

# Curriculum Vitae

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## Education

- 1990: Matura (high school diploma) in Basel, Switzerland
- 1991-1993: B.Sc. in Environmental Natural Sciences, Swiss Federal Institute of Technology (ETH) Zurich
- 1993-1998: M.Sc. in biology and mathematics/informatics, University of Basel, Switzerland
- 2001-2006: Ph.D. in Ecology and Evolutionary Biology, Yale University, USA (with Prof. S. C. Stearns)
- 2006- Postdoctoral research, University of Basel, Switzerland, Institute of Zoology (with Prof. D. Ebert)

## Work history and relevant experience

- 1991: World trip (Sumatra, Australia, New Zealand, Fiji, Hawaii). 6 months
- 1994: Participation in a research project of the University of Miami (Prof. S. H. Gruber, Miami) on Bimini Island, Bahamas. Subject: migration behaviour of juvenile lemon sharks (*Negaprion brevirostris*) in their nursing grounds. 3 months
- Assistant at the Basel Pathological Institute. 4 months
- 1995: Course in Tropical Botany at the Botanical Garden and University of Geneva
- Field work in Napo, Ecuador: vegetation mapping and plant determination in the Amazon rainforest for a PhD project about gap dynamics (supervision Prof. F. Klötzli, Zurich), and helping in a wild animal reintroduction centre. 3 months
- 1996: Assistant at the Basel Botanical Institute. 6 months
- Job at the Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), in Birmensdorf, section Biodiversity (Prof. P Duelli). Field work (insect trapping), statistical evaluation and interpretation of fauna data (inquiring in the question how 'biodiversity' can be estimated best with the least work). 3 months
- 1998: Job at the Swiss Federal Institute for Forest, Snow and Landscape Research, Birmensdorf. Evaluations on how to calibrate the newly installed Biodiversity Monitoring Switzerland. 6 months
- 1999: Work for UPCAM, a Swiss-Cameroonian NGO for development assistance. Work on my own project to introduce Community Forestry and FSC forest certification in the district Ngoulemakong, Southern Cameroon, to promote sustainable rain forest use, including a 1-month visit to Cameroon. 6 months
- Evaluation of a new permanent amphibian guiding system in the Oris valley (BL) for the Canton of Baselland, Switzerland
- 1999-2000: Job with Hintermann & Weber AG, Ecological Consultancy, Reinach, a conservation bureau. Work on the Swiss Biodiversity Monitoring and on several projects concerned with local, regional and national conservation efforts. 1 year
- 2000: CEO ad interim, World Wide Fund for Nature (World Wildlife Fund) Basel. 3 months

- Job with Micro Systems. Product manager for “Field List”, a software for digital field surveys with PalmOS organizers
- 2000-2001: High school teacher in biology and chemistry (and substitute teaching since 1991)
- 2002: Research project on coral bleaching at the Smithsonian Tropical Research Institute in Panama

### International workshops/courses with selected participants

- 1995: Darwin Field Course in Tropical Ecology and Conservation in Uganda, organised by the Tropical Biology Association (TBA), Bristol. 1 month
- 2003: 3<sup>rd</sup> International Course on African Trypanosomoses, Lisbon, Portugal, organized by WHO, IAEA, Doctors Without Borders & AATA. 3 weeks
- MR4 International Bioinformatics Workshop on Malaria Vectors, Johns Hopkins, USA. 1 week

### Publications

- Balmer, O. (2007): A review of *Evolutionary Ecology of Parasites*, by Robert Poulin. *Evolution and Development* 9: in press
- Brun, R. & Balmer, O. (2006): New developments in human African trypanosomiasis. *Current Opinion in Infectious Diseases* 19 (5): 415-420
- Balmer, O. & Palma, C., MacLeod, A., Caccone, A. (2006): Characterization of di-, tri-, and tetranucleotide microsatellite markers with perfect repeats for *Trypanosoma brucei* and related species. *Molecular Ecology Notes* 6 (2): 508-510
- Balmer, O. & Tostado, C. (2006): New fluorescence markers to distinguish co-infecting *Trypanosoma brucei* strains in experimental multiple infections. *Acta Tropica* 97: 94-101
- Balmer, O. (2002): Species lists in ecology and conservation: Abundances matter. *Conservation Biology* 16 (4): 1160-1161
- Balmer, O. & Erhardt, A. (2000): Consequences of succession on extensively grazed grasslands for Central European butterfly communities: Rethinking conservation practices. *Conservation Biology* 14 (3): 746-757
- Balmer, O. (1999): Die Schmetterlingsfauna an mageren Standorten des Jura in verschiedenen Stadien der Verbrachung. *Mitteilungen der Schweizerischen Entomologischen Gesellschaft* 72: 303-314. (Translation: Butterfly fauna of calcareous sites in various successional stages in the Jura mountains. *Proceedings of the Swiss entomological society*.)
- Balmer, O. & Erhardt, A. (2000): Gesteigerte Tagfalterdiversität durch 10-jährige Verbrachung von Magerweiden im Nordwestschweizer Jura. *Mitteilungen der Deutschen Gesellschaft für allgemeine und angewandte Entomologie* 12: 259-262. (Translation: Increased lepidopteran diversity through 10-year succession on calcareous grasslands in the Jura mountains of Northwest Switzerland. *Proceedings of the German society for general and applied entomology*.)
- In review:
- Balmer, O., Andreas Schötzau, A. & Brun, R. Mutual competitive suppression between parasite strains enhances host survival in multiple-strain trypanosome infections. *PLoS Pathogens*.
- Balmer, O. Multiple-strain pathogen infections: detection, commonness and clinical implications. *The Lancet Infectious Diseases*
- Balmer, O. & Caccone, A. Frequency of multiple-strain infections in *Trypanosoma brucei*. *Parasitology*

### In preparation:

- 1 manuscript on experimental virulence evolution in *Trypanosoma brucei* in response to multiple infection – target journal: *Evolution*

- 1 manuscripts on population genetics and phylogeny of *Trypanosoma brucei* in the field – target journal: *Molecular Biology and Evolution*
- 2 manuscripts on experimental coral bleaching – target journal: *Ecology, Proceedings B*
- 1 manuscript on population genetics of Indian Ocean giant tortoises – target journal: *Molecular Ecology*

## Talks

- 1998: Departmental seminar, Department of Integrative Biology, University of Basel, Switzerland  
Natural History Museum, Basel, Switzerland
- 1999: Entomological Societies of Germany, Switzerland, and Austria, Annual Meeting, Basel, Switzerland
- 2005: Swiss Trypanosomatid Meeting, Leysin, Switzerland
- Swiss Tropical Institute, Basel
  - Eastern Africa Network for Trypanosomosis, Annual Meeting (EANETT), Mombasa, Kenya
  - Yale University, Department of Epidemiology and Public Health, New Haven, USA
- 2006: University of Fribourg, Switzerland
- Ecological Society of America (ESA), Annual Meeting, Memphis, USA
  - British Ecological Society (BES), Annual Meeting, Oxford, UK
- 2007: Swiss Trypanosomatid Meeting, Leysin, Switzerland

## Poster presentations

- 2000: Neuchatel, Switzerland: Digital data recording for field surveys: A solution for Palm organizers.” (Balmer, O. & Balmer, M.)
- 2001: Ecological Society of America (ESA) annual meeting, Tucson, AZ, USA: “Digital data recording for field surveys using PalmOS organizers (PDAs).” (Balmer, O. & Balmer, M.)
- 2004: Jacques Monod conference “Ecology and evolution of host-parasite relationships”, Roscoff, France: “Multiple infections and virulence evolution in African trypanosomes.” (Balmer, O.)
- 2005: Swiss Trypanosomatid Meeting, Leysin, Switzerland: “Live fluorescence markers for trypanosome population studies.” (Tostado, C. & Balmer, O.)
- 2006: Joint meeting of the Swiss Society of Tropical Medicine and Parasitology and the Royal Society of Tropical Medicine and Hygiene, Basel, Switzerland: „Competition between co-infecting parasite strains alters within-host population dynamics in genetically diverse trypanosome infections.“ (Balmer, O.)
- 2007: Swiss Trypanosomatid Meeting, Leysin, Switzerland: “Phylogeography and population structure of *Trypanosoma brucei*” (Balmer, O.)
- Biology07, ETH Zürich, Switzerland
  - European Science Foundation conference “The impact of the environment on innate immunity: at the defence frontier – the biology of innate immunity”, Obergurgl, Austria: “Competition between co-infecting *Trypanosoma brucei* strains: direct interference or immune-mediated indirect competition?” (Balmer, O.)

## Grants and awards

- 1997: Swiss National Science Foundation grant 5001-044622/1 to A. Erhardt
- 2001-04: Charles A. and June R. P. Ross Fellowship Fund (partial coverage of Yale fellowship)
- 2002: Newhouse Foundation Fellowship (partial coverage of Yale fellowship)
- Yale EEB award for conference presentation (Ecological Society of America) (US\$ 500)
  - Yale EEB chairman’s fund for research in Panama (US\$ 1’000)

- 2002-03: Smithsonian Tropical Research Institute (STRI) Panama, short-term research fellowship for research on coral bleaching (US\$ 2'500)
- 2003: Yale Center for International and Area Studies, Council on African Studies, Lindsay Fellowship for Research in Africa (US\$ 2'500)
- Yale Institute for Biospheric Studies, Center for Field Ecology, research in Africa (US\$ 1'360)
  - Association against Trypanosomosis in Africa, award for course participation (US\$ 2'000)
  - Eastern Africa Network for Trypanosomosis, award for course participation (CHF 1'500)
- 2004-06: National Science Foundation (USA) Doctoral Dissertation Improvement Grant DEB-0408083 (US\$15'345)
- 2004: Basler Stiftung für experimentelle Zoologie (CHF 2'500)
- 2005: Sigma Xi (US\$ 970)
- 2005-07: Bill and Melinda Gates foundation (with Ch. Burri, STI Basel) (US\$ 4'425)
- 2007: Fonds zur Förderung des akademischen Nachwuchses der Universität Basel (CHF 20'755)
- 2007-08: Novartis Foundation for Medicine and Biology (CHF 37'498)

## Teaching experience

- 1991-2001: High school teaching (biology and other subjects)
- 1997-1998: Teaching assistant University of Basel: Vertebrate course (Prof. D. G. Senn)
- 2001: Co-organizer of the University of Basel littoral ecology field course in Erquy, France (with Dr. M. Glasstetter)
- 2001-2004 Organizer interdepartmental ecology seminar, Yale University
- 2002: Teaching assistant Yale University: Intro EEB (Prof. S. C. Stearns)
- Teaching assistant Yale University: Population ecology (Dr. A. Carter)

## Professional memberships

Ecological Society of America  
 British Ecological Society  
 British Society for Parasitology  
 Sigma Xi, The Scientific Research Society

## Pro bono work

- 1999-2002: Secretary and member of the board of WWF (World Wide Fund for Nature) Basel
- 1998-2001: Co-founder and treasurer of 'Arbeitsgemeinschaft Oenzthal', an NGO devoted to the protection and promotion of the extraordinary natural and cultural values of the Oenz valley (Canton of Bern)
- 1997-2001: President of a volleyball club (SC University Basel, c. 200 members), player, coach, and referee
- Guide for the Pro Natura "Animatura" program (nature days for school classes)

## Miscellaneous

Reviewer for: PLoS Pathogens, Conservation Biology, Biodiversity and Conservation, Biological Conservation, Kinetoplastid Biology and Disease, Annals of the New York Academy of Sciences

Field ornithologist (official Swiss certification 1999)

Member of Yale EEB search committee for a senior ornithology professor (2003)

## Languages

German: mother tongue  
English: fluent  
French: fluent  
Spanish: basics, 6 months work in South and Central America  
Italian: basics, 1 year at school, many visits to Italy  
Latin: 6 years at school (it's been hard to practice ever since)

15 August 2007