

PD Dr. Mark-Oliver Rödel

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Science Program: Diversity Dynamics

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Tasks

Curator of Herpetology
Ombudsman
Acting Spokesperson of Science Program "Diversity Dynamics"
Lecturer (Privatdozent) at the Humboldt University

Research interests

I am particularly interested in what factors shape animal communities (in space and time), how and why species interact in particular ways and if and how natural and anthropogenic environmental changes influences species and species communities. Our research thus aims at integrating research questions from systematic zoology (phylogeny), biogeography, community/functional ecology and conservation biology.

Our methods range from traditional approaches to modern modelling and molecular techniques and from field work to laboratory experiments. Our model organisms are predominantly amphibians, the geographic focus is on Africa and Europe. In order to base our analyses on a sound taxonomy, we close respective gaps by own faunistic and taxonomic research.

Education

- 1987 – 1993 Studying biology (diplom) at the University of Tübingen (systematic zoology, botany, parasitology, palaeontology)
- 1995 – 1998 Dissertation (Dr. rer. nat.) at the Department of Animal Ecology and Tropical Biology at the University of Würzburg
- 2006 Habilitation (Zoology) at the University of Würzburg
- 2008 Habilitation (Zoology) at the Humboldt University Berlin

Professional appointments

- 1998 – 1999 Post-Doc at the University of Würzburg
- 2000 – 2005 Project coordinator of West African amphibian projects (BIOTA W08) at the University of Mainz
- 2005 – 2006 Assistant professor at the Department of Animal Ecology and Tropical Biology at the University of Würzburg (until June 2006)
- 2006 – 2007 W2-Professor at the Department of Animal Ecology and Tropical Biology at the University of Würzburg (until September 2007)
- 2007 – Curator of herpetology at the Museum für Naturkunde Berlin

Five most relevant publications

Ernst R, Linsenmair KE, **Rödel MO** (2006): Diversity erosion beyond the species level: Dramatic loss of functional diversity after selective logging in two tropical amphibian communities. *Biological Conservation* 133: 143-155.

- Hirschfeld, M, **Rödel MO** (2011): Variable reproductive strategies of an African savanna frog, *Phrynomantis microps* (Amphibia, Anura, Microhylidae). *Journal of Tropical Ecology* 27: 601-609.
- Penner J, Wegmann M, Hillers A, Schmidt M, **Rödel MO** (2011): A hotspot revisited – a biogeographical analysis of West African amphibians. *Diversity and Distributions* 17: 1077-1088.
- Rödel MO** (2000): Herpetofauna of West Africa, Vol. I: Amphibians of the West African savanna. Edition Chimaira, Frankfurt/M., 335 pp.
- Rudolf VHW, **Rödel MO** (2007): Phenotypic plasticity and optimal timing of metamorphosis under uncertain time constraints. *Evolutionary Ecology* 21: 121-142.

Three relevant projects from the last three years (2009 – 2011)

- “Amphibians of Mount Nimba, Guinea – ecology, population genetic, conservation” (SMFG, May 2007 - December 2012)
- “Biodiversity loss and fragmentation – matrix effects and ecosystem consequences using a hyperdiverse Malagasy amphibian assemblage as an example” (DFG Projekt GL 665/1-1 & RO 3064/2-1; February 2010-January 2012) in co-operation with Dr. J. Glos, (Hamburg University)
- „Adaptive capacity of selected species to global climatic change“; funded by Bundesamt für Naturschutz (BfN; Oktober 2011-2013) in co-operation with Prof. G. Kerth, Prof. K. Fischer (Uni. Greifswald), Prof. E. Obermaier (Uni. Würzburg), Prof. N. Blüthgen (Uni. Darmstadt).

Teaching & Education

- Master module (lecture, seminar, course) „Evolution of Biodiversity“ within Master program „Organismic Biology“ (since WS 2008/2009 at the Humboldt University)

Professional Roles:

Membership Associations, Advisory Board, Editorial Board etc.

IUCN/SSC Amphibian Specialist Working Group Chair for West / Central Africa (since 2007), Editor *Journal of Zoology* (since 2010; Editorial Board 2007-2010), Editorial Board of *African Journal of Herpetology* (since 2005), scientific advisor: Conservation International (TEAM, RAP and amphibian programs), Global Amphibian and Reptile Assessment programs.

Reviewer for Journals: *Journal of Herpetology*, *Amphibia-Reptilia*, *Biological Journal of the Linnean Society*, *Canadian Journal of Zoology*, *Contribution to Zoology*, *Copeia*, *Ecotropica*, *European Journal of Taxonomy*, *Herpetologica*, *Herpetological Journal*, *Herpetozoa*, *Journal of Herpetology*, *Journal of Natural History*, *Journal of Tropical Ecology*, *Journal of Zoology*, *Oecologia*, *Oryx*, *PlosOne*, *Proceedings of the California Academy of Sciences*, *Revue Suisse de Zoologie*, *Science*, *Zoosystematics and Evolution*, *Zootaxa*.

Reviewer for Funding Bodies: Alexander von Humboldt-Stiftung, Deutscher Akademischer Austausch Dienst, Deutsche Forschungsgemeinschaft, Deutsche Wildtier Stiftung, Evangelisches Studienwerk e.V., International Foundation for Science.

Memberships: American Society for the Study of Amphibians & Reptiles, American Society of Ichthyologists & Herpetologists, Association for Tropical Biology & Conservation, Deutsche Gesellschaft für Herpetologie und Terrarienkunde; Gesellschaft für Tropenökologie, Herpetologist's League, International Society for the Study and Conservation of Amphibians; Österreichische Gesellschaft für Herpetologie; *Societas Herpetologica Europaea*.

Awards

- PhD scholarship from DAAD (1995-1996)
- Post-Doc scholarship from DAAD (1999-2000)
- „R.J.H. Hintelmann Scientific Price for Systematic Zoology“, awarded by the “Friends of the Zoological States Collection Munich ” (January 2000)