



Franz-Sebastian Krah

Curriculum Vitæ

Education

- 2015–present **PhD Biology**, Technical University of Munich (TUM), Ecology and Evolution of mushroom-forming fungi.
Supervision: Prof. Dr. Hanno Schäfer & Dr. Claus Bässler;
Funding: PhD scholarship by the Rudolf und Helene Glaser-Stiftung (50.000 EUR, T083/26495/2015/kg) and Zempelin Stiftung (7.000 EUR, T214/32357/2018/sm)
- 2013–2015 **Masters of Science - Biology**, Technical University of Munich (TUM), passed with high distinction.
Thesis: Pattern of host associations and dynamics of substrate switching in wood decay fungi using phylogenetic comparative methods and a mega-phylogeny of the Basidiomycota;
Supervision: Prof. Dr. David Hibbett & Prof. Dr. Hanno Schäfer
- 2010–2013 **Bachelor of Science - Forest Science and Resource Management**, Technical University of Munich (TUM), passed with merit.
Thesis: Forest fungal α and β -diversity: environmental factors and functional role of saprotrophic and ectomycorrhizal fungi in an unmanaged mature *Picea abies* stand
- 2008–2010 **Magister - Philosophy**, Ludwig-Maximilians-Universität (LMU), Munich, Majors: Analytical philosophy and Philosophy of language.
Midterm exam passed with high distinction

Experience

- June – Oct., 2013 **Freelancer**, Bavarian Forest National Park, Grafenau.
- 2013 Project BIOHOLZ, Fungal species identification based on macro- and micromorphology.
- Nov., 2010 – March, 2013 **Student Assistant**, Technical University of Munich (TUM), Chair for Ecophysiology of Plants.
e.g., teaching plant identification, various field work
- March, 2015 **Teaching assistant**, Technical University of Munich (TUM), RG Biodiversity of Plants.
Introduction to bryophyte ecology and evolution.

Awards

- Sept. 2016 1st prize in poster session, 23rd Symposium on 'Biodiversity and Evolutionary Biology' of the German Botanical Society in Munich

Computer skills

- Basic Linux, SQL
- Intermediate L^AT_EX, GitHub, Rcpp
- Advanced R programming, Inkscape, AffinityDesigner, Microsoft Office, Geneious, MAFFT, RAxML, BEAST, data mining, statistics and phylogenetic comparative methods (PCM) in R
- Software QFranzKrah, e.g., rUSDA, rMyCoPortal

Conferences - Seminars - Presentations

- March. 2019 Invited **Talk** at the Ecological and Socio-Economic. Challenges and Opportunities of Climate Change in Rural Southern Europe. Workshop 14th – 16th Feb 2019, link
- Dec. 2018 Invited **Talk** at the Julius-Maximilians Universität Würzburg. Invited by Peter. H. Biedermann (Department of Animal Ecology and Tropical Biology)
- Sept. 2018 **Talk** at the 48th Annual Meeting of the Ecological Society of Germany, Austria and Switzerland. Gesellschaft für Ökologie
- Nov. 2017 **Talk** at the Bayerische Akademie für Naturschutz und Landschaftspflege, Hochschule Weihenstephan-Triesdorf.
- Oct. 2017 **Talk** at the PhD-colloquium in Ecology. Technical University of Munich
- July 2017 Invited **talk** at the Yale University about color in fungal fruit bodies (Invited by Michael Donoghue). New Haven, (Connecticut), USA.
- June 2017 **Talk** at the Evolution meetings conference. Portland (Oregon), USA.
- Sept. 2016 **Poster** at the 23rd Symposium on 'Biodiversity and Evolutionary Biology' of the German Botanical Society. Munich.
- Sept. 2016 **Talk** at the Conference of the Deutsche Gesellschaft für Mykologie (DGfM) in Bernried
- May 2016 EMBO Practical **Course** on Computational Molecular Evolution on Crete and poster presentation
- Jan. 2016 **Seminar:** Improving your Intercultural Skill Set. Frauenchiemsee. Germany
- Dec. 2015 **Seminar:** Towards Sustainable Development in Harmony With Nature in "Crocker Range Biosphere Reserve (CRBR)". Kota Kinabalu, Sabah

Research Visits

- Nov. – Dec., 2015 Institute for Tropical Biology and Conservation (ITBC), University Malaysia Sabah.
Dr. Jaya Seelan Sathiya Seelan
- Feb. – May, 2015 Clark University, Massachusetts (USA). Prof. Dr. David Hibbett

March, 2014 Rooiklip Research Station, Namibia, Dr. Thomas Wagner

Languages

- German - Mothertongue
- English - fluent
- French - Basic communication skills
- Bengali - Basic communication skills

Peer-review

- Fungal Ecology
- Web ecology

Biological Conservations

Supervisions

- S. Lenz Research project (6 weeks)
E. Koc Research project (6 weeks)
B. Ludl Research project and B.Sc. thesis (6 months)
T. Endriß M.Sc. thesis (6 months)
L. Schmid Research project (6 months)
A. Zarvoc PhD student, Aerial fungal diversity
B. Olou PhD student from Benin, Africa (DAAD scholarship, Okt. 2017 - present)

Interests

- Squash, Doggy-walks
- Traveling
- Movies
- Tabla

Publications

Published

- 1 **Franz-S. Krah**, Hanno Schäffer, Christoph Heibl, Claus Bässler, John Soghigian, David Hibbett. Evolutionary dynamics of host specialization in wood-decay fungi. (*BMC Evolutionary Biology*) 2018, 18:119-132
- 2 **Franz-S. Krah**, Sebastian Seibold, Roland Brandl, Petr Baldrian, Jörg Müller, Claus Bässler (2018). Independent effects of host and environment on the diversity of wood-inhabiting fungi. *Journal of Ecology* 2018, 106:1428-1442
- 3 Maria-Barbara Winter, Claus Bässler, Markus Bernhardt-Römermann, **Franz-S. Krah**, Hanno Schäfer, Sebastian Seibold, Jörg Müller. On the structural and species diversity effects of bark beetle disturbance in forests during initial and advanced early-seral stages at different scales. *European Journal of Forest Research* 2017, 136:357-373
- 4 Sebastian Seibold, Jörg Müller, Petr Baldrian, Marc W. Cadotte, M. Štúrová, Peter H. Biedermann, **Franz-S. Krah**, C. Bässler. Fungi associated with beetles dispersing from dead wood – Let's take the beetle bus! *Fungal Ecology* 2018, 39:100-108

- 5 Boris A. Olou, Nourou S. Yorou, Manuel Striegel, Claus Bässler, **Franz-S. Krah**. Effects of macroclimate and resource on the diversity of tropical wood-inhabiting fungi (*Forest Ecology and Management*), 2019, 436:79-87
 - 6 **Franz-S. Krah**, Andrew N. Miller and Scott T. Bates. rMyCoPortal - an R package to interface with the Mycology Collections Portal (*Biodiversity Data Journal*), 2019, 7: e31511
 - 7 Leonie Schmid, Claus Bässler, Hanno Schaefer, **Franz-S. Krah**. A test of camera surveys to study fungus-animal interactions (*Mycoscience*), accepted
- [Under Review](#)
- 8 Jonas Hagge, Claus Bässler, Axel Gruppe, Björn Hoppe, Harald Kellner, **Franz-S. Krah**, Jörg Müller, Sebastian Seibold, Elisa Stengel, Simon Thorn. Wood-inhabiting fungi and bacteria facing tree bark as the outermost shield of dead wood (Major revision in *Molecular Ecology*)
 - 9 Leonardo H. Teixeira, Bruno F. D. Oliveira, **Franz-S. Krah**, Johannes Kollmann, Gislene Ganade. Linking plant traits to soil multiple functions in semi-arid ecosystems (Under review in *Journal of Arid Environments*)
 - 10 Claus Bässler, Jörg Müller, **Franz-S. Krah**, Arthur Reinelt and Hans Halbwachs. On a global scale, the fruit bodies of mushroom assemblages in the temperate zone are the largest. (Under review in *Global Ecology and Biogeography*)
 - 11 **Franz-S. Krah** and Christoph Heibl. GUIDANCE – alignment confidence score computation in R. (Under review in *JOSS*)
 - 12 **Franz-S. Krah**, Lindsie McCabe, Andrew N. Miller, Scott T. Bates, Neil Cobb. rSymbiota – an R interface to Symbiota portals for accessing multi-organismal biodiversity data. (Under review in *Bioinformatics*)