UNIVERSITY OF HOHENHEIM

Kom Bio Ta

NATURAL HISTORY MUSEUM STUTTGART

KomBioTa's Research Group Directory for Students



KomBioTa Coordination Office
Wollgrasweg 23
70599 Stuttgart
kombiota@uni-hohenheim.de

Plant Evolutionary Biology

- **Where:**
  - ✓ UHOH
- **What:**
  - ✓ Humboldt reloaded project
  - ✓ Bachelor thesis
  - ✓ Master thesis
  - ✓ PhD
  - ✓ HiWi / Student job
- **How:**
  - ✓ Field work, domestic
  - ✓ Field work, international
  - ✓ Lab work
  - ✓ Data Analysis
  - ✓ Literature review
- **Required skills / Prerequisites:**
  - ✓ Prerequisites: Depends on the project; generally motivation and appropriate skills/background for a given project.
  - ✓ Selection: based on scientific excellence.
- **Frequency of openings:**
  - ✓ Every semester
  - ✓ Year-round
  - ✓ Occasionally (i.e. for new projects)



We are interested in the genetic and genomic basis of speciation and the origin of plant diversity; we aim to understand plant evolutionary development and the molecular basis of adaptation to biotic selection agents, as well as the phylogenetic, ecological and population genetic underpinnings of ecological interactions. This endeavour is focused upon the role of chemical and developmental floral traits in pollinator-driven evolution. Orchids, especially the bee orchids (Ophrys), are our favourite study plants.

Group leader:
Prof. Dr. Philipp Schlüter
philipp.schlueter@uni-hohenheim.de

Homepage:

Functional Plant Ecology

- **Where:**
  - ✓ SMNS
- **What:**
  - ✓ Humboldt reloaded project
  - ✓ Bachelor thesis
  - ✓ Master thesis
  - ✓ PhD
  - ✓ HiWi / Student job
- **How:**
  - ✓ Field work, domestic
  - ✓ Field work, international
  - ✓ Lab work
  - ✓ Data Analysis
  - ✓ Literature review
- **Required skills / Prerequisites:**
  - ✓ general interest in plant ecology
  - ✓ general interest in plant biodiversity
- **Frequency of openings:**
  - ✓ Every semester
  - ✓ Year-round
  - ✓ Occasionally (i.e. for new projects)

The Functional Plant Ecology Group at the SMNS studies how plant species and communities respond to environmental changes. We combine fieldwork, experiments, and large-scale data analysis to investigate plant diversity at local to global scales.



Our department aims to elucidate the genetic and genomic basis of speciation Our research includes studying grassland dynamics, tracking declining species and spreading neophytes, and collaborating internationally. Ultimately, we aim to understand biodiversity shifts to support nature conservation and sustainable ecosystem management.

Group leader:
Dr. Pierre Liancourt
pierre.liancourt@smns-bw.de

Homepage:

LUBW Fluginsektenmonitoring


Image: KomBioTa


Image: KomBioTa

- **Where:**
  - ✓ SMNS
- **What:**
  - ✓ Humboldt reloaded project
  - ✓ Bachelor thesis
  - ✓ Master thesis
  - ✓ PhD
  - ✓ Volunteer work
- **How:**
  - ~~✓ Field work, domestic~~
  - ~~✓ Field work, international~~
  - ✓ Lab work
  - ✓ Data Analysis
  - ~~✓ Literature review~~
- **Required skills / Prerequisites:**
  - ✓ Basic knowledge of identifying arthropods
  - ✓ careful handling of biological samples
- **Frequency of openings:**
  - ✓ Every semester
  - ✓ Year-round
  - ✓ Occasionally (i.e. for new projects)

The "Biomass-Air" sub-project aims to determine the biomass of flying insects, and other groups of Arthropods from Malaise traps that are set up in nature reserves, grassland and agricultural areas at 40 sites across Baden-Württemberg. Parameters that may influence the insects – such as temperature, precipitation and the use of surrounding land for, for example, arable farming or haymaking – are also recorded for each site. Upon request, the samples and the information gathered can be made available to cooperation partners for a wide range of analyses.


Image: KomBioTa

How to get in touch:

Dr. Hossein Rajaei
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0711 8936-223

Dipl.-Biol. Ingo Wendt
ingo.wendt@smns-bw.de
0711 8936-228

Homepage:

Entomology: Insect-Plant Interactions Group

- **Where:**
  - ✓ SMNS
- **What:**
  - ~~✓ Humboldt reloaded project~~
  - ~~✓ Bachelor thesis~~
  - ✓ Master thesis
  - ✓ PhD
  - ~~✓ HiWi / Student job~~
  - ✓ Volunteer work
- **How:**
  - ✓ Field work, domestic
  - ✓ Field work, international
  - ✓ Lab work
  - ✓ Data Analysis
  - ✓ Literature review
- **Required skills / Prerequisites:**
  - ✓ Interest in bees, especially their biodiversity and conservation
  - ✓ Knowledge of traditional taxonomy, phylogenomic reconstruction and macroecological analyses
  - ✓ Understanding of bee biology and life history
- **Frequency of openings:**
  - ✓ Occasionally (i.e. for new projects)

Michael Orr is an interdisciplinary taxonomist broadly interested in the biodiversity of bees. Michael's research group on Insect-Plant Interactions seeks to bridge traditional life history and taxonomic research with cutting-edge approaches aimed at exploring the interactive consequences of bee ecology and evolution. Current projects include the systematics and phylogenomics of solitary bees, bee distribution and conservation across scales, the evolution of mimicry, and several new directions in genomics related to these and other topics.
He and his lab have published over 130 articles on a wide range of topics, with leading roles on papers in journals including National Science Review, Current Biology, Nature Ecology & Evolution, Ecography, Bioscience, and Global Ecology and Biogeography.



Anthophora hololeuca, Michael Orr

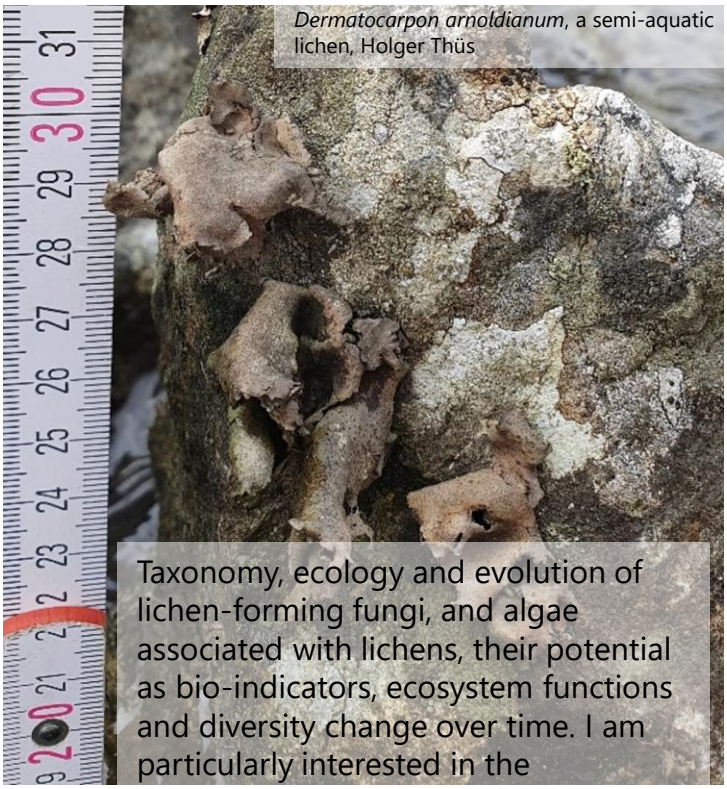
How to get in touch For volunteer work:
Dr Arnaud Faille
Arnaud.faille@smns-bw.de

Group leader:
Dr. Michael Orr
michael.christopher.orr@gmail.com

Homepage:

Botany: Lichens and other Fungi

- **Where:**
  - ✓ SMNS
- **What:**
  - ✓ Humboldt reloaded project
  - ✓ Bachelor thesis
  - ✓ Master thesis
  - ~~✓ PhD~~
  - ~~✓ HiWi / Student job~~
- **How:**
  - ✓ Field work, domestic
  - ~~✓ Field work, international~~
  - ✓ Lab work
  - ✓ Data Analysis
  - ✓ Literature review
- **Required skills / Prerequisites:**
  - ✓ Knowledge of organism-centered and collection-based research on fungi and algae
  - ✓ Knowledge of integrative taxonomy combining anatomical and molecular methods
  - ✓ High level of manual dexterity for handling small, delicate specimens
  - ✓ High level of attention to detail
- **Frequency of openings:**
  - ✓ Occasionally (i.e. for new projects)
  - ✓ Limited number per semester / year



Dermatocarpon arnoldianum, a semi-aquatic lichen, Holger Thüs

Taxonomy, ecology and evolution of lichen-forming fungi, and algae associated with lichens, their potential as bio-indicators, ecosystem functions and diversity change over time. I am particularly interested in the interactions of lichenised fungi with other organisms, the role of secondary metabolites and physical structures for the functionality of the lichen symbiosis.

As a model group, I mainly use the family of the Wart lichens (Verrucariaceae/Ascomycota), a species-rich and ecologically diverse group which is present in the driest parts of the world as well as in permanently submerged habitats, where the species of this family can cover large surface areas.

Group leader:
Dr. Holger Thüs
holger.thues@smns-bw.de
0711 8936 2816

Homepage:

Biostatistics Unit

- **Where:**
  - ✓ UHOH
- **What:**
  - ~~✓ Humboldt reloaded project~~
  - ~~✓ Bachelor thesis~~
  - ✓ Master thesis
  - ✓ PhD
  - ✓ HiWi / Student job
- **How:**
  - ~~✓ Field work, domestic~~
  - ~~✓ Field work, international~~
  - ~~✓ Lab work~~
  - ✓ Data Analysis
  - ~~✓ Literature review~~
- **Required skills / Prerequisites:**
  - ✓ Good quantitive (statistical) skills
- **Frequency of openings:**
  - ✓ Occasionally (i.e. for new projects)

We mostly focus on experiments plant breeding and variety testing. However, we also have a line of research on wildlife abuncance dynamics in Kenya, mostly of ungulates, which is led by Dr. Ogutu.



Image: Hans-Peter Pieho & Joseph Ogutu

How to get in touch:
Dr. Joseph Ogutu
jogutu2007@gmail.com

Group leader:
Prof. Dr. Hans-Peter Piepho

Homepage:

Biodiversity Monitoring

- **Where:**
  - ✓ SMNS
- **What:**
  - ✓ Humboldt reloaded project
  - ✓ Bachelor thesis
  - ✓ Master thesis
  - ✓ PhD
  - ~~✓ HiWi / Student job~~
- **How:**
  - ~~✓ Field work, domestic~~
  - ~~✓ Field work, international~~
  - ~~✓ Lab work~~
  - ✓ Data Analysis
  - ✓ Literature review
- **Required skills / Prerequisites:**
  - ✓ solid knowledge on evolution,
  - ✓ basic knowledge on population genetics
  - ✓ some background or strong interest in learning: genomics, conservation, speciation, hybridization, adaptation, population genomics, bioinformatics, computational languages
- **Frequency of openings:**
  - ✓ Every semester

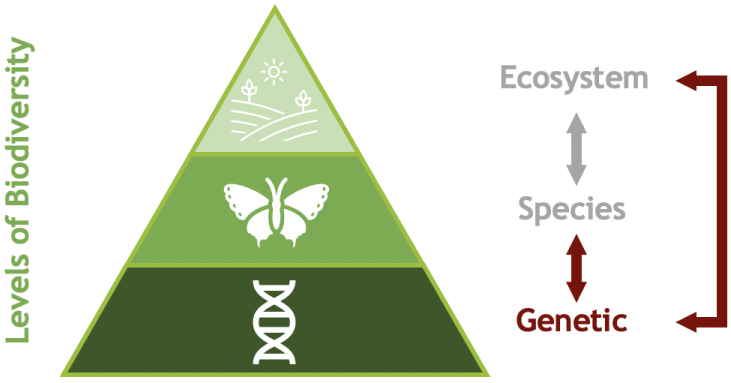


Image: Genomics diversity within species allows for species and ecosystem persistence, Ricardo Pereira

We focus on understanding biodiversity at the genomic level and its influence on species and ecosystem diversity.
By utilizing state-of-the-art genomic technologies, our research draws from museum and monitoring collections to understand the drivers of biodiversity change over time.
This provides valuable insights into evolutionary processes and conservation strategies.

Group leader:
Prof. Dr. Ricardo Pereira
ricardo.pereira@smns-bw.de

Homepage:

Arachnology

- **Where:**
  - ✓ SMNS
- **What:**
  - ✓ Humboldt reloaded project
  - ✓ Bachelor thesis
  - ✓ Master thesis
  - ✓ PhD
  - ✓ HiWi / Student job
  - ✓ Volunteer work
- **How:**
  - ✓ Field work, domestic
  - ✓ ~~Field work, international~~
  - ✓ Lab work
  - ✓ Data Analysis
  - ✓ Literature review
- **Required skills / Prerequisites:**
  - ✓ Basic knowledge of handling and identifying arachnids
  - ✓ laboratory work (e.g. DNA barcoding)
- **Frequency of openings:**
  - ✓ Every semester
  - ✓ Year-round
  - ✓ Occasionally (i.e. for new projects)
  - ✓ Limited number per semester

The SMNS's arachnological collections focus on central European web-spinning spiders (Araneae). In addition, there are extensive and scientifically significant collections of pseudoscorpions and whip spiders. The collection of tarantulas (Theraphosidae) has been significantly expanded in recent years. The collections are available for taxonomic and faunistic studies.

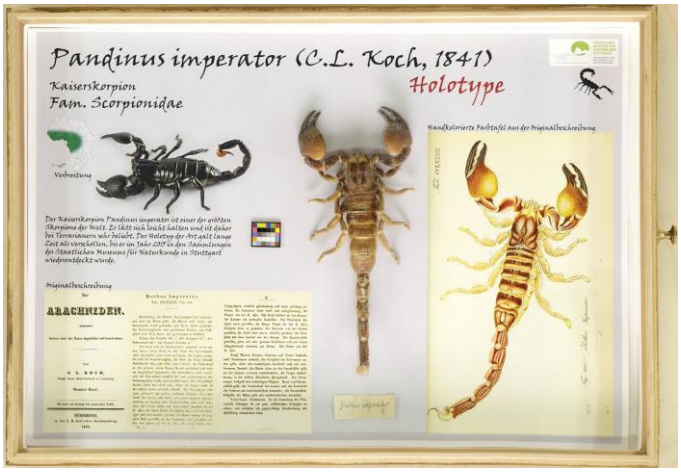


Image: Ingo Wendt

How to get in touch:
Dipl.-Biol. Ingo Wendt
ingo.wendt@smns-bw.de

Group leader:
Dr. Joachim Holstein
joachim.holstein@smns-bw.de
0711 8936-234

Homepage:

Department of Molecular Genetics

- **Where:**
  - ✓ UHOH
- **What:**
  - ✓ Humboldt reloaded project
  - ✓ Bachelor thesis
  - ✓ Master thesis
  - ✓ PhD
  - ✓ HiWi / Student job
  - ✓ Volunteer work
- **How:**
  - ~~✓ Field work, domestic~~
  - ~~✓ Field work, international~~
  - ✓ Lab work
  - ✓ Data Analysis
  - ~~✓ Literature review~~
- **Required skills / Prerequisites:**
  - ✓ (1) a background in fundamental molecular biology, genetics and/or evolution
  - ✓ (2) an enthusiasm for our lab's research interests are essential.
  - ✓ Training is of course provided for new topics and methods.
- **Frequency of openings:**
  - ✓ Year-round



Our focus on the intersection of evolution and ecology encompasses macroevolutionary timescales and gene/ genome evolution as well as the phenotypic outcomes of these changes. We focus especially on dietary breadth in the insect order Hemiptera (true bug species), conducting feeding experiments to explore the genetic basis of why some species are monophagous or specialist for plant feeding while others are generalist and potentially invasive. Computational work on gene structure, copy number, microbiome, and functional divergence for diet and other traits is experimentally tested for gene expression (e.g., RNA-seq) and for gene function (e.g., RNAi and feeding assays).



Image: Milkweed bugs (DOI: 10.1186/s13059-019-1660-0)

Group leader:
Prof. Dr. Kristen Panfilio
k.panfilio@uni-hohenheim.de

Homepage:

Eco-Evolutionary Modelling

- **Where:**
  - ✓ UHOH
- **What:**
  - ~~✓ Humboldt reloaded project~~
  - ✓ Bachelor thesis
  - ✓ Master thesis
  - ✓ PhD
  - ~~✓ HiWi / Student job~~
- **How:**
  - ~~✓ Field work, domestic~~
  - ~~✓ Field work, international~~
  - ~~✓ Lab work~~
  - ~~✓ Data Analysis~~
  - ~~✓ Literature review~~
- **Required skills / Prerequisites:**
  - ✓ Successful participation (grade 2,0 or better) in one of the courses that we teach. Summer semester: "Computational Ecology: Modelling Systems Across Scales", Winter semester: "Theoretical Ecology: From chaos to Coexistence".
- **Frequency of openings:**
  - ✓ Year-round
  - ✓ Occasionally (i.e. for new projects)

Our research projects are diverse and rooted in various sub-disciplines of ecology. All of them have the common goal to understand how complex ecosystems are structured and how this structure affects their functioning and stability.

We are particularly interested in questions related to the eco-evolutionary emergence of complex interaction networks, as well as their long-term responses to disturbances and changing environmental conditions. We address our research questions from a theoretical perspective using a mix of tools, including individual-based modelling, dynamical systems theory and adaptive dynamics.

Group leader:
Dr. Korinna T. Allhoff
Korinna-allhoff@uni-Hohenheim.de

Homepage:

Integrative Taxonomy of Insects

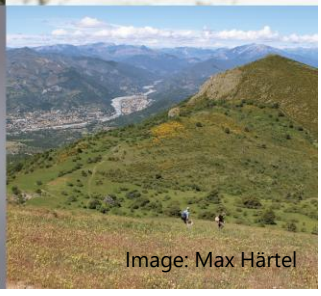
- **Where:**
  - ✓ UHOH
- **What:**
  - ✓ Humboldt reloaded project
  - ✓ Bachelor thesis
  - ✓ Master thesis
  - ✓ PhD
  - ✓ HiWi / Student job
- **How:**
  - ✓ Field work, domestic
  - ✓ Field work, international
  - ✓ Lab work
  - ✓ Data Analysis
  - ✓ Literature review
- **Required skills / Prerequisites:**
  - ✓ strong interest in systematics, ecology, and evolution
  - ✓ Completion of at least one of our courses, Methods for Monitoring Insect Biodiversity or Integrative Taxonomy of Insects, will strenghten your application.
  - ✓ Proficiency in laboratory and field sampling techniques is welcome but not required.
- **Frequency of openings:**
  - ✓ Year-round

Our research combines evolutionary biology, biogeography and ecology to study biodiversity and and biological speciation. Discovering and describing new species, as well as understanding how new species originate and how biodiversity is maintained in our ecosystems is important for developing strategies against the global biodiversity crisis.
Our studies focus on ants (Hymenoptera: Formicidae), because their high diversity, ecological dominance, complex social behaviors, and diverse symbiotic interactions make them ideal study systems for exploring long-standing questions in ecology, evolutionary biology, and biodiversity research.


Image: Max Härtel


Image: Max Härtel


Image: Kyle Gray


Image: Max Härtel

Group leader:
Prof. Dr. Christian Rabeling
christian.rabeling@uni-hohenheim.de
+49 711 459 22525

Homepage:

Fachgebiet Chemische Ökologie

- **Where:**
  - ✓ UHOH
- **What:**
  - ✓ Humboldt reloaded project
  - ✓ Bachelor thesis
  - ✓ Master thesis
  - ~~✓ PhD~~
  - ✓ HiWi / Student job
- **How:**
  - ✓ Field work, domestic
  - ~~✓ Field work, international~~
  - ✓ Lab work
  - ✓ Data Analysis
  - ✓ Literature review
- **Required skills / Prerequisites:**
  - ✓ none
- **Frequency of openings:**
  - ✓ Every semester
  - ✓ Occasionally (i.e. for new projects)
  - ✓ Limited number per semester

In our department, we address two questions: How have new species evolved, and how can we stop species extinction? To answer these questions, we draw upon the insights and methods of chemical ecology. This branch of research focuses on the chemical signals that govern interactions between organisms, such as sex pheromones. For instance, the emergence of new species is often accompanied by the evolution of new sex pheromones, and the use of these pheromones in traps aids in the detection and conservation of rare and endangered insect species. In addition, we are studying how to reduce losses in biodiversity and biomass of insects in grasslands caused by mowing using scaring devices and modified mowing equipment. This aim is to provide insect-friendly mowing technology, to make a substantial contribution to protect biodiversity and preserve grassland ecosystem functions while incurring only minor losses in economic productivity.



Image: Versuche_zur_biodiversitaetsschonenden_Mahd_2026, 17. Jui 2026

Group leader:
Prof. Dr. Johannes Steidle
jsteidle@uni-hohenheim.de

Homepage:

Ecology of Tropical Agricultural Systems

- **Where:**
  - ✓ UHOH
- **What:**
  - ~~✓ Humboldt reloaded project~~
  - ✓ Bachelor thesis
  - ✓ Master thesis
  - ~~✓ PhD~~
  - ~~✓ HiWi / Student~~ job
- **How:**
  - ✓ Field work, domestic
  - ✓ Field work, international
  - ✓ Lab work
  - ✓ Data Analysis
  - ✓ Literature review
- **Required skills / Prerequisites:**
  - ✓ See our homepage for more information
- **Frequency of openings:**
  - ✓ Year-round
  - ✓ Limited number per semester

Our group does research on aboveground biodiversity and ecosystem services in tropical and temperate agricultural landscapes. Thesis projects are usually tied to ongoing PhD activities. See our homepage for more information

How to get in touch:
Please see our team members and their projects on the homepage

Group leader:
Prof. Dr. Ingo Grass
Ingo.grass@uni-Hohenheim.de

Homepage:

Diversity Change and Evolution of Bryophytes

- **Where:**
  - ✓ SMNS
- **What:**
  - ✓ Humboldt reloaded project
  - ✓ Bachelor thesis
  - ✓ Master thesis
  - ✓ PhD
  - ~~✓ HiWi / Student job~~
  - ✓ Volunteer work
- **How:**
  - ✓ Field work, domestic
  - ✓ Field work, international
  - ✓ Lab work
  - ✓ Data Analysis
  - ✓ Literature review
- **Required skills / Prerequisites:**
  - ✓ none
- **Frequency of openings:**
  - ✓ Every semester
  - ✓ Occasionally (i.e. for new projects)
  - ✓ Limited number per semester


Image: BryoGroup.jpg

Our research group investigates bryophyte biodiversity and its evolution across time and space. We are deeply interested in how climate change, habitat fragmentation, and land-use shifts impact both natural and human-modified ecosystems, with a special focus on mountain habitats and epiphytic communities.

To uncover these dynamics, our analyses integrate genetic, genomic, morphological, and ecological data within and between species, including comparative approaches and interactions with other organismal groups.

Group leader:
Dr. Thomas Kiebacher
Thomas.kiebacher@smns-bw.de
+49 (0) 711/ 8936-209

Homepage:

Bunte Wiese Stuttgart

Volunteer opportunity!

- **Where:**
  - ✓ SMNS
- **How:**
  - ✓ Field work, domestic
  - ~~✓ Field work, international~~
  - ~~✓ Lab work~~
  - ~~✓ Data Analysis~~
  - ~~✓ Literature review~~
- **Required skills / Prerequisites:**
  - ✓ Interesse an Naturschutz, Taxonomie und Ökologie heimischer Insekten und Pflanzen, Fachwissen nicht vorausgesetzt
  - ✓ Interesse an Öffentlichkeitsarbeit, Durchführen von Infoständen, Workshops, kleinen Exkursionen
  - ✓ hauptsächlich Deutsch seltener Englisch
- **Time commitment:**
  - ~~✓ Daily~~
  - ~~✓ Weekly~~
  - ✓ Monthly
  - ~~✓ Seasonally~~
  - ✓ Occasionally

Als Studierendeninitiative setzen wir uns für die heimische Biodiversität und den Artenschutz ein. An vielfältigen Infoständen erklären wir im Rahmen unterschiedlicher Nachhaltigkeitsaktionen der breiten Öffentlichkeit, wie sie ihren Garten nachhaltiger gestalten können, warum Insekten für uns wichtig sind und wie sie geschützt werden können. Hierfür erstellen wir selbst Infomaterial, entwickeln kreative Materialien und Konzepte für Groß und Klein, halten Vorträge oder gestalten Workshops. Nebenbei veröffentlichen wir Steckbriefe einer bestimmten Art oder Artengruppe in Form des "Wiesenbewohner des Monats"



Image: Tag der Artenvielfalt Wilhelma, 2025

Group leader:
Bunte Wiese Stuttgart
kontakt@buntewiese-stuttgart.de

Homepage:

Floristic Mapping of Baden-Württemberg

Volunteer opportunity!

- **Where:**
  - ✓ SMNS
- **How:**
  - ✓ Field work, domestic
  - ~~✓ Field work, international~~
  - ~~✓ Lab work~~
  - ~~✓ Data Analysis~~
  - ~~✓ Literature review~~
- **Required skills / Prerequisites:**
  - ✓ Basic plant identification skills and the motivation and record plant species independently in the field are desirable
- **Time commitment:**
  - ✓ Daily
  - ✓ Weekly
  - ✓ Monthly
  - ✓ Seasonally
  - ✓ Occasionally

The Floristic Mapping of Baden-Württemberg is a long-term citizen-science initiative coordinated by the Natural History Museum since 1970. Volunteers record the occurrence of wild plant species across the region, helping to document one of Germany`s most diverse floras and the change it is undergoing.

These observations provide an important basis for distribution maps, Red Lists, scientific research, and conservation planning.
We welcome interested students and volunteers who would like to contribute to field surveys, learn more about plant identification, and support the monitoring of biodiversity in Baden-Württemberg.



Image: Calcareous grassland, 2025

How to get in touch:
Cornelia Krause
Floristische.kartierung@smns-bw.de

Homepage:

All information valid as of WS 2026/2027

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kombiota@uni-hohenheim.de