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CURRENT POSITION

Postdoctoral researcher, Agrawal lab, Cornell University (www.herbivory.com)

Since 2009 **Advanced researcher grant**. Swiss National Science foundation.

- Mechanisms and evolution of defences in the genus *Asclepias*

2007 – 2008 **Prospective researcher grant**. Swiss National Science foundation.

- Above- and belowground interactions in the milkweeds (*Asclepias* spp.).

EDUCATION

2002 – 2006 **University of Neuchâtel - PhD Thesis (awarded February 26, 2006).**

- Belowground tritrophic interactions, Advisor: Prof. Ted Turlings

2001 – 2002 **University of Neuchâtel - Diploma thesis**

- Is differential larval survival influencing host specialization? The example of *Oreina elongata* leaf beetles, Advisor: Prof. Martine Rahier and Dr. Karl Gotthardt.

1997 – 2002 **Undergraduate studies at the University of Neuchâtel**

- Specialization in Ecology and Systematics.

PUBLICATIONS

- Agrawal AA, Fishbein M, Halitschke R, Hastings AP, Rabosky DL, **Rasmann S** (2009). Evidence for adaptive radiation from a phylogenetic study of plant defenses. **Proceedings of the National Academy of Science of USA**. In press.
- Rasmann S** and Agrawal AA (2009). Plant defense against herbivory: progress in identifying synergism, redundancy, and antagonism between resistance traits. **Current Opinion in Plant Biology** 12: 473-478.
- Rasmann S**, Agrawal AA, Cook SC, Erwin AC (2009). Cardenolides, induced responses, and interactions between above- and belowground herbivores of milkweed (*Asclepias spp.*). **Ecology** 90: 2393-2404.
- Rasmann S** and Agrawal AA (2008). In defense of roots: A research agenda for studying plant resistance to belowground herbivory. **Plant Physiology** 146: 875-880.
- Rasmann S** and Turlings TCJ (2008). First insights into specificity of belowground tritrophic interactions. **Oikos** 117: 362–369.
- Rasmann S** and Turlings TCJ (2007). Simultaneous feeding by aboveground and belowground herbivores attenuates plant-mediated attraction of their respective natural enemies. **Ecology Letters** 10: 926-936.
- Rasmann S**, Kollner TG, Degenhardt J, Hiltpold I, Toepfer S, Kuhlmann U, Gershenzon J, and Turlings TCJ (2005). Recruitment of entomopathogenic nematodes by insect-damaged maize roots. **Nature** 434: 732-737.
- Gotthard K, Margraf N, **Rasmann S**, and Rahier M (2005). The evolution of larval foraging behaviour in response to host plant variation in a leaf beetle. **Oikos** 109: 503-512.

Publications submitted or in preparation

- Rasmann S**, Johnson DM, and Agrawal AA (submitted). Induced responses to herbivory and jasmonate in three milkweed species. **Journal of Chemical Ecology**
- Rasmann S**. Invited review for **Functional Ecology**. Special feature entitled “Evolutionary ecology of plant defense against arthropod herbivores”. The ecology and evolution of above and below-ground interactions between plants and enemies.
- Rasmann S**, Agrawal AA (for **Ecology Letters**). The evolutionary history of cardenolides and induced defense in the milkweeds (*Asclepias spp.*)
- Rasmann S**, Erwin AC, and Agrawal AA (for **PNAS**). Chemically-mediated belowground trophic cascades.

Rasmann S and Agrawal AA (for **American Naturalist**). Constraints on host range: a phylogenetic study of the red milkweed beetle (*Tetraopes tetraophthalmus*)

PARTICIPATION IN SCIENTIFIC SYMPOSIA & SEMINARS

Organization

2009 *Evolutionary ecology of plant defense against insects: novel approaches to classic questions*. Annual meeting of the ecological society of America (ESA 2009 – Albuquerque, NM, USA). Co-organizer with MTJ Johnson and AA Agrawal.

Invited presentations

2008 *Belowground insect herbivory and manipulation of plant defenses*. Entomological Society of America - Eastern Branch, annual meeting. Syracuse, NY, USA.

2005 *Recruitment of entomopathogenic nematodes by insect damaged maize roots*. IWGO Meetin – International Working Group on *Ostrinia* and other maize pests. 11th *Diabrotica* Subgroup Meeting. 10th EPPO ad hoc Panel and FAO Network Group Meeting. Bratislava, Slovak Republic.

2004 *Recruitment of entomopathogenic nematodes by insect damaged maize Roots*. 3ème cycle romand e sciences biologiques - Host recognition by parasites and parasitoids. Neuchâtel, Switzerland.

New tools to study belowground interactions - the example of Diabrotica virgifera virgifera. 10th IWGO *Diabrotica* Subgroup meeting. Engelberg, Switzerland.

Below- and aboveground tritrophic interactions. Departement of Biology. University of Freiburg, Switzerland.

Workshop “Entomopathogenic Nematode Application”. COST Action 850. Helsinki, Finland.

2003 *Below-ground herbivory reduces above-ground indirect defence in maize*. International Symposium on the Ecology and Management of Western Corn Rootworm. Göttingen, Germany.

Attendance

2010 Gordon Conference of plant herbivore interactions. Galveston, TX, USA.

2009 International Society of Chemical Ecology. Neuchâtel, Switzerland.
Ecological Society of America meeting. Albuquerque, NM, USA.

2008 International Society of Chemical Ecology. Penn State University, PA, USA.
Ecological Society of America meeting. Milwaukee, MI, USA.

2007 Gordon Conference on plant herbivore interactions. Ventura Beach, CA, USA (Poster Presentation).

2005 NCCR Plant Survival International Conference 2005. Leysin, Switzerland.
Symposium of the Swiss Zoological, Botanical and Mycological Societies. Basel, Switzerland.

2004 Annual Graduate School Meeting. Neuchâtel, Switzerland.
Annual Symposium of the Swiss Zoological, Botanical and Mycological Societies. Fribourg, Switzerland.

2003 Annual Graduate School meeting. Neuchâtel, Switzerland.

2002 Annual Symposium of the Swiss Zoological, Botanical and Mycological Societies.
Bern, Switzerland.

TEACHING EXPERIENCES

2001 -2004 Theory and practical course in *Ecology and systematics of insects* at the University of Neuchâtel, Switzerland. (Undergraduate level, 3 hrs/week, 1 semester/year. Responsible: Prof. Martine Rahier).

2002 -2004 Theory and practical course in *Soil invertebrate biology* at the University of Neuchâtel. (Undergraduate level, 3 hrs/week, 1 semester/year. Responsible: Prof. Jean-Michel Gobat).

2004 – 2005 Lecture on *Biological control of invasive insect pests* at the University of Neuchâtel. (Undergraduate level, 2 hrs/year. Responsible: Prof. Ted Turlings)

2004 -2005 Supervisor of Diploma student in biology Neuchâtel (Ivan Hiltbold) on belowground tritrophic interactions. (Director of research: Prof. Ted Turlings).

GRANTS

2007 Fellowships for prospective researchers, **Direct and indirect, above- and belowground defenses on common milkweed (*Asclepias syriaca*)** - Swiss National Science Foundation, 12 months, 71.950 CHF

2008 Fellowships for advanced researchers, **Manipulation of plant defenses by belowground herbivory** – Swiss National Science Foundation, 30 months, 160'050 CHF

Total awards: 232'000 CHF

EXTERNAL REFEREE

Ecological Entomology
Ecology Letters
Entomologia Experimentalis et Applicata
Journal of Chemical Ecology
New Phytologist
Plant Physiology
PNAS
Proceedings of the Royal Society B
Quarterly Review of Biology

FIELD EXPERIENCE

2004 Field work (4 months) in Southern Hungary for PhD thesis.

2001 Field work (4 months) in the Alps (France) for Diploma work.

2000 Field work (4 weeks) in Peru for practice in ecological entomology.

1999 Field work (3 weeks) in Parco Nazionale degli Abruzzi, Italy, on Mediterranean ecosystem studies.

SOCIETY AFFILIATIONS

Ecological Society of America (since 2006)
International Society of Chemical Ecology (since 2004)
Swiss Zoological Society (since 2002)

PRESS RELEASES IN THE INTERNET

April 6, 2005. Quand le maïs appelle au secours. Press release from SwissInfo.ch (<http://www.swissinfo.ch/eng/search/Result.html?siteSect=882&ty=st&sid=5662249>).

April 7, 2005. A discovery from Neuchâtel published in Nature: Injured maize roots emit a fragrant call for help. Press release from SeedQuest. (<http://www.seedquest.com/News/releases/2005/april/11896.htm>).

April 7, 2005. Unterirdische Lockmittel für nützliche Nematoden. Press release from Max Planck Institute for Chemical Ecology. (<http://www.mpg.de/bilderBerichteDokumente/dokumentation/pressemitteilungen/2005/pressemitteilung200503235/>).

REPORTS IN NEWSPAPERS

September 4, 2005. Le maïs appelle au secours des vers pour combattre un coleoptere ravageur" - Le Monde, France.

November 10, 2005. Publication of a cross-interview article with biotechnology professor in Italy on the GMO's debate - Corriere del Ticino. Switzerland.

REPORTS ON NATIONAL TELEVISION

April 4, 2005. Swiss Agriculture: l'Université de Neuchâtel met en lumière un système de défense du maïs. Swiss French TV News. (http://www.swissinfo.ch/eng/multimedia/video/detail.html?siteSect=15045&ne_id=5665991&type=real).

January 10, 2006. Pesticides : oranges amères. Swiss French TV documentary (A bon entendeur). (<http://www.tsr.ch/tsr/index.html?siteSect=300003&sid=6373243>).

LANGUAGES

Mother tongue Italian
Fluent in English and French
Good knowledge of Spanish
Basic knowledge of German