

DETAILED PROGRAM

Tuesday 19th August

Plenary Events

08.40 – 08.50 Welcome
Sir Alan Wilson
Vice-Chancellor, The University of Leeds
(Conference Auditorium)

08.50 – 09.40 Plenary talk
Robert May
Evolution and everyday Life: Examples of relevance and neglect
(Conference Auditorium)

Chairperson: Jacobus (Koos) Boomsma

13.00 – 14.00 ESEB council Meeting
(Museum, School of Biology)

17.30 - Poster Session
(Sports Centre)

18.30 – 19.30 Discussion on ‘Free Access Publishing’
Catriona MacCallum *Public Library of Science*
(Roger Stevens Lecture Theatre 1)

Tuesday 19 August

Conference Auditorium 1

Symposium 1: JEB Special Symposium:

The role of evolutionary biology in understanding, preventing and treating infectious diseases

(Bruce Levin)

- 09.50 - 10.30** **Lipsitch, M.]**
Antibiotic use and resistance: An evolutionary / population perspective
- 10.30 - 11.00** **Coffee**
- 11.00 - 11.40** **Andersson, D. I.**
Adapting to the deleterious effects of antibiotic resistance
- 11.40 - 12.20** **Baquero, F.**
Antibiotic Resistance: Adapting to adversity by manipulating mutation rates and local tool-box genetic resources
- 12.20- 12.40** **Peck, S. L.**
The spread of antibiotic resistance in a spatially structured hierarchy of metapopulations
- 12.40 - 14.00** **Lunch**
- 14.00 - 14.40** **Gupta, S.**
The effects of immune selection on the population dynamics of malaria
- 14.40 - 15.20** **Svanborg, C.**
Genetic control of innate immune responses and resistance to kidney infection: some evolutionary implications
- 15.20 - 15.40** **Hambuch, T. M.**
Evolutionary Genetics of Smallpox
- 15.40 - 16.00** **Tea**
- 16.00 - 16.20** **Reece, S. E.**
Host anaemia and sex ratios in malaria parasites
- 16.20 - 16:40** **Day, T.**
A general theory for the evolutionary dynamics of virulence
- 16.40 - 17:00** **Dionisio, F.**
Evolution of conjugative plasmids under antibiotic pressure
- 17.00 - 17.30** **Levin, B** - Brief summary and provoked discussion.

Tuesday 19 August

Conference Auditorium 2

Symposium 2: Reproductive parasites in evolution (Greg Hurst & Tim Karr)

- 09.50 – 10.20 Jiggins, F.**
Host-parasite coevolution between sex ratio distorting microbes and their hosts
- 10.20 – 11.00 Coffee**
- 11.00 – 11.30 Breeuwer, J. A. J.**
Haploid female parthenogenesis in the mite *Brevipalpus phoenicis* is caused by a new bacterium
- 11.30 – 12.00 Bazinet, C.**
The Cellular Archeology of Sex
- 12.00 – 12.20 Ubeda, F. F. U.**
Why Mendelian segregation?
- 12.20 – 12.40 Burt, A.**
Site-specific selfish genes as tools for the control and genetic engineering of natural populations
- 12.40 – 14.00 Lunch**
- 14.00 – 14.20 Rigaud, T.**
Consequences of Wolbachia-induced female biased sex ratios on their isopod host reproductive success
- 14.20 – 14.40 Reuter, M.**
Loss of Wolbachia infection during colonisation in the invasive Argentine ant *Linepithema humile*
- 14.40 – 15.00 Tinsley, M.**
Host specificity of male-killing bacteria in ladybirds
- 15.00 – 15.20 Pannebakker, B. A.**
Cytology of *Wolbachia* induced parthenogenesis in *Leptopilina clavipes* (Hymenoptera: Figitidae)
- 15.20 – 16.00 Tea**
- 16.00 – 16.20 Egas, M.**
Evolution of incompatibility types in CI Wolbachia is structurally unstable under the mod-resc hypothesis
- 16.20 – 16.40 Butcher, R. D. J.**
Competition and co-operation between intracellular insect symbionts within a common host
- 16.40 – 17.00 Perrot-Minnot, M-J.**
Castration of intermediate hosts by acanthocephalan parasites : adaptive trait or by-product of manipulation
- 17.00 – 17.20 Smith, J. E.**
The evolutionary origins of vertical transmission in microsporidian parasites

Tuesday 19 August

Roger Stevens Lecture Theatre 20

Symposium 3: *Genetics of species differences* (Juergen Gadau & Leo Beukeboom)

- 09.50 – 10.20** **Rieseberg, L. H.**
Integration of Populations and Differentiation of Species
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.30** **Orr, A.**
Molecular evolution of a 'speciation gene' in *Drosophila*
- 11.30 – 12.00** **Barton, N.**
The plausibility of parapatric speciation
- 12.00 – 12.20** **Miyatake, T.**
Pleiotropic effects of clock genes and allochronic reproductive isolation
- 12.20 – 12.40** **Domazet-Loso, T.**
An evolutionary analysis of orphan genes in *Drosophila*
- 12.40 – 14.00** **Lunch**
- 14.00 – 14.20** **Bensch, S.**
Extreme conflict among mitochondrial and nuclear loci for phylogenetic patterns in Phylloscopus warblers
- 14.20 – 14.40** **Greenberg, A. J.**
Precise allelic substitution as a tool to study speciation and adaptation in *Drosophila*
- 14.40 – 15.00** **Haerty, W.**
Sexual isolation between natural populations of *Drosophila melanogaster* from Brazzaville (Congo)
- 15.00 – 15.20** **Lineham, M. E.**
How polygenic are the traits responsible for sexual isolation in fruit flies?
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **Shuker, D. M.**
The genetic basis of male hybrid sterility in a *Chorthippus* grasshopper hybrid zone: quantitative genetic and molecular approaches
- 16.20 – 16.40** **Pietsch, C.**
The genetic architecture of courtship and mating behaviour of *Nasonia* (Hymenoptera: Pteromalidae)
- 16.40 – 17.00** **Gadau, J.**
The evolution of non-flying males in the genus *Nasonia*
- 17.00 – 17.20** **Peire-Morais, A.**
Non-mendelian inheritance of courtship behaviour in *Nasonia vitripennis* (Hymenoptera: Pteromalidae)

Symposium 4: *Natural hybridization and introgression: its role in evolution and conservation*
(Thure Hauser, Michael L. Arnold & Michael M. Hansen)

- 09.50 – 10.20** **Lexer, C.**
Hybridization and ecological divergence in wild sunflowers
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.30** **Bernatchez, L.**
The integrated use of quantitative genetics, linkage mapping and functional genomics to investigate the basis of population divergence and reproductive isolation in a hybrid zone of the lake whitefish (Salmonidae)
- 11.30 – 12.00** **Bouck, A.**
Mapping introgression and reproductive isolation in Louisiana Irises
- 12.00 – 12.20** **Babik, W.**
A mosaic, bimodal hybrid zone between two species of newts (*T. vulgaris* x *T. montandoni*, Amphibia: Salamandridae)
- 12.20 – 12.40** **Hauser, T. P.**
Frequency dependent male and female fitness of oilseed rape, weedy *B. rapa*, and their hybrids
- 12.40 – 14.00** **Lunch**
- 14.00 – 14.20** **Asami, T.**
Interspecific asymmetry of cryptic isolation and hybrid vigor in hermaphroditic snails
- 14.20 – 14.40** **Nürnbergger, B.**
Barriers to gene flow produced by selection on quantitative traits in hybrid zones
- 14.40 – 15.00** **Christiansen, D. G.**
How sexually reproducing hybrids remain hybrid: Microsatellite offspring genotyping in pure populations of the hybrid waterfrog *Rana esculenta*
- 15.00 – 15.20** **Strehl, C-P.**
Preventing introgression in ants by shunting F1 hybrids into the sterile caste
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **Köhler, S. C.**
Natural selection in tadpole cohorts in the *Bombina* hybrid zone
- 16.20 – 16.40** **Nolte, A.**
An apparent hybrid species of *Cottus* displays novel traits that facilitate colonization of new ecological subregions within the Rhine drainage
- 16.40 – 17.00** **Spaak, P**
Predator induced hybrid superiority in *Daphnia*?
- 17.00 – 17.20** **Hauffe, H. C.**
Local speciation and raiation in a chromosomal hybrid zone

Tuesday 19 August

Roger Stevens Lecture Theatre 22

Symposium 5: Evolution in non-coding DNA (Richard Sibly & Mark Pagel)

- 09.50 – 10.20 Hartl, D. L.**
Genomic Themes in Augmented and Diminished C
- 10.20 – 11.00 Coffee**
- 11.00 – 11.30 Li, W-H.**
Methods for analyzing genomic DNA sequences
- 11.30 – 12.00 Tristem, M.**
The evolution, persistence and distribution of endogenous retroviruses
- 12.00 – 12.20 Brookfield, J. F. Y.**
Phylogenies of interspersed repetitive DNA families when not all copies are active
- 12.20 – 12.40 Johnson, L.**
Sequence analysis of rodent ID elements: Re-assessing the evidence for a master gene
- 12.40 – 14.00 Lunch**
- 14.00 – 14.20 Papp, B.**
Dosage sensitivity and evolution of gene co-regulation and gene families yeast
- 14.20 – 14.40 Keightley, P. D.**
Quantifying functional constraints in noncoding DNA
- 14.40 – 15.00 Parsch, J.**
Selective constraints on intron evolution in *Drosophila*
- 15.00 – 15.20 Sibly, R. M.**
In search of a general theory of microsatellite evolution
- 15.20 – 16.00 Tea**
- 16.00 – 16.20 Weetman, D.**
Misbehaving microsatellites: how significant are deviations from classical mutation models?
- 16.20 – 16.40 Ustinova, J.**
Length and frequency of microsatellite loci in the huge genome of the acridid grasshopper *Chorthippus biguttulus*
- 16.40 – 17.00 Meagher, T. R.**
QTLs need not be coding loci - localised variation in DNA content within the genome of *Silene latifolia*
- 17.00 – 17.20 Filatov, D. A.**
Molecular evolution of the human pseudoautosomal region

Wednesday 20th August

Plenary events

- 08.50 – 09.40 Plenary talk
Dan Hartl
Evolutionary genomics: Platform for a new modern synthesis
(Conference Auditorium)
- Chairperson: Godfrey Hewitt
- 13.00 – 14.00 Journal of Evolutionary Biology Editorial Board Meeting
(Museum, School of Biology)
- 17.30 – 18.00 Journal of Evolutionary Biology Deciding Editors Meeting
(Museum, School of Biology)
- 17.30 – 18.00 Refreshments
(Sports Centre)
- 18.00 – 18.40 Presidential Address
Rolf Hoekstra
On genetic infection and safe sex
(Conference Auditorium)
- 18.40 – 19.30 JMS Lecture
Patricia Beldade
The genetic basis of phenotypic variation: Evolution and development of butterfly wing patterns
(Conference Auditorium)

Wednesday 20 August Roger Stevens Lecture Theatre 21

Symposium 6: *Sexual conflict* (Rhonda Snook & David Hosken)

- 09.50 – 10.20 Arnqvist, G.**
Sexual conflict: concepts and empirical avenues
- 10.20 – 11.00 Coffee**
- 11.00 – 11.30 Eberhard, B.**
Male-female conflict and genitalia: failure to confirm predictions
- 11.30 – 12.00 Lessells, K.**
Why are copulating males bad for females?
- 12.00 – 12.20 Moore, P. J.**
Patterns of genetic correlations between traits required for male fertility and manipulation of female remating
- 12.20 – 12.40 Rodríguez-Muñoz, R.**
Genetic trade-offs in fitness related traits in the field cricket *Gryllus bimaculatus*?
- 12.40 – 14.00 Lunch**
- 14.00 – 14.20 Crudgington H. S.**
Experimental removal and elevation of sexual selection in a sperm heteromorphic model insect system: Does sexual selection generate sexual conflict?
- 14.20 – 14.40 Wigby, S. L.**
The evolution of sexual conflict in *Drosophila melanogaster*
- 14.40 – 15.00 Rowe, L.**
On detecting sexually antagonistic coevolution with population crosses
- 15.00 – 15.20 Reinhardt, K.**
Sexual conflict and reproductive isolation in a hybrid zone
- 15.20 – 16.00 Tea**
- 16.00 – 16.20 Stockley, P.**
Sexual conflict and speciation in rodents
- 16.20 – 16.40 Maklakov, A. A.**
Conflict and cooperation in mating systems of *Stegodyphusi* spiders
- 16.40 – 17.00 Anthes, N.**
Do internally fertilising simultaneous hermaphrodites really trade sperm?
- 17.00 – 17.20 Harris W. E.**
Sexual conflict. polygyny and female mate preference: avoidance of sperm-depleted males by a novel mechanism of mate discrimination

Symposium 7: *Pleistocene refugia, colonization patterns and evolution* (Anna-Britta Berglund, Pierre Taberlet and Godfrey Hewitt)

- 09.50 – 10.20** **Bennett, K.**
The movement of plants in space and time
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.30** **Taberlet, P.**
Molecular techniques for phylogeographic studies.
- 11.30 – 12.00** **Crandall, K.**
Analytical approaches in phylogeography
- 12.00 – 12.20** **Baird, S. J. E.**
A novel approximation to the structured coalescent: the Dancing Trees algorithm
- 12.20 – 12.40** **Cooper, S. J.B.**
The impact of Pleistocene environmental changes on population subdivision of species in southern Australia
- 12.40 – 14.00** **Lunch**
- 14.00 – 14.20** **Kotlik, P.**
Circum Black Sea phylogeography of freshwater fish *Barbus*: divergence in the Pontic glacial refugium
- 14.20 – 14.40** **Babik, W.**
A long leap from the East? Phylogeography of *Rana arvalis* in Eurasia
- 14.40 – 15.00** **Vogel, J.**
Pleistocene refugia, phylogeography and polyploidy of the rockfern genus *Asplenium* in Europe: evidence from cpDNA and allozymes
- 15.00 – 15.20** **Carlsson, M.**
The genetic structure of North European adders (*Vipera berus*).
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **Tribsch, A.**
Patterns of endemism and comparative phylogeography confirm palaeo-environmental evidence for Pleistocene refugia in the Eastern Alps
- 16.20 – 16.40** **Van Houdt, J. K. J.**
Holarctic phylogeography of burbot (*Lota lota*): evidence for large-scale extinctions and recolonisation
- 16.40 – 17.00** **Liebers, D.**
The Herring Gull (*Larus argentatus*) complex is not a ring species
- 17.00 – 17.20** **Bronken Eidesen, P.**
Effects of climate change on ecosystems in Svalbard: past and future immigration of thermophilous key species

Symposium 8: Are transmission modes important for the evolution of mutualistic symbioses? (Duur K. Aanen & Jacobus J. (Koos) Boomsma)

- 09.50 – 10.20** **Frank, S. A.**
Host control of symbiont transmission: the separation of symbionts into germ and soma
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.30** **Herre, E. A.**
Do general laws govern mutualisms? Abstractions and realities
- 11.30 – 12.00** **Lutzoni, F.**
What can we learn from lichens about the origin, maintenance and deterioration of mutualism?
- 12.00 – 12.20** **de Roode, J.**
Within-host competition between rodent malaria parasites
- 12.20 – 12.40** **Nash, D. R.**
Transmission, dispersal and evolution of trophobiotic symbionts of ants
- 12.40 – 14.00** **Lunch**
- 14.00 – 14.20** **Aanen, D. K.**
Fungus-growing social insects and symbiont transmission modes
- 14.20 – 14.40** **Poulsen, M.**
Incompatibility mechanisms of fungus clones cultivated by *Acromyrmex* leaf-cutting ants
- 14.40 – 15.00** **Korb, J.**
Transmission modes of fungal symbionts in fungus-growing termites (Macrotermitinae) and their implications
- 15.00 – 15.20** **Belliure, B.**
Does Tomato Spotted Wilt Virus benefit its vector *Frankliniella occidentalis*?
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **Bédhomme, S.**
Resource availability and parasite virulence in *Aedes aegypti* infected with a microsporidia
- 16.20 – 16.40** **Capelle, J.**
Virulence and mode of transmission in wild populations: a plant/parasite study case
- 16.40 – 17.00** **Gil, R.**
The minimum gene set to sustain endosymbiotic life: comparative analysis of reduced genomes
- 17.00 – 17.20** **Barr, C.**
Hybridization and regional sex ratios in a gynodioecious plant with nuclear-cytoplasmic sex inheritance

Symposium 9: Genetic biodiversity in natural populations: implications for management (Kerstin Johannesson, Armando Caballero and Jesús Fernández)

- 09.50 – 10.20** **Hedrick, P.**
Effective population size in endangered species
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.30** **Bernatchez, L.**
Challenges in assessing genetic biodiversity: an empirical illustration through recent research on salmonid fishes
- 11.30 – 12.00** **Nunney, L.**
Responding to directional environmental change: adaptation or extinction?
- 12.00 – 12.20** **Hollander, J.**
Evolution of reproductive barriers
- 12.20 – 12.40** **Leblois, R.**
Maximum likelihood inference of demographic parameters from microsatellites data : precision and robustness of a new algorithm
- 12.40 – 14.00** **Lunch**
- 14.00 – 14.20** **Bakker, J.**
Genetic differentiation in experimental *Drosophila melanogaster* metapopulations
- 14.20 – 14.40** **Wang, J.**
Estimating admixture proportions from genetic data
- 14.40 – 15.00** **Griebeler, E. M.**
Spatial genetic patterns generated by admixing populations of two cryptic species
- 15.00 – 15.20** **Carvajal-Rodríguez, A.**
Effect of contamination processes on intra- and interpopulation genetic diversity
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **van der Linde, K.**
Genetic differences on a local scale
- 16.20 – 16.40** **Ernande, B.**
Adaptive changes in harvested populations: Plasticity and evolution of age and size at maturation
- 16.40 – 17.00** **Jehle, R.**
The spatio-temporal genetic structure of subdivided newt populations
- 17.00 – 17.20** **Zhang, X-S.**
Response of genetic variation to a bottleneck in population size

Symposium 10: *Experimental microbial evolution: the roles of sex, recombination and mutation*
(Santiago F. Elena, J. Arjan G. M. de Visser and Graham Bell)

- 09.50 – 10.20** **Bell, G.**
Experimental sexual selection in *Chlamydomonas*
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.30** **Taddei, F.**
Sources of genetic and phenotypic variability
- 11.30 – 12.00** **Bohannan, B. J. M.**
Using microbial model systems to explore spatially-explicit evolutionary theory
- 12.00 – 12.20** **Korona, R.**
When defects cannot be masked: a case study with deleterious mutations in yeast
- 12.20 – 12.40** **Schoustra, S.**
Experimental evolution in *Aspergillus nidulans*: reducing the cost of resistance
- 12.40 – 14.00** **Lunch**
- 14.00 – 14.20** **Velicer G.**
Evolution of cooperation in a social bacterium
- 14.20 – 14.40** **de Visser J. A. G. M.**
Experimental rejection of non-transitive interactions as cause of declining rate of evolution in *E. coli*
- 14.40 – 15.00** **Hughes, D.**
Evolution of fluoroquinolone resistance in urinary tract infection *E. coli*
- 15.00 – 15.20** **Collins, S.**
Evolutionary Response to Rising Levels of Carbon Dioxide in *Chlamydomonas reinhardtii*
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **Elena, S. F.**
The experimental evolution of gene regulation and expression: the case of the *tetAR* operon
- 16.20 – 16.40** **Buckling, A.**
Specialization constrains diversification of *Pseudomonas fluorescens*
- 16.40 – 17.00** **Spiers, A.**
Multiple evolution to a single niche: comparative analysis of the *Pseudomonas fluorescens* wrinkly spreaders
- 17.00 – 17.20** **Bell, G.**
Closing remarks.

Thursday 21th August

Plenary events

08.20 – 09.10 Plenary talk
Paul Brakefield
Butterfly eyespots and the power of evo-devo to explore
evolutionary constraints
(Conference Auditorium)

Chairperson: Peter van Tienderen

12.40 – 13.15 ESEB Business Meeting – All Welcome
(Conference Auditorium)

14.00 – Excursions
(Conference Auditorium)

Thursday 21 August

Conference Auditorium 1

Symposium 11: *Pollinators and plant evolution - from specialists to generalists* (Christine B. Mueller & James M. Cook)

09.20 – 09.50 Ollerton, J.

Patterns of specialization and generalization in pollination systems across ecosystems

09.50 – 10.20 Smithson, A.

Cheating plants, pollinator learning, and specialisation by plants and pollinators

10.20 – 11.00 Coffee

11.00 – 11.20 Castellanos, M. C.

Pollen transfer and evolutionary shifts to hummingbird pollination in *Penstemon*

11.20 – 11.40 Collin C. L.

Should *Dianthus sylvestris* cater to a specialist pollinators that eats its seeds?

11.40 – 12.00 Cook, J. M.

Impacts of pollinating fig wasps on the evolution of their host plants

12.00 – 12.20 Memmot, J.

Generalization in pollination systems: a food web approach

12.20 – 12.40 Schiestl, F. P.

Insect behaviour and floral evolution in sexually deceptive orchids

12.40 – 14.00 Lunch

14.00 – Excursions

Thursday 21 August

Conference Auditorium 2

Symposium 12: *Evolution of sexual communication in insects* ([Astrid Groot](#) & [Anneli Hoikkala](#))

- 09.20 – 09.50** **Löfstedt, C.**
A phylogenetic reconstruction of the evolution of moth pheromone communication
- 09.50 – 10.20** **Ritchie, M. G.**
Title unavailable
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.20** **Cremer, S.**
Being attractive to both sexes: chemical female mimicry of ant males
- 11.20 – 11.40** **LeBas, N. R.**
Non-linear and correlational sexual selection on ‘honest’ female ornamentation
- 11.40 – 12.00** **Jones, T. M.**
The importance of being average
- 12.00 – 12.20** **Groot, A.**
Evolution of moth pheromone communication systems
- 12.20 – 12.40** **Serrano-Meneses, A.**
Disentangling the mechanisms of selection for male wing pigmentation in calopterygid damselflies: sexual or natural selection?
- 12.40 – 14.00** **Lunch**
- 14.00 –** **Excursions**

Thursday 21 August

Roger Stevens Lecture Theatre 20

Symposium 13: Geographical parthenogenesis and polyploidy (Koen Martens & Peter Van Dijk)

09.20 – 09.50 **Van Dijk, P. J.**

Geographic parthenogenesis in higher plants

09.50 – 10.20 **Martens, K.**

Geographic Parthenogenesis in animals: a review

10.20 – 11.00 **Coffee**

11.00 – 11.20 **Aguin-Pombo, D.**

Origin and advantages of multiple clones of *Empoasca* like leafhoppers in the Madeira archipelago. Geographical patterns of parthenogenesis within an island escale

11.20 – 11.40 **Meirmans, P. G.**

The distribution areas of sexual and asexual dandelions suggest postglacial recolonisation routes for which there is only scarce genetic evidence

11.40 – 12. 00 **Haag, C. R.**

Coexistence of cyclical parthenogenetic and obligate parthenogenetic *Daphnia pulex* in a metapopulation

12.00 – 12.20 **Kapralov, M. V.**

The Ural Mountains as a model system for studying South-North differentiation in sexuality and polyploidy, exemplified by the Nodding Saxifrage (*Saxifraga cernua*)

12.20 – 12.40 **Lamatsch, D. K.**

Monophyletic origin of the triploid clones of the Amazon Molly, *Poecilia formosa*

12.40 – 14.00 **Lunch**

14.00 – **Excursions**

Thursday 21 August

Roger Stevens Lecture Theatre 21

Symposium 14: Positive selection and adaptive trait genes (Christian Schlötterer & Diethard Tautz)

09.20 – 09.50 **Nachman, M. W.**

The genetic basis of adaptive melanism in pocket mice

09.50 – 10.20 **Stephan, W.**

Multi-locus approaches to distinguish the effects of demography, substructure and selection in *Drosophila*

10.20 – 11.00 **Coffee**

11.00 – 11.20 **Anderson, T. J. C.**

Drug treatment and hitchhiking in SE Asian malaria parasites

11.20 – 11.40 **Hasselmann, M.**

Distribution of nucleotide polymorphisms, recombination rate and nonsynonymous sites at a locus under strong overdominance selection

11.40 – 12.00 **Ihle, S.**

Searching for genes involved in environmental adaptations in mouse populations

12.00 – 12.20 **Wiener, P.**

Patterns of diversity near a selected locus in cattle

12.20 – 12.40 **Emerson, B. C.**

Origin and maintenance of a broad-spectrum disease resistance locus in *Arabidopsis*

12.40 – 14.00 **Lunch**

14.00 – **Excursions**

Thursday 21 August

Roger Stevens Lecture Theatre 22

Symposium 15: Evolutionary biology of learning (Tadeusz J. Kawecki & Sue Healy)

09.20 – 09.50 **Braithwaite, V.**

The evolutionary ecology of learning and memory

09.50 – 10.20 **Mery, F.**

Fitness costs and benefits of learning: experimental evidence from *Drosophila melanogaster*

10.20 – 11.00 **Coffee**

11.00 – 11.20 **Sznajder, B.**

Innate versus learned responses to prey-related cues and the evolution of learning

11.20 – 11.40 **Mallon, E. B.**

Immune response inhibits memory consolidation in insects

11.40 – 12. 00 **Mappes, J.**

Does natural selection favour smart birds?

12.00 – 12.20 **Jordan, W. C.**

Atlantic Salmon change the expression of odorant receptor genes to learn the smell of home

12.20 – 12.40 **Ellers, J.**

Testing the role of vocal learning in song divergence and male dispersal

12.40 – 14.00 **Lunch**

14.00 – **Excursions**

Friday 22nd August

Plenary events

08.20 – 09.10 Plenary talk
Allen Orr
The genetics of adaptation: What do we know?
(Conference Auditorium)

Chairperson: Nicholas Barton

17.30 - Poster Session
(Sports Centre)

20.00 – 01.00 Conference Dinner
(Royal Armouries)

Friday 22 August Conference Auditorium 1

Symposium 16: *Key factors in adaptive radiation* (Konrad Bachmann & Susanne Foitzik)

- 09.20 – 09.50** **Meyer, A.**
Comparative developmental and genomic approaches to the study of cichlid fish diversification
- 09.50 – 10.20** **Städler, T.**
Genealogical footprints of speciation processes in wild tomatoes: A multilocus approach
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.20** **Glaubrecht, M.**
Endemic radiations in the evolutionary theatre of ancient lakes: an evolutionary ecology approach exemplified by limnic gastropods in East Africa and on Sulawesi
- 11.20 – 11.40** **Maraun, M.**
Radiation in 'ancient asexuals': oribatid mites (Acari)
- 11.40 – 12.00** **Mayhew, P. J.**
Which clade is the greatest? Reasons why we still don't know
- 12.00 – 12.20** **Ruber, L.**
Rapid speciation and ecological divergence in the American seven-spined gobies (Gobiidae, Gobiosomatini) inferred from a molecular phylogeny
- 12.20 – 12.40** **Feldhaar, H.**
Is ecological speciation the driving force in the radiation of the *Macaranga* associated *Crematogaster* (*Decacrema*) plant-ants?
- 12.40 – 14.00** **Lunch**

Friday 22 August Conference Auditorium 2

Symposium 17: *The evolutionary biology of complex phenotypes* (Massimo Pigliucci & Katherine Preston)

- 09.20 – 09.50** **Preston, K. A.**
Phenotypic integration: the challenges of studying the evolution of complex phenotypes
- 09.50 – 10.20** **Klingenberg, C. P.**
Integration in complex morphological structures: from developmental processes to evolutionary potential
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.20** **Astles, P.**
Potential for character state evolution in response to an indirect ecological effect
- 11.20 – 11.40** **Hermisson, J.**
The evolution of the genetic architecture of complex traits under selection and constraint
- 11.40 – 12.00** **Townsend, J. P.**
Population Genetic Variation in Genome-wide Gene Expression
- 12.00 – 12.20** **Forsman, A.**
Correlated evolution of conspicuous coloration and body size in poison frogs (Dendrobatidae)
- 12.20 – 12.40** **Davidowitz, G.**
The physiological regulation of insect body size
- 12.40 – 14.00** **Lunch**

Friday 22 August Roger Stevens Lecture Theatre 20

Symposium 18: *The evolution of sexual size dimorphism* (Jutta Schneider & Marie Herberstein)

09.20 – 09.50 **Blanckenhorn, W. U.**

Selection, Rensch's rule and the evolution of sexual size dimorphism in dung flies

09.50 – 10.20 **Badyaev, A. V.**

Male and female growth in sexually dimorphic vertebrates: Harmony, conflict, or both?

10.20 – 11.00 **Coffee**

11.00 – 11.20 **Szekely, T.**

Sexual selection explains Rensch's rule of size dimorphism in shorebirds

11.20 – 11.20 **Höglund, J.**

The evolution of sexual size dimorphism in grouse- phylogenetic data and the molecular basis for sex specific growth patterns in chicken

11.40 – 12.00 **Teder, T.**

Females tend to vary more in body size than males: a meta-analysis

12.00 – 12.20 **Fairbairn, D.**

Deducing the adaptive significance of divergent genitalic and somatic sexual size dimorphism in a water strider

12.20 – 12.40 **Uhl, G.**

Sex related growth strategies in a spider

12.20 – 14.00 **Lunch**

Friday 22 August Roger Stevens Lecture Theatre 21

Symposium 19: *From cell to society: conflict and cooperation at different evolutionary levels*
(Francis Ratnieks & Tom Wenseleers)

09.20. – 09.50 **Szathmary, E.**

Major transitions in evolution: Information, energy, boundary

09.50 – 10.20 **Frank, S. A.**

Repression of competition and the evolution of cooperation

10.20 – 11.00 **Coffee**

11.00 – 11.20 **Foster, K.**

How is cheating maintained in the slime mould, *Dictyostelium discoideum*?

11.20 – 11.40 **Ratnieks, F. L. W.**

Conflict resolution by worker policing in insect societies

11.40 – 12.00 **Aanen, D. K.**

Genomic conflicts in mushrooms

12.00 – 12.20 **Dijkstra, M. B.**

The regulation of worker reproduction in queenright *Acromyrmex* leafcutter ants

12.20 – 12.40 **Korb, J.**

The evolution of cooperation in termites

12.40 – 14.00 **Lunch**

Friday 22 August Roger Stevens Lecture Theatre 22

Symposium 20: *The evolutionary roles of biased variation and internal selection* (Wallace Arthur & Alessandro Minelli)

- 09.20 – 09.50** **Newman, S. A.**
From physics to development: the evolution of morphogenetic mechanisms
- 09.50 – 10.20** **Stoltzfus, A.**
Climbing Mount Probable: the mechanistic basis of orthogenesis
- 10.20 – 11.00** **Coffee**
- 11.20 – 11.20** **Fusco, G.**
Interaction between selection and constraints in arthropod post-embryonic growth
- 11.20 – 11.40** **Chipman, A. D.**
The gene and the egg – what is conserved and what is not in early arthropod embryogenesis
- 11.40 – 12.00** **Hansen, T. F.**
The effect of epistatic gene interactions on evolvability
- 12.00 – 12. 20** **Azevedo, R. B. R.**
Nematode cell lineages are computationally efficient
- 12.20 – 12.40** **General Discussion**
Contributions from organisers, speakers and audience
- 12.40 – 14.00** **Lunch**

Friday 22 August Conference Auditorium 1

Symposium 21: *Evolution on islands - patterns of colonisation, adaptation and speciation* ([Sara Goodacre & Angus Davison](#))

14.00 – 14.30 **Gillespie, R. G.**

Evolution of spiders on Oceanic islands: the venture of few and gain of many

14.30 – 15.00 **Meyer, A.**

Patterns and processes of colonization and radiation in East African cichlid fish species flocks

15.00 – 15.20 **Roderick, G. K.**

Colonisation of the insular Pacific by herbivorous insects: the role of host shifts and dispersal

15.20 – 16.00 **Tea**

16.00 – 16.20 **Clegg, S. M.**

Microevolution in an island bird group, the silvereyes of the southwest Pacific

16.20 – 16.40 **Leys, R.**

Islands in the desert: Evolution of subterranean water beetles in arid Australia

16.40 – 17.00 **Adamowicz, S. J.**

Intercontinental phylogeography and the radiation of *Daphnia*

17.00 – 17.20 **Jordal, B. H.**

Distinguishing insular isolation from host switching in the diversification of Macaronesian beetles breeding in *Euphorbia* spurge

Friday 22 August Conference Auditorium 2

Symposium 22: *The evolutionary significance of variation in reproductive investment* (B. J. Zwaan & K. Fischer)

- 14.00 – 14.30** **Boggs, C. L.**
Reproductive investment as a life history adaptation
- 14.30 – 15.00** **Fox, C.**
The evolution of egg size and number in a variable environment: Lessons from a seed beetle.
- 15.00 – 15.20** **Chapman, T.**
Variation in reproductive success arising from sexual conflict
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **Kruuk, L. E. B.**
Maintaining variation: the evolutionary genetics of maternal effects in a long-lived mammal
- 16.20 – 16.40** **Gibbs, M.**
Where do good parents come from and does it matter?
- 16.40 – 17.00** **Candolin, U.**
Condition-dependent variation in reproductive investment of male three-spined sticklebacks
- 17.00 – 17.20** **Fischer, K.**
Artificial selection on butterfly egg size: Responses, correlated responses and fitness consequences

Friday 22 August Roger Stevens Lecture Theatre 20

Symposium 23: *Morphological model systems in evolution and development* (Christian Klingenberg & Benedikt Hallgrímsson)

- 14.00 – 14.30** **Hall, B. K.**
Cell condensations as modules of morphological change in development and evolution
- 14.30 – 15.00** **Cheverud, J. M.**
Modular structure of pleiotropic effects on morphology
- 15.00 – 15.20** **German, R. Z.**
Variation in growth of the craniofacial skeleton
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **Leamy, L. J.**
Epistatic pleiotropy within and between early- and late-developing skull character complexes in mice
- 16.20 – 16.40** **Richtsmeier, J. T.**
Developmental instability of the skull in aneuploidy
- 16.40 – 17.00** **Hallgrímsson, B.**
The use of mouse mutant models for understanding canalization and developmental stability
- 17.00 – 17.20** **Renaud, S.**
Morphological variability in mandible shape of wood mice (*Apodemus*): Latitudinal gradients as adaptive trend?

Friday 22 August Roger Stevens Lecture Theatre 21

Symposium 24: *Social plasticity* (Jürgen Heinze & Patrizia D'Ettorre)

- 14.00 – 14.30** **Bourke, A.**
Social plasticity and its consequences in social insects
- 14.30 – 15.00** **O'Riain, J. M.**
Naked mole-rats - pushing the limits of mammalian plasticity
- 15.00 – 15.20** **Korb, J.**
Solitary spotted hyenas, *Crocuta crocuta*: Social plasticity in a typical group living carnivore and its potential causes
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **Sundström, L.**
Phenotypic plasticity in facultatively polygynous ants
- 16.20 – 16.40** **Foitzik, S.**
Ecology of Leptothorax ants: impact of food, nest sites and social parasites
- 16.40 – 17.00** **Faurie, C.**
Fights and the evolution of handedness: a cross-cultural study.
- 17.00 – 17.20** **Salonen, A.**
Spatial and temporal distribution of food - The effect on aggressive behaviour in European grayling (*Thymallus*:Salmonidae)

Friday 22 August Roger Stevens Lecture Theatre 22

Symposium 25: *Genome size, cell size and scaling metabolic rate: a cytogenetic approach to life history evolution* (Marek Konarzewski & Jan Kozłowski)

- 14.00 – 14.30** **Gregory, T. R.**
Aves versus Amphibia: Why organismal biology matters in genome size evolution
(and vice versa)
- 14.30 – 15.00** **Morand, S.**
Genome size and life history traits in primates
- 15.00 – 15.20** **Kozłowski, J.**
Cell size as a link between junk DNA and scaling of metabolic rate
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **Konarzewski, M.**
Genome size and scaling of metabolic rate in homeotherms
- 16.20 – 16.40** **Olmo, E.**
Reptiles: a group of transition in the evolution of genome size and nucleotypic effect
- 16.40 – 17.00** **Glazier, D. S.**
Evolution of differences in metabolic scaling in pelagic versus non-pelagic animals

Saturday 23rd August

Plenary events

08.50 – 09.40 Plenary talk
Bob Wayne
(Conference auditorium)

Chairperson: Richard Nichols

Saturday 23 August

Roger Stevens Lecture Theatre 20

Symposium 26: *Theoretical and empirical aspects of the evolution of diversity: speciation, species discovery, and inventory* (Douglas Causey)

- 09.50 – 10.20** **Causey, D.**
How to quantify biodiversity
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.30** **Hey, J.**
Understanding and confronting species uncertainty in biology and conservation
- 11.30 – 12.00** **Krishtalka, L.**
Modelling evolutionary phenomena using biodiversity informatics
- 12.00 – 12.20** **Gomez, A.**
The evolution of biodiversity: what can we learn from cryptic species?
- 12.20 – 12.40** **Tautz, D.**
The use of DNA taxonomy for species inventories
- 12.40 – 14.00** **Lunch**
- 14.00 – 14.20** **Saetre, G-P.**
Speciation as a positive feedback loop between pre- and postzygotic barriers to gene flow
- 14.20 – 14.40** **Weingartner, E. L.**
Speciation processes and host plant utilization in Polygonia butterflies
- 14.40 – 15.00** **Gavrilets, S.**
On models of sympatric speciation
- 15.00 – 15.20** **Drossel, B.**
Speciation and cospeciation in quantitative genetic models
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **Cohen, D.**
Modeling evolutionary and ecological consequences of selection in heterogeneous environments
- 16.20 – 16.40** **Burzynski, A.**
Evolution of mitochondrial inheritance in mussels from Baltic Sea
- 16.40 – 17.00** **Barraclough, T. G.**
Diversification in sexuals and asexuals
- 17.00 – 17.20** **Grande, C.**
Molecular systematics of Euthyneura (Mollusca: Gastropoda)

Saturday 23 August

Roger Stevens Lecture Theatre 22

Symposium 27: *Limits to species' boundaries: linking hybrid zones with adaptation to marginal conditions* (Jon Bridle, Nick Barton, Tim Vines)

- 09.50 – 10.20** **Kirkpatrick, M.**
Evolution between *Scylla* and *Charybdis*: Gene flow and local adaptation
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.30** **Lenormand, T.**
The evolution of local adaptation
- 11.30 – 12.00** **Thomas, C. D.**
The eco-evo dynamics of range boundaries
- 12.00 – 12.20** **Billard, S.**
Evolution of migration in a spatially varying environment
- 12.20 – 12.40** **Bridle, J.**
Individual based simulations of adaptation at range margins
- 12.20 – 14.00** **Lunch**
- 14.00 – 14.20** **Boulding, E. G.**
Modelling the extinction risk of prey populations after an invasion of predators: Parameter estimates from an inter-tidal field experiment
- 14.20 – 14.40** **Pérez-Figueroa, A.**
Evolutionary factors explaining polymorphism in *L. saxatilis*: computer simulations.
- 14.40 – 15.00** **Vines, T.**
The role of habitat distribution in the structure of *Bombina* hybrid zones
- 15.00 – 15.20** **Goodman, S.**
Varying introgression among markers in a dynamic hybrid zone: Distinguishing selection from ancestral polymorphism and drift
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **Polechova, J.**
Speciation in asexual populations in sympatry and parapatry
- 16.20 – 16.40** **Nolte, A.**
Hybrid zones of *Cottus* are fixed locally despite changes in population density
- 16.40 – 17.00** **Jiggins, C. D.**
Speciation in mimetic butterflies – range middle or margin?
- 17.00 – 17.20** **Barton, N.**
Ecological and genetic limits to a species' range

Saturday 23 August

Roger Stevens Lecture Theatre 21

Symposium 28: Evolutionary consequences of mate choice (Martine Maan & Vicky Schneider)

- 09.50 – 10.20** **Howard, R. S.**
Mate choice and the evolutionary stability of sex
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.30** **Siller, S.**
Is there a lek paradox?
- 11.30 – 12.00** **Van Dooren, T. J. M.**
Mate choice evolution and the odds of sympatric speciation vs. dimorphic sexes
- 12.00 – 12.20** **Van Doorn, G. S.**
Sympatric speciation by sexual selection
- 12.20 – 12.40** **Klinkhamer, P. G. L.**
Selective embryo abortion in plants
- 12.40 – 14.00** **Lunch**
- 14.00 – 14.20** **Barson, N. J.**
Genetics of female mate preferences and speciation in Lake Malawi Cichlid fishes.
- 14.20 – 14.40** **Radwan, J.**
Effectiveness of sexual selection in preventing fitness deterioration in bulb mite populations under relaxed natural selection
- 14.40 – 15.00** **Haavie, J.**
Asymmetric character shifts in the song of sympatric pied and collared flycatchers (*Ficedula spp.*): a case of reinforcement?
- 15.00 – 15.20** **Vistulo de Abreu, F.**
Sympatric speciation from mutual sexual selection
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **Bilde, T.**
Implications of mate choice for inbreeding and the evolution of sociality in spiders
- 16.20 – 16.40** **Butcher, R. D. J.**
Kin recognition based female mate discrimination in polyandrous wasps with an inbreeding sensitive sex determination system
- 16.40 – 17.00** **Kurtz, J.**
Mate choice for optimal immunity
- 17.00 – 17.20** **Alatalo, R. V.**
Multitude of non-arbitrary male sexual ornaments in the lekking black grouse

Saturday 23 August

Conference Auditorium 2

Symposium 29: Evolutionary dynamics of the major histocompatibility complex (MHC) (Stuart Piertney & Steve Paterson)

- 9.50 - 10.20** **Hedrick, P.**
Selection at MHC: General perspective and estimation in salmon and humans
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.30** **von Schantz, T.**
Defence systems, MHC and radical sexual signals
- 11.30 – 12.00** **Potts, W. K.**
Pathogen-mediated selection acting on histocompatibility genes
- 12.00 – 12.20** **Surridge, A. K.**
MHC diversity and reproductive success in wild European rabbits (*Oryctolagus cuniculus*)
- 12.20 – 12.40** **Palmén, A.**
Spatial heterogeneity in MHC polymorphism and intensity of multiple parasite infection in Arctic charr
- 12.40 – 14.00** **Lunch**
- 14.00 – 14.20** **Westerdahl, H. W.**
Between-year variation of MHC allele frequencies in great reed warblers: selection or drift?
- 14.20 – 14.40** **Piertney, S. B.**
MHC diversity, disease resistance and mate choice in red grouse (*Lagopus lagopus scoticus*)
- 14.40 – 15.00** **Reusch, T. B. H.**
Divergent selection at MHC Class IIB genes across locations with contrasting parasite communities
- 15.00 – 15.20** **Ekblom, R.**
MHC class II variation and mate choice in a lekking bird, the great snipe (*Gallinago media*)
- 15.20 – 16.00** **Tea**

Symposium 30: Evolution of host defences against parasites (Arjen Biere & Jacqui A Shykoff)

- 09.50 – 10.20** **Mitchell-Olds, T. H.**
Molecular and phenotypic variation for insect resistance in *Arabidopsis thaliana* and *A. lyrata*.
- 10.20 – 11.00** **Coffee**
- 11.00 – 11.30** **Rausher, M. D.**
Experimental analysis of selection in plant-enemy systems.
- 11.30 – 12.00** **Kraaijeveld, A. R.**
Multiple selection pressures on host resistance.
- 12.00 – 12.20** **Heidel, A. J.**
Interactions between herbivore and pathogen resistance in *Nicotiana attenuata*.
- 12.20 – 12.40** **Restif, O.**
Concurrent evolution of resistance and tolerance against pathogens.
- 12.40 – 14.00** **Lunch**
- 14.00 – 14.20** **Ågren, J.**
Negative correlation between resistance and tolerance to herbivory in the perennial herb *Lythrum salicaria*.
- 14.20 – 14.40** **Biere, A.**
Cost of chemical defense: are trade-offs with growth enhanced under competition?
- 14.40 – 15.00** **Wegner, K. M.**
Constraints in defence gene diversity – the case of sticklebacks and their parasites.
- 15.00 – 15.20** **Decaestecker, E.**
Constraints in defences of *Daphnia magna* populations.
- 15.20 – 16.00** **Tea**
- 16.00 – 16.20** **Van der Veen, I. T.**
State dependent trade-off between predation and infection risk mediated via carotenoids.
- 16.20 – 16.40** **Montserrat, M.**
Who is forcing on my door? Flexible anti-predator behaviour in spider mites.
- 16.40 – 17.00** **Mallon, E. B.**
Specific vs. non-specific immune defence in the bumble bee, *Bombus terrestris* L.
- 17.00 – 17.20** **Wertheim, B.**
Genome-wide study of induced immune responses after parasitoid attack