaraborg region. Presentations were held from both the banking and insurance companies as well as farmers who have taken concrete measures to increase biodiversity on their land. In addition, staff from Uddetorp gave examples of how they use insect sensors to measure biodiversity in the arable landscape. After presentations and discussions, a mini exhibition was held with mingling and networking with the approximately 40 participants, where Dalénium Science Center, Balthazar Science Center and CSR West Sweden demonstrated their activities. In addition to partners in SamBio, Agroväst's Green Meetings were also co-organisers of the event.

### Business Memorandum of understanding for biodiversity

In late autumn SamBio decided to engage in the process of bring forth a memorandum of understanding (MoU or "handslag") called **BeeGo - Biodiversity and Ecosystem services in the Gothenburg Region**. The MoU is an initiative from four companies and the City of Gothenburg supported by the University of Gothenburg and Business Region Göteborg (BRG). The signatories are committed to increasing knowledge and enabling actions to support biodiversity and ecosystem services. This is performed for example by raising awareness, knowledge, and engagement and bringing together actors with a mandate to strengthen biodiversity and ecosystem services in the Gothenburg region. Collaborating is an essential part in creating processes to share experiences, including lessons learned from both successes and failures.

SamBio agreed to take a coordinating role in this collaboration process since it is a valuable business tool and network opportunity for biodiversity within the objectives of SamBio. Also, the GGBC offered to assign a scientific board which should audit the work, documents and targets in the Memorandum of Understanding. The MoU will have a local focus, yet with a commitment to global responsibility and will be signed in early 2025 heading for commitment until at least 2030.

### New tools for discussing and learning about biodiversity

SamBio has also explored the possibility to use the **workshop concept 'Biodiversity collage'** (originally 'Fresque de la biodiversité') to increase awareness and action for biodiversity among businesses and other actors in society. A Swedish version of the game is being developed in collaboration with Lund University (Mistra Biopath), highlighting nationally relevant matters of human impact on forestry, agriculture and exploitation of marine resources. SamBio has trained several facilitators of the concept and will later offer the tool to all partners in the GGBC network who are interested in using it.



Another collaboration was initiated in 2024 around a biodiversity handbook for the business sector. The handbook was initially developed by Vildriket (previously Järvzoo). The idea is to use expertise from the SamBio partners to update the handbook since new legislation which concerns biodiversity and business have been adopted lately. The process to publish a revised and improved guide where scientists and other SamBio partners contribute is in progress and a new version will be ready in spring 2025.

### Meeting the public

SamBio has participated in many public events during the year, e.g. arranging activities during the Science festival, Västerhavsveckan, Spring market in Nordstan (Gothenburg), Marine Business fair at Tjärnö, Summer festival in Lidköping, "I fel natur" (a week against invasive species) at Nordens ark, Linnémarschen in Borås, Bioblitz in Slottsskogen during Biodiversity Day May 22nd, Frihamnsdagarna in Gothenburg and many more!

SamBio also presented at several larger events on biodiversity, e.g. the seminar organised by the City of Gothenburg in November 2024 and several webinars for the business in the region. The events have established new contacts and ideas of continued projects and collaborations within the Gothenburg area. Furthermore, Jenny Klingberg and Viktor Elliot visited the podcast "Trädgårdspodden" run by the Gothenburg Botanical Garden, where the idea of the SamBio project and ongoing activities were discussed.



**Photo:** SamBio presented the school program on biodiversity during the teacher training event arranged in October at Natrium, at University of Gothenburg. GGBC member and researcher at BioEnv, Leon Green, also talked about invasive species in marine environments.





### The power of working together

It is truly amazing what happens when we bring together researchers, students, conservationists, educators, communicators and curators in the GGBC network and let them meet, share, explore, co-create and disseminate together! Many new collaborations have been established, meanwhile having a lot of fun, and we are very excited to continue working together in 2025!

### GGBC plays an important role

The SamBio project contributes to GGBC's continued strategic work around biological diversity, by improving collaboration between the partners and knowledge dissemination, as well as strengthening GGBC as a collaboration platform. The overall aim of the SamBio project is to strengthen existing connections and create new collaborations to increase understanding of what biodiversity is, why it is important and what we can do in the short and long term to protect it. The long-term goal of this project will hopefully be a better-informed public in Västra Götaland and more initiated decision-makers in business in the coming years, which leads to a long-term positive impact on biodiversity that is in line with the global sustainability goals and the regional strategy for biodiversity.

### Information about SamBio:

The 3- year (2023-2025) project SamBio (samverkan för mångfald) is funded by Region Västra Götaland and is hosted at GGBC through the Department of Biology and Environmental Sciences at the University of Gothenburg, and involves 22 partners, which includes all 18 GGBC partners and four additional science centres in the region; Navet Science Center (Borås), Innovatum Science Centre (Trollhättan), Balthazar Science Centre (Skövde) and Dalénium Science Centre (Stenstorp). The aim of the project is to increase knowledge, engagement and action for biodiversity in the region, focusing on two main target groups; children and youth and the business sector

Med stöd från



### Contact

If you want to know more about the project or get involved, please contact us!

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**TETTRIs**

Kate Evans, PhD



The [TETTRIs](#) (Transforming European Taxonomy through Training, Research and Innovations) project addresses the critical gap in taxonomic expertise crucial for tackling biodiversity loss and ecosystem degradation. The project is funded by the European Union and led by CETAF, the Consortium of European taxonomic facilities. GGBC as well as GGBC partners the Gothenburg Museum of Natural History and the Gothenburg Botanical Garden are taking part in TETTRIs. The key aims of this project is to:

#### Transform Taxonomy in Europe through:

- **Training:** Advancing taxonomist workforce, with capacity building and training programmes to facilitate the continuous upgrade of competencies and skills.
- **Research Transfer:** Engaging citizen scientists in natural sciences, as key actors in co-generating taxonomic knowledge and collecting biodiversity data.
- **Innovation:** Developing innovative methods and digital solutions to improve taxonomic knowledge, support integrative and comprehensive taxonomy, speed up species discovery and description, and making collections and knowledge available at large scale.

The GGBC contribution kicked off in 2024 with a workshop at the All Hands Meeting in Brussels and will heat up in 2025 as we have the task of writing the Blueprint which will highlight the outcomes of this project. The Blueprint will be the conventional report required by the grant but we shall also incorporate videos to educate the public and policy makers on the key outcomes and steps forward.



Photo: Stina Weststrand, Kate Evans

## INTERNAL EVENTS

### GGBC Annual Members Meeting

Funded by the strategic research area Biodiversity and Ecosystem Services in a Changing Climate (BECC) the 8<sup>th</sup> Annual Member meeting was held on the 2<sup>nd</sup> and 3<sup>rd</sup> of December. The first day was hosted at the [Maritime Museum and Aquarium](#) and focused on outreach under the title of **Beyond Awareness: Inspiring Biodiversity Action through Creative Outreach**. Our keynote speaker was **Lena Pareto**, who holds a joint professorship at Universeum and University of Gothenburg and got us all thinking about the topic of the day and the question of whether awareness leads to action, or does action lead to awareness? Lena Pareto highlighted how GGBC partner Universeum works to spark public engagement with science and socio-scientific issues. The talks that followed gave wonderful insights on how our members are communicating science and inspiring action in the public, such as the award winning podcast from the Gothenburg Botanical Gardens, Botaniska trädgårdspodden, hosted by **Stina Weststrand** and **Åsa Krüger**. Botaniska trädgårdspodden is one of few podcasts produced by botanical gardens in Europe and currently has an audience of around 3000 per episode. Another award-winning venture also took centre stage at the meeting when **Grazzia Matamoros** presented the Centre for Sea and Society's *Flytevi*, Gothenburg's first blue community garden. Blue community gardens are small-scale farms in the sea. Flytevi was built as an educational platform and "showroom" for small-scale ocean farming where visitors can learn about blue food (food harvested from the sea) and get inspired. We were also transported to Africa, by **Helen Sköld** from Havets Hus who took their *Beach School on Jellyfish* which children aged 7-12 years enjoy here on the west coast, over to the island of Zanzibar. The day ended with a behind the scenes tour of the new facilities at the museum and many members enjoyed an evening meal together to carry on the conversations.







Day 2 had the theme of **Connecting Discoveries to Decisions** and was hosted by the Department of Biological and Environmental Sciences in Natrium and started with a tour of the Herbarium GB, and the research facilities of the pollen laboratory and the phytotron. We kick-started the day with a review of the EU Nature Restoration Law to restore degraded ecosystems and focused on how we may expect this to be implemented in Sweden. We welcomed **Carsten Ambelas Skjøth**, Professor at the Department of Environmental Science - Atmospheric Measurements, Aarhus University as our keynote of the day and what followed throughout the day gave us insight on the precarious world of pollen forecasting through to the ecology of bats and the information we can glean from their poop and how that will affect land management decision in Slottsskogen for biodiversity.

This meeting was organised by a planning committee consisting of Varsha Rai Chalise (Department of Biology & Environmental Sciences), Kate Evans (GGBC), Nestor González Roldán (Department of Biology & Environmental Sciences) and Jen Ulvås (Maritime Museum & Aquarium).

## Weekly Monday meetings: Research presentations

**Every Monday morning** during the University of Gothenburg's semesters GGBC members have the opportunity to meet. These weekly meetups alternate between a presentation, and chats over coffee: both options giving valuable opportunities to meet and discuss topics important to our work and spark interesting debates.

These hybrid bi-monthly talks enable GGBC members to present on a current project and afterwards, we discuss and give feedback, making use of the various expertise within our network. Talks are announced through the Members newsletters, the Slack channel #Monday meetings and on the [GGBC website](#). We met 18 times in 2024 with a total of 278 attendees. We kick started the year with a talk by lecturer Søren Faurby on '*Estimating the land-use within biodiversity hotspots by people in the global north broken down by products*' and finished with Master's student Lynn Kleinjan giving us a talk on her methods for using camera trap images to assess the walking speed of African savanna elephants (*Loxodonta africana*) in Botswana's Makgadikgadi Pans National Park.



## Journal Club

**William Tejler, PhD student**



The GGBC organises a bi-weekly journal club in Natrium, meeting on Wednesdays from 13:00 to 14:00, where participants take turns leading the meetings. Each leader selects a scientific paper related to biodiversity, ecology, systematics, or other related topics, and guides the discussion. Throughout the sessions in 2024, we've explored a diverse range of topics, some of the subjects covered are:

- De-extinction of the woolly mammoth
- Plant-hummingbird pollination systems
- Dwarf elephants and hippos, and how early settlers on Cyprus likely could have hunted them to extinction
- Birds' role in dispersing truffles in Patagonia
- The impact of wind farms on biodiversity

## EVENTS OPEN TO THE PUBLIC

### Annual Biodiversity Lecture

In 2024 we welcomed **Dr Brigitte Baptiste**, a Colombian cultural landscape ecologist and an expert on environmental issues and biodiversity to deliver the GGBC Annual Biodiversity Lecture. She was a member of the Multidisciplinary Expert Panel of the Intergovernmental Science and Policy Platform on Biodiversity and Ecosystem Services (IPES) and during that time co-chair of an assessment. In 2019 she became director of Universidad Ean. The event was hosted Friday 26<sup>th</sup> April at our home in Natrium, where Brigitte Baptiste gave a thought provoking lecture '**Emerging, traditional or invisible biodiversity values: the quest to become aware**'.

This BECC sponsored event is key to our annual calendar. The lecture had over 70 participants registered of which many stayed for chat and mingle afterwards.

It is available to watch on our YouTube channel [here](#).





## International Day for Biological diversity



22<sup>nd</sup> of May 2024, GGBC celebrated the international day for biological diversity with a Bioblitz, a 24-hour species race where experts, enthusiasts and curious visitors gathered to find and identify as many species as possible within a specific area. The event was organised by Gothenburg Botanical Garden, Gothenburg Natural History Museum, Slottsskogen and GGBC. During the day 6 school classes and 500 visitors took active part in a variety of hands-on activities for all ages and met local stakeholders and exhibitors at the Bioblitz square in Slottsskogen. In total 19 organisations contributed to the program. The focus was on plants, animals and the joy of learning. The Bioblitz summed up to 505 unique findings (unique taxa, i.e. either species or higher taxonomic rank) of which 20 red-listed species.



## The West Coast Sea Week

### Västerhavsveckan



During Västerhavsveckan (1-8 August 2024) GGBC via the SamBio project arranged activities at Askimbadet, in Gothenburg, where GGBC members and researchers from Department of Biological and Environmental Sciences, University of Gothenburg, Daire Carroll and Fotini Kappa, as well as zoologist Linda Thelin from Slottsskogen talked about seals and how they are an important part of the marine ecosystem. In addition, educator Lotta Backman from Gothenburg Museum of Natural history arranged a 'species search' and identification on the jetty where the public could borrow equipment to look for and identify different species that they found in the shallow waters. The activities attracted many visitors, both young and old, including people who had never been to the sea before and that were completely fascinated by crabs and seaweed!

In addition, many GGBC partners and members contributed to the program of the West Coast Sea Week. For example the Centre for Sea and Society and the Department of Marine Sciences, University of Gothenburg, arranged activities during the week at Omställningslabbet in Frihamnen (Gothenburg), in Strömstad and on the ship Kvartsita (including GGBC partners Väst kuststiftelsen and Chalmers). Havets Hus in Lysekil arranged activities around jellyfish including guided tours and crochet activities.







## The Gothenburg Science Festival

### Vetenskapsfestivalen



During the science festival, GGBC via the SamBio project arranged six school activities where researchers and students from the Department of marine sciences, University of Gothenburg and the Maritime Museum and Aquarium, talked about the importance of marine biodiversity and what it is like to do research on biodiversity in the ocean. Lars Gamfeldt and Björn Källström and talked about what biodiversity is and why it is important. The pupils also got to explore hands-on (using stereomicroscopes) what species could be found on VIRTUE racks that had been brought in from the sea and fill in a species bingo. Christian Nilsson talked about biodiversity on the deep sea and how underwater robots (ROV) and artificial intelligence can be used to map species on the seafloor in the deep Kosterfjord area. He also challenged the pupils with a species quiz while watching one of the underwater video recordings, which was really appreciated by the pupils.

In addition, many GGBC partners and members contributed to the science festival program. An example is Alexandre Antonelli who gave a public lecture [Enfald och mångfald](#) at Göteborgs stadsbibliotek.



## European Researchers' Night - Forskarfredag

This annual event brings together researchers and the general public for an entertaining evening centred around science. Working with the hosts, Gothenburg Museum of Natural History, GGBC helped put on a quiz and a scavenger hunt for facts, giving insight into the museum's collections, how they are used by researchers today, and how biodiversity connects to living a sustainable lifestyle. This interactive event had individuals and teams competing against each other in a hunt for knowledge while learning fun facts about biodiversity science. Researchers were on hand to help teams track down answers including GGBC staff Jenny Klingberg and Kate Evans as well as several other GGBC members. The quiz teams interrogated the researchers on sturgeon, bats, urban trees, hedgehogs and snails and everything in-between in the inspiring environment of the museum before we taxed them with our questions. It was an exciting evening and a close run quiz with 2nd and 3rd place having to be separated by guessing how many squid where in a jar!



## Systematikdagarna

On the 18-19<sup>th</sup> November GGBC co-hosted the annual [Systematikdagarna](#) where many GGBC members participated and presented their work and GGBC partners Botaniska and Gothenburg Natural History Museum hosted events. GGBC member Adrian Hill won the best student poster award.





## Examples of Members Activities

Kate Evans, PhD



Photo: Rhianastra isosceles - OceanExplorer.noaa.



Photo: Skalborg, Nordens Arc. Se Nyhetsdagen Live

Another fruitful year for our members in publishing their findings through scientific journals with 2024 seeing 129 papers published by our members using GGBC as an affiliation, including some in high-impact journals such as **Nature**, **Nature Sustainability** and **Nature Ecology & Evolution**. As well as the many journal publications, 2024 saw GGBC members Henrik Nilsson and Alexander Antonelli again featuring on the [Clarivate list of highly cited researchers](#) globally.

Whilst new species discovered this year by our members included the endearingly named pink pig (*Amperima sps.*) which Thomas Dalgren part of an international team mapping the deep-sea areas in the so-called Clarion-Clipperton Zone in the Pacific Ocean between Mexico and Hawaii, discovered on the sea floor. GGBC member Rhian Waller had the sea star that was spotted on remote footage on a deep-sea expedition to the North Atlantic named after her, *Rhianastra isosceles*, and Masters student, Christian Nilsson had his dream come true with the discovery of a novel polychaete species discovered on an abyssal wood-fall, *Erinaceusyllis* (Annelida: Syllidae)

The GGBC members are vital to our **outreach** mission and through appearing on TV or being interviewed on the radio, being active at public events, authoring books and popular science articles and giving public lectures, they communicate their work, alongside the importance and beauty of biodiversity to a wider audience than academic papers alone can reach. See the Appendix for a list of GGBC member publications and examples of GGBC member media appearances.

## Awards

It is very gratifying to hear of and read about the work of our members being recognised both nationally and internationally, and we take this opportunity to congratulate the following members once more for that recognition.

- The Centre for Sea and Society won the [European Bauhaus Competition](#) for the innovative *Flytevi*, Gothenburg's first blue community garden.
- Gothenburg Maritime Museum and Aquarium was awarded *Museum of the year* by the Swedish Museums Association and the Swedish ICOM. The prize is awarded to a Swedish museum that demonstrates innovative and important activities
- [Botaniska trädgårdspodden](#) won the Marsh Award for Education.
- GGBC member and project coordinator Kate Evans was awarded an Honorary Doctoral Degree by University of Wales Swansea for her conservation work on African Savannah elephants. She was also recognised for this work by the Maryland Zoo in Baltimore with the Dr Mike Cranfield Award.
- GGBC founder and member Alexandre Antonelli was appointed to the International Board of WWF.
- Master student Cecilia Axelsson Örberg won the Gothenburg University Sustainability Thesis Award, GUSTA, for her thesis 'Can offshore wind farms offer regenerative solutions for depleted fish stocks'. Supervised by Thomas Dahlgren



Photos: Top: Project coordinator Malin Rosengren gives the acceptance speech at the European Bauhaus Competition for the innovative *Flytevi*, Gothenburg's first blue community garden. Bottom: Flytevi. Credit: Happy Visuals



## GGBC contributions to university education

### Course: Biodiversity in Western Sweden

Christine Bacon, PhD, course leader



As one of five courses offered by the University of Gothenburg's Summer School for Sustainability, the course Biodiversity in Western Sweden is open to students from all over the world. This year we welcomed 28 students from 11 nationalities at the welcome ceremony in July. We worked together for the next five weeks as they learned about biodiversity through various lectures and field visits. Some of the questions we answered over the course were: *What is biodiversity? How do we measure it? Why is it threatened, and by what? and, How can we conserve it?*

Many GGBC members gave lectures during the course and GGBC member, Kate Evans was the course coordinator, being on hand for the students throughout the course. During the course, we highlighted examples of biodiversity field and conservation projects from around Western Sweden, as well as global research being undertaken by members and partners of the Gothenburg Global Biodiversity Centre to help students understand the complexities and urgency of biodiversity research and conservation. The students even got to speak to field biologists from their field camp in Botswana, via Zoom.

The field visits were a highlight of the course, with visits to our GGBC partners, [Nordens Ark](#), [Slottskogen Zoo](#), the [Gothenburg Museum of Natural History](#), the [Gothenburg Botanical Garden](#), and the [Maritime Museum and Aquarium](#) to learn about their in-situ and ex-situ work. Whilst researchers Mats Havström of the Gothenburg Botanical Garden and Adrian Hill of the [Department of Biological and Environmental Sciences](#) led plant field trips.



*I took part in the course focusing on the Biodiversity of Western Sweden, and visited many amazing places such as Nordens Ark, numerous islands of the Archipelago of Gothenburg, took a behind the scenes look at the Maritime Museum & Aquarium and engaged in a group project creating an idea for an environmental NGO, all under the great tutelage of our course coordinator.*



**Photos:** Field work activities during the Summer School course, Biodiversity in Western Sweden. Kate Evans



## Course: Biodiversity in the 21<sup>st</sup> Century

Christine Bacon, PhD, course leader

Understanding what biodiversity is, why it is important, and ways of conserving and managing it efficiently is fundamental to addressing the challenges we face in the 21st century. Human life is at risk due to our current biodiversity crisis, and as guardians of the natural world, our management strategies of ecosystems and species are of critical importance. This course introduces the basic principles of biodiversity and its conservation from the natural science perspective, as well as integrates social sciences for a transdisciplinary understanding.

This year we hosted 24 students from a range of backgrounds from bachelor students to retired professionals, those working in the field and those simply fascinated by the subject and wanting to learn more.

This course is important as it is a concrete way we reach the public and create discussion surrounding topics covered in the course. Many GGBC partner organisations participated in the course, including [Nordens Ark](#), [Slottsskogen Zoo](#), the [Gothenburg Museum of Natural History](#), the [Gothenburg Botanical Garden](#), and the [Department of Biological and Environmental Sciences](#).



Photo: Kate Evans

## Graduating Students

### PhD



**Olivier Manzi - PhD**

Department of Biological and Environmental Sciences

*Heat and drought responses of tropical trees in a warming world*

## Graduating Students

### Masters

**Simon Isaksson - Masters**

Department of Biological and Environmental Sciences

*Movement patterns and social dynamics of male African savannah elephants (Loxodonta africana). Following the steps of giants.*



**Shalala Hasanov - Masters**

Department of Biological and Environmental Sciences

*Enabling nitrogen use efficiency and salt stress tolerance in wheat*

**Matz Heitzmann - Masters**

Department of Marine Science

*Biodiversity Assessment in Regenerative ocean farms using eDNA barcoding*





**Maria Pavolotskaia**- Masters  
Department of Biological and Environmental Sciences

*Flowering time dependence on microclimate across an elevational gradient in arctic plant communities.*

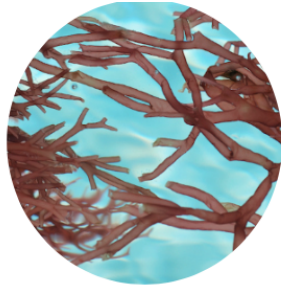


**Xhoni Dalipi** - Masters  
Department of Marine Science

*Assessing benthic biodiversity in low-trophic aquacultures using computer vision and deep learning*

**Jonna Szilveszter** - Masters  
Department of Marine Science

*Deep dive into shallow waters: exploring morphological and genetic gradients of two species of important seaweeds*



**Hugo Duphorn** - Masters  
Department of Marine Science

*Offshore Wind energy in Denmark, Norway, Sweden*

**Fabian M. Grünerc** - Masters  
Department of Marine Science

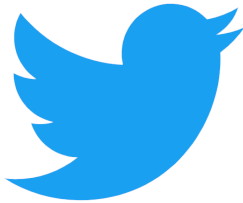
*Seascape genomics of shore crabs (Carcinus maenas): Exploring influences of temperature and salinity*



**Cecilia Axelsson Örberg** - Masters  
Department of Marine Science

*Can offshore wind farms offer regenerative solutions for depleted fish stocks*

## Social media



Now in its eighth year the GGBC continued to be active in public engagement through the social media platforms; Facebook (1161 followers) and X/Twitter (3000 followers) and the audience has increased by 96 and 880 followers respectively. We set ambitious targets of increasing our audiences on these platforms to 1600 & 2000 respectively and we are happy to report that this was achieved.

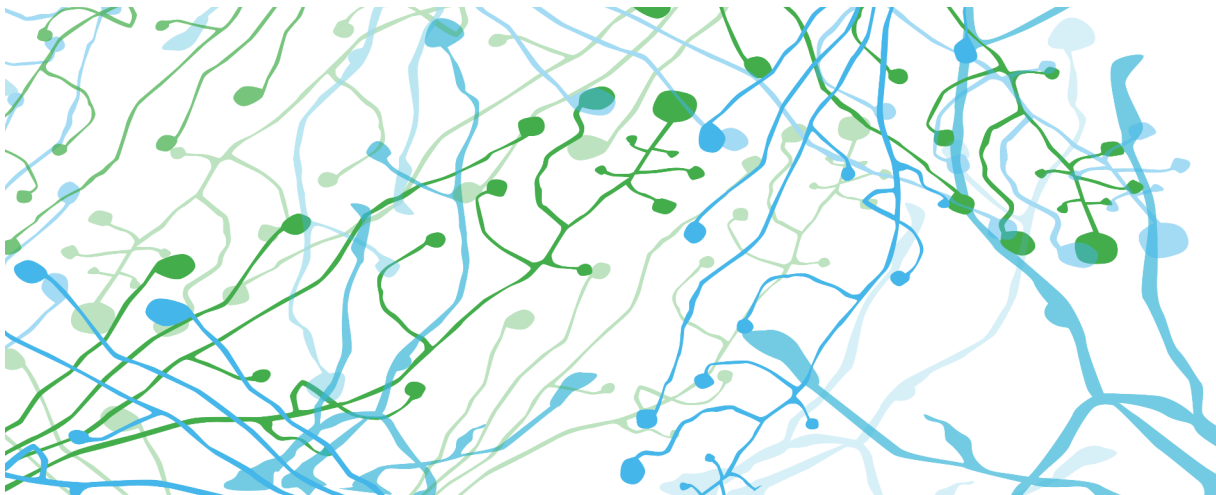


## GGBC in the media 2024

Gothenburg Global Biodiversity Centre has been occurring in the Swedish news media several times during the year, taking part in the societal dialogue regarding biodiversity conservation and promotion.

- Artikel i Arkitekten: Skolgårdarna är en nyckel till hållbar framtid
- Debattartikel i Alltingen: Forskare: Skapa inte mer polarisering mellan människa och natur, Moderaterna
- Debattartikel hos Naturskyddsföreningen: Utan biologisk mångfald har människan ingen framtid – inför en naturlag
- Debattartikel i Göteborgs-Posten: Utan biologisk mångfald har människan ingen framtid – inför en naturlag
- Pressmeddelande från Göteborgs Botaniska trädgård: Artinventeringsrace på biologiska mångfaldens dag

In addition, GGBC members continue to highlight the importance of biodiversity and the urgency to conserve it through media interviews and mentions. See examples of GGBC member appearances in the media in the Appendix.





# Organisation

The GGBC was inaugurated in 2017 and is hosted by the Department of Biological and Environmental Sciences at the University of Gothenburg, with three years of funding from the Faculty of Science. GGBC was externally evaluated in 2019 and was subsequently granted its second period of funding for three years (2020-2022) from the Faculty of Science. An external evaluation of the GGBC's second funding period was received in February 2022 and faculty funding was granted for an additional 3-year period (2023-2025). In the end of 2024, an external evaluation of GGBC was initiated and delivered in the beginning of 2025.

The GGBC is made up of 18 partner organisations, of which 11 are from outside of the University of Gothenburg. A full partnership involves a written agreement and an annual financial contribution to the centre. GGBC is led by Director Jenny Klingberg. The centre has a management team that meets regularly to plan and coordinate activities related to the activity plan, budget, governing documents, and mission.



Photo: Steering Board meeting at Universeum, Gothenburg

# Board members

Each partner organisation is represented by a member on the steering board. GGBC has a highly active steering board which consisted of the following members in 2024:

- Marie Stenseke (Chair of the Board), Department of Economy and Society at the School of Business, Economy and Law, University of Gothenburg
- Åsa Arrhenius, Department of Biological and Environmental Sciences, University of Gothenburg
- Robert Björk, Department of Earth Sciences, University of Gothenburg
- Paula Bäckman, Naturbruksförvaltningen
- Viktor Elliot, Department of Business Administration, University of Gothenburg
- Mats Havström, Gothenburg Botanical Garden
- Mats Höggren, Nordens Ark
- Björn Källström, Maritime Museum and Aquarium
- Mattias Lindholm, Väst kuststiftelsen
- Eskil Mattson, IVL Swedish Environmental Research Institute
- Matthias Obst, Department of Marine Sciences, University of Gothenburg
- Ulrika Palme, Division of Environmental Systems Analysis, Chalmers University of Technology
- Marina Panova, Centre for Sea & Society, University of Gothenburg
- Claes Persson, Herbarium GB was replaced by Claes Gustafsson, University of Gothenburg
- Håkan Sigurdsson, Universeum
- Helen Sköld, Havets Hus
- Linda Thelin, Slottsskogens Zoo
- Stefan Örgård, Gothenburg Museum of Natural History
- Jenny Klingberg, GGBC Director (adjunct steering board member)

In 2024 the following changes to the steering board were approved by the Faculty of Science at the University of Gothenburg.

- The Gothenburg Botanical Garden representative Hanna Tornevall was replaced by Mats Havström
- The IVL Swedish Environmental Research Institute representative John Munthe was replaced by Eskil Mattson



GGBC Partner Organisations 2024

- [University of Gothenburg](#)
- [Centre for Sea & Society](#)
  - [Department of Biological & Environmental Sciences](#)
  - [Department of Business Administration](#)
  - [Department of Earth Sciences](#)
  - [Department of Economy & Society](#)
  - [Department of Marine Sciences](#)
  - [Herbarium GB](#)
- [Department of Management & Economy](#), Chalmers University of Technology
- [Gothenburg Botanical Gardens](#)
- [Gothenburg Museum of Natural History](#)
- [Havets Hus](#)
- [IVL - Swedish Environmental Research Institute](#)
- [Maritime Museum and Aquarium](#)
- [Naturbruksförvaltningen at Region Västra Götaland](#)
- [Nordens Ark](#)
- [Slottsskogens Zoo](#)
- [Universeum](#)
- [Västkuststiftelsen](#)

Several of our partners welcome visitors from the public, attracting over six million visitors each year (Table 1). Through these partner visits, schools and members of the public can directly engage with and learn about biodiversity found in Western Sweden and globally and is thus a key means by which GGBC communicates with and educates the public about biodiversity.

Partner organisations	Visitor numbers	
	2023	2024
Gothenburg Botanical Garden	650 000	608 000
Gothenburg Museum of Natural History	250 000	210 700
Havets Hus	74 000	64 000
Nordens Ark	115 000	100 000
Slottskogen Zoo	4 500 000	4 300 000
Maritime Museum and Aquarium	314 600	269 000
Universeum	550 000	550 000
TOTAL	>6 450 000	>6 101 700

Table 1: Number of visitors in 2024 & 2023 to GGBC partner organisations.

GGBC Employees 2024

In 2024, five people were employed with GGBC, most of them as part of a poistion:

- Dr Jenny Klingberg, Director (45% GGBC and 5% SamBio)
- Dr Kate Evans, GGBC Project Coordinator (60%)
- Ms Grazzia Matamoros, MSc, GGBC Project Coordinator (30%)
- Dr Anna-Lisa Wrangé, Sambio Coordinator (100%)
- Mr Mikael Östblom, Sambio Coordinator (50%)

GGBC Membership

GGBC Membership is available to any person employed or studying at one of the GGBC partner organisations, who is working with biodiversity-related issues. In exceptional cases, a person not working for one of these organisations, but with close collaborations with GGBC members and partners, may also be admitted as a member. In 2024 GGBC welcomed 37 new members.

Honorary membership

In 2018, the GGBC created an 'honorary membership'. This membership category is awarded to those that have contributed significantly to biodiversity research or popularisation of biodiversity.

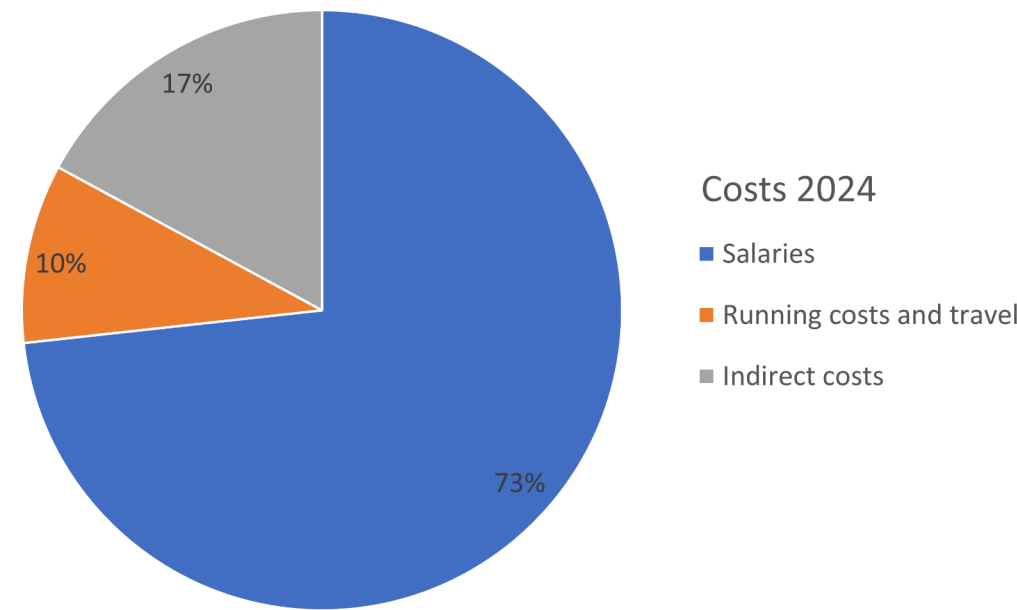
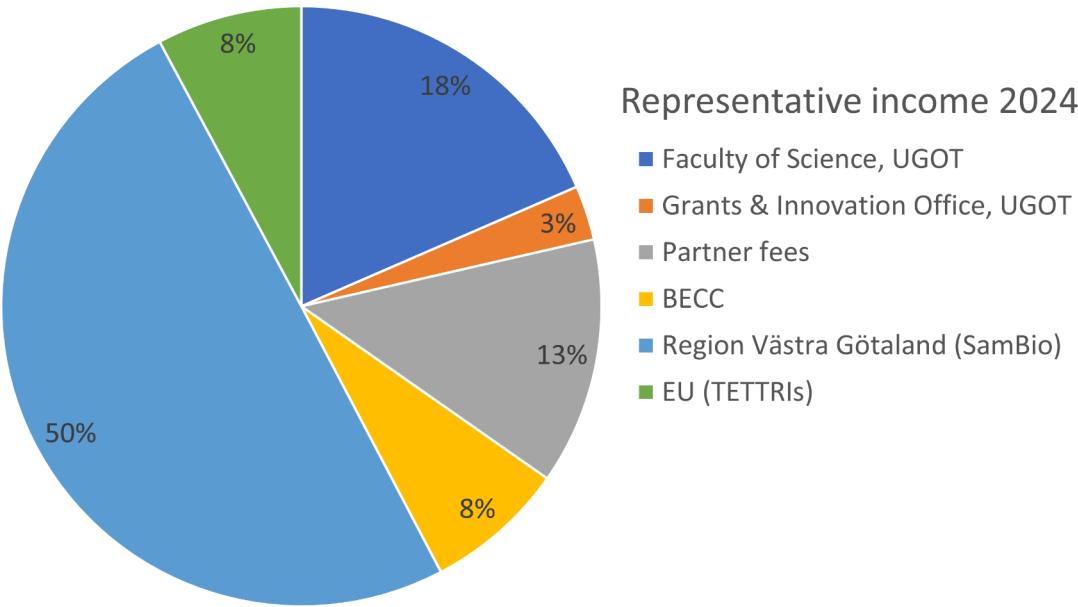
The honorary membership has been awarded to:

- 2024: Dr Brigitte Baptiste
- 2021: Dr Paul Jepson
- 2020: Professor Sandra Diaz
- 2020: Dr Anne Laurigauderie
- 2019: Professor Susanne Åkesson and Marc Abrahams
- 2018: Professor Edward O. Wilson
- 2018: Sir David Attenborough
- 2018: Professor Rosemary Grant
- 2018: Professor Peter Grant



## GGBC Economic Report 2024

The total costs for 2024 amounted to 2 758 659 SEK and the majority of which covered the salaries for the director and coordinators. The costs are covered by funding from the Faculty of Science at the University of Gothenburg and partner fees. Further funding came from the strategic research area Biodiversity and Ecosystems services in a Changing Climate ([BECC](#)); the Region Västra Götaland (VGR) via the SamBio project, participation in the EU-funded TETTRIs project and collaboration with Universeum through the University of Gothenburg Grants and Innovation Office.



## Funders & Partners

The GGBC simply would not exist without the support of our funders and partners.  
**Thank you.**



UNIVERSITY OF GOTHENBURG



**CHALMERS**  
UNIVERSITY OF TECHNOLOGY



Göteborgs  
Stad



Med stöd från



GÖTEBORGS  
naturhistoriska  
museum

**BOTANISKA**  
GÖTEBORGS BOTANISKA TRÄDGÅRD





## APPENDIX

### Examples of GGBC members in the media during 2024

<https://sverigesradio.se/artikel/antalet-utrotade-fagelararter-storre-an-man-trott>

<https://oceanographicmagazine.com/features/exploring-the-effects-of-light-pooling-on-whale-sharks/>

[https://time.news/restoring-the-atlantic-sturgeon-in-sweden-a-130-year-journey-to-reintroduce-a-species/?fbclid=IwAR1wqzQCJ55bHwhO7DFhSrZ5j2WggRj-E8SLUwYbspYI8uUIKG7-FNCcAf0#google\\_vignette](https://time.news/restoring-the-atlantic-sturgeon-in-sweden-a-130-year-journey-to-reintroduce-a-species/?fbclid=IwAR1wqzQCJ55bHwhO7DFhSrZ5j2WggRj-E8SLUwYbspYI8uUIKG7-FNCcAf0#google_vignette)

<https://www.deepseareporter.com/sv/licensjakten-hotar-grasalen-visar-ny-forskning/>

<https://animalecologyinfocus.com/2024/03/27/managing-wildlife-in-a-changing-environment-the-case-of-the-baltic-grey-seal/>

<https://sverigesradio.se/artikel/sa-ska-ett-mote-radda-den-biologiska-mangfalden>

[https://www.theguardian.com/environment/2024/oct/01/kew-botanic-gardens-study-33-dark-spots-plant-species-identification-unknown-biodiversity-?fbclid=IwY2xjawFtXopleHRuA2FlbQlXMQABHeUChPotLA\\_80A13UZk-ovuLW-YoVjrlRRR4jcHyPPdovBO8MbN2RTlmWA\\_aem\\_8WOt3YN14jnbLHrLoAD0MA](https://www.theguardian.com/environment/2024/oct/01/kew-botanic-gardens-study-33-dark-spots-plant-species-identification-unknown-biodiversity-?fbclid=IwY2xjawFtXopleHRuA2FlbQlXMQABHeUChPotLA_80A13UZk-ovuLW-YoVjrlRRR4jcHyPPdovBO8MbN2RTlmWA_aem_8WOt3YN14jnbLHrLoAD0MA)

<https://www.tv4play.se/klipp/1d9314732c52d92fcf0e/video-hotade-skalbaggen-tillbaka-pa-fastlandet-odlats-i-labb?>

[https://www.aftonbladet.se/nyheter/a/KMLz3e/forskare-vi-maste-vaga-ha-nya-trad-i-s-t-a-d-e-r-?fbclid=IwY2xjawE5K99leHRuA2FlbQlXMQABHW03uPBX1einMyZiAirUswYeFLDp4w3FqYISP1L8uBII-lf35zj1c-QnfA\\_aem\\_D5pya-aeDln\\_Nj02W4qJ1w](https://www.aftonbladet.se/nyheter/a/KMLz3e/forskare-vi-maste-vaga-ha-nya-trad-i-s-t-a-d-e-r-?fbclid=IwY2xjawE5K99leHRuA2FlbQlXMQABHW03uPBX1einMyZiAirUswYeFLDp4w3FqYISP1L8uBII-lf35zj1c-QnfA_aem_D5pya-aeDln_Nj02W4qJ1w)

<https://plantkingdom.earth/episode/09-asa-kruger-göteborg-botaniska>

<https://www.gu.se/en/news/göteborg-blue-community-garden-winner-in-new-european-bauhaus-competition>

<https://www.gu.se/nyheter/mangmiljonsatsning-lyfter-den-svenska-sjomaten>

<https://www.gu.se/en/news/new-genus-of-sea-stars-named-after-marine-biologist>

<https://www.gu.se/en/news/itex30ar>

<https://www.youtube.com/watch?v=yu3-ZZRI58M>





## APPENDIX

### Papers published by members in 2024

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Abrego N, Furneaux B, Hardwick B, Somervuo P, Palorinne I, C. Aguilar-Trigueros CA, Andrew NR, Babić UV, Bao T, Bazzano G, **Nilsson RH** et al. Airborne DNA reveals predictable spatial and seasonal dynamics of fungi. *Nature* 2024;**631**, s. 835-842 doi: 10.1038/s41586-024-07658-9.

Aguilar-Cano J, Perez-Escobar OA, Pizano C, Tovar E, **Antonelli A**. Isolated, neglected, and likely threatened: a new species of Magoniella (Polygonaceae) from the seasonally dry tropical forests of Northern Colombia and Venezuela revealed from nuclear, plastid, and morphological data. *Frontiers in Plant Science* 2024;**15** doi: 10.3389/fpls.2024.1253260.

Alison J, Payne S, Alexander JM, **Bjorkman AD**, et al. Deep learning to extract the meteorological by-catch of wildlife cameras. *Global Change Biology* 2024;**30**:1 doi: 10.1111/gcb.17078.

Allkin R, Baquero A, Cámara-Leret R, Canteiro C, Dennehy-Carr Z, Govaerts R, Hargreaves S, **Antonelli A**. et al. The global distribution of plants used by humans. *Science* 2024;**383**:6680, s. 293-297 doi: 10.1126/science.adg8028.

Alström P, Mohammadi Z, Donald PF, Nymark M, E. D. Enbody ED, Irestedt M, Elisha EB, Ndithia HK, Tieleman BI, Engelbrecht D, **U. Olsson U**, et al. Integrative taxonomy reveals unrecognised species diversity in African Corypha larks (Aves: Alaudidae). *Zoological Journal of the Linnean Society* 2024;**200**(4):1080-108.

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**Antonelli A**, Rueda X, Calcagno R, Nantongo Kalunda P. How biodiversity credits could help to conserve and restore nature. *Nature* 2024;**634**, s. 1045-1049 doi: 10.1038/d41586-024-03475-2.

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Azevedo J, **Faurby S**, Colli GR, **Antonelli A**, Werneck FP. Deforestation limits evolutionary rescue under climate change in Amazonian lizards. *Diversity and Distributions* 2024;**30**:7 doi: 10.1111/ddi.13860.

**Bacon CD**, **Hill A**. Hybridization in palms (Arecaceae). *Ecology and Evolution* 2024;**14**:7 doi: 10.1002/ece3.70014.

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**Carroll D**, Ahola MP, Carlsson AM, Sköld M, Harding KC. 120-years of ecological monitoring data shows that the risk of overhunting is increased by environmental degradation for an isolated marine mammal population: The Baltic grey seal. *Journal of Animal Ecology* 2024;**93**, s. 525-539 doi: 10.1111/1365-2656.14065.

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