

Robin Grob



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Department of Biology - Faculty of Natural Sciences
Realfagbygget, DU2-188, Gløshaugen
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Research Positions

Postdoctoral Researcher Since 12/2022
Researcher in the Insect Navigation Research Group (el Jundi Lab)
Department of Biology, NTNU, Trondheim

Research Fellow 04/2017-11/2022
Researcher in the Neuroethology Research Group (Rössler Lab)
Chair of Behavioral Physiology & Sociobiology, University of Würzburg

Research Assistant 07/2015-04/2016
Student Research Assistant in the Neuroethology Research Group (Rössler Lab)
Topic: "Learning walks of *Cataglyphis* desert ants"
Institute of Behavioral Physiology & Sociobiology, University of Würzburg

Research Assistant 10/2014-04/2015
Student Research Assistant in the Neuroethology Research Group (Rössler Lab)
Topic: "Learning walks of *Cataglyphis* desert ants"
Institute of Behavioral Physiology & Sociobiology, University of Würzburg

Education

Doctoral Student 04/2017-09/2022
Julius-Maximilians-University of Würzburg, Germany
Doctoral Thesis: "The function of learning-walks of *Cataglyphis* ants: behavioral and neuronal analyzes"
Supervisors: Prof. Dr. Wolfgang Rössler, JMU Würzburg
Prof. Dr. Marie Dacke, Lund University
Prof. Dr. Keram Pfeiffer, JMU Würzburg

"Sensory Ecology" Course 09/2018-10/2018
Lund University, Sweden
Participation in the international course "Sensory Ecology" 2018
Directors: Prof. Dr. Eric Warrant, Lund University
Prof. Dr. Almut Kelber, Lund University
Prof. Dr. Christer Löfsted, Lund University

MBL Course "Neurobiology" 05/2018-07/2018
Marine Biological Laboratory in Woods Hole, USA
Participation in the MBL practical course "Neurobiology" 2018
Topics: Genomics, Electrophysiology, Imaging, and Neuronal Cell Biology
Directors: Prof. Dr. Diana Bautista, UC Berkeley
Prof. Dr. Ellen Pumpkin, Columbia University
Prof. Dr. Mark Hammarlund, Yale University

**FENS-Hertie
Winter School**
12/2017

Universitätszentrum Obergurgel, Austria

Participation in the FENS-Hertie Winter School "Neural control of behaviour - Series 1: Navigation" 2017

Directors: Prof. Dr. Henrik Mouritsen, Oldenburg University
Prof. Dr. Nachum Ulanovsky, Weizmann Institute
Prof. Dr. Eric Warrant, Lund University

**Biology -
Master of
Science**
04/2015-03/2017

Julius-Maximilians-University of Würzburg, Germany

Thesis: "Experience-dependent behavioral changes and neuronal plasticity in visual pathways of *Cataglyphis* desert ants"

Supervisors: Prof. Dr. Wolfgang Rössler, JMU Würzburg
Prof. Dr. Flavio Roces, JMU Würzburg

**Biology -
Bachelor of
Science**
10/2011-02/2015

Julius-Maximilians-University of Würzburg, Germany

Majors: Sociobiology and Behavioral Physiology

Thesis: "Orientierungsläufe der Wüstenameise *Cataglyphis fortis*/Learning Walks of the desert ant *Cataglyphis fortis*"

Supervisor: Prof. Dr. Wolfgang Rössler, JMU Würzburg
Minors: Clinical Neurobiology, Neurobiology

"Abitur"
Until 07/2011

Hochfranken-Gymnasium Naila, Germany

Professional Experience

Field work
06/2022-08/2022

Field work in Schinias National Park, Marathonas, Greece with the desert ants *Cataglyphis nodus*

Topic: "The function of learning-walks of *Cataglyphis* ants: behavioral and neuronal analyzes"

Supervisor: Prof. Dr. Wolfgang Rössler, JMU Würzburg
Cooperation: Dr. Pauline N. Fleischmann, University Oldenburg
Partners: Dr. Christos Georgiadis, University of Athens

Field work
06/2021-08/2021

Field work in Schinias National Park, Marathonas, Greece with the desert ants *Cataglyphis nodus*

Topic: "The function of learning-walks of *Cataglyphis* ants: behavioral and neuronal analyzes"

Supervisor: Prof. Dr. Wolfgang Rössler, JMU Würzburg
Cooperation: Dr. Pauline N. Fleischmann, JMU Würzburg
Partners: Dr. Christos Georgiadis, University of Athens

Field work
05/2019-09/2019

Field work in Strophilia National Park, Kato Archea, Greece, and Schinias National Park, Marathonas, Greece with the desert ants *Cataglyphis nodus*

Topic: "The function of learning-walks of *Cataglyphis* ants: behavioral and neuronal analyzes"

Supervisor: Prof. Dr. Wolfgang Rössler, JMU Würzburg
Cooperation: Dr. Pauline N. Fleischmann, JMU Würzburg
Partners: Dr. Christos Georgiadis, University of Athens
Prof. Dr. Keram Pfeiffer, JMU Würzburg

- Field work**
05/2017-07/2017 **Field work in Schinias National Park, Marathonas, Greece with the desert ants *Cataglyphis nodus***
Topic: "The function of learning-walks of *Cataglyphis* ants: behavioral and neuronal analyzes"
Supervisor: Prof. Dr. Wolfgang Rössler, JMU Würzburg
Cooperation Prof. Dr. Jochen Zeil, ANU Canberra
Partners: Prof. Dr. Rüdiger Wehner, University of Zürich
Dr. Christos Georgiadis, University of Athens
- Field work**
06/2016-09/2016 **Field work in Schinias National Park, Marathonas, Greece with the desert ants *Cataglyphis nodus* and *Cataglyphis aenescens***
Topic: "Experience-dependent behavioral changes and neuronal plasticity in visual pathways of *Cataglyphis* desert ants"
Supervisor: Prof. Dr. Wolfgang Rössler, JMU Würzburg
Cooperation Prof. Dr. Jochen Zeil, ANU Canberra
Partners: Prof. Dr. Rüdiger Wehner, University of Zürich
Prof. Dr. Bernhard Ronacher, HU Berlin
Dr. Christos Georgiadis, University of Athens
- Field Work**
07/2015-09/2015 **Field work in Schinias National Park, Marathonas, Greece with the desert ants *Cataglyphis nodus***
Topic: "High Speed Analyzes of the Learning Walks in *Cataglyphis* Desert Ants"
Supervisor: Prof. Dr. Wolfgang Rössler, JMU Würzburg
Cooperation Prof. Dr. Jochen Zeil, ANU Canberra
Partners: Prof. Dr. Rüdiger Wehner, University of Zürich
Dr. Christos Georgiadis, University of Athens
Prof. Dr. Bernhard Ronacher, HU Berlin
- Field work**
06/2014-08/2014 **Field work in Menzel Chaker, Tunisia with the desert ants *Cataglyphis fortis***
Topic: "Orientierungsläufe der Wüstenameise *Cataglyphis fortis*/Learning Walks of the desert ant *Cataglyphis fortis*"
Supervisor: Prof. Dr. Wolfgang Rössler
Cooperation Prof. Dr. Jochen Zeil, ANU Canberra
Partners: Prof. Dr. Rüdiger Wehner, University of Zürich
Prof. Dr. Bernhard Ronacher, HU Berlin
- Field Work**
02/2014-03/2014 **Practical course at the Institute of Behavioral Physiology & Sociobiology: Field work at the Research Station "La Gamba", La Gamba, Costa Rica**
Topic: "Diplopoden - Zur chemischen Ökologie von Wehrsekreten/Diplopods – Chemical Ecology of Defensive Secretion"
Supervisors: PD Dr. Johannes Spaethe, JMU Würzburg
Dr. Dieter Mahsberg, JMU, Würzburg
Cooperation
Partner: Dr. Werner Huber, University of Vienna

Field Work
07/2013-08/2013

Student research assistant: Field Work in Menzel Chaker, Tunisia with the desert ants *Cataglyphis fortis*
Institute of Behavioral Physiology & Sociobiology, University of Würzburg
Topic: "How does the desert ant *Cataglyphis fortis* acquire its solar ephemeris function?"
Supervisor: Prof. Dr. Wolfgang Rössler, JMU Würzburg
Cooperation Partner: Prof. Dr. Rüdiger Wehner, University of Zürich

Teaching Experience

- 2022 **Effects of magnetic pulses on natural learning-walk behaviour and related neuronal plasticity in *Cataglyphis* ants**
Bachelor thesis of Maximilian Fuchs
- Ant antenna: A potential candidate for sensing magnetic fields during learning walks in *Cataglyphis nodus***
Master thesis of Johanna Wegmann
- 2020 **Body postures in ant re-learning walks during magnetic field elimination.**
Bachelor thesis of Lea Blinzler
- Characterisation of the magnetic compass in ant foragers (*Cataglyphis nodus*) using a 3D-Helmholtz coil system.**
Bachelor thesis of Johanna Wegmann
- The caste-specific brain structures in desert ants (*Cataglyphis nodus*).**
Bachelor thesis of Niklas Heinig
- The importance of changing polarization patterns during learning walks for behavioral and neuronal plasticity in *Cataglyphis* desert ants.** Bachelor thesis of Oliver Holland Cunz
- 2019 **Struktur und Aufbau des Johnstonschen Organs in *Cataglyphis nodus*.**
Bachelor thesis of Clara Tritscher
- since 2021 Master Practical Course "**Verhaltensphysiologie und Soziobiologie F2**"
- since 2019 Master Practical Course "**Verhaltensphysiologie und Soziobiologie F1**"
- since 2018 Bachelor Practical Course "**Integrative Biology III**"
- since 2017 4th Semester Bachelor Practical Course "**Behavioral Physiology**" (SS)
Topic: "Olfactory orientation and communication: Trail pheromone of *Lasius niger*"
- since 2015 5th Semester Bachelor Practical Course "**Integrative Biology II**" (WS)
Topic: "Learning walks of *Cataglyphis* desert ants"

Grants

- 2019** Scientific Meeting Grant by The Company of Biologists (for NeuroDoWo19).
- 2018** Boehringer Ingelheim Fonds - Travel Grant.
Graduate School of Life Sciences - Travel Fellowship (University of Würzburg).
Kurt and Rhoda Isselbacher Endowed Scholarship Fund – Scholarship
Helmsley Charitable Trust – Neurobiology - Scholarship

Organization of Scientific Meetings

- 2019** Co-Organization of the 30th Neurobiology Doctoral Students Workshop “**NeuroDoWo19**”, Residence Würzburg, JMU Würzburg, Germany
- 2017** Co-Organization of the Symposium “**New Frontiers in Insect Navigation**”, Biocentre, JMU Würzburg, Germany (with Dr. Pauline Fleischmann)