



IUSI North-west European section

International Union for the Study of Social Insects

Autumn Newsletter 2013

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Announcements

The IUSSI NW Europe section 2013 Winter Meeting

(www.iussi.org/NWEurope/meetings.htm): This year's meeting will take place at Royal Holloway, University of London, on Monday and Tuesday the 16th and 17th December (giving you the opportunity to spend a weekend in London beforehand, if you're coming from afar). The timetable will run from 9-10 on the Monday morning until around lunchtime on the Tuesday (a detailed timetable and agenda will be posted closer to the date). Royal Holloway's 135-acre campus is one of the most beautiful in the world with bars, cafés, and high-quality accommodation. All this is surrounded by stunning parkland that you can explore at your own leisure.

Registration costs for the meeting will be £40 for students and £45 for non-students (members prices) and will include morning and afternoon coffee/tea, but not lunch (we will forage on campus). Accommodation costs on campus for the Monday night will be covered for student members, and will cost £44.25 bed and breakfast for non-student members. There will also be a 3-course dinner on the Monday evening, which will cost ~£15, which we expect to follow with a trip to a local pub. Situated just 40 minutes by train from London and seven miles from Heathrow, you can find travel options here <http://www.rhul.ac.uk/aboutus/locationmap/home.aspx>.

Please register for the meeting by emailing Mark Brown (Mark.Brown@rhul.ac.uk), indicating whether you are a student or non-student member. Titles of potential talks or posters should be emailed to Mark by 1st October 2013. We especially encourage students to come forward, and as always, there will be a prize for the best student talk.

In addition to the scientific content, the meeting will host our annual section business meeting. If you have items for the agenda, please email them to our Secretary, Elli Leadbeater (Elli.Leadbeater@rhul.ac.uk). One item on the agenda will be the structure and content of the two semi-annual newsletters. This year we trialed a new structure for the newsletter, with the spring newsletter focused on reporting back from the winter meeting and forward to summer events and conferences, and the autumn newsletter containing lab updates (aka gossip), information about the upcoming winter meeting, and other relevant items. Your committee would like to propose that this becomes the accepted structure, but we would very much appreciate feedback and discussion on this, so that we can give the society what it wants.

Student Travel Grants

The North-west European section of IUSSI supports student members by awarding small grants for conference attendance, including for next year's IUSSI congress in Cairns, Australia. See <http://www.iussi.org/NWEurope/studentgrants.htm> for further details of how to apply. The next deadline for the grants will be the 28th February 2014, which is after notification of abstract acceptance for the Cairns congress (Feb 2014) and before the deadline for early bird registration for the congress (31st March).

Other upcoming meetings

IUSSI 2014 (www.iussi2014.com): The Australian Section of the IUSSI invites you to the Union's 17th Congress in Cairns, Australia. Cairns is a medium-sized, tropical city adjacent to the World Heritage listed Queensland Wet Tropics and Great Barrier Reef. The surrounding area is a naturalist's paradise, replete with social insects of all kinds. Cairns enjoys direct air routes to Australian, New Zealand and Asian hubs, with onward connections to all parts of the world.

The conference will be held in the magnificent Cairns Convention Centre during the period 13-18 July 2014. The Convention Centre is conveniently located in the heart of the city, in easy walking distance to 3-5 star hotels and apartments, backpacker hostels and restaurants to suit all tastes and budgets. The facility itself is state of the art and has won numerous awards. July weather is optimal in Cairns; not too hot, not too cold, and no possibility of cyclones.

ASAB winter conference 2013 (sites.google.com/site/winterasab2013/): This year's theme is "The evolution of behavioural mechanisms" and plenary speakers are Prof. Melissa Bateson, Prof. Reuvan Dukas and Prof. Simon Laughlin. The conference will take place on 5-6th December at the Zoological Society of London's meeting rooms
More upcoming meetings are advertised on the section's webpage (www.iussi.org/NWEurope/meetings.htm)

Lab updates

University of Bristol

Seirian Sumner's group are slowly but surely completing their migration from Institute of Zoology in London to Bristol. Seirian has been busy getting to know everyone in Bristol, and squeezing in wasp collections in Spain, UK, Panama and Trinidad before the teaching starts. In July, Seirian organised another successful "Soapbox Science" event on the Southbank, London, taking some of the UK's top women in science to the streets to get the public excited about science. Sadly no social insect speakers this year: social insect ladies, please apply to be a speaker on the Southbank in 2014! Check out www.soapboxscience.org. In May **Stephanie Dreier** completed her IPI postdoc at the Institute of Zoology with Seirian (co-PI'd with Andrew Bourke (UEA) and Claire Carvell (CEH)), and moved to the University of Bristol to take up a new 6 month Post Doc with Seirian. She is in the process of finishing up several papers on her past work with wasps and bumblebees. PhD student **Thibault Lengronne** (supervised with Laurent Keller) is now back in Switzerland finishing off his thesis on nest-drifting in *Polistes* wasps, where Laurent can keep a close eye on him! PhD student **Claire Asher** (supervised with Bill Hughes, Sussex) is due to hand in her thesis on *Dinoponera quadriceps* this month and is currently working at University College London as the Genetics, Evolution and Environment's Knowledge Transfer Officer, you can check out some of her latest work here: <http://blogs.ucl.ac.uk/gee-research/>. PhD student **Henry**

Ferguson-Gow (supervised with Kate Jones (UCL) and Andrew Bourke (UEA) continues his super ant (super) tree analyses. He is based mainly in London at UCL, and is busy fighting off too many supervisors! PhD student **Emily Bell** has just returned from another field season in Panama where she was awarded a Pre Doctoral Research Fellowship with the Smithsonian Tropical Research Institute to fund her studies. Later this year she will be joining the rest of the group in Bristol to start the 3rd year of her PhD, whilst maintaining her links with the Institute of Zoology. MSc student **Anna Heath** (UCL) completed her project on the attraction of invasive ants to electricity, gaining herself a well deserved distinction, and came back for follow up experiments at Bristol in July. In June we welcomed Dr **Emilia Santos** to the group for a 6 month position. Emilia is conducting proteomics, genomes and transcriptomes on a range of wasps (and the odd bee!). **Chris Wyatt** also joined us in June for a 6 month NERC Omics Discipline Hopping position on wasp proteomics and transcriptomics. Two new faces will be joining the lab in October. **Robin Southon** will be starting his NERC funded PhD on male behaviour in *Polistes* and **Adam Devenish** will be starting his NERC funded studentship, with Kew as CASE partner, on seed dispersal in invasive ants. A warm welcome to them both!

University of East Anglia (UEA)

The end of the 2012-2013 academic year is bringing a few changes to **Andrew Bourke's** group, as some projects end and new ones start (Andrew Bourke writes). **Edd Almond**, who worked with **Tim Huggins** on our project on the effect of social conflicts on queen ageing and gene expression in *Bombus terrestris*, starts a new job with Natural England in September. Meanwhile, Tim continues with his current project on worker longevity and reproductive success in *B. terrestris*. Among the PhD students in the group, **Jacob Holland** is on the point of submitting his thesis on the control of events in the colony cycle of *B. terrestris* prior to starting as a postdoctoral researcher in Guy Bloch's group at the Hebrew University of Jerusalem. Many congratulations go to both Edd and Jacob on their employment success in today's difficult conditions, and we wish them all the best. **David Collins** and **Henry Ferguson-Gow** are coming to the end of the third years of their PhDs, their projects being on, respectively, the role of microRNAs in the caste determination of bees, and evolution and diversification of ants from a comparative perspective. Henry is remaining in London to spend time in the group of his CASE partner supervisor, Kate Jones at UCL; his other supervisor is Seirian Sumner, who is now at the University of Bristol. Of new arrivals, **Liam Crowther** and **Becca Franklin** are both starting PhDs with Andrew at UEA in October, on *B. hypnorum* ecology (collaboratively with CASE partner Claire Carvell at the Centre for Ecology and Hydrology, Wallingford) and the combined analysis of bee and pollen movement, respectively. Liam comes to us from his MSc at UEA, while Becca recently graduated from the University of Plymouth. We are looking forward to their arrival and the new dimensions they will bring to research in the group. Finally, it is an exciting time in Andrew's collaborative Insect Pollinators Initiative project as all the data are undergoing analysis. This project is investigating movements of bumblebees in relation to fine-scale landscape features and is collaborative with Claire and Matt Heard at the Centre for Ecology and Hydrology, Seirian and Stephanie Dreier at the University of Bristol and Jinliang Wang at the Institute of Zoology.

University of Helsinki

Nick Bos writes: Since last year's expansion of TEAM::ANTZZ, after becoming a part of the Centre of Excellence in Biological Interactions (CoE), lots of things have happened. First of all, let's see who is done with their work. Our M.Sc. students **Unni Pulliainen and Jenni Lehtimäki** have finished their theses. **Annu Tertsonen, Noora Parkkonen and Sini Vuorensyrjä** are very busy writing, and close to finishing. Besides many people finishing, more very motivated M.Sc. students started on their projects this year. **Viljami Kankaanpää** is working together with **Nick Bos** on linking morphology, behavior and physiology of different species to their resistance to pathogenic fungi. **Siiri Fuchs** is working together with **Dalial Freitak** on transgenerational priming of stress resistance and immunity in *Formica fusca*. **Anna Hietala** started her M.Sc. project under supervision of **Heikki Helanterä** and **Claire Morandin** on the effects of caste and social context on vitellogenin expression in *Formica fusca*. She already did her experiments during the field season and will now start in the lab. **Hanna Parri** started her Master thesis with **Jana Wolf** and **Perttu Seppä** and is investigating the mating system of *Myrmica ruginodis*. All these students had a very busy field season in Tvärminne Zoological station this year, and the results are turning out to be very exciting!

Next to new M.Sc students, some new Ph.D. students started as well! **Unni Pulliainen**, after finishing her thesis on physiological trade-offs in *F. exsecta*, has started her Ph.D. studies titled 'Co-evolutionary arms race between nest parasites and their hosts in *Formica* ants'. **Sanja Hakala** has started her PhD work, and is busy in the lab investigating kin structures, population genetics and phylogenetics of Coptoformica supercolonies, supervised by Heikki Helanterä and Perttu Seppä. **Stafva Lindström**, next to doing a lot of administrative work, decided to do a Ph.D. study as well! **Kishor Dhaygude** is going to be equally busy, as next to his bio-informatic work, he will be starting a Ph.D. as well, working closely together with **Helena Johansson and Kalle Trontti!**

Jonna Kulmuni successfully defended her thesis after having been on maternity leave, and is now applying for post doc positions. In the meantime, she also managed to publish two of her thesis chapters already. Ph.D. student **Martina Ozan** is working on her second manuscript about the influence of *Formica fusca* workers on queen fecundity, before starting her maternity leave next month. Her first article entitled: The value of oviposition timing, queen presence and kinship in a social insect, has recently been published in Proceedings of the Royal Society B. Ph.D. student **Eva Schultner** spent another field season in Tvärminne exploring larval cannibalism and is now working on finalizing her thesis. She got a grant and set up a new collaboration with Heike Feldhaar at Bayreuth University about how brood investment varies with colony kin structure in a socially polymorphic ant. Ph.D. student **Jenni Paviola** is still working on assessing adaptive evolution of the immune genes in the invasive Argentine ant. For her next project she will be focusing on gene evolution in the Argentine ant. Ph.D. student **Jana Wolf** just returned from the field station in Tvärminne, where she, together with **Hanna Parri** and **Perttu Seppä** monitored the mating flights of *Myrmica* ants, and now swapped it for work in the lab. Ph.D. student **Claire Morandin** is working hard on her first manuscript. She's still working together with Dr Mikheyev at the ecology and evolution unit in OIST Japan, and will spend another three months there early next year in order to finish her comparative genomic analysis project.

Post-docs **Nick Bos** and **Dalial Freitak** are working hard together with PhD student **Dimitri Stucki** on many projects concerning stress and pathogen resistance in ants. After a long and intensive field-season this year, they managed to gather a lot of data, and this autumn and winter will mostly be spent on analyzing and writing up papers. Dalial is also collaborating with other members of the CoE located in the beautiful Jyväskylä, working on maternal and paternal priming of immunity in wood-tiger moths. Post-doc **Helena Johansson** was appointed temporary lecturer at the Division of Biosciences, University of Helsinki, in April this year, and has consequently taken on some new teaching related tasks. Nevertheless, a pathogen hunt in *Formica exsecta* transcriptome data has been accomplished, and we hope to see it accepted for publishing soon.

Heli Havukainen is a new post-doctoral fellow with a Finnish academy grant starting this September. She studies the effects of the protein Vitellogenin on honeybee immunity and inflammation. She finished her PhD at Norwegian University of Life Sciences, and did her first post-doc at New York University and Arizona State University before returning to Finland. **Heikki Helanterä** has now moved into the second half of his Academy of Finland Fellowship, and is keeping busy with projects on genomics, behaviour, and theoretical issues in social evolution and genetics. Unrelated to any projects, **Nick Bos** decided it was time to focus some of his time on disseminating science. First of all, he started a popular-science weblog at antyscience.wordpress.com. Furthermore, together with **Heikki Helanterä** and **Lotta Sundström** he organized a Ph.D. course on 'The evolution of social interactions' at Tvärminne Zoological Station, with Andy Gardner, Michel Chapuisat and Michael Poulsen as invited speakers. A group of Ph.D. students from many different countries attended, and the feedback on this course was very positive.

Perttu Seppä divides his time teaching population genetics and studying spatial structure of social insect populations. A new project is to study genetic divergence of populations of the paper wasp *Polistes biglumis* and its social parasite *P. atrimandibularis* in parallel, in collaboration with Mariù Bonelli and Cristina Lorenzi from the University of Torino. **Lotta Sundström** is very busy with supervising, being a co-director of the CoE and the new director of the graduate school in ecology and evolution. Furthermore, the *Formica exsecta* genome is under assembly and annotation, the 454 transcriptome is published in PLoS ONE, and some exciting new results on ant viruses from *Formica exsecta* are under review.

Imperial College, London

Richard Gill writes: In April 2013 I said my heartfelt goodbyes to the friendly crew at Royal Holloway, and after a break in Peru (where I got to see some cool social insects) I took up a Lectureship position just down the road at the Silwood Park campus in May. Thus a new social insect group has been born in the West of London (well its officially in Berkshire, and currently I am the only person that constitutes the 'group' – but "if you build it 'they' will come"). I hope to now develop a productive, friendly and collaborative group addressing questions surrounding cooperative behaviour and social evolution, and increasingly the important roles that social insects play in ecosystems such as pollination. If you, or anyone you know, are interested in joining my budding lab or up for collaboration I would love to hear from you (r.gill@imperial.ac.uk).

Royal Holloway, University of London

In **Mark Brown's** group, it has been a busy year. Mark writes: Finally, the UK has had a decent 9 months of weather. Bee catching was a joy, with loads of queens foraging everywhere, despite the atrocious weather last year. Quite how bumble bees do it remains a mystery... Consequently, **Matthias Fürst** has had a busy year rearing colonies and conducting a large-scale fitness experiment, which we hope he'll be reporting on at the Winter meeting. Sadly, he will be leaving us after that, to move to a post-doctoral position with Sylvia Cremer at the IST. We'll make the most of him whilst he's here, and wish him well for the future! **Inti Pedroso** also left us in January, for a position at Kings College investigating the genetics of extreme intelligence, and we have been very fortunate to replace him with **Fabio Manfredini**, who started with us in July. For those of you who don't know him, Fabio did his PhD on paper wasps and Strepsiptera in Italy, before two post-docs in Penn State with Christina Grozinger and our (as in the NW European IUSSI's) very own David Hughes. Fabio's first paper on gene expression in fire ants just came out in PLOS Genetics, and we know this bodes well for his productivity whilst he's with us. Returning to the theme of leaving, by the time you receive this both **Joe Colgan** (our last outpost in Ireland) and **Catherine Jones** will have submitted their PhD theses, so we're looking forward to the parties! **Gemma Baron** spent a few weeks in Lund with collaborators learning how to be a microbiologist, but has otherwise been busy here working on more parasite-pesticide experiments, which, again, we hope to tell you about at the Winter meeting. **Gemma and Matthias** presented their work at the INTECOL meeting in London in August, whilst Mark Brown went to the poorly time-planned and clashing ESEB in Lisbon, to report back on the Portuguese wines.... The lab continued our involvement in the *Bombus subterraneus* reintroduction project, where we run the quarantine stage pre-release. This year, despite the high parasite prevalence in queens, we were able to release ~50 queens in early June, and initial sightings suggest that at least one queen established a colony, which is really exciting! Of course, this is a long-term project, but it's great to have success in only the 2nd year of releases. Finally, in the theme of change, which seems to run through our news this year, **Mark** has recently been promoted to a personal Chair. Together with Nigel Raine and the recent arrival of Elli Leadbeater, we now have a real nucleus of social insect researchers at Royal Holloway, and we look forward to hosting you all here for the 2013 Winter Meeting. See you soon!

For **Nigel Raine's** group, the long overdue update starts back in October (2012) with **Richard Gill's** high profile publication reporting the combined impacts of neonicotinoid and pyrethroid pesticides on bumblebee worker behaviour, colony development and survivorship under field realistic conditions (*Nature* 491: 105-108). These results generated significant public and media interest, led to Nigel Raine appearing as an expert witness in front of the Parliamentary Environment Audit Committee at their inquiry into 'Insects and insecticides', and contributed to the EC decision to suspend the use of three neonicotinoid pesticides on crops attractive to bees for 2 years from December 2013. They also led to Rich accepting a lectureship in ecology at Imperial in March 2013. Whilst we were sad to see him leave, we've not so much lost a postdoc as gained a collaborator a couple of miles down the road.

In June, **Dara Stanley** joined the lab as a postdoc to replace Rich on the Insect Pollinators Initiative pesticide project. Dara recently completed her thesis work investigating pollinators and pollination services in agricultural regions in Ireland, supervised by Jane Stout, at Trinity College Dublin. She hit the ground running and has been working very busily on experiments throughout the summer. **Lisa Evans** and **Karen Smith** joined forces over the summer to conduct an exciting big experiment to investigate the impact of learning behaviour on foraging performance in the field. Right now they're busily engaged in reconstructing the activity patterns of bees from the wealth of radio frequency identification (RFID) data they amassed. Hopefully we'll be able to report more on these results at the winter meeting. **Gemma Baron** (co-supervised by Mark Brown) has also been busy conducting a range of experiments on the combined impacts of pesticides and parasites on bumblebees. Whilst this has meant daily checks on hundreds of bees for months on end, the payback is spending several weeks working with colleagues in Lund. During his MSc project, **Dylan Smith** has developed a new protocol to extract and segment specific regions of interest from high resolution micro-CT scans of bee brains (conducted by collaborators at the Natural History Museum). Dylan is currently analysing his data to compare the structure of brains from pesticide and untreated bees. The lab has also presented their work at a range of conferences this year, including Behaviour 2013 (Karen), ENTO'13 (Lisa), INTECOL (Gemma and Nigel) and the 2nd International Conference on Pollinator Health (Nigel).

Elli Leadbeater has recently joined Royal Holloway as a lecturer, after two years as a Leverhulme Early Career Research Fellow at the Institute of Zoology. Elli writes: I'll be continuing laboratory work on social insect cognition, and a long-term field project on the Mexican honey wasp *Brachygastra mellifica* in Texas. After several rather painful pilots, the project has finally begun to produce some interesting behavioural data thanks to a successful CEE-funded collaboration with **Erika Dawson** at QMUL, who spent six weeks living in a trailer in the Lone Star State this spring, with field assistance from **Sam Gandy**. Sam showed his worth by scaling a thin tree over a creek full of unpleasant reptiles, in his beesuit, to drop a nest of very angry wasps into a vat of liquid nitrogen! MSc students **Sara Raj Pant** and **Claire Florent** have now graduated, and Sara is off to work on Meerkats in the Kalahari for a year. **Jessica Kim** (UCL) replaces them this year, and will be working on observational conditioning in honeybees, again in collaboration with Erika Dawson. I'll also be advertising a research studentship in the autumn, so any interested candidates, please get in touch (elli.leadbeater@rhul.ac.uk).



Sam Gandy with Elli Leadbeater and Erika Dawson, sampling from a honey wasp nest in Texas

University of Sussex

There have been both departures (from Leeds) and arrivals (to Sussex) in **Bill Hughes'** group. **Kirsten Foley** successfully defended her thesis on the virulence and evolution of stonebrood fungal parasites of honeybees a few months ago in Leeds. **Claire Asher**, **Rowena Mitchell** and **Pete Graystock** will also be defending their theses in Leeds in the coming weeks, which has ensured that Bill hasn't exactly suffered from a lack of reading material over the summer. Claire has been investigating the behaviour, genomics and transcriptomics of sociality in dinosaur ants in collaboration with Seirian Sumner, and is currently employed in a knowledge exchange post at UCL. Rowena has studied caste determination and development in leaf-cutting ants and honeybees, and will shortly be beginning a new career as a clinical geneticist. Pete, having rather put the cat amongst the pigeons with his discovery of prevalent, infectious parasites in commercially produced bumblebee colonies that were meant to be "disease free", will be moving from Leeds to Sussex in October to begin a postdoc position with Bill following up on the pathogen spillover story and how to better control it. **Chris Tranter** and **Jasmine Parkinson** are now entering the third years of their PhDs at Sussex studying disease resistance in ants and symbiont dynamics in mealybugs respectively, while **Victoria Norman** is beginning her second year looking at the determination of castes and tasks in leaf-cutting ants. Chris and Victoria had a successful fieldtrip to Panama earlier in the year, which was particularly nice for Bill because it allowed him to spend less time with his head buried in ant nests and more time adopting the Koos

Boomsma style of tropical fieldwork, bestowing helpful advice from the comfort of an air conditioned car (driving for me is like walking for you, as a wise man once said). We've recently been joined in Sussex by postdoc **Julia Jones** who is looking at the metagenomics of bees. The lab will be growing further in a couple of weeks when **Dave Treanor** and **Joe Turner** join us. Dave is beginning a PhD studentship investigating the impacts of symbiont infections, working primarily with *Myrmica* ants, while Joe will be examining the effects of parasites on ant behaviour.

In **Francis Ratnieks'** group, **Norman Carreck** writes: 2013 has proved to be our busiest year in terms of the number of summer students and volunteers since the Laboratory of Apiculture and Social Insects (LASI) was set up in 2008. 2012 proved to be the year when we finally achieved our long hoped for appointment of full time support for our beekeeping, with the appointment of **Luciano Scandian** as Honey Bee Research Facilities Manager, funded by the Esmée Fairbairn Foundation. Since he has joined, our bee hives and apiaries have now become something that we are truly proud to show to our many visitors. During the year we said goodbye to **Tomy Czaczk**es and **Sam Jones** who both successfully completed their PhDs, and **Fiona Riddell-Pearce** who completed her MPhil. We also said goodbye to **Christophe Grüter** and **Francisca Segers**, off to take up post-doctoral positions at the University of São Paulo, Brazil. In January 2012 **Nick Balfour** officially joined us to commence a PhD, having carried out field work as a visitor in 2011. Nick is carrying out a number of projects relating to pollination and helping bees in farmland. This complements the work being done by **Mihail Garbuzov** whose PhD addressing similar questions but related to bees in urban environments. Meanwhile **Margaret Couvillon** continues to develop new techniques for analysing honey bee dance communication, and **Norman Carreck and Karin Alton** have been continuing with breeding honey bees for hygienic behaviour as a defence against the varroa mite. **Hasan Al Toufailia**, having completed an MPhil has now gone on to PhD studies on various aspects of honey bee disease work including evaluating the use of oxalic acid for varroa control under UK conditions. **Gianluigi Bigio** has completed the practical work for his PhD on various methods for improving queen rearing and breeding and is now writing up, but is carrying out a further field season of experiments with support from the British Beekeepers Association. In December we also welcomed **Tom Butterfield** to start a PhD on the chemical ecology and organisation of ant colonies. As usual, members of the laboratory have been fulfilling our outreach role by giving many talks at conferences and to a variety of audiences, running workshops at the university itself, and by working with school children of various ages.



Members of LASI (University of Sussex) enjoying a meal in Francis' garden

Queen Mary University of London

Lars Chittka's group has a new Marie Curie postdoctoral fellow, **David Baracchi**. Four other post-docs are due to start later this year. From 2014, there will be two vacant postdoctoral positions and one technician post for 5 years (working on insect navigation), funded by an ERC Advanced Grant. **Vivek Nityananda** will be leaving the lab to start a 5 year postdoctoral position at the University of Newcastle working on praying mantis vision. **Mu-Yun Wang** has recently successfully obtained her PhD and has now started a postdoctoral position in Japan.

Yannick Wurm's group has had several publications this year, including a Nature paper which identified a social chromosome that affects colony organization in fire ants. This work was presented at the ESEB 2013 meeting in Lisbon, Portugal.

University of York

Elva Robinson's ant research group in York said goodbye to **Phillip Buckham-Bonnet** earlier this year, on completion of his MSci by Research on foraging trail organisation. **Zoe Cook** is writing up her PhD thesis on modelling the costs and benefits of decentralisation in polydomous species. **Sam Ellis** and **Yi-Huei Chen** have had good weather for very productive

field seasons studying wood ants in the Peak District the Alps and the Swiss Jura. Sam has continued to be a media star, and will be appearing on the One Show later this year. New PhD student **Duncan Procter** has collected a huge dataset on wood ants in the North York Moors and is starting preliminary genetic work to investigate how large-scale landscape changes have affected the wood ants. **Elva Robinson** is back from maternity leave and continuing to work on behavioural aspects of polydomy and other areas of ant organisation.

University of Copenhagen

The working conditions at The Centre of Social Evolution in Copenhagen led by **Koos Boomsma** are now nearly back to normal. The renovations of our building have reached the stage where it is feasible to set up the GC-MS lab again. An event long awaited by the "Social recognition" group now led by **David Nash**. Masters' student **Anders Illum** has extracted surface hydrocarbons from *Mantigusa* spiders and their *Formica* ant hosts, and they have just been sent to **Patrizia d'Ettores** lab in Paris for analysis. Koos and Patrizia d'Ettores has accepted an invitation from Joan Herbers and Neil Tsutsui to contribute a paper to a special "Hamilton's Legacy" issue of *Biology Letters* to appear in spring 2014. **David Nash** has been asked to be part of the committee to develop the "Ethology" theoretical exercises for the 26th International Biology Olympiad, to be held in Denmark, where high school pupils from 60 countries will compete on biological knowledge and skills.

In the "Social parasitism" group also led by David, **Joanito Liberti** defended his MSc thesis on 18 April and is now employed at CSE as research assistant. **Sämi Schär** has returned from his period abroad in the lab of Prof. Naomi Pierce at Harvard. Here he has been developing RAD sequence tags for Polyommata butterflies to allow comparison of the genetic. **Lærke Nykjær Johansen** has started a bachelor project with David and **Andreas Kelager**, completing the genotyping and population genetic analysis of *Maculinea alcon* collected from the National park "Thy" in 2012. Andreas continues his fieldwork on *Maculinea alcon*, this year in National park "Vadehavet". **Kai von Szadkowski** completed his period in Harvard in early January, during which he successfully filmed interactions between *Myrmica rubra* workers, queens and caterpillars of *Maculinea alcon*. Kai finished his stay at CSE on 27 February.

Susanne den Boer has returned to Copenhagen from her two years in Perth. Her daughter Nora was born on 15 May and Susanne is now on maternity leave until March 2014. New MSc student **Sarah Cherasse** has been visiting the lab of Serge Aron to (successfully) try out their methods for antibacterial and PO/pro-PO monitoring in the reproductive tracts of *Acromyrmex* gynes. Fulbright Fellow **Manvir Singh** completed his stay with CSE and is moving to Harvard Anthropology, to do a PhD in Richard Wrangham's group.

Bettina Markussen, our hardworking CSE secretary, also went on maternity leave in April, and gave birth to a son, Henry, in May. While he is on leave, her duties are being covered by **Maj-Britt Pontopidan**, who is no stranger to the group, having previously worked with David Hughes for her Master's project when he was still part of the group.

In the "Invasive Social Syndromes" group led by **Jes Søe Pedersen**, **Dóra Huszár** continues the *Myrmica rubra* project with a new series of morphological measures now also including

fluctuating asymmetry as a quantification of possible developmental instability. **Sarah Carlsen** defended her MSc thesis “Variation in colony type in the common red ant, *Myrmica rubra*: A study of two Danish populations” on 8 April 2013. Sarah has been hired for 3 months to complete the microsatellite screening of the ‘premier league’ *A. echinator* and *Atta colombica* colonies that **Guojie Zhang** will use for his transcriptomics and methylomics studies. **Sarah Carlsen** has also been training new MSc student **Louise Savstrup Pedersen** in molecular genetic analyses of *M. rubra* for Louise’s thesis project. This involves a study of diploid male production in relation to the high inbreeding detected in parts of the population on Bornholm, but also a further study of the development of the local supercolony. **Patrick Philipson** has joined as BSc project student to boost the morphological measurements focusing on size allometries in gynes/queens related to dispersal. After having spent some months in Tim Linksvayer’s lab in Pennsylvania **Luigi Pontieri** is back and now focuses on analysing the data from the study surprisingly showing a strong preference (83%), not avoidance, for *Monomorium pharaonis* colonies to move into nests containing nestmate corpses covered with spores of *Metarhizium brunneum*. **Rasmus Stenbak Larsen** ended his contact on 31 January and **Pia Kjær Hansen** has started an MSc project to study possible competition between honeybees and wild bees in Thy National Park.

Associate professor **Annette Bruun Jensen** from the Frederiksberg Campus has been appointed as Head of Study for Animal Science BSc. Annette, together with Professor **Jørgen Eilenberg** has received the grant “Discerning Taste: Deliciousness as an Argument for Entomophagy”. **Joanna Malagocka** is back from maternity leave and will resume her *Pandora-Formica* project, with major focus on transcriptome sequencing data. BSc student **Emil Østergaard** Rue has left for a stay in São Paulo as part of his project on insect pathogenic fungi in citrus. Signatures have been obtained for a Marie Curie Intra-European Fellowship for **Susanna Saari** on the project EndoPest. Susanna will first start as a guest researcher funded by two personal Finnish grants that she has obtained. The Marie Curie grant will then start 1 March 2014. A Greek candidate, **Sevasti Maistrou**, for the PhD scholarship on ‘Exploring fungal entomopathogen diversity for improved biological control’ has been appointed to start 1 August. **Henrik de Fine Licht** has decided to start his post doc project in August with the team at Frederiksberg. Title of his project is “Disentangling the intimate details of parasite adaptation - Host specialization in entomopathogenic fungi. **Jens Ringelberg** from Duur Aanen’s lab in Wageningen joined the “Farming and Husbandry” group led by **Morten Schiøtt** and **Michael Poulsen**. Jens stayed at the CSE until August doing RNA sequencing of *Termitomyces*. **Thijs Gruntjes** finished his project on *Trabulsiella* with fungus-growing termites and returned to Holland mid-June. **Hwei-yen Chen**, Taiwanese citizen and PhD student at the Evolutionary Biology Center in Uppsala, is visiting CSE from 1 May until 30 November 2013. She started her stay joining the Panama fieldwork where she initiated a project on size variation in metapleural glands of *Atta colombica* and *Trachymyrmex zeteki*. Apart from finishing that, she will be working with Guojie on a new project to quantify mutational load in *Acromyrmex echinator*. **Michael Poulsen** has accepted an invitation to be an editorial board member of *Frontiers in Systems Microbiology*, a subsection of *Frontiers in Microbiology*. **Morten Schiøtt** has accepted a 3-year position as Associate Professorship in Molecular Evolutionary Biology at the CSE. Morten also had brief paternity leave in connection to the birth of his son Malthe on 1 May 2013. Signatures have been obtained for the Marie Curie Incoming International Fellowship of **Jonathan Shik** on the project INSEAME (*INtegrating Social Evolution And Metabolic*

Ecology). Jon will study metabolic rates of entire fungus gardens across the attine ants to document major transitions in efficiency of fungus farming.

Sean Byars from the “Evolutionary Medicine” group has completed his MC at CSE and is now seriously looking for jobs in the Melbourne area. **Matilde Winther-Jensen** successfully defended her MSc thesis ‘Polycystic ovary syndrome and evolution in contemporary Denmark’ on 22 January 2013. Matilde accepted a 2-year position at the Cardiovascular Department of Rigshospitalet, starting 1 March 2013.

IUSSI (North-west European Section)

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