

Bernd Lenzner B.Sc. M.Sc. PhD
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Scientific Education

- 2019-present **Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)**
- Fellow and contributing author to the thematic assessment on invasive alien species and their control
- 2018-present **Postdoctoral researcher at the University of Vienna, Austria**
- Bioinvasions, Global Change, Macroecology Group
 - Department of Botany and Biodiversity Research
 - Project – Global Naturalized Alien Floras (GloNAF) database
 - Project – Alien Scenarios
 - Project - ReSurveyEurope

Scientific Education

- 2015-2018 **PhD student at University of Vienna, Austria**
- Department of Botany and Biodiversity Research
 - Thesis: “Investigating global patterns and processes of non-native alien plant diversity and assembly” (1.0 with distinction)
 - Supervisors: Mag. Dr. Franz Essl; Prof. Mag. Dr. Stefan Dullinger
- 2012-2015 **MSc in Geoecology at the University of Bayreuth, Germany**
- Major in Landscape Ecology
 - Thesis: “Ecological implications of flower color change in fertilized and unfertilized grassland over the past 150 years” (1.0)
 - Supervisors: Prof. Dr. Carl Beierkuhnlein, Prof. Dr. Manuel Steinbauer, Prof. Dr. Andreas Schweiger
- 2008-2012 **BSc in Geoecology at the University of Bayreuth, Germany**
- Major in Landscape Ecology
 - Thesis: “Plant differentiation on oceanic archipelagos in dependence of island age” (1.0)
 - Supervisors: Prof. Dr. Carl Beierkuhnlein, Prof. Dr. Manuel Steinbauer

Project Funding, Awards and Scholarships

Awards, Scholarships & travel funding

- 2021 **Young Investigator Award**
- Faculty of Life Sciences, University of Vienna

- Honouring young postdoctoral scientists publishing in the top journals of their field
 - 7000€ award money
- 2019 **Award of Excellence**
- Federal Ministry of Education, Science and Research of Austria
 - Honoring the 40 best dissertations of the past academic year conducted in Austria.
- 2017 **IIASA – Young Scientist Summer Program**
- Funding agency: German IIASA National Member – Institute for Climate Research (PIK)
 - 4500€ (for 3 months) stipend
- 2016 **COST Action TD1209 – “Alien Challenge”**
- Travel grant: 600€

Successful funding

- 2021 **AgriWeedClim - Emerging Agricultural Weeds under Climate and land-use changes in Central Europe**
- Project manager: Prof. Dr. Franz Essl
 - Role: Collaborating scientist
 - Call: Austrian Climate Research Program (ACRP)
 - National Funding Agency: Austrian Climate Research Program (ACRP)
 - Project funding: 244 453€
- 2019 **Alien Scenarios**
- Project manager: Prof. Dr. Franz Essl
 - Role: Co – project lead and work package lead
 - Call: BioScen joint call by the Belmont Forum and BiodivERsA on “Scenarios of Biodiversity and Ecosystem Services”
 - National Funding Agency: Austrian Science Foundation (FWF)
 - Success rate: 21 projects out of 135 full proposals
 - Total funding of the call: > 28Mio €
- 2018 **Global Naturalized Alien Floras database**
- Project manager: Prof. Mark van Kleunen & Prof. Dr. Franz Essl
 - Role: Contributed to conceptualization and writing; explicitly mentioned as post-doctoral researcher for the project
 - Call: Joint projects Germany, Austria, Switzerland (DACH)
 - National Funding Agency: Austrian Science Foundation (FWF)

Ongoing proposals

The biogeography and ecology of alien pathogenic fungi world-wide

- Project manager: Prof. Dr. Franz Essl

- *Role*: Contributed to conceptualization and writing; listed as primary researcher involved
- *Call*: Stand-alone project
- *National Funding Agency*: Austrian Science Foundation (FWF)

Advancing the understanding of global plant invasions: building the bridge from data to drivers and biodiversity changes

- *Project manager*: Prof. Mark van Kleunen & Prof. Dr. Franz Essl
- *Role*: Contributed to conceptualization and writing; explicitly mentioned as post-doctoral researcher for the project
- *Call*: Joint projects Germany, Austria, Switzerland (DACH)
- *National Funding Agency*: Austrian Science Foundation (FWF)

ALIENSHIFT - Garden of Eden or Garden of Hell? Exploring plant invasions - wildfire interactions to prevent undesired critical transitions in Anthropocene rural landscapes

- *Project manager*: Dr. Joana Vicente
- *Role*: Conceptualization and writing of tasks related to scenarios and modelling; member of the scientific advisory board
- *Funding Agency*: Portuguese National Funding Agency

Unsuccessful funding

EXOTIC - Artificial intelligence and nature-based solutions for mitigating cumulative impacts of climate change and invasive alien species

- *Project manager*: Prof. Dr. Stelios Katsanevakis
- *Role*: Conceptualization and writing of work package “Nature based solutions”
- *Call*: Biodiversa call “Biodiversity and Climate Change”

ISLabs - European ISLANDS as global laboratories for biodiversity and ecosystem research

- *Project manager*: Prof. Dr. Carl Beierkuhnlein
- *Role*: Conceptualization and commenting on proposal drafts; member of the consortium
- *Funding Agency*: European COST Action

Working Group and Organization Memberships

Working Groups

- InvaCost – Economic costs of biological invasions
 - o <http://invacost.fr/en/about/>
- Invasions Dynamics Network (InDyNet)
 - o <https://indynet.de/>
- Theory and Workflows for Alien and Invasive Species Tracking (sTWIST)
 - o https://www.idiv.de/sdiv/working_groups/wg_pool/stwist.html
- Global Mountain Biodiversity Assessment (GMBA)
 - o Endemism and species richness in mountains group
 - o http://www.gmba.unibe.ch/research/working_groups/endemism

Memberships

- International Biogeography Society (IBS)
 - o <https://www.biogeography.org/>
- British Ecological Society (BES)
 - o <https://www.biogeography.org/>

Teaching

Analysis of ecological data - univariate methods (lecture and practical; 5 ECTS)

- *Central topics:* General aspects of designing ecological studies - Establishing hypotheses and deriving predictions, statistical tests, experimental design, power analysis; Analysis of variance (ANOVA); Regression analysis and its derivatives (GLM, GAM, PGLS, Classification Trees); Analysis of structured data and time series (Mixed Models).
- Joint lecture with Dr. Johannes Wessely

Modelling spatial and temporal dynamics of (ecological) animal and plant populations (practical; 5 ECTS)

- After successful completion, the students will be equipped with the necessary skills to formulate theoretical models to tackle a specific biological problem, translate the theoretical assumptions into mathematical formulas, implement these in R and evaluate the model outcomes and their ecological relevance.
- Joint lecture with Dr. Johannes Wessely

Klimawandel - Biodiversität, Globaler Wandel und Klimapolitik (lecture; 3 ECTS)

- English: Climate Change – Biodiversity, Global Change and Climate Policy
- Joint lecture with Prof. Dr. Franz Essl

Peer review

Journals: Diversity and Distributions, Ecology and Evolution, Evolutionary Ecology, Frontiers in Biogeography, Journal of Biogeography, Journal of Ecology, Nature and People, Diversity, Bioinvasion Records, Ecography, Frontiers in Ecology and Evolution, Frontiers in Ecology and the Environment, Global Ecology and Biogeography, Journal of Environmental Management, Neobiota, Plant Ecology and Diversity

Funding agencies: Czech Science Fund

Outreach

- 2021 **Presentation of personal research at the visit of the First Ladies of South Korea and Austria to the botanical Garden, Vienna, Austria**
- 2021 **Guided tour at the botanical garden Vienna – “Neue Wilde”**
 - <https://botanischergarten.univie.ac.at/veranstaltungen/veranstaltungen/neue-wilde/>
- 2020 **Podcast – Postcoronal Podcast #1 – Invasive Spezies – Aliens unter uns**
 - Postcoronal: <https://postcoronal.org/>
 - <https://soundcloud.com/user-370693458/neophyten>
- 2020 **Podcast – Invasive Tiere und ihr Charisma: Sind Grauhörnchen eine Gefahr**

- Institut française, Vienna, Austria
- 2020 **TV interview – ORF**
- Topic: Biodiversity change, species extinctions and biological invasions globally and in Austria
 - Format: Aktuell nach eins
- 2019 **Blog entry - Wieso, weshalb und warum das Artensterben uns alle betrifft**
- University of Vienna Blog
 - <https://blog.univie.ac.at/artensterben-betrifft-alle/>
- 2019 **Blog entry - Introducing a framework for 21st century biological invasions**
- Nexus blog, International Institute of Applied Systems Analysis (IIASA)
 - <https://blog.iiasa.ac.at/2019/10/28/introducing-a-framework-for-21st-century-biological-invasions/>

Teaching

Lectures & Practicals

Analysis of ecological data - univariate methods (lecture and practical; 5 ECTS)

- *Central topics:* General aspects of designing ecological studies - Establishing hypotheses and deriving predictions, statistical tests, experimental design, power analysis; Analysis of variance (ANOVA); Regression analysis and its derivatives (GLM, GAM, PGLS, Classification Trees); Analysis of structured data and time series (Mixed Models).
- Joint lecture with Dr. Johannes Wessely

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- Joint lecture with Dr. Johannes Wessely

Klimawandel - Biodiversität, Globaler Wandel und Klimapolitik (lecture; 3 ECTS)

- English: Climate Change – Biodiversity, Global Change and Climate Policy
- Joint lecture with Prof. Dr. Franz Essl

Bachelor & Master thesis

Sebastian Hancock (MSc)

- Introducing the Combined Atlas Framework for large-scale web-based data visualization – The GloNAF Atlas of Plant Invasion
- Under revision in *Methods in Ecology and Evolution*

Julia Konic (MSc)

- To Care or Not to Care? Which Factors Influence the Distribution of Early-Flowering Geophytes at the Vienna Central Cemetery (Austria)
- Published in *Sustainability* - <https://doi.org/10.3390/su13094657>

Tom Vorstenbosch (MSc)

- An uphill battle? The altitudinal distribution of alien plant species along rivers and roads in the Austrian Alps
- Published in Neobiota - <https://doi.org/10.3897/neobiota.63.55096>

Moritz Michael Adam (BSc)

- Neonatives and Climate Change – Assessing the EU 2030 Biodiversity Strategy

Pia Köck (BSc)

- Impact of colonial history on species composition of alien floras on islands

Research – Related Experience

Workshop – IPBES Nature Futures - Modelling, Online, 2021

Conference Organisation – “*Bending the curve for Biodiversity Change*” - Thematic Session British Ecological Society, Online, 2021

Workshop – AlienCSI, Czech Republic, 2020

Workshop – CBD – post2020 Biodiversity Targets – Germany, 2020

Workshop – Leipzig, Germany, Summer 2018 & Summer 2019

- Title – “Theory and Workflows for Alien and Invasive Species Tracking” (sTWIST)
- Organizer: sDiv – Synthesis Centre of the German Centre for Integrative Biodiversity Research (iDiv)

Workshop – Hannover, Germany, Summer 2018

- Title – „Developing a web portal for biodiversity research based on the hierarchy-of-hypotheses approach: Conceptual ecology meets bioinformatics, data visualization and web design”
- Organizer: Jonathan Jeschke & Tina Heger

Workshop – Berlin, Germany, Spring 2018

- Title – „Invasion dynamics”
- Organizer: Invasion Dynamics Network (InDyNet)

Summer Program – Laxenburg, Austria, Summer 2017

- Title - “Developing the first global scenarios for biological invasions in the 21st century”
- Organizer: International Institute of Applied Systems Analysis – Young Scientists Summer Program (YSSP)

Conference Organisation – Vienna, Austria 2017

- Title - “Macroecology in Space and Time”
- 10th Annual Meeting of the Macroecology Specialist Group of the Ecological Society Germany, Austria & Switzerland
- Part of the local organizing committee

Workshop – Berlin, Germany, Winter 2016

- Title - “Invasion dynamics”
- Organizer: Invasion Dynamics Network (InDyNet)

Workshop – Vienna, Austria, Fall 2016

- Title – “Scenario planning to evaluate alternative futures of biological invasions”
- Organizer: COST Action – TD1209: AlienChallenge

Training School – Olbia, Sardinia, Italy, Spring 2016

- Title – “Applied methods for evaluating and monitoring the impact of invasive alien species in a protected area”
- Organizer: COST Action – TD1209: AlienChallenge

Workshop – Barcelona, Spain, Summer 2015

- Title – “The Use of Phylogenies in the Study of Macroevolution”
- Instructor: Dr. Juan López-Cantalapiedra

Science School – La Palma, Canaries, Spring 2014

- Development and execution of a group project concerning plant invasion effects on endemic species

Internship – National and Kapodistrian University of Athens, April – September 2013

- Full member of a research group within a project on taxonomic and morphological diversity of land snails
 - ***Invited Talks, Presentations and Posters***
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- **Lenzner B**, Essl F (January 2021) A macroscopic view on biological invasions – past, present, future. *Department of Ecology and Evolution Seminar, University of Lausanne, Switzerland (Invited Talk)*
- **Lenzner B**, Essl F (March 2020) The option space of future alien species impacts: an expert based assessment, *11th International Conference on Biological Invasions - The Human Role in Biological Invasions: a case of Dr Jekyll and Mr Hyde? Vodice, Croatia (Oral presentation)*
- **Lenzner B**, Essl F (March 2020) The option space of future alien species impacts: an expert based assessment, *Macroecology of the Anthropocene, Annual Meeting of the Specialist Group on Macroecology of the Gesellschaft für Ökologie, Konstanz, Germany (Oral presentation)*
- **Lenzner B**, Essl F (July 2019) Towards Island-Specific Scenarios of Biological Invasions in the 21st century, *3rd International Conference on Island Ecology, Evolution and Conservation, St. Denis, La Réunion 2019 (Oral presentation)*
- **Lenzner B** (June 2019) The macroecology of alien species and its temporal dynamics. *Colloquium of the Physical-Geography Institute, Goethe University Frankfurt am Main, Germany, (Invited Talk)*
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- **Lenzner B**, Moser, D, GloNAF core team, Capinha C, Cassey, P, Economo E, García-Díaz P, Guénard B, Maurel, N, Seebens H, Stein, A, Essl, F (January 2019) Remoteness promotes biological invasions on islands worldwide, *9th Biennial Conference of the International Biogeography Society, Málaga, Spain (Oral presentation)*
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- **Lenzner B**, Leclère D, Franklin O, Seebens H, Roura-Pascual N, Obersteiner M, Dullinger S, Essl F (January 2019) A framework for global 21st century scenarios and models of biological invasions, *9th Biennial Conference of the International Biogeography Society, Málaga, Spain (Poster)*
- **Lenzner B**, Leclère D, Franklin O, Seebens H, Roura-Pascual N, Obersteiner M, Dullinger S, Essl F (September 2018) A framework for global 21st century scenarios and models of biological invasions, *48th Annual Meeting of the Ecological Society of Germany, Austria and Switzerland, Vienna, Austria (Oral presentation)*
- **Lenzner B**, Leclère D, Franklin O, Seebens H, Roura-Pascual N, Obersteiner M, Dullinger S, Essl F (September 2018) A framework for global 21st century scenarios and models of biological invasions, *Neobiota Conference, Dun Laoghaire, Dublin, Ireland (Poster)*
- **Lenzner B**, Moser, D, GloNAF core team, Capinha C, Cassey, P, Economo E, García-Díaz P, Guénard B, Maurel, N, Seebens H, Stein, A, Essl, F (September 2016) Isolation drives alien species establishment on islands, *Neobiota Conference, Vianden, Luxembourg, (Poster)*
- **Lenzner B**, Essl F, GloNAF core team, Capinha C, Guénard B, Economo E, Seebens H, Moser D (July 2016) What is the role of vacant niches for alien species establishment on isolated islands? *Island Biology Conference, Angra do Heroísmo, Terceira, Azores, (Oral presentation)*
- **Lenzner B**, Mang T, Dullinger S, Moser D, Dawson W, Kreft H, Pergl J, Pyšek P, van Kleunen M, Winter M, Weigelt P, Weber E, Seebens H, Essl F (May 2016) Spread it to the world! The global drivers of plant invasions, *Special Meeting on the Biogeography of Ecology of the International Biogeography Society, Beijing, China (Oral presentation)*
- **Lenzner B**, Steinbauer MJ, Schweiger AH, Beierkuhnlein C (February 2016) Ecological implications of flower color change in fertilized and unfertilized grassland over the past 150 years, *9th Annual Meeting of the Specialist Group on Macroecology of the Gesellschaft für Ökologie, Trier, Germany (Oral presentation)*
- **Lenzner B**, Dawson W, Dullinger S, Essl F, Kreft H, Moser D, Pergl J, Pyšek P, Seebens H, van Kleunen M, Weigelt P, Winter M (August 2015)
- A global assessment of the patterns and drivers for plant naturalizations *45th Annual Meeting of the Ecological Society of Germany, Austria and Switzerland (Poster)*
- **Lenzner B**, Steinbauer MJ, Weigelt P, Kreft H, Beierkuhnlein C (January 2015) The general dynamic model of island biogeography revisited on the level of major plant families *International Biogeography Society 7th Biennial Conference, Bayreuth, Germany (Poster)*
- **Lenzner B**, Tsikliras A, Triantis KA (September 2013) Species-area-relationships in seamounts *11th FishBase Symposium, Thessaloniki, Greece (Oral presentation)*

- **Lenzner B**, Steinbauer MJ, Beierkuhnlein C (March 2013) Plant differentiation on oceanic archipelagos in dependence of island age *7th Annual Meeting of the Specialist Group on Macroecology of the Gesellschaft für Ökologie, Göttingen, Germany (Oral presentation)*
- **Lenzner B**, Steinbauer MJ, Beierkuhnlein C (September 2013) Plant differentiation on oceanic archipelagos in dependence of island age *42nd Annual Meeting on the Ecological Society of Germany, Austria and Switzerland, Lüneburg, Germany (Poster)*