

Martha Kandziora

Work and Research Experience

- since 10/2017 **Postdoctoral Fellow**, *Life and Environmental Sciences, University of California, Merced.*
Development of a software tool to automatically update phylogenies; script development for reproducible science
- 11/2015 – 03/2016 **Research Volunteer**, Mainz/Germany.
Finishing of dissertation related work (preparation and submission of publications, identification and labeling of herbarium material), collaborative *Erica* research project; development of computational skills; fellowship application
- 02/2013 – 10/2015 **Research Assistant**, *Institute of 'Spezielle Botanik und Botanischer Garten'¹, Johannes Gutenberg-Universität, Mainz/Germany.*
Doctoral student in the DFG-project of Dr. B. Gehrke 'Origins of the African high mountain flora: the role of past climates on establishment and diversification'
- 05/2009 – 08/2009 **Student Assistant**, *Julius Kühn-Institut, Darmstadt/Germany.*
Plant pathogen research on barley, supervised by Dr. Andreas Leclercque
- 07/2008 – 11/2008 **Student Assistant**, *Institute of Ecology, Technische Universität Darmstadt, Darmstadt/Germany.*
Food-network experiments, supervised by Gregor Kalinkat

Education

- 02/2013 – 12/2015 **Dr. rer. nat.**, *Institute of 'Spezielle Botanik und Botanischer Garten'¹, Johannes Gutenberg-Universität, Mainz/Germany, 'magna cum laude'.*
Evolution and historical biogeography of *Senecio* (Asteraceae) with focus on the Old World
- 10/2009 – 11/2012 **Diplom - Biology**, *Johannes Gutenberg-Universität, Mainz/Germany, 'very good'.*
Evolution of dwarf shrubs in *Alchemilla* (Rosaceae) of sub-Saharan Africa
- 10/2006 – 10/2009 **Pre-Diplom Biology**, *Technische Universität Darmstadt, Darmstadt/Germany, 'good'.*

Teaching/Mentoring Experience

- 2019 **Guest lecturer - Evolution at the undergraduate level**, *Species and Speciation*, own syllabus, UC Merced.
- 2018 **Mentor of Women in STEM fields**, *2 Graduate Student Mentees*, UC Merced.
- 2018 **Guest lecturer - Evolution at the undergraduate level**, *Species and Speciation*, own syllabus, UC Merced.
- 2018 **Teaching Assistant**, *Data Carpentry - Introduction to bash, R and git*, 2 days. UC Merced
- 2018 **Supervisor of undergraduate researchers**, *2 semester*, UC Merced.

- 2017 **Guest lecturer - Phylogenetics at the undergraduate level**, *Introduction into Biogeography*, own syllabus, UC Merced.
- 2013 – 2015 **Research Assistant - Introduction to laboratory work and phylogenetic methods**, *undergraduate and graduate students*, multiple times, JGU Mainz.
- 2014 **Co-supervisor of undergraduate dissertation project**, *1 semester*, JGU Mainz.
- 2013 **Teaching Assistant**, *plant identification course*, 1 semester, JGU Mainz.

Scientific Tools

- Laboratory skills DNA extraction, PCR, purification methods, gel electrophoresis, sequencing, DNA quantification
- Methods development of phylogenetic pipelines, phylogenetic, biogeographic and ancestral trait reconstructions, molecular dating, diversification rate analyses (state-dependent diversification, diversification rate shifts), climate niche reconstruction and corresponding statistics, microscopy, plant taxonomy, measurement of photosynthetic rates
- Programming/
computing skills bash, git/github, large research cluster usage, Linux OS, Python, R, travis
- Software Adobe Illustrator, GIMP, Inkscape, L^AT_EX , LibreOffice, Microsoft Office, QGIS

Field/Herbarium Visits

- 2019 **South Africa, Western Cape**, *Field trip*, *Erica* collection trip, 14 days.
- 2015 **Uganda, Rwenzori Mountains**, *Field trip*, Tropical alpine ecosystem, 7 days.
- 2014 **United Kingdom, Kew - Royal Botanic Garden**, *Herbarium visit*, Plant identification and study of African *Senecio*, 4 days.
- 2014 **South Africa, Bolus Herbarium - University of Cape Town**, *Herbarium visit*, Plant identification and study of African *Senecio*, 2 days.
- 2014 **South Africa, Compton Herbarium**, *Herbarium visit*, Plant identification and study of African *Senecio*, 2 days.
- 2014 **South Africa, Knersvlakte**, *Field trip*, *Anacampseros* collection trip, 3 days.
- 2014 **South Africa, Jonkershoek**, *Field trip*, Introduction to Mediterranean type ecosystems, 1 day.
- 2013 **United Kingdom, Royal Botanic Garden Edinburgh**, *Herbarium visit*, Plant identification and study of African *Senecio*, 5 days.
- 2010 **Spain, Teneriffe**, *Field trip*, Introduction to island biogeography and plant evolution, 10 days.
- 2006-2010 **Germany**, *Field trip*, Introduction to the German Flora, several single day trips.

Extracurricular Training

- 09/2018 **Hackathon for Phylogenetic Comparative Methods**, *ARBOR*, Cornell University, Ithaca, New York, USA, 4 days.
How to build and host Arbor instances, making phylogenetic comparative methods available for non-programmers

- 05/2018 **Advances in Spatial Analysis of Multivariate Ecological Data: Theory and Practice**, *PrStatistics*, Orford, Canada, 5 days.
Introduction to data analysis, multiple linear regression, statistical testing by permutation, origin of spatial structures, spatial modeling
- 12/2017 **Computable Evolutionary Phenotype Knowledge Workshop**, *Phenoscape Knowledgebase*, Durham, North Carolina, USA, 4 days.
Connecting the database with iDigBio and developing a shiny app to display the distribution of species traits on a map
- 10/2015 **Introduction to Bioinformatics for Biosystematics**, *ForBio*, Oslo, Norway, 7 days.
Python, SQL and R for systematic research questions
- 10/2014 **Species Tree Phylogenetics**, *ForBio*, Kristineberg, Sweden, 5 days.
Species coalescent theories and assumptions; final report about paralogy assessment
- 05/2014 **Computational Molecular Evolution**, *EMBO*, Heraklion, Greece, 10 days.
Theories of dataset assembly, hypothesis testing in phylogenies and coalescent model

Grants

- 2017 **Travel Fund**, *Phenoscape Knowledgebase*, Phenoscape Project Durham USA, Travel fund for workshop attendance: Phenoscape, USA; 1200\$.
- 2015 **'Förderung im Rahmen der Gleichstellung'**, *Johannes Gutenberg-Universität*, Mainz/Germany, Grant for workshop attendance: ForBio, Norway; 200€.
- 2013 **'Förderung von aktiven Tagungsreisen im Rahmen des Speziellen Promotionskollegs'**, *Johannes Gutenberg-Universität*, Mainz/Germany, Grant for conference attendance, AETFAT, South Africa; 800€.

Outreach/ University Services

- 11/2018 – today **R Support Group**, *Founder of an open space for collaborative learning to program using the R language*, Group consists of postdocs and graduate students, UC Merced.
- 10/2018 – today **Postdoc Advisory Council Member**, UC Merced.
- 09/2018 **Scientist at a Science Fair in Primary School**, *Merced*.
- 05/2018 – today **Recording Secretary of the University of California Postdoc Union in Merced**, <http://uaw5810.org/about-your-union/contact-your-union/>.
- 03/2017 **Plants next to the road: a floristic adventure**, *Interactive website*, <https://blubbundbla.github.io/plantmap/>.
- 2015 – today **Ad-hoc reviewer**, *Taxon, Molecular Phylogenetics and Evolution, American Journal of Botany, PCI Evol Biol*.

Languages

- German native
- English European language grade: C1/C2
- Spanish European language grade: A2
- French European language grade: A1

Voluntary Activities

- 08/2016 – 06/2017 **Cycling in South America**, Cycled ca. 8000 km, independently and self-supported. Learning Spanish; <https://blubbundbla.github.io/plantmap/>.
- 05/2010 – 12/2012 **Archive for African Music**, *Johannes Gutenberg-Universität*, Mainz/Germany, Volunteer; supervised by Dr. Hauke Dorsch. Design and organization of exhibitions and music concert.
- 11/2008 – 12/2008 **Nature Palace Foundation**, Luwule/Jandira, Uganda, Internship with a NGO that maintains a botanic garden. Conducting interviews with locals who use traditional plant medicines; identification of plants.

¹The institute 'Spezielle Botanik und Botanischer Garten' is today part of the 'Institut für Organismische und Molekulare Evolutionsbiologie', the lab is now called 'Evolution der Pflanzen/Diversität der Blütenpflanzen'