

IUSSI, British Section

(International Union for the Study of Social Insects)

Spring/Summer Newsletter 2007

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Upcoming Meetings

Summer Section Meeting: The 2007 IUSSI British Section summer trip will take place in Finland over the weekend June 7-10. The place is Tvärminne Zoological Station, and the idea is to use the field station as a base, and make half to one-day trips from there. The Antzz group of the University of Helsinki is doing their field work at the station, and many students will be there at that time to show you around. We will also try to recruit other local experts to join the party. We expect to provide good competence in local ants (but maybe less so in bees or wasps).

Tvärminne is located in the Hanko peninsula, in the southernmost tip of mainland Finland, where there is good access to sites both in the archipelago and mainland. Within a ~1 h drive from Tvärminne almost any kind of habitat is available. So, most of the Finnish social insect fauna is easily reachable. For more information on Tvärminne, check the web site: <http://luoto.tvärminne.helsinki.fi/english/index.htm>

Other relevant meetings

Remember to check out upcoming meetings on the IUSSI British Section website <http://www.zi.ku.dk/iussi/meetings.html>

- IUSSI Italian Section meeting, Olbia, Sardinia. 23-26th May.
- Bees under the midnight sun, Mikkeli, Finland. 10-14th June.
<http://www.helsinki.fi/ruralia/mikkeli/beesunder/>
- 11th Congress of The European Society for Evolutionary Biology, Uppsala, Sweden. 20-25th August.

www-conference.slu.se/eseb2007

- IUSSI Bolivarian section meeting, Venezuela. 25-27th September.
- IUSSI German speaking section meeting, Schwerte, Ruhr. 26-28th September. www.vbio.ruhr-uni-bochum.de/IUSSI2007.html

Section News: From North to South (roughly)

The Helsinki Hub: **Lotte Sundström's** group currently undergoes many changes. **Kalle Trontti** who finished his PhD a year ago cannot keep his fingers off DNA and is returning to the group for a short spell of genotyping. Two new prospective PhD students, **Anton Chernenko** from Russia and **Martin Luka** from Slovakia, will conduct short term projects on reproductive conflicts in *Formica fusca*. In addition three new MSc students will start projects on *F. fusca* and *F. exsecta*. **Katja Bargum** defended her PhD thesis on March 30th – the opponent was Michel Chapuisat from Lausanne, Switzerland. The topic of the thesis was reproductive sharing in *Formica fusca*. Katja is now looking for job opportunities in journalism and media in general.

Social insect research in Helsinki will pick up considerable momentum, as **Pekka Pamilo** is soon to move from Oulu to Helsinki to take up a Chair in population genetics. The new Nordic network on social evolution kicked off with its first meeting in Tvärminne, Finland 31.3 – 3.4. The network laboratories include Copenhagen with **Koos Boomsma**, **Jes Pedersen**, **David Nash** and **Patrizia D'Ettorre**, Oulu with **Pekka Pamilo**, Uppsala with **Ingemar Fries**, Tartu with **Ants Martin** and **Marika Mänd**, Reykjavik with **Snaebjörn Pálsson**, and Helsinki with **Lotta Sundström** and **Perttu Seppä** as coordinators. The network will provide funding for workshops and exchange visits for the next three years.

As for past group members, after a couple of years as a coordinator at BioCity in Turku, and having two children, **Minttu Hannonen** (now Jaakkola) has landed a permanent position at Turku University (email: minttumaaria.jaakkola@utu.fi). **Vienna Setälä** finished her licentiate after having a boy and a girl, and now holds a 4-year PhD position at the Department of Communication. The topic of her thesis is Media coverage of science. **Heikki Helanterä**, who finished his thesis in 2005, is now working in Sheffield with **Francis Ratnieks** and **Stephen Martin**.

The Danish Dudes (some of them): CODICES is a Marie Curie Excellence Programme led by **Patrizia d'Ettorre** at the University of Copenhagen. Patrizia's group consists of three "permanent" staff members, post-doc **Fernando Guerrieri**, and two PhD students, **Stéphanie Dreier** and **Jelle van Zweden**. Recently, the group welcomed **Charlotte Grube Jørgensen** who is a chemist post-doc working on the synthesis of hydrocarbons. The youngest generation is represented by MSc student **Nathalie Stroeymeyt**, and undergraduate **Stefano Pellechia**. All these people come from different parts of the world and are trying hard to unravel the mechanisms of nestmate recognition with different approaches, involving behaviour, neurobiology, genetics, chemistry... and enjoying the *hyggelige* atmosphere of Denmark. Website: <http://www.bi.ku.dk/codices>



From left to right: Jelle, Patrizia and Stéphanie working hard in Italy to get their study organisms to the lab.



The study organism, *Camponotus vagus*

The Paxton Posse (Queens University Belfast): Just over a year ago, postdoc **Joachim de Miranda** joined **Rob Paxton's** lab to work within an EU funded project, Bee Shop, that aims to map disease resistance traits in the honey bee (FOOD-CT-2006-022568), with the project itself coordinated by **Robin Moritz** at the University of Halle in Germany. Joachim is a honey bee pathologist with a fascination for viruses and his research is centred around transmission and virulence of honey bee viruses transmitted by ectoparasitic *Varroa* mites. Joachim, originally from the Netherlands, has spent the previous few years at Pennsylvania State University in the lab of Scott Camazine. Now he shuttles between Belfast (lab work) and Uppsala (Ingemar Fries' lab at SLU for field work). We are also to be joined this spring by a new PhD student, **Orlando Yañez** from Peru, who will be working with Joachim on the EU project and honey bee diseases. Another recruit to the lab is **Emily Davis**, who will work on the conservation ecology of a rare native bee. Emily is a local Northern Irish, maybe somewhat surprisingly the first from NI the group, and starts her thesis research this October.

As some arrive, others leave. Having been with the lab for just over three years each, **Tomás Murray** and **Julia Klee** are both on the verge of PhD submission. Tom has already taken up a postdoc with Teagasc (Department of Agriculture of the Republic of Ireland) in Carlow, working on the impact of commercial imports of the bumble bee *Bombus terrestris* on indigenous conspecifics. On the research side, Julia has a paper out shortly that highlights a new, emergent pathogen of the honey bee, the microsporidian *Nosema ceranae* (*J. Invert. Path.* DOI: 10.1016/j.jip.2007.02.014). Within the past 5-10 years, this gut parasite of Asiatic *Apis cerana* honey bees has spread across almost the entire world to infect *Apis mellifera*, the common honey bee used most widely in bee-keeping. Whether *N. ceranae* is responsible for the massive honey bee colony losses reported this spring in the USA is not clear, though it may well have had a helping hand.

Others in mid-term are **Antonella Soro**, working on the population genetics of the facultatively social sweat bee *Halictus rubicundus*, and **Emma Seale**, working on the conservation biology of the marsh fritillary butterfly, *Euphydryas aurinia*. I know the latter is not a real social insect, but caterpillars live together in so-called 'webs' so they are getting close. Needless to say, there will be a strong genetic component to Emma's work.

The Dublin Domain (Trinity College Dublin): The Dublin group, led by **Mark Brown**, has changed dramatically over the past year. Three students, all of whom presented their work at annual winter meetings, graduated with their PhDs. **Samina Rutrecht** is now partly based in Grenada, where she is delivering parasitology lectures at the University of the West Indies to keep her hand in, before heading off on a two-people yacht circumnavigation of the globe. **Mario Ruiz-González** is doing a post-doc in the University of Valencia working on Alzheimer's in fruit flies, although he still retains interests in social insects. **John McMullan** is continuing his work on honey bee parasites, particularly tracheal mites, as a Research Associate with our Department. **Úna Fitzpatrick**, a post-doc who was working on bumble bee and solitary bee conservation, has moved on to become the Ecologist at the new Irish National Biodiversity Data Centre. But not everyone is leaving! **Mike Kelly**, who is still studying Sphaerularia in bumble bees, has been joined by **Andrew Byrne**, who is including bumble bees as a major group within his PhD looking at biodiversity at the landscape level. And we are currently advertising for a new post-doc, and so we hope that the group is rapidly on its way back to its previous size!

The Bourke Bunch (University of East Anglia): Andrew Bourke moved from the Institute of Zoology to UEA in July last year, and has since been setting up a new laboratory and group. His work will continue to focus on social evolution, with, he intends, an increased emphasis on the genetic basis of sociality. He also retains his interests in the conservation biology of social insects. Current group members are **Jouni Sorvari**, who is studying the economics of polydomy in ants on an Academy of Finland fellowship, and **Lorenzo Zanette** and **Sophie Miller**, who are working as PDRA and Research Technician respectively on a NERC-funded project investigating reproductive conflicts and internest drifting in bumble bees (co-investigator, **Bill Jordan** at IoZ). Later in the year Andrew's group will be joined by **Lucy Friend**, who will take up a PhD studentship on testing kin selection theory in the ant *Leptothorax acervorum*, and **Nehal Saleh**, who, having finished her PhD at QMUL, has been awarded a British Ecological Society Early Career Project Grant to study the chemical ecology of caste conflict in ants. Of group members in London, **Simon Rees** and **Tom Charman** both passed their PhD vivas (for projects on the Black Bog Ant, *Formica picea*, and the Great Yellow Bumble Bee, *Bombus distinguendus*, respectively). Simon is now a postdoctoral researcher in the School of Clinical Medicine, University of Birmingham, and Tom recently started a job as an Area Officer for Scottish National Heritage. **James Sainsbury**, who finished as a Research Technician working on genetic censuses of bumble bees in July last year, is now a postdoctoral fellow in the National Microbiology Laboratory, Winnipeg, Canada.

The Field Federation (UCL): From 1 September, **Jeremy Field** is moving from UCL to take up a personal chair in the Department of Biology & Environmental Science at Sussex University, UK. At Sussex his research group will continue to work mainly on social insects with the additional advantage of nearby field sites to study taxa such as halictine bees and digger wasps. **Cathy Bridge** (postdoc) and **Eric Lucas** (Ph.D student) will be moving down at the same time. Congratulations to **Edd Almond** who has just been awarded his Ph.D on interactions between *Polistes dominulus* and its social parasite *P. semenowi*. **Lorenzo Zanette** (now in Andrew Bourke's lab – see above) is about to submit his thesis on group formation in *P. dominulus*.

The Sendova-Franks Set (University of the West of England, Bristol): **Tom Richardson** started a PhD studentship on 1 April 2007 on self-regulation and division of labour as part of an EPSRC project (see below), whilst **Antony Aleksiev** (supervised by **Nigel Franks**, advisor - ABSF) who was studying building behaviour in ants was awarded his PhD at the end of 2006. Recent grant success includes a Leverhulme Trust Research Fellowship (2006-2007) for 'The collective intelligence of movement in ants', and an EPSRC grant for 'Defying the rules: how self-regulatory social systems work' as part of a multidisciplinary collaborative project with Imperial College (physics), Hull (social science) and University of Wales (robotics, 2007-2010).

Job Vacancies

Web-maestro David Nash is keeping an excellent record of vacancies in the social insect world on the IUSSI British Section webpage <http://www.zi.ku.dk/iussi/vacancies.html>. Please check it for jobs you might be interested in, and also keep him informed about any jobs coming up in your labs.

Dublin: Mark Brown has received funding from Science Foundation Ireland for a 3-year post-doctoral project looking at the potential value of DNA barcoding in the conservation of 'solitary' bees. If you are interested please contact Mark (mabrown@tcd.ie) or go to: <http://www.tcd.ie/Zoology/research/insects/opportunities.php>

Sydney: University of Sydney is currently seeking a results-driven Postdoctoral Fellow to conduct research into a project that will determine the mechanisms by which ants and honeybees solve dynamic problems when foraging. More information is given at: <http://www.zi.ku.dk/iussi/vacancies.html#Sydney>