

CURRICULUM VITAE

PERSONAL INFORMATION

Andreas Härer, PhD

Division of Biological Sciences | Ecology, Behavior & Evolution Section

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ACADEMIC APPOINTMENTS

02/2020 – present **Postdoctoral researcher** at University of California San Diego

Host: Prof. Dr. Diana Rennison

10/2018 – 09/2019 **Postdoctoral researcher** at the University of Konstanz, Germany

Host: Prof. Dr. Axel Meyer

EDUCATION

2014 – 2018 **Graduate student** at the University of Konstanz, Germany

Project: *Of eyes and gut microbiomes in Nicaraguan cichlid fishes – convergent diversification at different levels of biological organization*

Final grade: *magna cum laude*

Laboratory for Zoology and Evolutionary Biology

Supervisor: Prof. Dr. Axel Meyer

2010 – 2013 **Master of Science** in Biological Sciences at the University of Konstanz, Germany

Master's degree received in June 2013, Final grade: A

Thesis: *Molecular genetics of morphological color change in Nicaraguan Midas cichlids*

Laboratory for Zoology and Evolutionary Biology

Supervisor: Prof. Dr. Axel Meyer

2007 – 2010 **Bachelor of Science** in Biology at the Karlsruhe Institute of Technology (KIT), Germany

Bachelor's degree received in June 2010, Final grade: A

Thesis: *Characterization of a His-tagged Wnt Protein*

Institute for Cell and Developmental Biology

Supervisor: Prof. Dr. Doris Wedlich

TEACHING EXPERIENCE

- 2018 – 2019** Lecture “Environmental Genomics” given during the “Advanced Methods in Genetics and Genomics” seminar at the University of Konstanz (organized by Dr. Paolo Franchini)
- 2016 – 2017** Lecture “Conservation Genetics” given during the Advanced Course “Molecular Evolutionary Biology” at the University of Konstanz (organized by Prof. Dr. Axel Meyer)
- 2012 – 2015** Teaching assistant for Evolutionary Biology lectures for undergraduate students at the University of Konstanz (organized by Prof. Dr. Axel Meyer)

PRACTICAL EXPERIENCE

- 2014 – 2018** Independent organization and realization of three field trips (three - six weeks each) to Nicaragua within the scope of my Dissertation
- 07/2013 – 01/2014** **Research assistant** at the University of Konstanz including a one-month field trip to Nicaragua in October 2013
Laboratory for Zoology and Evolutionary Biology
Supervisor: Prof. Dr. Axel Meyer
- 09/2011 – 03/2012** **Research intern** at the Institute of Molecular and Cell Biology in Singapore
Project: *The role of Wip1 in gene transcription and ageing processes*
Supervisor: Dr. Dmitry Bulavin
Internship funded by the Singapore International Pre-Graduate Award (SIPGA) of the agency for science, technology and research Singapore (A*STAR)

SUPERVISION

Master students

- **Anne van Humbeeck, Femina Prabhukumar and Nils Fabian Strumpfen**, Advanced Course “Molecular Evolutionary Biology” 2019 (Co-Supervision with Dr. Darrin Hulsey, & Dr. Julian Torres-Dowdall)
- **Benedikt Speisser**, Advanced Course “Molecular Evolutionary Biology” 2018 (Co-Supervision with Dr. Darrin Hulsey, Dr. Melisa Olave & Dr. Julian Torres-Dowdall)
- **Nidal Karagic**, Advanced Course “Molecular Evolutionary Biology” 2016 and master's thesis 2017 – 2018 (Co-Supervision with Dr. Julian Torres-Dowdall)
- **Marvin Kaupp**, Advanced Course “Molecular Evolutionary Biology” 2015 (Co-Supervision with Dr. Julian Torres-Dowdall)

FURTHER EDUCATION

- **UCLA/LaKretz Conservation Genomics Workshop**, Los Angeles, CA, 2014
- **Evolutionary Biology Workshop in the Alps**, Riederalp, Switzerland, 2015
- **Animal Handling Course**, Animal Research Facility, Konstanz, Germany, 2015
- **Programming for Evolutionary Biology**, Freie Universität Berlin, Germany, 2019

GRANTS, FELLOWSHIPS AND AWARDS

- Singapore International Pre-Graduate Award (SIPGA) of the agency for science, technology and research Singapore (A*STAR), 2011 (9,000 S\$)
- Research project prize from the foundation "Umwelt und Wohnen an der Universität Konstanz" for research expedition to Nicaragua, 2014 (5,000 €)
- Best Talk at the 23rd DZG Evol Graduate Meeting, Freiburg, Germany, March 2018

SOCIETY MEMBERSHIPS

- European Society for Evolutionary Biology (ESEB)
- German Zoological Society (DZG)
- Society for Conservation Biology (SCB)
- Society for the Study of Evolution (SSE)

PROFESSIONAL SERVICES

- **Reviewer** for international scientific journals: Molecular Ecology, Evolution, Biological Conservation, Aquaculture Research
- **Steward** for the Postdoc Union at University of California (UAW Local 5810)

PUBLIC OUTREACH

Exhibition at the 5th "Lange Nacht der Wissenschaft Konstanz" (Konstanz Science Night): Sehen alle Tiere die Welt wie wir? Ein Blick durch das Auge eines Buntbarsches (Do all animals see the world like we do? A look through the eye of a cichlid fish). Co-Organization with Dr. Julián Torres-Dowdall & MSc Nidal Karagic

INVITED SEMINARS

- Department of Biosciences, University of Salzburg, Austria 2019
- Department of Biology, Colorado State University, USA 2019

CONFERENCE PRESENTATIONS

Talks

- **4th Cichlid Science Meeting**, Graz, Austria, September 2015. Härer A, Torres-Dowdall J, Kaupp M and Meyer A: Phenotypic plasticity in Midas cichlid opsin expression
- **Evolution Meeting**, Austin, TX, June 2016. Härer A, Torres-Dowdall J, Kaupp M and Meyer A: Phenotypic plasticity in Midas cichlid opsin expression
- **2nd Annual Meeting in Conservation Genetics**, Göttingen, Germany, October 2016. Härer A, Torres-Dowdall J and Meyer A: The Nicaragua Canal – a threat to freshwater biodiversity
- **23rd DZG Evol Graduate Meeting**, Freiburg, Germany, March 2018. Härer A, Karagic N, Torres-Dowdall J and Meyer A: The visual system of Neotropical cichlid fishes: a case study for adaptive evolution after colonization of novel light environments
- **2nd Joint Congress on Evolutionary Biology**, Montpellier, France, August 2018. Härer A, Torres-Dowdall J, Rometsch S, Yohannes E, Machado-Schiaffino G and Meyer A: The young adaptive radiation of Nicaraguan Midas cichlid fishes: which factors shape the gut microbiota during ecological divergence?

Poster presentations

- **14th European Society for Evolutionary Biology Meeting**, Lisbon, Portugal, August 2013. Härer A, Henning F and Meyer A: Genomic instability in the locus responsible for a conspicuous polychromatism in Nicaraguan Midas Cichlid fish
- **Evolution Meeting**, Austin, TX, June 2016. Härer A, Torres-Dowdall J and Meyer A: The imperiled fish fauna in the Nicaragua Canal zone
- **16th European Society for Evolutionary Biology Meeting**, Groningen, Netherlands, August 2017. Härer A, Torres-Dowdall J and Meyer A: Evolution of the visual system in Neotropical cichlids: how to adapt to novel light environments

PUBLICATIONS

Publications in peer-reviewed scientific journals

9. [Härer A](#), Torres-Dowdall J, Rometsch SJ, Yohannes E, Machado-Schiaffino G and Meyer A (in press). Parallel and non-parallel changes of the gut microbiota during trophic diversification in repeated young adaptive radiations of sympatric cichlid fish. *Microbiome*.
8. Kautt A, Kratochwil CF, Nater A, Machado-Schiaffino G, Olave M, Henning F, Torres-Dowdall J, [Härer A](#), Hulseley CD, Franchini, Pippel M, Myers EW and Meyer A (in press): Contrasting signatures of genomic divergence during sympatric speciation. *Nature*.
7. [Härer A](#), Karagic N, Meyer A and Torres-Dowdall J (2019): Reverting ontogeny: rapid phenotypic plasticity of colour vision in cichlid fish. *Royal Society Open Science* 6: 190841.
6. [Härer A](#), Meyer A and Torres-Dowdall J (2018): Convergent phenotypic evolution of the visual system via different molecular routes: how Neotropical cichlid fishes adapt to novel light environments. *Evolution Letters* 2(4): 341-354.
5. Karagic N, [Härer A](#), Meyer A and Torres-Dowdall J (2018): Heterochronic opsin expression due to early light deprivation results in drastically shifted visual sensitivity in a cichlid fish: Possible role of thyroid hormone signaling. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution* 330: 202-214.
4. [Härer A](#), Torres-Dowdall J and Meyer A (2017): Rapid adaptation to a novel light environment: The importance of ontogeny and phenotypic plasticity in shaping the visual system of Nicaraguan Midas cichlid fish (*Amphilophus citrinellus* spp.). *Molecular Ecology*, 26(20): 5582-5593.
3. Torres-Dowdall J, Pierotti MER, [Härer A](#), Karagic N, Woltering J, Henning F, Elmer KR and Meyer A (2017): Using the whole toolbox: multiple molecular mechanisms are involved in the parallel rapid adaptive evolution of the visual system of Neotropical Midas cichlid fish. *Molecular Biology and Evolution* 34(10): 2469-2485.
2. [Härer A](#), Torres-Dowdall J and Meyer A (2017): The imperiled fish fauna in the Nicaragua Canal zone. *Conservation Biology* 31: 86-95.
1. Huete-Pérez JA, Ortega-Hegg M, Urquhart GR, [and 21 others, including [Härer A](#)] (2016). Critical uncertainties and gaps in the environmental and social impact assessment of the proposed transoceanic canal through Nicaragua. *BioScience* 66: 632-645.

Short communications

1. Verheyen E, [and 69 others, including [Härer A](#)] (2016). Oil extraction imperils Africa's Great Lakes. *Science* 354: 561-562.

Preprints

1. Härer A, Bolnick DI and Rennison DJ (2020). The genomic signature of trophic divergence along the benthic-limnetic axis in allopatric and sympatric threespine stickleback. Preprint at *Authorea*. DOI: 10.22541/au.159542492.27700680/v2