Martha Kandziora

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⌂ *blubbundbla.github.io/plantastic*

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 to easily link species and geographic information

11/2015 – 03/2016   **Research Volunteer**, Mainz/Germany.
Analyzes for a collaborative research project about *Erica*; development of computational skills; preparation and submission of publications, identification and labeling of herbarium material; 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 Leclerque

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   **Preliminary-Diplom Biology**, *Technische Universität Darmstadt*, Darmstadt/Germany, *'good'*.

1996 – 2005   **Abitur**, *Kooperative Gesamtschule Schwanewede*, Schwanewede/Germany, *'2.8'*.

Teaching/Mentoring Experience

2018   **Supervising of an undergraduate summer researcher**, *1 semester*.

2018   **Supervising of undergraduate researchers**, *1 semester*.

2017   **Teaching evolution at the undergraduate level**, *1 lecture*.

2013-2015   **Introduction to laboratory work and phylogenetic methods for students at undergraduate and graduate level**, *multiple times*.

2014   **Co-supervision of undergraduate dissertation project**, *1 semester*.

2013 **Teaching assistant during plant identification course**, *1 semester*.

Grants

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€.

Extracurricular Training

forthcoming: **Hackathon for Phylogenetic Comparative Methods**, *ARBOR*, Cornell University, Ithaca, New York, USA, 4 days.
09/2018 How to build and host Arbor instances, implement new workflows combining methods for data manipulation, analysis, and visualization

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

Field/Herbarium Visits

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.

Scientific Tools

Laboratory skills	DNA extraction, PCR, purification methods, gel electrophoresis, sequencing, DNA quantification
Methods	development of phylogenetic pipelines, phylogenetic and biogeographic reconstruction, ancestral trait reconstructions, molecular dating, phylogenetic comparative analysis, climate niche reconstruction and corresponding statistics, microscopy, plant taxonomy, measurement of photosynthetic rates
Computer programs	Alignment tools (Modeltest, PartitionFinder, SeqState), Ancestral character reconstruction (BayesTraits, Mesquite), Biogeographic reconstruction (BioGeoBears, Lagrange, DIVA), Molecular clock (BEAST, RelTime), diversification rate methods (BAMM, diversitree, MEDUSA), Geographic information systems (DIVA-GIS, QGIS), Phylogenetic inference (BEAST, MrBayes, PAUP, RAxML), various related R packages to the above mentioned methods
Programming	Python, R, SQL, JavaScript, Object-Oriented-Programming
Other computer skills	Adobe Illustrator, GIMP, Inkscape, LaTeX , large research cluster usage, LibreOffice, Microsoft Office, various Linux- and Windows-distributions

Ad-hoc Reviewer

○ Taxon
○ Molecular Phylogenetics and Evolution
○ American Journal of Botany

Languages

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

Voluntary Activities

05/2018 – today	**Recording Secretary of the University of California Union in Merced**, http://uaw5810.org/about-your-union/contact-your-union/.
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.
07/2005 – 11/2005	**BERUDEP**, Belo, Cameroon, Internship with a NGO that runs different projects to eradicate poverty. Organizing meetings and workshops as part of their conservation and agriculture projects.

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[1]The 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'