

**Name:** Peter Hans Wilhelm Biedermann, MSc

**Date of birth:** 21<sup>st</sup> June 1981 (in Leoben, Austria)

**Nationality:** Austrian

**Position:** Ph.D. candidate

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## EDUCATION

- 1/2009- Ph.D. candidate**  
Thesis on "The Evolution of Cooperation in the Ambrosia beetle, *Xyleborinus saxesenii*"  
Institute of Ecology & Evolution, University of Bern, Switzerland; supervisor: Prof. Michael Taborsky
- 7/2007 Master degree**  
Master of Science in Ecology and Evolution, awarded with distinction ("summa cum laude")
- 4/2005-7/2007 Study of Ecology and Evolution**  
Thesis on "Social behaviour of *Xyleborinus saxesenii*"  
Institute of Zoology, University of Bern, Switzerland; supervisor: Prof. Michael Taborsky
- 1/2005 Bachelor degree**  
Bachelor in Biology; Thesis on "Hidden leks in the yellow browed warbler *Phylloscopus inornatus*"; Institute of Zoology, University of Graz, Austria; supervisor: Prof. Heiner Römer
- 2002-2005 Study of Biology/Zoology**  
Major in Ethology and Neurobiology; University of Graz, University of Vienna, Austria
- 2000 -2001 Study of Physics**  
University of Graz, Austria
- 1999 School leaving examination**  
(Matura) awarded with distinction, BRG Leoben, Austria

## FURTHER EXPERIENCES

- 4-8/2009 Visiting researcher "Microbial communities of Ambrosia beetles"**  
Department of Bacteriology, UW Madison/WI, USA; supervisor: Prof. Cameron Currie
- 6/2007 Workshop "Evolutionary Biology in the Alps"**  
ETH Zurich, Guarda, Switzerland
- 8-11/2004 Internship on "Sexual selection in blue tits"**  
Max Planck Institute for Ornithology, Seewiesen, Germany; supervisors: Prof. Bart Kempenaers
- 4-8/2004 Project on "Drone (*Apis mellifera*) – swallow interactions"**  
Institute of Zoology, University of Graz, Austria. supervisor: Prof. Karl Crailsheim
- 2-3/2004 Field assistant "Neurophysiology of katydids in relation to predation by bats"**  
Smithsonian Tropical Research Institute, BCI, Panama; supervisor: Prof. Heiner Römer
- 4-8/2003 Project on "Breeding-ecology of Yellow-browed Warblers" in Mongolia**  
University of Göttingen, Germany, funded by the DAAD; supervisor: Prof. M. Mühlenberg

- 8-10/2002** **Field assistant Thunder Cape Bird Observatory**  
ThunderBay/ON, Canada; banding of songbirds and raptors, bird observations
- 6-8/2001 & 2002** **Field assistant “Sex differences in Sandhill-cranes”**  
Intern. Crane Foundation, Baraboo/WI, USA; banding, radio-tracking cranes, prairie restoration
- 5/2001** **Field assistant for whale and dolphin research**  
Tethys organization, Mediterranean sea
- 2000-2005** **Bird monitoring for “Atlas of breeding-birds of Graz”**  
Museum of Natural History (Joanneum), Graz, Austria
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## POSITIONS HELD

- 1/2009-** **Ph.D. student with Prof. Michael Taborsky**  
Institute of Ecology & Evolution, University of Bern, Switzerland
- 1-12/2008** **Research assistant position with Prof. Michael Taborsky**  
Institute of Zoology, University of Bern, Switzerland
- 8-12/2007** **Visiting researcher with Dr. Kier Klepzig**  
Southern Research Station, USDA Forest Service, Pineville/LA, USA
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## RESEARCH FELLOWSHIPS

- |                       |   |                     |
|-----------------------|---|---------------------|
| <b>1/2010-12/2011</b> | <b>DOC Fellowship</b><br>Austrian Academy of Science, Vienna, Austria                                     | <b>€ 60,000.-</b>   |
| <b>1-12/2009</b>      | <b>Roche Graduate Research Fellowship</b><br>F. Hoffmann-La Roche Research Foundation, Basel, Switzerland | <b>30,000.- CHF</b> |
| <b>8-12/2007</b>      | <b>USDA Cooperative Research grant</b><br>US-Department of Agriculture, Washington, USA                   | <b>\$ 10,000.-</b>  |
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## OTHER GRANTS

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|-------------------|--|--------------------|
| <b>8/2011</b>     | <b>Promotion of Young Scientists</b><br>Phil.nat. Faculty, University of Bern  | <b>2,000.- CHF</b> |
| <b>8/2010</b>     | <b>Travel grant</b><br>Swiss Zoological Society                                | <b>€ 1,000.-</b>   |
| <b>2/2009</b>     | <b>Mobility grant</b><br>Conférence universitaire de Suisse occidentale (CUSO) | <b>300.- CHF</b>   |
| <b>2007, 2008</b> | <b>Travel grants</b><br>Ethological Society                                    | <b>2 × € 200.-</b> |
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## PRICES AND AWARDS

- 2010** **Achievements in Biosciences**  
Oxford University Press
- 2009** **Kutter Prize by the International Union for the Study of Social Insects**  
IUSSI meeting Frauenchiemsee, Germany
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## PROFESSIONAL MEMBERSHIP

European Society of Evolutionary Biology (ESEB)  
 Association for the Study of Animal Behaviour (ASAB)  
 International Union for the Study of Social Insects (IUSSI)  
 Entomological Society of America (ESA)

Ethological Society  
 Deutsche Gesellschaft für allgemeine und angewandte Entomologie (DGaaE)  
 Swiss Zoological Society (SZS)  
 Austrian Entomological Society (OEG)

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## INVITED TALKS AND SEMINARS

- 2011** - Max-Planck Institute for Chemical Ecology, Jena, Germany
- 2010** - Department of Environmental Sciences, ETH Zurich, Switzerland  
 - Institute for Zoology, University of Regensburg, Germany  
 - Seminar in Ecology & Evolution, University of Neuchatel, Switzerland  
 - Zoological Colloquium, University of Graz, Austria
- 2007** - Section of Integrative Biology, University of Texas, Austin, USA  
 - Department of Bacteriology, University of Wisconsin, Madison, USA
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## TALKS AT MEETINGS AND CONFERENCES

- 2011** - Genetics of Bark Beetles and Associated Microorganisms (IUFRO), Sopron, Hungary  
 - European Society of Evolutionary Biology (ESEB), Tübingen, Germany (Poster)  
 - Deutsche Gesellschaft für allgemeine und angewandte Entomologie (DGaaE), Berlin, D  
 - Austrian Entomological Society (öEG), Graz, Austria  
 - Biology2011, Zurich, Switzerland
- 2010** - International Union for the Study of Social Insects (IUSI), Kopenhagen, Denmark  
 - COST meeting, Diversity of symbioses in arthropods, Bad Bevensen, Germany (Poster)  
 - Biology2010, Neuchatel, Switzerland
- 2009** - International Union for the Study of Social Insects (IUSI), Frauenchiemsee, Germany\*  
 \* Awarded with the **Kutter-prize**  
 - European Society of Evolutionary Biology (ESEB), Torino, Italy (Poster)  
 - 57th Annual Meeting Entomological Society of America, Indianapolis, USA (Virtual Poster)
- 2008** - Behavioural Biology, Dijon, France  
 - Ethological Society, Regensburg, Germany
- 2007** - East Texas Forest Entomology Seminar (ETFES07), Nacogdoches/TX, USA  
 - International Union of Forest Research (IUFRO07), Vienna, Austria  
 - D-Day, Lausanne, Switzerland (Poster)  
 - Meeting of PhD Students in Evolutionary Biology (EMPSEB13), Lund, Sweden  
 - Xylobionten-Meeting, Bern, Switzerland  
 - DZG and Ethological Society, Göttingen, Germany  
 - Biology2007, Zurich, Switzerland (Poster)
- 2006** - Ethological Society, Bielefeld, Germany (Poster)
- 2005** - International Union for the Study of Social Insects (IUSI), Halle, Germany  
 - Zoological Colloquium, Graz, Austria
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## ORGANIZATION OF MEETINGS

- 5-9/2008** **14th European Meeting of PhD Students in Evolutionary Biology (EMPSEB14)**  
 Einsiedeln, Switzerland; Member of the Organizing Committee
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## TEACHING EXPERIENCE

- 2006-2011** **Teaching assistant**  
 „Behavioural Ecology“ (practical course, 4 times),  
 „Physiology of rats“ (practical course, 2 times),  
 „Insect determination, Coleoptera“ (practical course, 2 times).
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## CO-SUPERVISION OF STUDENTS

**Master theses** Andrea Meister  
Michael Würgler (in progress)

**Bachelor theses** Michael Würgler  
Andrea Moser

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## INTERNATIONAL COLLABORATIONS

- Dr. Martin Kaltenpoth, Max-Planck Institute for Chemical Ecology, Jena, Germany
  - Dr. Kier Klepzig, Southern Research Station, USDA Forest Service, Ashville, USA
  - Prof. Cameron Currie, Department of Bacteriology, UW Madison, USA
  - Prof. Diana Six, University of Montana, Missoula, USA
  - Prof. Christian Stauffer, BOKU Vienna, Austria
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## SKILLS

**IT** Microsoft Office (Word, Powerpoint, Excel), several CMS, SPSS, SigmaStat, SigmaPlot, R, Adobe Photoshop

**Languages** German (mother tongue), English (excellent), Italian (basic)

**Others** Full knowledge of European birds by call & sight, bird monitoring, bird banding  
Culturing of bacteria and fungi  
Scanning electron microscopy (SEM)

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## LIST OF PUBLICATIONS

### PUBLICATIONS (peer reviewed)

- (1) Biedermann PHW (2006) Hidden leks in the Yellow-browed Warbler (*Phylloscopus inornatus*)? - Investigations from the Khan Khentey Reserve (Mongolia). **Acrocephalus** 27: 233-247.
  - (2) Biedermann PHW & Kärcher MH (2008) Weather-dependent activity and flying height of Barn Swallows (*Hirundo rustica*) and House Martins (*Delichon urbica*) in southwestern Styria. **Egretta** 50: 76-81.
  - (3) Kärcher MH, Biedermann PHW, Hrassnigg N & Crailsheim K (2008) Predator-prey interaction between drones *A. m. carnica* and swallows *Hirundo rustica* or *Delichon urbica*. **Apidology** 39(3): 302-309.
  - (4) Delhey K, Peters A, Biedermann PHW & Kempnaers B (2008) Optical properties of the uropygial gland secretion: no evidence for UV cosmetics in birds. **Naturwissenschaften** 95(10): 939-946.
  - (5) Biedermann PHW, Klepzig KR & Taborsky M (2009) Fungus cultivation by ambrosia beetles: Behavior and laboratory breeding success in three Xyleborine species. **Environmental Entomology** 38(4): 1096-1105.
  - (6) Biedermann PHW (2010) Observations on sex ratio and behavior of males in *Xyleborinus saxesenii* Ratzeburg (Scolytinae, Coleoptera). In: Cognato AI, Knížek M (Eds) Sixty years of discovering scolytine and platypodine diversity: A tribute to Stephen L. Wood. **Zookeys** 56: 253-267.
  - (7) Grubbs K.J., Biedermann P.H.W., Suen G., Adams S.M., Moeller J.A., Klassen J.L., Goodwin L.A., Woyke T., Munk A.C., Bruce D., Detter C., Tapia R., Han C.S. & Currie C.R. (2011): The Complete Genome Sequence of *Streptomyces* cf. *griseus* (XyelbKG-1 1), an Ambrosia Beetle-Associated Actinomycete. **Journal of Bacteriology** doi:10.1128/JB.00330-11
  - (8) Biedermann PHW, Klepzig KD & Taborsky M (2011): Costs of delayed dispersal and alloparental care in the fungus-cultivating ambrosia beetle *Xyleborus affinis* Eichhoff (Scolytinae: Curculionidae). **Behavioral Ecology & Sociobiology** doi 10.1007/s00265-011-1183-5
- In revision / submitted
- (9) Biedermann PHW & Taborsky M (submitted): Larval helpers and age polyethism in ambrosia beetles. **Proc Natl Acad Sci USA**, submitted - in major revision
  - (10) Biedermann PHW, Peer K & Taborsky M (submitted): Cooperative breeding in the ambrosia beetle *Xyleborinus saxesenii* Ratzeburg (Coleoptera; Scolytinae). **Mitteilungen der Deutschen Gesellschaft für allgemeine und angewandte Entomologie**, submitted
  - (11) Biedermann PHW & Taborsky M (in work): Social Fungus Farming Varies among Xyleborine Ambrosia Beetles (Coleoptera, Curculionidae, Scolytinae).
  - (12) Biedermann PHW, Ott E, Taborsky M, Klepzig KR & Six D (in work): Dynamics of filamentous fungi in the ambrosia gardens of the primitively eusocial beetle *Xyleborinus saxesenii*.

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### OTHERS

- (1) Biedermann PHW (2003) Die Kraniche der Welt. **Zool. Newsletter** 2; Landesmuseum Joanneum Graz.
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### SELECTED POPULAR PRESS ARTICLES

- Biotreibstoffe aus den Pilzgärten eines Käfers – **Tagesanzeiger** (CH) 10.7.2010
- Schwalben fliegen bei Schlechtwetter nicht tiefer - **Neue Züricher Zeitung** Online (CH) 07.04.2009
- Schwalben halten sich nicht an Bauernregeln – **Uniaktuell** (Bern, CH) 07.04.2009