

## Curriculum vitae

Susanne den Boer

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**Name** Susanne Petronella Antonia den Boer  
**Phone / E-mail** (+45) 41188436 / SPADenBoer@bio.ku.dk  
**Born** 20<sup>th</sup> November 1980, Zierikzee, the Netherlands  
**Sex** Female  
**Nationality** Dutch

### Current employment

May 2009 – Sep 2010 Post-doctoral researcher, Centre for Social Evolution, Department of Biology, University of Copenhagen.  
Involved in the organization of the 16<sup>th</sup> Congress of the International Union for the Study of Social Insects (IUSI) in Copenhagen, Denmark (August 2010).

### Qualifications and employment history

Jan – May 2009 Research assistant, Centre for Social Evolution, University of Copenhagen, Denmark.  
2006 – 2009 PhD, Centre for Social Evolution, University of Copenhagen, Denmark. '*Dynamics of ejaculate transfer, sperm storage and sperm use in social insects*'. Supervisors: Prof. J.J. Boomsma & Dr. B.C. Baer. Public defense of PhD thesis: 22/04/2009.  
2002 – 2004 MSc, Faculty of Biology, University of Utrecht, the Netherlands. '*The smelly side of feeding behaviour in the bumble bee Bombus terrestris*' and '*Queen fertility in the leafcutter ant Atta colombica*'. Main supervisor: Dr. M.J. Duchateau.  
1998 - 2002 BSc, Faculty of Biology, University of Utrecht, the Netherlands.

### Honours and grants awarded

2011-2014 Marie Curie International Outgoing Fellowship offered by the European Union (€271,667.30). Project title: '*The post-copulatory interplay between females and ejaculates in social insects*.'  
2010-2011 'Internationalisation Stipend for Women in Science' offered by the Faculty of Science of the University of Copenhagen (€36,416.70). Project title: '*The evolution and molecular mechanism of cryptic female choice in honeybees*.'  
2009 Second Prize for best presentation at the winter meeting of the International Union for the Study of Social Insects in Sussex, UK.  
2003 Award for best presentation at the 50<sup>th</sup> Annual meeting of the Society of German Bee Research Institutes, Germany.  
2002 Award for best presentation at the 9<sup>th</sup> Benelux Congress of Zoology, Antwerp, Belgium.

### Courses & workshops

2008 Workshop: 'Writing grant proposals.' Tvärminne, Finland  
2008 PhD course: 'The biology of social insects.' Centre for Social Evolution, University of Copenhagen, Denmark

- 2007 PhD course: 'The evolution of communication.' Centre for Social Evolution, University of Copenhagen, Denmark
- 2007 PhD course: 'Experimental design and statistical analysis of data.' University of Copenhagen, Denmark.
- 2006 PhD course: 'Digital microscopy and image analysis.' University of Copenhagen, Denmark.

### Supervision & teaching

- 2008 - 2009 Supervision of MSc student Marlene Stürup
- 2008 Assistant teacher in Experimental Design and Statistical Methods in Biology (ca. 60 hours)
- 2003, 2005 Assistant teacher in Behavioural Biology (ca. 100 hours)
- 2002 Assistant teacher in Zoology, University of Utrecht, The Netherlands. (ca. 50 hours)
- 2002 Teaching Biology to high school students. Griflandcollege, Soest, the Netherlands (2 months).

### Peer reviewing

Insectes sociaux, Naturwissenschaften, Science Asia, Journal of Asia-Pacific Entomology, Journal of Experimental Biology

### Membership

Member of the Northwest European Section of the International Union for the Study of Social Insects (IUSI).

### Field experience & visits to other labs

- 2008 Two visits to the Department of Behavioral and Evolutionary Ecology, Universite Libre de Bruxelles, Belgium, hosted by Prof. S. Aron. Flow cytometry on *Atta colombica* eggs.
- 2006 - 2010 Fieldwork (~6 weeks each year) in Gamboa, Republic of Panama. Collection of fungus growing ants and experimental work.
- 2007 - 2008 Four month-stay at the Centre for Evolutionary Biology, School of Animal Biology, University of Western Australia in Perth, Australia. Experimental work on *Apis mellifera*.
- 2006 Two week stay at the Laboratory of Entomology, Catholic University of Leuven, Belgium, hosted by Prof J. Billen. Morphological work on fungus growing ants.
- 2004 Field assistant for Prof J.J. Boomsma and Dr B.C. Baer. Gamboa, Republic of Panama.

### Research skills

Fluorescence microscopy and cytological staining, micro-dissection of diverse insects, field observations and behavioral observations of bees and ants, artificial insemination of leafcutter ant queens, basics of flow cytometry, basics of sectioning and histology, image analysis.

### Languages

Dutch mother tongue, fluent in English, conversation level in Danish, basic in French and German

## Presentations

- 2009 *Dynamics of ejaculate transfer, sperm storage and sperm use in social insects.* Invited guest lecture, Department of Biology, University of Utrecht, The Netherlands.
- 2009 Sperm competition and queen influence on ejaculate interactions in social insects. Oral presentation at the annual winter meeting of the International Union for the Study of Social Insects in Sussex, UK.
- 2009 *Ejaculate competition affects sperm survival in social insects.* Poster presentation, 10<sup>th</sup> Biology of Sperm conference (BoS), Sheffield, UK.
- 2009 *Ejaculate competition affects sperm survival in social insects.* Poster presentation, 12<sup>th</sup> Congress of the European Society for Evolutionary Biology, Turin, Italy
- 2008 *The importance of sperm viability in social insects.* Invited guest lecture. Department of Biology, University of Utrecht, The Netherlands.
- 2008 *The effect of seminal fluid interactions on sperm viability in social insects.* Oral presentation, 4<sup>th</sup> European congress of the International Union for the Study of Social Insects (IUSI), La Roche en Ardenne, Belgium.
- 2007 *The effect of accessory gland secretion on sperm viability in ants.* Poster presentation, 9<sup>th</sup> Biology of Sperm conference (BoS), Sheffield, UK.
- 2006 *Sperm use in the leafcutter ant *Atta colombica*.* Oral presentation, 15<sup>th</sup> Congress of the International Union for the Study of Social Insects (IUSI), Washington DC, USA.
- 2003 *The smelly side of feeding behaviour in the bumble bee *Bombus terrestris*.* Oral presentation, 50<sup>th</sup> Annual meeting of the Society of German Bee Research Institutes, Schmitten – Arnoldshain, Germany.
- 2002 *The smelly side of feeding behaviour in the bumble bee *Bombus terrestris*.* Oral presentation, 14<sup>th</sup> Dutch Entomologists Day, Amsterdam, The Netherlands.
- 2002 *The smelly side of feeding behaviour in the bumble bee *Bombus terrestris*.* Oral presentation, 9<sup>th</sup> Benelux Congress of Zoology, Antwerp, Belgium.

## Peer-reviewed publications

**Den Boer, S. P. A.,** Baer, B. & Boomsma, J. J. Seminal fluid mediates sperm competition in social insects. *Science*, in press.

**Den Boer, S. P. A.**, Baer, B., Dreier, S., Aron, S., Nash, D.R. & Boomsma, J. J. (2009). Prudent sperm use by leafcutter ant queens. *Proc R Soc Lond B* **276**, 3945-3953.

Baer, B., **den Boer, S. P. A.**, Kronauer, D. J. C., et al. (2009). Fungus gardens of the leafcutter ant *Atta colombica* function as egg nurseries for the snake *Leptodeira annulata*. *Insectes Soc* **56**, 289-291.

**Den Boer, S. P. A.**, Boomsma, J. J. & Baer, B. (2009). Honey bee males and queens use glandular secretions to enhance sperm viability before and after storage. *J Insect Physiol* **55**, 538-543.

**Den Boer, S. P. A.**, Boomsma, J. J. & Baer, B. (2008). Seminal fluid enhances sperm viability in the leafcutter ant *Atta colombica*. *Behav Ecol Sociobiol* **62**, 1843-1849.

**Den Boer, S. P. A.** & Duchateau, M. J. H. M. (2006). A larval hunger signal in the bumblebee *Bombus terrestris*. *Insectes Soc* **53**, 369-373.

### **Manuscripts, submitted**

Stürup, M., **den Boer, S. P. A.**, Baer, B. & Boomsma, J. J. Variation in male traits in the leafcutter ant *Atta colombica*. Submitted to *Insectes Sociaux*