

IUSSI, North-west European Section (International Union for the Study of Social Insects) Spring/Summer Newsletter 2009

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Meetings site: <http://www.zi.ku.dk/iussi/meetings.html>
Who's who site: <http://www.zi.ku.dk/iussi/whoswho.html>
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Upcoming Meetings

David Nash keeps a comprehensive and regularly updated webpage of upcoming meetings at <http://www.zi.ku.dk/iussi/meetings.html>. The highlights are listed below:

- **IUSSI North-west European Annual Winter Meeting 2009.**

This year's Winter 2009 meeting of the North-West European section of IUSSI will take place at the University of Sussex on Thursday and Friday, 26-27 November.

Sussex University is now an important centre for social insects research, with 4 faculty and their groups working full time on social insects (Professors Francis Ratnieks, Jeremy Field and Tom Collett and Dr. Paul Graham) and two others part time (Professor David Waxman, a mathematical biologist now working on the organization of ant colonies and Professor Jonathan Bacon, a neurobiologist now also studying ants and honey bees).

Sussex University is located on the outskirts of Brighton and is very easy to reach by train or car. It is 5 minutes walk from Falmer railway station. Brighton is a lively, cosmopolitan, seaside town. The closest airport is Gatwick, about 50 minutes by train from Falmer via Brighton with 2 or more trains per hour to Brighton.

Approximate program

Thursday: convene mid morning c. 1030, talks until c. 1800, evening meal together at the Swan Inn, Falmer, 5 minutes walk from Freeman Centre.

Friday: convene early morning c. 0930, talks until end of meeting c. mid afternoon

Accommodation

Please arrange your own accommodation. There are many hotels and guest houses in Brighton. Our recommendation is Jury's Inn, Brighton, which is 400m from Brighton Railway Station. It is clean and new and has a bar and restaurant. A double room is c. £ 60, including breakfast (www.jurysinns.com). In the morning, there are 4 trains per hour from Brighton to Falmer.

To give a talk

Please submit to Christoph Grueter (cg213@sussex.ac.uk) a title and short abstract (< 300 words) before the 1st of September 2009. Please state your position (i.e. Ph.D-Student, Postdoc etc.) so we can have a balance. We will choose the best talks to give a balanced program. There will also be several invited speakers.

Posters

If you have a poster please bring it.

Cost

The registration fee will be kept as low as possible, c. £30 and will include snacks and lunch on Thursday and Friday. The evening meal on Thursday will cost c. £10. We will be asking the NWE IUSSI Section Treasurer if any contribution can be made towards the accommodation cost for Ph.D students.

Location

The meeting will take place in the Freeman Centre. See campus map (<http://www.sussex.ac.uk/aboutus/findus/documents/campusmap.pdf>), building No. 43. This is c. 5 minutes walk from Falmer railway station.

- **12th Congress of the European Society for Evolutionary Biology (ESEB)**. 24-29th August 2009. Torino Italy. Abstract submission is now closed. <http://www.eseb2009.it/uk>
- **Apimondia beekeepers' conference**. 15-20th September 2009. Montpellier, France. www.apimondia2009.com
- **XVI International IUSSI Congress**, 8-14th August 2010. Copenhagen Denmark. Symposia call is now closed. Decisions on accepted symposia will be made by June 2009. Registration and submission of abstracts will open on 1st October 2009. Keep up to date with progress at: <http://www.iussi.org/iussi2010/>, where you can also view the Program and Organising Committees.

Important Announcements

Summary of main points discussed at the IUSSI North-west European Section business meeting, Nov. 2008.

- *Our Section's name*: The Section's name change from the 'British Section' to the 'North-west European Section' of the IUSSI was welcomed by the Section, but remains to be formally approved at the business meeting of the International Congress in Copenhagen in 2010.
- *Our Section's Health*: The Section is flourishing, with 114 new members in 2008, and over 60 people attending the Winter (2008) meeting. Please continue to encourage both new and existing members of your research groups to support the Section by joining/renewing their membership. Despite Rob's valiant efforts, we are unfortunately still unable to accept electronic online payment for membership subscriptions.
- *Subscriptions to our Union's journal, Insectes Sociaux*: These fell by about 50% in 2008. This is thought to be a result of the transfer of the subscription process to the publisher, Birkhauser, and a

subsequent ambiguous request for subscription renewals from them. The Union no longer handles orders, money transfers or other business relating to individual subscriptions to the journal. Birkhauser now sends subscribers a renewal notice, which must be paid direct to Birkhauser. They can accept bank drafts, credit card transactions and other forms of payment. Any queries, please contact the sales office at Birkhauser by sending an email to Petra.Stromberger@birkhauser.ch. This is our Union's journal: please do support it.

- *2010 IUSSI International Congress*: If you wish to receive email updates on progress being made in the organization of our Union's next international meeting, please send an email to IUSSI2010@bi.ku.dk, with "Updates" in the subject header. Alternatively, visit the website, which is regularly updated.
- *Website*: Please continue to send all job adverts and meeting announcements to our Webmaster, David Nash (DRNash@bi.ku.dk). We would also like to encourage all members (new and old) to review the content of their "Who's Who" section on the website (<http://www.zi.ku.dk/iussi/whoswho.html>), and send any appropriate updates to David. Many of the current entries are limited to a list of keywords, whilst other are an engaging description of current research interests.

Other important items

Officer elections: At the Winter meeting this year, Andrew, Rob and myself will be sadly stepping down from our positions as officers of the Section. We have had a wonderful time over the last 3 years, and would like to thank you all firstly for appointing us, secondly for tolerating us, and finally for not giving us too much trouble (you do have a few months left to do so though!). So, the time has come to start looking for our successors for the posts of President, Treasurer and Secretary. Following the tradition of our Section, we would like to invite self-nominations. Each nomination must come from a proposer and a seconder from the Section's membership. All nominations (with proposer and seconder names) must be emailed to me (Seirian.Sumner@ioz.ac.uk) by 1st September 2009. The results will be announced in the Autumn/Winter newsletter and a democratic vote held amongst the membership to resolve any positions with more than one nomination. The new officers will be confirmed by the 15th October and will take over from the existing officers at the close of the Winter meeting in November this year.

Section Gossip Column

The ANTZZ Labs! (Helsinki)

The social insect research in Helsinki has not been very different from usual, however there is some news. **Emma Vitikainen** will defend her thesis later this year, so she will not be doing field work at Tvärminne zoological station (I believe she will miss it very much!). **Martina Ozan**, who did a project last summer, decided to continue in the group and has started her Ph.D. She will concentrate on queen fecundity and egg viability. **Anton Chernenko** is in the middle of his Ph.D and is already thinking about what to do next. This season he will work on recognition, sexual selection, and queen turnover in *Formica fusca*. **Tuomas Aivelo**, master's student, will graduate soon and continue a Ph.D on lemurs with Professor **Jukka Jernvall**. **Hannele Luhtasela** and **Lea Heikkinen** will carry on with their theses. **Ulla Vattulainen** will probably take Emma's place on the islands and start her MSc project on *Formica exsecta*.

The Nordic network on social evolution has entered its last year. It has provided opportunities for research exchange between the network labs. **Heikki Helanterä** spent some time in Copenhagen, working on chemical cues of different *Formica* species. **Jelle van Zweden** will come to Tvärminne zoological station in May and June to work on *Formica exsecta* and to do some experiments on preimaginal learning in *Formica fusca*, with **Anton Chernenko**. **Luke Holman** will also come to Tvärminne to work on sexual selection in *F. fusca* (with Anton). In April **Anton Chernenko** and **Martina Ozan** will take part in a course on mutualism organized by **David Nash** and **Ants Martin** in Estonia. In addition, **Snaebjörn Pálsson** will host a course on population genetics and statistics in Reykjavik in August. The other teachers will be **Pekka Pamilo** and **Jukka Corander**.

The network will end its last year with a symposium on social insect biology in Reykjavik. As in previous years, the symposium is especially designed for Ph.D-students, in order to provide an opportunity to practice scientific communication. However, one should not forget that Iceland has the best weather in August, and it is a nice place to see geysers and hike around! There are several opportunities for extra-curricular activities, such as whale watching, hiking, and horse riding. After this event we are all going to ESEB meeting in Torino.

Anton Chernenko

The Boomsma, D'Ettorre, Pedersen, Eilenberg and Nash labs (Centre for Social Evolution, University of Copenhagen)

These are exciting times in the Copenhagen group, just as many of us are preparing for a new field season. The CODICES group led by **Patrizia d'Ettorre** has already started off the field season with trips to Italy where Ph.D student **Nick Bos** (see attached picture!) collected *Camponotus* ants and to Israel where master's student **Lena Grindstedt** collected *Stegodyphus* males and females for her project on chemical communication in social spiders. Ph.D. student **Volker Nehring** is in the middle of a three months stay in Gamboa, Panama, where he is looking extensively for social parasites of leaf-cutting ants. Also in the CODICES group, **Jelle van Zweden** successfully defended his thesis "The smell of cooperation and conflict in insect societies" and will soon join **Lotta**

Sundström's group for a month of field work at Tvärminne field station.



In the fungus-growing section **Susanne den Boer** defended her thesis "Dynamics of ejaculate transfer, sperm storage and sperm use in social insects" with great success, just a week before she is off to more field work at the Smithsonian Tropical Institute field station in Gamboa, Panama. **Koos, Patrizia, Marie Curie Postdoc Luke Holman,** and master's student **Marlene Stürup** will join her on this year's Copenhagen expedition to Panama. Ph.D. students **Sandra Breum Andersen** and **Henrik de Fine Licht** will stay home this year, as Sandra is focused on lab work and Henrik has just returned from a five month stay with Ulrich Mueller in Austin, Texas, and is busy writing-up. We also just welcomed back Postdoc **Hermogenes Fernandes Marin** from the Smithsonian Tropical Institution in Panama who just received a prestigious 3-year Tupper Fellowship from STRI and will stay with us for five weeks.

David Nash's group in Copenhagen has temporarily become smaller while his Ph.D. students are off experiencing other countries: **Line Vej Ugelvig** has gone to Naomi Pierce's lab at Harvard to work on *Maculinea* phylogenetics for four months and **Matthias Fürst** is working with Mark Brown at Royal Holloway College, University of London, for a month. However the group will gain **András Tartally** as Marie Curie Postdoc from the beginning of June. **David** has just returned from a workshop on mutualism he organized in Estonia, which was attended by Ph.D student **Nick Bos** and master's students **Erica Juel Ahrenfeldt, Pepijn Kooij** and **Bertrand Fouks**, as well as participants from Lotta Sundström's lab, Duur Aanen, Heike Feldhaar and local Estonian students of Ants Martin and Marika Mänd.

The group of **Jes Søe Pedersen** has successfully initiated the large scale breeding of *Monomorium* pharaoh ants and Ph.D. student **Anne Mosegaard Schmidt** and Postdoc **Tim Linksvayer** have just hired four undergraduates to help taking care of the growing number of colonies. The winter has also been fairly busy with meetings and conferences, the most distant one being the ant genomics meeting at Arizona State University in January 2009, which was attended by **Koos** and Postdocs **Tim Linksvayer** and **Morten Schiøtt**. Our planning and organization of IUSSE 2010 in Copenhagen is progressing as planned, with many interesting symposium proposals having been submitted that we are currently examining. We look forward to welcoming all of you next summer in Copenhagen.

Henrik H. de Fine Licht

The Bourke Lab (UEA, Norwich).

We will shortly be welcoming **Christiana Faria** to the group. Christiana will work as a research technician with **Lorenzo Zanette** on our ongoing NERC-funded project on reproductive conflicts inside colonies of the bumble bee *Bombus terrestris*. Christiana did her first degree at the Federal University of Minas Gerais in Brazil, before taking a Masters degree in Applied Ecology and Conservation here at UEA. Christiana replaces **Sophie Miller**, who has left the group for a secondment from UEA to the Kunming Institute of Zoology in China. Meanwhile, current group members **Edd Almond** and **Lucy Friend** are pushing on with their projects on, respectively, measuring the heritability of sex ratio and other life-history traits in bumble bees and testing aspects of kin selection theory in the ant, *Leptothorax acervorum*. Finally, Andrew, in collaboration with **Joel Parker** at the University of Southampton, was fortunate enough to be awarded a new NERC research grant to investigate the effect of social conflicts on ageing in bumble bees. In due course this will employ a postdoctoral researcher and research technician at UEA and a second postdoctoral researcher at Southampton.

Andrew Bourke

The Brown Labs (Royal Holloway, London & Trinity College Dublin).

Well, I'm now happily ensconced at Royal Holloway, having started here on 1st December 2008. My bee room is currently being built and one day soon, I hope, will be finished - apparently, buying red lights is incredibly difficult if you're a builder.... While I have no group here, as yet, **Matthias Fuerst** is visiting from April 15 to May 15, and we are hoping to do an experiment looking at multiple parasites and their interactive effects on bees. I've been busy collecting bees and their parasites in Windsor Great Park (I'm sure that the Queen doesn't mind!) and enjoying discovering that Alford, who did considerable work on bumble bee parasites back in the 1960s, was based at Royal Holloway. Meanwhile, the lab in Ireland is still running, and I remain a Research Fellow of Trinity College. **Joe Colgan** has been hard at work infecting bumble bee queens with the nematode *Sphaerularia bombi*, following in the footsteps of **Mike Kelly**, who has now handed in his thesis. **Karl Magnacca**, who has been working on DNA barcoding in solitary bees, is leaving us for the attractions of Hawaii, and I'm hoping that we may be able to follow up his work by looking at DNA barcoding in bumble bees. Watch this space.

Mark Brown

The Martin Lab (Sheffield)

Under the guidance of **Stephen Martin**, insect (social) research continues to develop at a pace in Sheffield. We have now moved into our purpose built building, which has a large open plan office, three large labs, a seminar room and two control temperature rooms, one which is fitted out as a bee observation/flight room. The wooded area behind the building has been thinned to make a glade that will house a small number of honeybee research colonies. The 3 yr NERC grant on the evolution of virulence has just started and we are very pleased that **Gráinne Long** will join the project in May. Grainne completed her Ph.D. on immunopathology and virulence evolution at Edinburgh University before doing a post-doc in the Centre for Infectious Disease Dynamics at Penn State. **Helen Legget** (a 4th year MSc student) has already got the viral molecular techniques up running in the lab and is currently sequencing different strains of the Deformed winged virus. We have also been awarded a 4 year BBSRC-CASE studentship award to study the honeybee recognition system and how viral pathogens may affect it. This follows on from another 4th year student, **Ricky Kather** who for the past two years has been decoding the cuticular profiles of honeybees to get at the nest-mate signal. We are now very close and have a strong set of candidate compounds that we are currently studying in detail. The NERC ant grant is progressing very well with almost 100 individual *Formica exsecta* colonies chemo-typed which will form the baseline data for a sequence of behavioural and genetic investigations. The 454 sequencing of the population went very well and currently the data set is being worked on by researchers from Sheffield and Finland. In the next few months we should be joined by a Ph.D student from Pakistan and a Post-doc from Japan to help with various projects. The department is now actively encouraging the expansion of the social and non-social insect research conducted out of the new facilities, so it's full steam ahead!

Stephen Martin



The Paxton Lab (Queen's University Belfast).

I missed out on putting together a news update for last issue's newsletter as I was tied up with the pre- and post-congress organisation of EurBee3, the 3rd European Congress of Apidology (9-11 Sept 2008). EurBee meetings are held every 2 years, and are the most important (=largest, with all major European bee researchers) European bee (mainly honey bee) research conferences. **Juliet Osborne** (Rothamsted Research) and I co-organised EurBee3, which was hosted at Queen's University Belfast. With about 250 delegates and ca. 150 presentations, the meeting was a great success; at least, we were both told so repeatedly. The science was truly excellent, the sun even shone, and the Guinness flowed freely (well, in quantity) on the last night's ceiling.

New group members

One local lass, **Lorriane McKendrick**, will be joining the group as a Ph.D student, as of September 2009 to work on bumble bee pollinators (landscape genetics) and the provision of pollination in Northern Ireland. She is currently ploughing through *Lasioglossum* sweat bee genotypes as part of a related study of that species' conservation genetics, but will turn her attention to the larger and furrer *Bombus* as they seem to play a major role in pollination service provision in our cool, Atlantic climate.

Outgoing group members

In November 2008, Ph.D student **João Paulo Holanda Neto** successfully defended his thesis on cashew pollination in NE Brazil. He has now returned to NE Brazil, where this important crop plant is native, to take up a position at a local university and continue his research into honey bees and pollination.

This March 2009, Dr **Joachim de Miranda** completed his stint as a postdoc at Queen's and moved to join **Prof. Ingermar Fries** at the Swedish Agricultural University in Uppsala, Sweden. Joachim has been working on viral transmission in honey bees, as mediated by varroa mites and, surprisingly, as mediated by males during copulation (the first clear demonstration of venereal transmission of a microbial pathogen in Hymenoptera). His research at Queen's was funded by the EU FP6 project BeeShop (FOOD-CT-2006-022568; see www2.biologie.uni-halle.de/bee-shop), final results of which will be presented at the Apimondia beekeepers' conference in Montpellier this September 2009. Our joint Ph.D student **Orlando Yañez** continues his studies of vertical and horizontal transmission of honey bee viruses, funded in this his final year by a new grant from the CB Dennis Trust. We've also heard that Swedish wedding bells will be ringing for Joachim this summer, so wish him all success and happiness in life and love.

Robert Paxton

The Sumner Lab (Institute of Zoology, London).

I returned to work from my personal breeding activities at the beginning of April. I started by appointing **Solenn Patalano**, as research assistant. She will be working on a NERC-funded project on nest drifting behaviour in tropical *Polistes*, and some gene expression projects. Solenn has a Ph.D in *Drosophila* developmental biology and will be combining fieldwork with gene expression analyses, bringing some valuable skills from the world of *Drosophila* genomics into our lab. Solenn, Ph.D student **Thibault Lengronne** and myself (with family in tow!) are all off to radio-tag wasps in Panama later this month. We will be joined by **Stephanie Drier**, who has just finished her Ph.D in Copenhagen with Patrizia D'Ettore. Meanwhile, I've decided to stop having babies for a while, as the investment is turning out to be rather high.....

Seirian Sumner

Job Vacancies

Web-wonder 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.

- **Research Associates in 'Optimal Collective Decision-Making in Social Insect Colonies' (Two Posts)**

Applications are invited for two postdoctoral research associate (PDRA) positions to study the collective decision-making of social insects, based in the Department of Computer Science and the School of Biological Sciences, University of Bristol, and under the supervision of Dr James Marshall and Professor Nigel R. Franks, and with the collaboration of Dr Anna Dornhaus (Arizona) and Professor Tom Seeley (Cornell).

Application Deadline: 8:00 (GMT) 12th June 2009. For informal enquiries, contact Dr James Marshall. For further details including how to apply, visit: <http://www.bris.ac.uk/boris/jobs/ads?ID=80006>
