



# Dr. Franz-Sebastian Krah

## Curriculum Vitæ

### Currently

**Postdoc**, *Philipps-Universität Marburg*, Department Biology, Ecology, Group of Prof. Dr. Roland Brandl, Working in the BIOHOLZ project.  
<https://www.bioholz-projekt.de>

### Education

- 2015 – 2019 **PhD Biology**, *Technical University of Munich (TUM)*, passed 'summa cum laude' (with highest distinction).  
Thesis: *Pattern and Processes of Fungal Community Ecology*  
Supervision: Prof. Dr. Hanno Schäfer & Dr. Claus Bässler;  
Funding: PhD scholarship by the "Rudolf und Helene Glaser-Stiftung" (50.000 EUR, TO83/26495/2015/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 S. 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  $\alpha$ - and  $\beta$ -diversity: environmental factors and functional role of saprotrophic and ectomycorrhizal fungi in an unmanaged mature *Picea abies* stand  
Supervision: Prof. Dr. Anton Fischer & Dr. Claus Bässler
- 2008 – 2010 **Magister - Philosophy**, *Ludwigs-Maximilians-Universität (LMU)*, Munich, Majors: Analytical philosophy and Philosophy of language.  
Midterm exam passed with high distinction

### Experience

- 11/2015 – 11/2018 **Research assistant**, *Bavarian Forest National Park*, Department of Conservation and Research, Mycology.

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- 03/2015 **Teaching assistant**, *Technical University of Munich (TUM)*, RG Biodiversity of Plants.  
Introduction to bryophyte ecology and evolution.
- 11/2010 – 03/2013 **Student Assistant**, *Technical University of Munich (TUM)*, Chair for Ecophysiology of Plants.  
e.g., teaching plant identification, various field work
- 06/2013 – 10/2013 **Freelancer**, *Bavarian Forest National Park*, Grafenau.  
Project BIOHOLZ, Fungal species identification based on macro- and micromorphology.
- 2010 – 2012 **Volunteer Fachschaft Forest Science and Resource Management**, *Technical University of Munich*, Freising.
- 01/2009 – 09/2010 **Student Assistant**, *Library Theology-Philosophy*, LMU, Munich.

## Awards

- 09/2016 1<sup>st</sup> prize in poster session, 23rd Symposium on 'Biodiversity and Evolutionary Biology' of the German Botanical Society in Munich

## Computer skills

Biostatistics, Ecostatistics, Phylogenetic comparative methods (PCM), Machine learning, Deep learning

Programming **R**, Python, **Rcpp**

Programs Microsoft Office, AffinityDesigner, Inkscape, Geneious, MAFFT, RAxML, BEAST,  $\LaTeX$ , GitHub, SQL, ...

## Software development

 FranzKrah rUSDA, rMyCoPortal, rSymbiota, rGUIDANCE

## Conferences - Seminars - Presentations

- 03/2019 Invited **Talk** at the Ecological and Socio-Economic. Challenges and Opportunities of Climate Change in Rural Southern Europe. Workshop 14th – 16th Feb 2019, link
- 12/2018 Invited **Talk** at the Julius-Maximilians Universität Würzburg. Invited by Peter. H. Biedermann (Department of Animal Ecology and Tropical Biology)
- 09/2018 **Talk** at the 48th Annual Meeting of the Ecological Society of Germany, Austria and Switzerland. Gesellschaft für Ökologie
- 11/2017 **Talk** at the Bayerische Akademie für Naturschutz und Landschaftspflege, Hochschule Weißenstephan-Triesdorf.
- 10/2017 **Talk** at the PhD-colloquium in Ecology. Technical University of Munich
- 06/2017 Invited **talk** at the Yale University about color in fungal fruit bodies (Invited by Michael Donoghue). New Haven, (Connecticut), USA.
- 06/2017 **Talk** at the Evolution meetings conference. Portland (Oregon), USA.

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- 09/2016 **Poster** at the 23rd Symposium on 'Biodiversity and Evolutionary Biology' of the German Botanical Society. Munich.
- 09/2016 **Talk** at the Conference of the Deutsche Gesellschaft für Mykologie (DGfM) in Bernried
- 05/2016 EMBO Practical **Course** on Computational Molecular Evolution on Crete and poster presentation
- 01/2016 **Seminar**: Improving your Intercultural Skill Set. Frauenchiemsee. Germany
- 12/2015 **Seminar**: Towards Sustainable Development in Harmony With Nature in "Crocker Range Biosphere Reserve (CRBR)". Kota Kinabalu, Sabah

## Research Visits

- 11/2015 – 12/2015 Institute for Tropical Biology and Conservation (ITBC), University Malaysia Sabah. Dr. Jaya Seelan Sathiyaa Seelan
- 02/2015 – 05/2015 Clark University, Massachusetts (USA). Prof. Dr. David Hibbett
- 03/2014 Rooiklip Research Station, Namibia, Dr. Thomas Wagner

## Languages

- o German - Mother tongue
- o English - fluent
- o French - Basic communication skills
- o Bengali - Basic communication skills

## Peer-review for

- o Fungal Ecology
- o Web ecology
- o Biological Conservations
- o Forest Ecology and Management

## 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 in Bavarian Forest National Park
- B. Olou PhD student from Benin, Africa (DAAD scholarship, 2017 - 2019)

## Interests

- Squash, Hiking
- Movies
- Traveling
- Reading

## Publications

- 1 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
- 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 **Franz-S. Krah**, Hanno Schäfer, Christoph Heibl, Claus Bässler, John Soghian, David Hibbett. Evolutionary dynamics of host specialization in wood-decay fungi. *BMC Evolutionary Biology* 2018, 18:119-132
- 4 Sebastian Seibold, Jörg Müller, Petr Baldrian, Marc W. Cadotte, M. Štursová, 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. Online publication 5<sup>th</sup> April 2019 *Mycoscience*
- 8 **Franz-S. Krah** and Christoph Heibl. rGUIDANCE – alignment confidence score computation in R. *Journal of Open Source Software* 2019, 4(36):1350
- 9 **Franz-S. Krah**, Ulf Buntgen, Hanno Schaefer, Carrie Andrew, Lynne Boddy, Jeffrey Diez, Simon Egli, Robert Freckleton, Alan C. Gange, Rune Halvorsen, Einar Heegaard, Antje Heideroth, Christoph Heibl, Jacob Heilmann-Clausen, Klaus Høiland, Ritwika Kar, Håvard Kauserud, Paul M. Kirk, Thomas W. Kuyper, Irmgard Krisai-Greilhuber, Jörg Müller, Jenni Norden, Phillip Papastefanou, Leonie Schmid, Beatrice Senn-Irlet, Claus Bässler. European mushroom assemblages are darker in cold climates. *Nature Communications* 2019, 10(2890)

#### Under Review

- 10 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 (Under review in *Environmental microbiology*)
- 11 Leonardo H. Teixeira, Brunno 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*)

- 12 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. (Major revision for *Global Ecology and Biogeography*)

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## Reference contact details

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- Dr. Claus Bässler  
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