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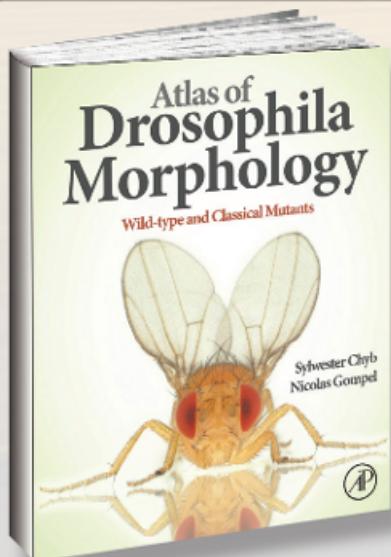
PROGRAM

CONGRESS

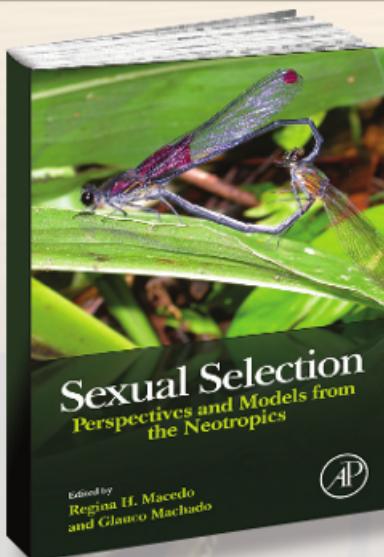
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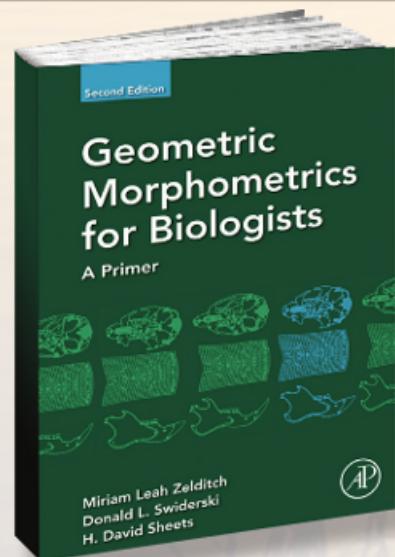
By **John G. Fleagle**
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May 2013
ISBN: 9780123846884



Nov 2013
ISBN: 9780124160286



Aug 2012
ISBN: 9780123869036

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Welcome to ESEB 2013!

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On behalf of the Society, it is my pleasure to welcome you to Lisbon and to the XIV Congress of the European Society for Evolutionary Biology.

The Lisbon ESEB is an unusual Congress because the 'gap year' after the meeting in Tübingen was occupied by our first joint congress with our North American sister organisations, held in Ottawa. Nevertheless, the Lisbon meeting is over-subscribed: the appetite for evolutionary biology research seems to be insatiable! The basic ingredients of good science, lively discussions and a relaxed atmosphere are, I believe, the key to the success of our conferences. Overlaid on that is the unique flavour provided by each host city and organising group, making individual congresses memorable events.

I would particularly like to welcome participants attending their first ESEB Congress. It is great to see new young scientists and contributors from an ever-increasing range of countries. Hopefully, you will enjoy the meeting and be back for more, as well as keeping up your ESEB membership.

A great deal of work goes into making a successful conference. Everyone does their bit, participants and speakers as well as the organisers and their support staff. A big thank you to Octávio and his team but also all of you for your input!

Roger Butlin

ESEB President 2013-2015



Dear delegate,

In Krakow, August, year 2005, Lisbon was added to the long cue of outstanding cities that were candidates for the organisation of an ESEB congress. Eight years later and after years of preliminary preparations and months of intense work, the XIV ESEB meeting is ready for your appreciation. We tried our best to deserve the distinction and achieve the quality of our predecessors. The number of delegates clearly surpasses our best expectation and for the ones that were on the waiting list, our apologies. The quality of the scientific contributions is outstanding and we hope, with the support of the IT, its effect will last for many years.

Lisbon, the University of Lisbon, the Faculty of Sciences, the congress organisation and the staff welcome you and wish that you will enjoy the scientific and the social events of the Congress.

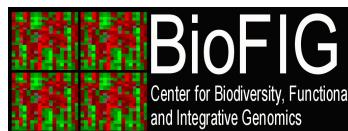
Octávio S. Paulo

Chairman



ORGANISATION

Organisation Entities:



Organising Committee:

Octávio S. Paulo (Chairman of the Congress, Professor in Evolutionary Biology at Faculty of Science of the University of Lisbon).

Dora Batista, Deodália Dias, Francisco Dionísio, André Levy, Maria-da-Luz Mathias, Maria Romeiras and Sofia Seabra.

Scientific Committee:

Patrícia Beldade, Laurent Excoffier, Isabel Gordo, Sara Magalhães, Margarida Matos, Juha Merilä, Richard Nichols, Octávio Paulo, Rémy Petit, Lluís Quintana-Murci, Jon Slate and Diethard Tautz.

Symposia Organisers:

See details on pages 11 - 17.

Staff:

Bruno Costa, Catarina Dourado, Telma Laurentino, João Silva, Sara Ema Silva and Bruno Vieira.

Collaborators:

Ana Cruz, Ana Margarida Carvalho, Ana Teresa Matias, Andreia Teixeira, Bianca Vaz, Bruno Gonçalves, Carolina Sá, Cristiano Roussado, Daniel Mameri, Diogo Antunes, Dora Dias, Flávia Penim, Gonçalo Martins, Gonçalo Silva, Joana Rodrigues, Joana Silva, João Lino, João Silva, Joaquim Santos, José Paula, Manuel Leiria, Marco Fernandes, Marco Louro, Marisa Rodrigues, Marta Rodrigues, Miguel Póvoas, Natacha Leitão, Pedro Afonso, Sara Bucar, Sofia Santos, Tânia Paulo, Tomás Gomes, Vanessa Cesário and Viviana Soares.

SPONSORS



CONGRESS VENUE

ESEB2013 will take place at:

Faculty of Sciences of the University of Lisbon

Campo Grande
1749-016 Lisboa
Portugal

The campus is located on the west side of Lisbon, at the northern end of the Garden of Campo Grande.

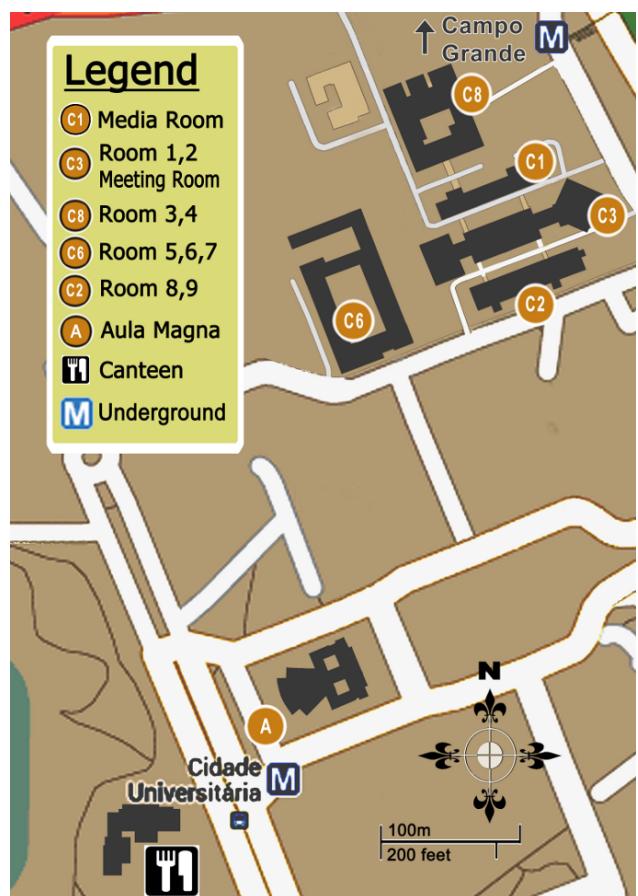
Registration Desk will be inside building C6, as well as one area for Exhibition and for Poster Sessions.

Parallel sessions will take place in the Faculty lecture halls (Room 1 – 9) inside buildings C2, C3, C6 and C8.

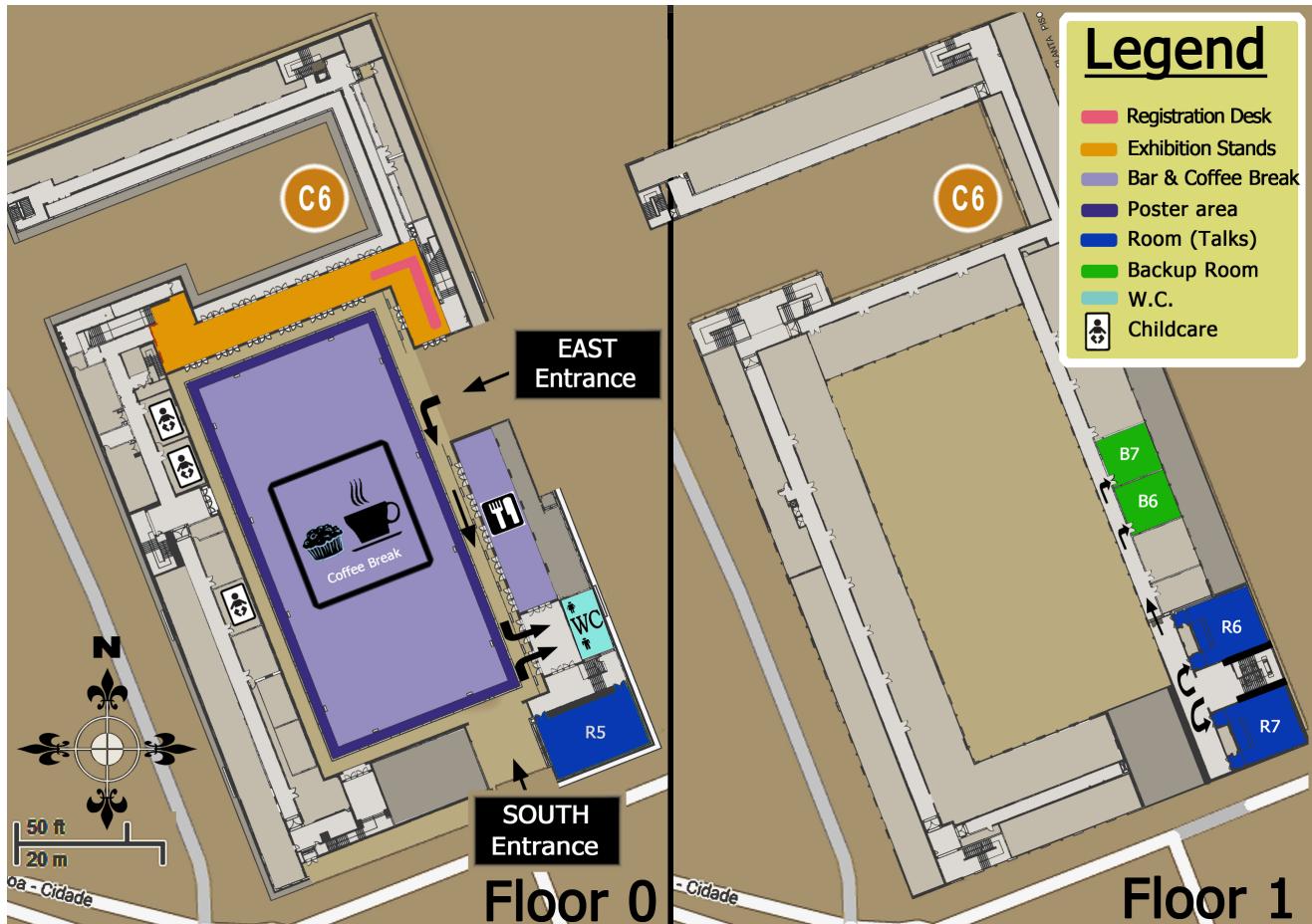
Plenary sessions will take place in the University Rector's main auditorium (Aula Magna).

Coffee Breaks will be held in the atrium of the building C6, whereas lunches will be held in the Canteen of the University Campus.

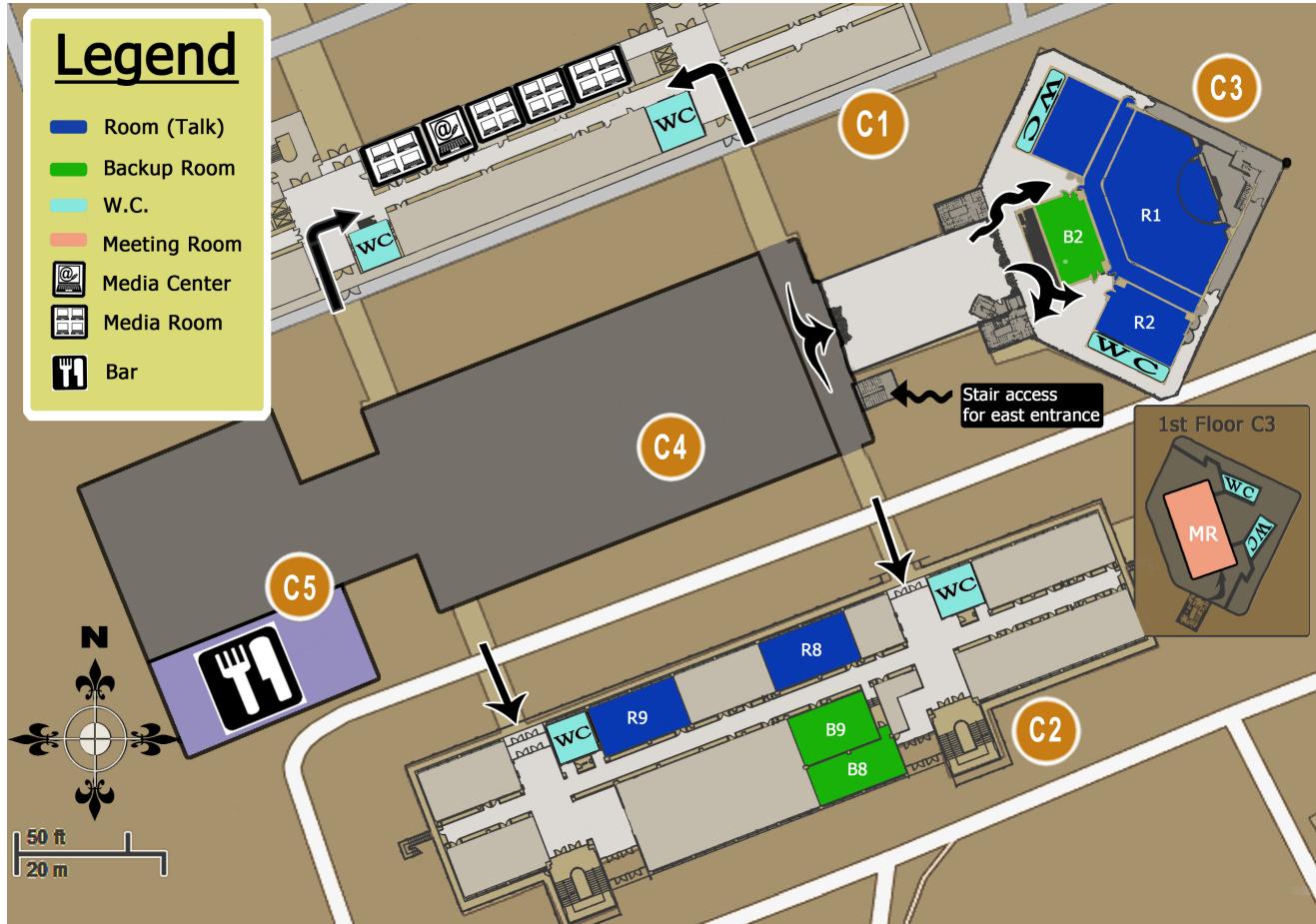
The Computer Alley will be located inside building C1.



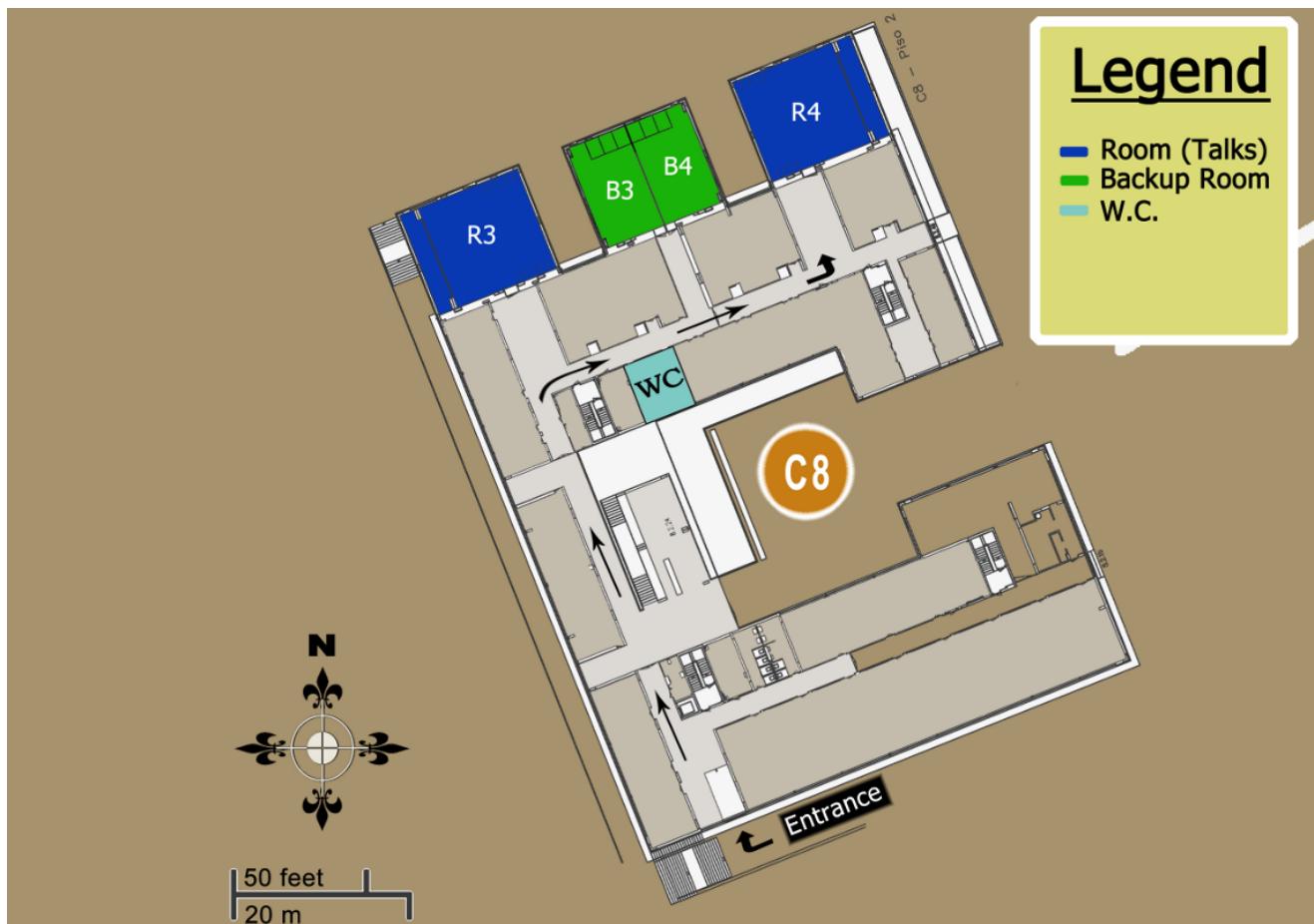
Building C6 Map



Building C1, C2 and C3 Map



Building C8 Map



KEY INFORMATION

General Information

Badges

The ID badge included in delegate's bags is the admission pass to scientific sessions, coffee breaks and lunches. Delegates are asked to wear it all the time.

Certificate of Attendance

You will receive a Certificate of Attendance at the Registration Desk.

Abstract Book

The Congress Abstract Book is published online. A full abstract search for author or symposium is also available from the congress website.

Internet

There will be free Wi-Fi Internet Access throughout the congress.

Language

English is the Congress official language. No translation will be provided.

Staff

You can recognise staff members by their green congress t-shirts. Talk to one of our student staff for assistance concerning technical issues, local logistics, social activities or anything else.

Refreshments and Catering

Lunch will be available to all registered participants through the Congress at the Canteen of the

University campus (Map, p.3). Food and drinks will be available during Coffee Breaks and Poster Sessions (Schedule, p.17; Map, p.3).

Childcare

A professional childcare service are available for the participants' children from 0 to 12 years-old. Our childcare service is free of charge and includes insurance, food (baby food, and other alimentary restrictions are not included) and activities for the children, age group appropriate.

Print Poster Service

The Congress Organisation offered a local print service for posters. You can see your poster during your registration at the Registration Desk and retrieve it right after the end of your session.

Contacts

<http://www.eseb2013.com>
mail@eseb2013.com
Tel: +351 91 701 38 00

Registration Desk, Building C6:

Use the Registration Desk to obtain all kind of information, the Congress Bag with all your documents, to deliver/receive your poster.

The Registration Desk will be open on:

Monday 19, 14:00 – 20:30
Tuesday 20 and Wednesday 21, 8:00 – 20:30
Thursday 22, 8:30 – 14:00
Friday 23, 8:00 – 20:30
Saturday, 8.00 – 18:30

Scientific Contributions

Talk Presentations

Plenary Talks, Presidential Address, John Maynard-Smith Prize, Distinguished Fellow Ceremony and Closing Ceremony take place in *Aula Magna*. Invited and Regular Presentations take place through the Faculty of Sciences Campus (Building C2, C3, C6 and C8).

Timings:

Invited Presentations: 35 min, followed by a 8 min discussion and 5 min to change room.

Regular Presentations: 15 min followed by a 4 min discussion and 5 min to change room.

Changing Rooms

Synchronised sound signals will indicate the start of the discussion and the start of the 5 min time to move between rooms before the beginning of the next talk presentation.

Handing in your Talk

Presentations must be **PDF - formatted**. Name the file with contribution ID + speaker's last name, e.g. D25SY35RT11:42R05_Smith.pdf. Oral presentations **must be handed in at the Media Room** (Building C1, Media Center, Map p.4) until 2h before your session starts. In Media Rooms you have also available computers to finish details in your presentation and technical assistance.

Poster Presentations

Poster Sessions take place in the building C6 (Map p.3) from 19:16h on Tuesday, Wednesday and Friday. Posters are up only during the day of the respective session and can be viewed during Coffee Breaks and during the Poster Session.

Handing in your poster

All posters must be handed in during your

registration at the Registration Desk and are put up by the congress staff.

Poster webpage exhibition

A digital version of posters should be **submitted online, until 24h before the beginning of the event**, through your registration area, for exhibition on the Congress Webpage.

Contribution ID

Contribution ID can be useful to easily identify local and time of presentations.

Poster ID encode presentation day, symposium and poster reference.

e.g. Poster ID

D20SY33PS1243

D = Day (19 – 24)

SY = Symposium (1 – 34)

PS = Poster (ref. 0001 - 1488)

Talk ID encode presentation day, symposium, type of presentation (Invited or Regular Talk) followed by

time and the respective room.

e.g. Talk ID

D24SY18IT15:45R5

D22SY06RT16:33R5

D = Day (19 – 24)

SY = Symposium (1 – 34)

IT = Invited Talk followed by Time (hh:mm)

RT = Regular Talk followed by Time (hh:mm)

R = Room (1 – 9)

EMERGENCY CONTACTS

Ask our staff or registration desk:

call +351 91 701 38 00

Ambulance, fire brigade, police:

call 112

EXHIBITORS

We invite all delegates to visit our Exhibition Area where Publishers, Companies and Organisations with interest in Life Sciences advertise their products and services. Direct links for each Publisher, Company and Organisation can be found at eseb2013.com.

Exhibition Area, Building C6

Exhibitor E01 (See ad on p.73)	 Royal Society Publishing	Exhibitor E02 (See ad on p.7)	
Exhibitor E03 (See ad on p.10)	 CAMBRIDGE UNIVERSITY PRESS	Exhibitor E04 (See ad on p.17)	
Exhibitor E05	 SARSTEDT	Exhibitor E06 (See ad on p.73)	
Exhibitor E07 (See ad on p.17)	 New Phytologist	Exhibitor E08 (See ad on p.7)	

Wiley is the world's leading publisher of Ecology, Conservation and Evolution journals.

14 Wiley journals are ranked within the Evolutionary Biology category of the ISI Journal Citation reports and 7 of these journals are in the top 20, including:

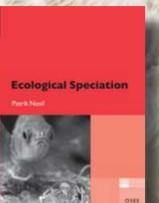
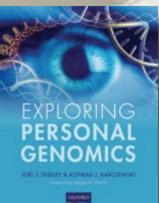
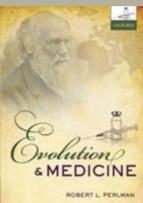
Journal of Evolutionary Biology (published on behalf of the European Society for Evolutionary Biology), *Evolution* (published on behalf of the Society for the Study of Evolution), *Molecular Ecology* and *Molecular Ecology Resources*.

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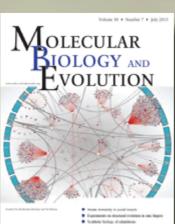
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WILEY

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SATELITTE ACTIVITIES

Satellite workshop (Registration required)

Actively learning evolution: methods and resources

Workshop for teachers and science educators

19 August (09:30 – 17:15h), room R6

Organisers: Alexandra Isabel Sá Pinto, Rita Campos and Kristin Jenkins

Workshop description: It has been shown that the best way of learning science is doing science. Unfortunately, methods traditionally employed to teach science are usually expository and do not promote active and meaningful learning. In particular, evolution has been demonstrated to be a particularly challenging topic for students to learn. This is an important issue as understanding evolution is the basis for understanding all of the life sciences, and arguably essential to the exercise of effective citizenship and ultimately underlies public support for research in evolutionary biology. Given this, the XIV ESEB congress is organising a workshop to explore methods and resources available for inquiry based teaching of evolution that engage students through enquiry and realistic scientific investigations. Speakers will present information about effective teaching methods and demonstrate methods and resources through hands on activities.

Target audience: This workshop targets biology teachers at high school and university levels' and science educators interested in improving their teaching practices and in promoting a better understanding of evolution and of its impacts on nature and human societies.

Satellite Meeting (Registration required)

Creating a European Drosophila Population Genomics Network

19 August (15:00 – 18:00h), room R7

Organisers: Josefa González and Thomas Flatt

Meeting Description: The main goal of the meeting is to explore whether there exist mutual interests among people studying the population genomics of European *Drosophila* (mainly *melanogaster* and *simulans*, but other species might be of interest as well) in initiating a joint, collaborative European network.

This is an extremely exciting time for population genomic studies. The recent advent of powerful next-generation sequencing (NGS) techniques allows us to examine genetic variation at unprecedent scales, at the whole-genome level and with single nucleotide resolution. The continuing technological improvements and the dropping costs of these methods means that even single labs can now generate terabytes of sequence data very rapidly a relatively low cost. However, the resulting data are typically used to address only a very limited number of specific questions, so that the overall value of these datasets for the community as a whole is somewhat limited. To foster the integration and exchange of population genomic information, we therefore propose that individual European labs build up a joint effort in collecting and generating population genomic data for *Drosophila* species across Europe.

During the meeting we would like to discuss (1) how to develop a collaborative strategy for sampling different European *Drosophila* populations through space and time in order to generate a unique European collection of samples for future sequence (and possibly phenotype) analysis; (2) how to best generate high-quality sequence data from such samples; and (3) how to optimally integrate the resulting data and information so that it can be used to answer a wide range of questions. We would also like to explore potential funding opportunities that could be used to support regular meetings of the network and that would foster scientific exchange and collaboration among the labs involved.

Satellite Exhibition

ESEB Outreach Fund Exhibition

Exhibition Area, Building C6

At this Lisbon conference ESEB has organised an exhibition to show off the variety of the ESEB Outreach initiatives that were funded from 2010 onwards (Exhibition Area, Building C6). At the exhibition you will find posters with more background information, as well as some of the finished products. We hope you will enjoy all of this and appreciate the considerable efforts that participants have undertaken to expand information about evolution in the public realm. It is activities such as these that will let the world now about the importance of evolutionary biology research in understanding life on earth and how results from such research can be used to help solve problems societies face today.

Sally Otto (University of British Columbia)
Santiago Elena (University of Valencia)
Isabelle Olivieri (University of Montpellier)
Bas Zwaan (Wageningen University)

FUNDING ORGANISATIONS MEETINGS

Volkswagen Foundation – A Foundation of Knowledge

20 August (13:30 – 14:00h), room R5

Representant: Oliver Grewe (Funding Team)

Meeting Description: The Volkswagen Foundation is the biggest private foundation for sciences, humanities and technology in research and higher education. The aim and structure of the foundation are presented, as well as funding options for postdocs and senior researchers. Funding schemes like the Lichtenberg Professorships, Freigeist Fellowships and Experiment! offer opportunities for German and international researchers who would like to work at or in cooperation with German research institutions.

BUSINESS MEETINGS

The following meetings will occur throughout the congress and may be of relevance to you depending on your position within the ESEB:

JEB Editorial Board Meeting

19 August (09:30 – 12:00h), Meeting Room (Map Building C3, p.4)

ESEB Officers' Meeting

19 August (13:00 – 17:30h), Meeting Room (Map Building C3, p.4)

ESEB Council Meeting

23 August (19:20 – 21:30h), Meeting Room (Map Building C3, p.4)

ESEB Members Meeting

24 August (13:00 – 14:00h), *Aula Magna* (Map p.3, see p.70)

PRESIDENTIAL ADDRESS

Saturday, 24 August, 14:30 – 15:30h, Aula Magna

President-Elect

Roger Butlin

Department of Animal and Plant Sciences, University of Sheffield, United Kingdom



Reinforcement (and other modes of speciation) (see p. 70)

SPECIAL AWARDS

Saturday, 24 August, 15:45 – 16:45h, Aula Magna

John Maynard Smith Prize

Rich FitzJohn

Department of Biological Science, Macquarie University, Australia



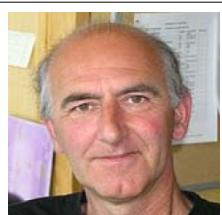
What drives biological diversification? Detecting traits under species selection
(see p. 70)

Saturday, 24 August, 17:00 – 18:00h, Aula Magna

Distinguished Fellow

Rolf Hoekstra

Laboratory of Genetics, Wageningen University, Netherlands



♀ ♂ + - (see p. 71)

CAMBRIDGE

Evolutionary Biology Books from Cambridge University Press

HUMAN EVOLUTION
Genes, Genealogies and Phylogenies
GRAEME FINLAY

Animal Contests
Edited by Ian C. W. Hardy and Mark Bell

Early Events in Monocot Evolution
Edited by Paul Wilkin and Steven J. May

FUNGAL BIOLOGY IN THE
ORIGIN AND
EMERGENCE OF LIFE
David Moore

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PLENARY LECTURES

08:30 – 09:30h, Aula Magna

Tuesday, 20 August

Juliette De-Meaux

Institute for Evolution and Biodiversity, University of Münster, Germany



The molecular underpinnings of adaptation in *Arabidopsis thaliana* (see p. 19)

Wednesday, 21 August

Dieter Ebert

Zoological Intitute, University of Basel, Switzerland

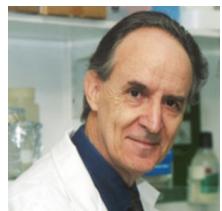


Population genetics of host-parasite coevolution (see p. 35)

Thursday, 22 August

Mel Greaves

The Institute of Cancer Research, United Kingdom



Cancer through the eye of evolutionary medicine (see p. 51)

Friday, 23 August

Trudy Mackay

Department of Genetics, North Carolina State University



Charting the Genotype-Phenotype map: Lessons from *Drosophila* (see p. 53)

Saturday, 24 August

Virpi Lummaa

Department of Animal and Plant Sciences, University of Sheffield, United Kingdom



Sex differences in natural selection on reproductive scheduling and longevity in humans (see p. 69)

SYMPOSIA

Symposium 01 (22 and 23 August)

Experimental evolution on empirical fitness landscapes

Organisers: J. Arjan G.M. de Visser and Santiago F. Elena

Invited speakers: Tim Cooper and Joachim Krug

To arrive at a quantitative understanding of adaptation, we need to identify the factors that determine its dynamics and understand how they do so quantitatively. A prominent recent development is to consider the structure of the fitness landscape and how this determines the outcome of adaptation. Microbial experimental evolution contributes to this development by exploring the structure of real fitness landscapes, either by constructing mutants carrying combinations of observed beneficial mutations, or by studying the contingency of evolution on particular genotypes and conditions. The aim of this symposium is to highlight diverse examples of the empirical study of fitness landscapes

using microbial experimental evolution [and their contribution to quantitative models of adaptation].

Symposium 02 (22, 23 and 24 August)

Selection and evolution in natural populations

Organisers: Tom Tregenza and Trine Bilde

Invited speakers: Ary Hoffmann, Susan Johnston and Jane Reid

This symposium will showcase studies designed to understand evolution by monitoring natural populations over multiple generations. It will highlight new model systems as well as recent discoveries in established systems. There will be a particular emphasis on innovative approaches to measuring selection in the wild, including new methodologies for measuring the success of genes and individuals. These will include the use of genetic markers, exploitation of natural pedigrees and new tagging and monitoring approaches.

Symposium 03 (23 and 24 August)

Molecular evolutionary innovations

Organisers: Frédéric Brunet and Rita Ponce

Invited speakers: Vaishali Katju and Dan I. Andersson

Evolutionary innovations, including evolution of new functions, bear the hallmarks of genome plasticity. During this symposium we will consider studies that have discovered and traced-down these events, mechanisms involved in their origin, the dynamics and fate of novelties, and the tools allowing their retrieval at the genomic level. Emphasis will be given to studies detailing changes at the molecular and cellular level up to those showing behavioural impact.

Symposium 04 (23 and 24 August)

Evolution of Symbiotic Interactions in Communities: Novel Approaches

Organisers: Kayla King, Mario X. Ruiz-González, Jérôme Orivel and Justyna Wolinska

Invited speakers: Christoph Vorburger and Jacobus Jan Boomsma

Biological interactions within communities shape the evolution of individual species. These relationships (obligate/facultative, beneficial/detrimental) force the emergence of innovative traits. The most exciting research on these topics now combines comparative "omics" approaches with concepts from evolutionary and behavioural ecology. The symposium will highlight recent progress in this interdisciplinary field and will discuss the interplay between communities and evolutionary biology: how do species interactions within a community affect evolution?

Symposium 05 (20 and 21 August)

Phenotypic plasticity: mechanisms, ecology and evolution

Organisers: Patricia Gibert and Patrícia Beldade

Invited speakers: Jacintha Ellers and Anthony Zera

Phenotypic plasticity refers to the ability of a genotype to produce different phenotypes in different environments. Its study integrates multiple disciplines and analyses at all levels of biological organization; from the molecular regulation of changes in organismal development, to variation in phenotypes and fitness in natural populations. The symposium welcomes work searching to understand how changes in external environment affect (or not) phenotype, how alternative phenotype perform in distinct environmental conditions, and how that weighs into account for the evolution of plasticity.

Symposium 06 (22 and 23 August)

Evolutionary consequences of an early germ-soma segregation

Organisers: Duur K. Aanen and Rick Michod

Invited speakers: Norman Arnheim and Andrew Bourke

It has been 25 years since Leo Buss first proposed that an early segregation of a germ line from the rest of the body is an adaptation to limit the scope for selfish cell lineages. A number of recent discoveries make it timely to reevaluate this hypothesis. This symposium explores the evolutionary stability of multicellularity in organisms with and without an early germ-line sequestration, to discuss the relative importance of this characteristic for conflict resolution.

Symposium 07 (20 and 21 August)

The nature and mechanisms of evolution of species recognition systems

Organisers: Guila Ganem and John Endler

Invited speakers: Tamra Mendelson and John Endler

What makes a mate recognition system specific? Is species recognition a good working concept? How does specificity evolve? Do the mechanisms involved differ in the presence or absence of gene flow? These questions are central to our understanding of evolution of behavioral isolation, one of the most important means of species diversification, and the symposium goal is to address them.

Symposium 08 (23 and 24 August)

Evolutionary significance of epigenetic variation

Organisers: Oliver Bosendorf and Koen Verhoeven

Invited speakers: Frank Johannes, Carlos Herrera and Christina Richards

Epigenetic mechanisms can have long-lasting effects on phenotypes, but what role do they play in evolution? Recent research provides evidence that epigenetic mechanisms can create heritable trait variation, that epigenetic variation can be heritably altered by the environment. Moreover, studies in natural populations suggest an epigenetic role in adaptation. This symposium presents the current status of the growing research field of ecological and evolutionary epigenetics.

Symposium 09 (21 and 22 August)

Genetics and genomics of host-parasite coevolution

Organisers: Joachim Kurtz and Hinrich Schulenburg

Invited speakers: Francis Jiggins and Ellen Decaestecker

Host-parasite coevolution often leads to fast evolutionary changes. It thus represents an ideal model for studying processes of rapid adaptation. Key to these studies is an understanding of the underlying genetics and genomics, because they help us identify the specific traits under selection and also the type of selective processes involved. Our symposium focuses on current advances in this field, taking advantage of recent innovations in high throughput sequencing technology.

Symposium 10 (21 August)

Genomics and experimental evolution

Organisers: Tadeusz J. Kawecki and Michael G. Ritchie

Invited speakers: Rees Kassen and Thomas Flatt

This symposium will focus on the application of whole genome resequencing and other high-throughput omics techniques (RNAseq, metabolomics) to experimental evolution, in a broad range of experimental systems. It will facilitate the exchange of information about the questions addressed, techniques adopted and result obtained by different research groups, but also encourage the spread of best practice concerning design and statistical approaches, which are being actively developed in this emerging field.

Symposium 11 (23 and 24 August)

Advances in quantitative approaches to recent evolutionary change in humans

Organisers: Alexandre Courtiol and Ian Rickard

Invited speakers: Mark Thomas and Stephen Stearns

Applying a rigorous evolutionary framework to understand human biology and behaviour present numerous challenges. However, many recent advances have brought this field to a point where resolution of past difficulties may be achieved. The goal of this symposium is to provide a diverse overview of the state-of-the-art in quantitative approaches to investigating human evolution at different levels of biological organisation.

Symposium 12 (20 August)

Studying multigene-family evolution in the post-genomic era: Towards a population genomic approach to MHC evolution

Organisers: Reto Burri and Robert Eklblom

Invited speakers: Jim Kaufman, Jacek Radwan and David Richardson

Multigene families, like the MHC, encode central components in pathways involved in individual fitness and are key to important adaptations. Elucidating the molecular processes involved in their evolution is an important issue to further our understanding of the genetic basis of biological diversification. Here, we aim at bringing together researchers studying the functional genomics, evolutionary ecology and population genomics of MHC to discuss the most recent developments in each of the fields and develop new ideas and future research directions that integrate the different branches of MHC evolution in particular and multigene family evolution in general.

Symposium 13 (21 August)

Rapid evolution and population genetics

Organisers: Lutz Becks and Teppo Hiltunen

Invited speakers: Joachim Hermisson, Hildegard Uecker and Richard Neher

While the synthesis of the so-called eco-evolutionary dynamics has seen large advances in the last decades, there is still further need to illuminate the relationship between ecology and evolution. In particular, we believe that the integration of rapid, contemporary evolution into studies of population genetics has largely been ignored.

Symposium 14 (22 and 23 August)

Non genetic inheritance

Organisers: Benoit Pujol and Katie Stopher

Invited speakers: Kevin Laland and Etienne Danchin

Evidence is accruing that epigenetic, developmental, parental, ecological and cultural inheritance mechanisms have a

major impact on the evolution of phenotypic diversity. The aim of this symposium is to highlight novel results and synthesize our knowledge on the contribution of non-genetic inheritance to evolutionary processes. We will also explore the need for an extended theory of evolution where genes are not the only inheritance system.

Symposium 15 (20 August)

Attack and defense: evolutionary and ecological consequences of individual variation

Organisers: Anna-Liisa Laine and Pedro Vale

Invited speakers: Meghan Duffy and Marcel Salathé

Understanding disease spread and host-pathogen co-evolution are central questions in disease biology. Accurate predictions of these processes are made more difficult due to individual variation in defense and attack strategies of hosts and pathogens. This symposium will bring together theoretical and empirical approaches across a broad range of biological systems, to embrace individual level variation in host-pathogen interactions, and its population level consequences.

Symposium 16 (21 August)

Evolutionary biology in China

Organisers: Roger Butlin and Kai Zeng

The aim of the symposium is to show-case the expanding field of evolutionary biology in China. The organisers and lead speakers will use it to encourage Chinese scientists to attend the ESEB Congress. This will be an excellent opportunity for the initiation of new, mutually-beneficial collaborations as well as to raise awareness in both Europe and China of ongoing work and key groups.

Symposium 17 (22 and 23 August)

Linking genome evolution at different time scales

Organisers: Nicolas Salamin and Marc Robinson-Rechavi

Invited speakers: Patrícia Beldade and Laurent Excoffier

The inference of evolutionary forces, notably selection, from molecular data, has a long tradition in evolutionary biology. Studies usually focus either on interspecific or on intraspecific data, and thus address disconnected questions. Thanks to advances in genomics and in computational biology, there is increasing interest in bridging the gap between these two fundamental scales of evolution. This symposium will provide exciting discussions and prospects to where next-generation sequencing data can lead us in the understanding of the selective forces acting during evolution.

Symposium 18 (23 and 24 August)

Evolutionary demography

Co-organised by:



MAX-PLANCK-GESELLSCHAFT

Organisers: Ulrich K. Steiner and Barbara Pietrzak

Invited speakers: Rebecca Sear and Tim Coulson

This symposium aims to stimulate cross disciplinary exchange in the emerging field of evolutionary demography that explores evolutionary and ecological processes that shape birth and death of individuals and populations. Evolutionary theory is formulated in demographic characteristics including structure, fitness, selection, and change. Specific emphasis is given on aging and senescence with the individual serving as link between the lower mechanistic level and the higher functional level both from a biological and demographic perspective.

Symposium 19 (20 August)

Evolutionary consequences of deception

Organisers: Carita Lindstedt-Kareksela and Mikael Mökkönen

Invited speakers: Martin Stevens, Tom Sherratt and Johanna Mappes

The ability to deceive oneself, conspecifics or individuals of other species is a fundamental aspect to many coevolutionary struggles. Brood parasites have the ability to produce eggs that exactly resemble the egg coloration of their host species, while alternative mating strategies employed by 'sneaker' individuals circumvent confrontation in intrasexual competition - these are just a few examples of widely known deceptive strategies in the animal kingdom. Deception allows individuals to gain an evolutionary advantage in reproduction and/or survival, such as through deceptive colour mimicry, predator-prey systems, sexually antagonistic encounters with a mate, parent-offspring interactions or competition over resources. Much of the existing research on deception has been fragmented into various topics with limited interaction, even though there are some common themes such as frequency dependent selection, manipulation of the receiver's sensory system, and the antagonistic coupling of the actor's benefits to costs of the recipient(s). Thus, our goals of this symposium are to unify researchers from different fields, as well as provide opportunities to present novel findings, questions, and different perspectives in an effort to better understand the costs and benefits of deception.

Symposium 20 (23 August)

Mechanisms of trade-offs

Organisers: Bas Zwaan and Thomas Flatt

Invited speakers: Stephen Stearns and Joost Keurentjes

Trade-offs are key in evolutionary theory: traits can only evolve in the direction of increased fitness at the expense of loss of fitness through other traits. Because organisms are universally restricted in resource acquisition, trade-offs have been explained by differential resource allocation. Recent molecular data has challenged the validity of this view. Unfortunately, up to date, trade-offs have either mostly been approached from a purely phenotypic perspective without much attention to the underlying physiological mechanisms, or conclusions have been drawn about trade-offs from molecular studies without considering the functional phenotype. Here, we aim to bridge these views by linking our current knowledge of the molecular and physiological pathways with that about quantitative genetic and phenotypic correlations between traits.

Symposium 21 (20 and 21 August)

The evolution and maintenance of heritable colour polymorphisms: from ecology to genomes

Organisers: Maren Wellenreuther and Bengt Hansson

Invited speakers: Rosemary G. Gillespie and Jon Slate

Heritable colour polymorphisms are widespread in nature but the processes governing the maintenance and evolution of different morphs in the wild are rarely well understood. The field of polymorphism research is currently progressing rapidly because of the fruitful integration of ecology and genetics with bioinformatics and genome technology. This advancement allows researchers to now address questions about evolutionary processes of polymorphisms, such as the genomic patterns of selection and the functional consequences of genetic architecture.

Symposium 22 (20 August)

The evolution and genetics of drug resistance

Organisers: Pleuni Pennings, Gabriel G. Perron, Sarah Cobey and R. Fredrik Inglis

Invited speakers: Cally Roper and Craig MacLean

The evolution of drug resistance in pathogenic microorganisms is one of the most important challenges facing evolutionary biologists. Evolutionary studies of drug resistance can aid the development of effective clinical strategies. At the same time, such studies help further our general understanding of evolutionary biology. Our symposium provides a venue to discuss experimental and theoretical studies that improve basic understanding and/or inform clinical practice.

Symposium 23 (20 and 21 August)

Genomic Islands: their role in adaptation and speciation

Organisers: Rui Faria, Sarah Helyar, Chris Jiggins, Gary R. Carvalho, Arcadi Navarro and Carole Smadja

Invited speakers: Jeffrey Feder, Nick Barton and Patrick Nosil

Genome-wide data offers a unique opportunity to gain an insight into the genomic architecture involved in the adaptive divergence found in heterogeneous environments which can lead to local adaptation, reproductive isolation and ultimately speciation. By considering a range of species and approaches, this symposium will explore the interactions of diversifying selection and homogenizing gene flow to identify trends in genomic evolution which accompany adaptation and ecological speciation. The symposium will focus on both theory and empirical data to assess the importance (or otherwise) of genomic islands of divergence.

Symposium 24 (22 and 23 August)

Unifying paleobiological and comparative perspectives on character evolution

Organisers: Lee-Hsiang Liow and Thomas F. Hansen

Invited speakers: Gene Hunt and Folmer Bokma

It is no longer debated that the fossil record is necessary to inform us about the history of life, yet the integration of data and perspectives using fossils and comparative data in understanding evolution is far from mature. This symposium gathers researchers straddling the realms of the extinct and the extant to explore how we can better understand evolutionary processes especially on time scales common to palaeobiological and phylogenetic comparative studies, using character evolution as a focal point.

Symposium 25 (21 August)

New directions in sex role research

Organisers: Tamás Székely and Michael Jennions

Invited speakers: Hanna Kokko and Larry J. Young

The evolution of sex roles is a core area in evolutionary biology linking life history and sexual selection theory. Recent advances in theory, experimental tests and phylogenetic analyses have provided fresh insights into sex roles. The Symposium will focus on 3 aspects of these recent developments.

Symposium 26 (20 August)

The genomic architecture of adaptive traits: do QTNS generally exist?

Organisers: Christopher W. Wheat

Invited speakers: Matt Rockmann, Thomas Mitchell-Olds and William Cresko

This symposium is focused upon presenting a balanced perspective upon what we currently know about the genomic architecture of adaptive traits. While one part of the evolutionary genetic community is declaring that the QTN paradigm is a fruitless pursuit, others are finding genes of very large effects on fitness in the wild. Trying to generalize from these disparate findings is the goal of this symposia.

Symposium 27 (21 August)

Evolutionary conservation: the applied side of evolutionary biology

Organisers: Christophe Eizaguirre, Miguel Soares and Victor Stiebens

Invited speakers: Simone Sommer, Jacob Höglund and Louis Bernatchez

Conservation biology is one of the rare fields of biology where evolution has too often been neglected. The reason for this probably stems from the misconception that evolution does not act on an ecologically relevant time scale. Here, we aim to combine the fields of evolutionary (e.g. ecological genomics, host-parasite interactions) and conservation biology to demonstrate the necessity to consider evolutionary theories (e.g. effects of inbreeding, constraints on small populations) in conservation programs.

Symposium 28 (21 August)

Non-genetic transfer of immunity across generations – evolution and underlying mechanisms

Sponsored by:



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Organisers: Olivia Roth and Gerrit Joop

Invited speakers: Ben Sadd and Mike Boots

To cope with parasites and pathogens, immunological experience can be transferred across generations also non-genetically, allowing for higher adaptive plasticity. Recent studies suggest that trans-generational immune priming (TGIP) can also be provided by innate defence components and that it is not limited to maternal effects. Both evolutionary and mechanistic advances in TGIP should be addressed in this symposium in systems ranging from invertebrates to vertebrates.

Symposium 29 (20 August)

Actively learning evolution: methods and resources

Organisers: Alexandra Isabel Sá Pinto, Rita Campos and Kristin Jenkins

Invited speakers: Tom Meagher

This symposium aims to explore methods and resources available for inquiry based teaching of evolution and to discuss the impacts of such methods on both students' and the public's understanding and engagement with evolution. Speakers will present information about effective teaching methods and demonstrate methods and resources through hands on activities.

Symposium 30 (21, 22, 23 and 24 August)

Phylogenetics and phylogeography

Organisers: Thomas Schmitt and Richard Nichols

Invited speakers: Lacey Knowles and Emily Lemmon

This is a wide scope session mostly addressing aspects in the field of geographical distribution pattern of genetic information. Novel data enlarging our knowledge on range dynamics of species are highly welcome as well as presentations advancing the analytical tool and methodological aspects in this field.

However, this session not only includes phylogenetics and phylogeography approaches, but also landscape genetics and a wide range of topics on the evolutionary processes across species ranges and of conservation aspects in larger scale population genetics.

Symposium 31 (22, 23 and 24 August)

Development, behaviour and evolution

Organisers: Élio Sucena and Christen Mirth

Invited speakers: Cristina Ledon-Rettig, Laura Corley Lavine, Wiliam Jeffery and Emilie Snell-Rood

Evolution moulds developmental processes to create the diversity of morphologies, life history strategies and behaviours displayed across organisms. Recent developments in areas such as genomics and developmental biology promises to further broaden our perspectives of this topic. This symposium aims to bring together investigators working on various aspects of the development, behaviour and evolution of phenotypes to highlight exciting new avenues of research and stimulate the exchange of ideas.

Symposium 32 (20 August)

Climate change and evolution

Organisers: Ary Hoffmann and Mauro Santos

Invited speakers: Ary Hoffmann

An increasing number of empirical studies and theoretical analyses consider the likelihood of populations evolving in response to the direct and indirect effects arising from rapid climate change. In this symposium we aim to provide an update of the recent literature. We also focus on studies that have investigated ways to increase evolutionary resilience

in species particularly by altering patterns of gene flow within landscapes and by enhancing genetic variation within populations.

Symposium 33 (20 August)

Population ecology

Organisers: Ricardo Beldade and Michael Morrissey

Invited speakers: Jean Clobert and Michael Morrissey

This symposium will include evolutionary perspectives on population ecology themes such as dispersal and life cycles in populations and meta-populations. The symposium will focus on theoretical and empirical developments in dispersal and life-cycle research welcoming synthetic approaches that span across taxa within these themes.

Symposium 34 (24 August)

General Symposium

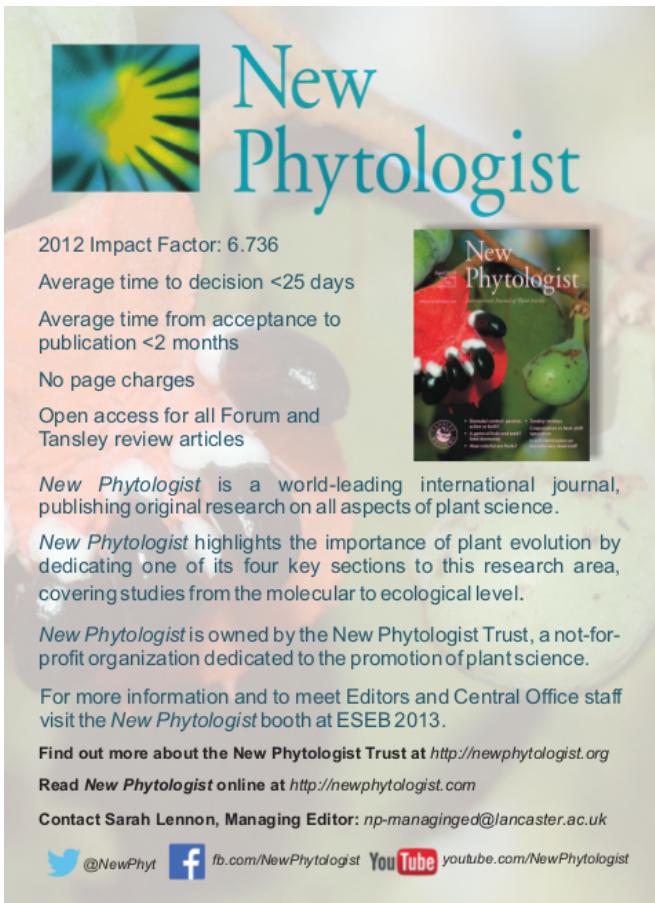


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SCHEDULE OVERVIEW

Time	19 Mon	Time	20 Tue	21 Wed	22 Thu	23 Fri	Time	24 Sat	
08:30	Registration	08:30	Plenary Talk Juliette De-Meaux	Plenary Talk Dieter Ebert	Plenary Talk Mel Greaves	Plenary Talk Trudy Mackay	08:30	Plenary Talk Virpi Lummaa	
		09:30	Coffee Break	Coffee Break	Coffee Break	Coffee Break	09:30	Coffee Break	
		10:30	Session 1 SY 05, 12, 15, 19, 22, 23, 29, 32, 33	Session 5 SY 05, 07, 09, 10, 13, 21, 23, 25, 27	Session 9 SY 01, 02, 06, 09, 14, 17, 24, 30, 31	Session 10 SY 01, 02, 06, 09, 14, 17, 24, 30, 31	10:30	Session 14 SY 02, 03, 04, 08, 11, 18, 30, 31, 34	
		12:01	Lunch	Lunch	Lunch	Lunch	12:01	Lunch ESEB Members Meeting	
		13:30	VF				13:00		
		14:00	Session 2 SY 05, 12, 15, 19, 22, 23, 26, 32, 33	Session 6 SY 05, 07, 09, 10, 13, 21, 23, 25, 27	Mid-Congress Tours	Session 11 SY 01, 02, 04, 14, 17, 18, 20, 30, 31	14:00		
14:00		15:31				Session 12 SY 02, 03, 04, 08, 11, 18, 20, 30, 31	14:30	Presidential Address	
		15:45	Session 3 SY 05, 12, 15, 19, 22, 23, 26, 32, 33	Session 7 SY 05, 09, 10, 13, 16, 25, 27, 28, 30		Session 13 SY 02, 03, 04, 08, 11, 18, 20, 30, 31	15:30		
		17:16	Coffee Break	Coffee Break		Coffee Break	15:45	JMS Prize	
		17:45	Session 4 SY 05, 07, 15, 21, 22, 23, 26, 32, 33	Session 8 SY 05, 09, 10, 13, 16, 25, 27, 28, 30		Poster Session SY 01, 02, 03, 04, 06, 08, 11, 14, 17, 18, 20, 24, 31, 34	16:45		
		19:16	Poster Session SY 05, 07, 12, 15, 19, 22, 23, 26, 29, 32, 33	Poster Session SY 09, 10, 13, 16, 21, 25, 27, 28, 30			17:00	DF Ceremony	
							18:00	Closing Ceremony	
19:00	Welcome Reception Barbecue						18:30		
							20:00	Congress Dinner	

VF - Volkswagen Foundation Meeting; JMS Prize - John Maynard Smith Prize; DF Ceremony - Distinguished Fellow Ceremony.

SYMPOSIA SCHEDULE

Day	20 Tue				21 Wed				22 Thu	23 Fri				24 Sat
Session	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Symposia	SY 05								SY 02					
	SY 23						SY 30							
	SY 15				SY 09				SY 20				SY 34	
	SY 32			SY 13			SY 17			SY 03				
	SY 19		SY 21		SY 16		SY 31							
	SY 22			SY 10			SY 01			SY 11				
	SY 12		SY 07		SY 28		SY 24		SY 04					
	SY 33			SY 27			SY 06		SY 18					
	SY 29	SY 26			SY 25			SY 14			SY 08			

DETAILED PROGRAM

TUESDAY 20

Plenary Talk

Time / Room	08:30 – 09:30	09:30 - 10:30	
Aula Magna	Juliette De-Meaux Institute for Evolution and Biodiversity, University of Münster, Germany The molecular underpinnings of adaptation in <i>Arabidopsis thaliana</i> <p>The theories used in Evolutionary Biology are rooted in powerful concepts, most of which were constructed before the discovery of DNA. In the meantime, we understand much better how function is encoded in the genome. The current task is now to examine how genetic modifications in molecular systems can promote adaptation in natural populations. <i>Arabidopsis thaliana</i> is a focal system in plant molecular biology. Genes and pathways controlling its development, physiology and immunity have been researched intensively. Its broad latitudinal distribution in Europe makes it a unique system to dissect the molecular underpinnings of adaptation. I will review some of the molecular changes that have been successfully associated with adaptive evolution in <i>A. thaliana</i>. I will thereby illustrate why reconciling molecular and evolutionary biology is a difficult yet necessary task, requiring a shift of concepts in both molecular biology and evolutionary theory.</p>		Coffee Break

Session 1

Time /Room	10:30 – 10:49	10:54 – 11:13	11:18 – 11:37	11:42 – 12:01	12:01 - 14:00
R1 SY05 Chair: Beldade P & Gilbert P	D20SY05IT10:30R1 INVITED TALK Ellers J A new perspective on phenotypic plasticity: taking into account physiological mechanisms challenges classic plasticity theory		D20SY05RT11:18R1 Foray V , Desouhant E, Gilbert P Can we predict the effect of thermal fluctuations on specialist and generalist reaction norms?	D20SY05RT11:42R1 Compton ME , Simons AM When in doubt, hedge your bets. Diversification and phenotypic plasticity in <i>Spirodela polyrhiza</i> (L.) (Greater duckweed)	
R2 SY32 Chair: Hoffmann A & Santos M	D20SY32IT10:30R2 INVITED TALK Hoffmann AA Climate change adaptation: genetic and genomic approaches in <i>Drosophila</i>	D20SY32RT10:54R2 Bridle J , Buckley J Evolution on the move: adaptation to use a widespread host associated with responses to climate change in the UK butterfly <i>Aricia agestis</i>	D20SY32RT11:18R2 Botero CA , Dor R, McCain C, Safran R Environmental tolerances, latitudinal gradients and the potential for speciation in mammals and birds	D20SY32RT11:42R2 Aurelle D , Jeremie V, Anne H, Christoph G, Didier F, Eve T, Guillaume M The puzzle of cnidarian adaptation: an integrative approach	
R3 SY23 Chair: Jiggins C	D20SY23IT10:30R3 INVITED TALK Feder JL Patterns of genomic divergence across the speciation continuum		D20SY23RT11:18R3 Blanckaert A , Hermission J How Dobzhansky-Muller Incompatibilities accumulate in presence of gene flow?	D20SY23RT11:42R3 Kautt AF , Machado-Schiaffino G, Meyer A The genomic landscape of speciation in the repeated adaptive radiations of Nicaraguan crater lake cichlid fishes	
R4 SY15 Chair: Laine AL	D20SY15IT10:30R4 INVITED TALK Duffy M , Auld SKJR, Ochs JH, Sebastian M, Hall SR Selection by predators on within host growth patterns of two natural parasites of <i>Daphnia</i>		D20SY15RT11:18R4 Schmid-Hempel P , Schmid-Hempel R Variation in disease epidemics across colonies	D20SY15RT11:42R4 Masri L , Schulte RD, Timmermeyer N, Thanisch S, Crummenerl L, Jansen G, Michiels NK, Schulenburg H A stumbling Red Queen: host-parasite coevolution handicapped by Feeble males	
R5 SY33 Chair: Beldade R & Morrissey M	D20SY33IT10:30R5 INVITED TALK Clobert J Dispersal: causes, mechanisms and population consequences		D20SY33RT11:18R5 Shaw A , Jalasvuori M, Kokko H Dispersal in a world with edges: hypermobility, inertia, and the population cost of evolution	D20SY33RT11:42R5 Barluenga M , Magalhaes I Cichlid evolution in crater lakes and ecological opportunity	13:30R5 Volkswagen F Meeting

TUESDAY 20

Coffee Break

Lunch

Volkswagen F Meeting

Time / Room	10:30 – 10:49	10:54 – 11:13	11:18 – 11:37	11:42 – 12:01	12:01 – 14:00
R6 SY22 Chair: Perron GG	D20SY22IT10:30R6 INVITED TALK MacLean C The evolutionary causes and consequences of divergence in antibiotic resistance between bacterial species: insights from comparative and experimental studies		D20SY22RT11:18R6 Hill AL , Rosenbloom DIS, Rabi AS, Georgette N, Siliciano RF, Nowak MA The role of antiretroviral dynamics in the evolution of drug resistance in HIV	D20SY22RT11:42R6 Dettman JR , Rodrigue N, Kassen R Evolutionary genomics of epidemic and non-epidemic strains of <i>Pseudomonas aeruginosa</i>	
R7 SY29 Chair: Sá Pinto A, Campos R & Jenkins K	D20SY29IT10:30R7 INVITED TALK Meagher T Data Access and Scientific Societies		D20SY29RT11:18R7 Sousa C Implementation of problem-based learning in the context of celebrating the centenary of Alfred Wegener's first publication on continental drift and bridging the evolution science-biology and geology teaching practice gap	D20SY29RT11:42R7 Paz-y-Mino-C G , Espinosa A The Jackprot Simulation: slot-machine model to teach the non-random nature of protein evolution	
R8 SY19 Chair: Mökkönen & Lindstedt-Kareksela A	D20SY19IT10:30R8 INVITED TALK Sherratt TN , Penny H, Abbott K, Hassall C, Skevington J The evolution of imperfect mimicry in hover flies (Diptera: <i>Syrphidae</i>)		D20SY19IT11:18R8 INVITED TALK Mappes J Is variation in chemical defence parasitism on a public good?		
R9 SY012 Chair: Burri R	D20SY12IT10:30R9 INVITED TALK Kaufman J Gene co-evolution in action: how genomic organisation impacts evolution of the adaptive immune system of jawed vertebrates		D20SY12RT11:18R9 Westerdahl H , Follin E, Karlsson M, Drews A, Lundsgaard C, Nielsen M, Wallin S, Paulsson K <i>In silico</i> peptide-binding predictions of MHC class I reveal similarities across distanRTy related songbird species, suggesting convergence on the level of protein function	D20SY12RT11:42R9 Winternitz J , Minchey S, Garamszegi L, Altizer S Sexual selection more than parasitism explains functional variation of the MHC across mammals	

Session 2

Time / Room	14:00 – 14:19	14:24 – 14:43	14:48 – 15:07	15:12 – 15:31	15:31 – 15:45
R1 SY05 Chair: Belhadde P & Gilbert P	D20SY05RT14:00R1 Gomez-Mestre I , Kulkarni S, Buchholz D Phenotypic divergence among spadefoot toad species reflects accommodation of mechanisms underlying developmental plasticity	D20SY05RT14:24R1 Leggett H , Buckling A Experimental evolution of plasticity in a virus	D20SY05RT14:48R1 Kuemmerli R , Schiessl K, Bigosch C, Ackermann M Division of labour through phenotypic heterogeneity in clonal bacterial populations	D20SY05RT15:12R1 Pulkkinen K , Ketola T, Laakso J, Mappes J, Sundberg L Fish farms select for increased phenotypic plasticity in growth and virulence in a fish pathogen	
R2 SY32 Chair: Hoffmann A & Santos M	D20SY32RT14:00R2 Krehenwinkel H , Tautz D A genetic and ecological dissection of the recent range expansion of the European wasp spider Argiope bruennichi - Consequence of climate change?	D20SY32RT14:24R2 Sundin J , Rosenqvist G, Aronen T, Berglund A Sex in murky waters: anthropogenic disturbance of sexual selection in the pipefish model system	D20SY32RT14:48R2 Parker D , Vesala L, Ritchie M, Laiho A, Hoikkala A, Kankare M Do closely related species use the same genes to adapt to fluctuating environmental conditions?	D20SY32RT15:12R2 Pascual M , Calabria G, Dolgova O, Balanyà J, Santos M Local adaptation drives latitudinal frequency clines for chromosomal inversions in <i>Drosophila subobscura</i>	
R3 SY23 Chair: Carvalho GR	D20SY23IT14:00R3 INVITED TALK Barton N What can we learn by sampling genomes across clines?		D20SY23RT14:48R3 Bossu C , Baglione V, Grabherr M, Kruszewicz A, Lantz H, Müller I, Poelstra J, Vijay N, Wikelski M, Wolf J Islands of genomic divergence across the hooded and carrion crow hybrid zone: linking genes and 'magic traits'	D20SY23RT15:12R3 Britton-Davidian J , Villafan de la Torre E, Smadja C, Caminade P, Boursot P Are Robertsonian fusions barriers to introgression in a house mouse hybrid zone?	

Lunch

Break

Time / Room	14:00 – 14:19	14:24 – 14:43	14:48 – 15:07	15:12 – 15:31	15:31 – 15:45
R4 SY15 Chair: Laine AI	D20SY15RT14:00R4 Vézilier J , Nicot A, Romain P, Nicolas B, Bruno B, Rivero A, Gandon S Deciphering the impact of Plasmodium parasites on bird odorant profile: what makes infected birds more attractive to mosquitoes?	D20SY15RT14:24R4 Zélé F , Nicot A, Cornet S, Duron O, Rivero A Implication of <i>Wolbachia</i> on avian malaria (<i>Plasmodium relictum</i>) transmission by <i>Culex pipiens</i> mosquitoes	D20SY15RT14:48R4 King K , Brockhurst M, Hurst GDD What's your gut feeling? Co-infections drive parasite evolution in <i>C. elegans</i>	D20SY15RT15:12R4 Lange B , Reuter M, Ebert D, Muylaert K, Decaestecker E Effects of pathogens and food on host population dynamics in <i>Daphnia magna</i> populations	
R5 SY33 Chair: Belkadi R & Morrissey M	D20SY33IT14:00R5 INVITED TALK Morrissey M Selection and evolution of causally-covarying traits		D20SY33RT14:48R5 Duthie A , Abbott K, Nason J A fluctuating environment drives coexistence in five non-pollinating fig wasps	D20SY33RT15:12R5 Reed T , Gienapp P, Visser M Quantifying the demographic cost of selection in a changing environment	
R6 SY22 Chair: Pennings P	D20SY22IT14:00R6 INVITED TALK Roper C How drug resistance evolved in the African malaria parasite <i>Plasmodium falciparum</i>		D20SY22RT14:48R6 Sousa AIGC , Trindade S, Gordo I Antibiotic resistance and stress in the light of Fisher's model	D20SY22RT15:12R6 Hall A , Angst D Effect of Phages on the Cost of Antibiotic Resistance	
R7 SY26 Chair: Wheat CW	D20SY26RT14:00R7 Santure A , DeCauwer I, Poissant J, Robinson M, Visser M, VanOers K, Groenen MAM, Sheldon B, Slate J The genomic architecture of morphological, life history and fitness traits in two long term wild populations of great tits (<i>Parus major</i>) - can we find evidence for genes of major effect?	D20SY26RT14:24R7 Pallares L , Harr B, Turner L, Tautz D Finding QTNs in genes affecting craniofacial morphology in wild house mice	D20SY26IT14:48R7 INVITED TALK Rockman M QTNs of no effect		
R8 SY19 Chair: Mökkönen & Lindstedt-Karekseila A	D20SY19IT14:00R8 INVITED TALK Stevens M Brood parasites and mimicry: a sensory ecology approach		D20SY19RT14:48R8 Abou Chakra M , Hilbe C, Traulsen A Retaliatory parasites make an offer a host should not refuse	D20SY19RT15:12R8 Schmitt T , Wurdack M, Kroiss J, Strohm E, Niehuis O Consequences of an arms race on the cuticular hydrocarbon profiles of an insect host and its three brood parasites	
R9 SY012 Chair: Ekblom R	D20SY12IT14:00R9 INVITED TALK Richardson D , Van Oosterhout C, Emerson B, Illera J, Bridgett S, Gharbi K, Spurgin L What drives the rapid regeneration of MHC diversity amongst recently bottlenecked populations?		D20SY12IT14:48R9 INVITED TALK Radwan J Evolution of MHC gene number: optimality hypothesis and beyond		

Session 3

Time / Room	15:45 – 16:04	16:09 – 16:28	16:33 – 16:52	16:57 – 17:16	17.16 – 17.45
R1 SY05 Chair: Belkadi P & Gibert P	D20SY05RT15:45R1 Peluffo A , Mallard F, Tully T When to shrink? Understanding the evolution of negative growth in ectotherms	D20SY05RT16:09R1 Clark E , Pompini M, Marques da Cunha L, Wedekind C Plastic traits of whitefish dependent on the interaction of pathogens, host developmental stage, and genetics	D20SY05RT16:33R1 Gotthard K The evolution of alternative developmental pathways in a butterfly: local adaptation in developmental thresholds and footprints of relaxed selection on life history plasticity	D20SY05RT16:57R1 Till-Bottraud I , Grassein F, Lavorel S The role of phenotypic plasticity in the response of species to environmental change: a reciprocal transplantation of five grasses species along an altitudinal gradient	
R2 SY32 Hoffmann A & Santos M	D20SY32RT15:45R2 Aviezer I , Chamovitz D, Sternberg M, Sapir Y How rapid can rapid evolution be? Differences	D20SY32RT16:09R2 Scharsack J , Dittmar J, Schmidt A, Franke F, Kurtz J Do rising temperatures	D20SY32RT16:33R2 Henning N , Cordellier M, Streit B, Schwenk K The evolutionary adaptive potential of <i>Daphnia</i>	D20SY32RT16:57R2 Poncet V , Munoz F, Munzinger J, Pillon Y, Gomez C, Couderc M, Tranchant-Dubreuil C, Hamon S, DeKochko A	Coffee Break

Time / Room	15:45 – 16:04	16:09 – 16:28	16:33 – 16:52	16:57 – 17:16	17.16 – 17.45
	between semi-arid and Mediterranean populations of <i>Brachypodium distachyon</i>	accelerate the evolutionary arms race of hosts and parasites?	<i>galeata</i> in time and space	Molecular data and ecological niche modeling reveal the evolutionary history of the New Caledonian relict <i>Amborella trichopoda</i> (Amborellaceae)	
R3 SY23 Chair: Smadja C	D20SY23RT15:45R3 Tavares H , Bradley D, Boell L, Copsey L, Couchman M, Elleouet J, Field D, Rebocho X, Yongbiao X, Barton N, Coen E Selection on flower colour in a hybrid zone reveals interwoven patterns of genomic divergence at a linked cluster of loci	D20SY23RT16:09R3 Nadeau N , Ruiz M, Salazar P, Counterman B, Jiggins C, Papa R Patterns of genomic divergence across parallel hybrid zones of mimetic <i>Heliconius</i> butterflies	D20SY23RT16:33R3 He Q , Knowles L Genomic tests of whether chromosomal rearrangements facilitated local adaptation in <i>Anopheles gambiae</i> based on coalescent expectations	D20SY23RT16:57R3 Fraisse C , Welch J, Belkhir K, Bierne N Mosaic genomes in time and space revealed by large-scale targeted sequencing in <i>Mytilus</i> mussels	
R4 SY15 Chair: Vale P	D20SY15IT15:45R4 INVITED TALK Salathe M Heterogeneity in contact networks and its effect on disease dynamics		D20SY15RT16:33R4 Tack AJM , Laine A Genotype and spatial structure shape pathogen dispersal and disease dynamics at small spatial scales	D20SY15RT16:57R4 Fellous S , Duncan A, Quillery E, Vale P, Kaltz O Parasites in patchy environments: genetic influence on parasite dispersal, local spread and establishment	
R5 SY33 Chair: Beldeado R & Morrissey M	D20SY33RT15:45R5 Ostevik K , Andrew R, Otto S, Rieseberg L Reproductive barriers between <i>Helianthus petiolaris</i> ecotypes	D20SY33RT16:09R5 Delmore K , Irwin D Hybrid songbirds employ intermediate routes in migratory divide	D20SY33RT16:33R5 Mullon CDL , Keller L, Lehmann L Co-evolutionary branching of dispersal and sociality in structured populations	D20SY33RT16:57R5 Garroway C , Hinde C, Verhelst B, Sheldon B Disentangling the social, parental and genetic influences on natal dispersal in great tits	
R6 SY22 Chair: Cobey S	D20SY22RT15:45R6 Rozen D , Grimbergen A Antibiotic resistance among the killers	D20SY22RT16:09R6 Torres-Barceló C , Moxon R, McWilliam M, MacLean R Direct benefit of the SOS response vanishes after long term evolution in <i>P. aeruginosa</i>	D20SY22RT16:33R6 Schneider K , Escalante A Why anti-malarial drug resistance is spreading faster in <i>Plasmodium falciparum</i> than in <i>Plasmodium vivax</i>	D20SY22RT16:57R6 Rankin D Antivirulence drugs and the evolution of antibiotic resistance	
R7 SY26 Chair: Rockmann M	D20SY26RT15:45R7 Konczal M , Babik W, Orlowska P, Radwan J, Rudolf A, Sadowska E, Koteja P Genomic pattern of selection for ecologically important trait - transcriptome analyses of the bank vole artificial selection experiment	D20SY26RT16:09R7 Joron M Inversions, supergenes and the genomic evolution of loci of large effect	D20SY26IT16:33R7 INVITED TALK Cresko W Genomic architecture facilitates and frustrates the identification of adaptive mutations in stickleback		
R8 SY19 Chair: Mökkönen & Lindstedt-Karekse A	D20SY19RT15:45R8 Le Pou Y , Chazot N, Elias M, Joron M Batesian mimicry, morphospace occupancy, and the shaping of warning signal diversity in butterfly communities	D20SY19RT16:09R8 Larsen J , Stürup M, Schiøtt M, Nash D Reproductive competition between polygynous parasite queens in ant colonies	D20SY19RT16:33R8 Sato Y , Sabelis M, Egas M Sneaking behaviour in young males: alternative male mating phenotypes in the two-spotted spider mite	D20SY19RT16:57R8 Flower T Flexible deceptive tactics of the fork-tailed drongo	
R9 SY012 Chair: Ekblom R	D20SY12RT15:45R9 Hartasanchez D , Valles-Codina O, Navarro A Interplay of gene conversion and crossover in the molecular evolution of multigene families	D20SY12RT16:09R9 Duvaux L , Smadja C, Ferrari J, Zhou J, Butlin R Linking chemosensory multigene-family evolution with speciation in the pea aphid (<i>Acyrtosiphon pisum</i>)	D20SY12RT16:33R9 Silva M , Su Q, Daugherty S, Coelho M, Silva J Evolution of olfaction in tubenose seabirds	D20SY12RT16:57R9 Eizaguirre C , Lenz T, Kalbe M, Milinski M Genetic signature of local adaptation of MHC genes to varying parasite pressures	

Coffee Break

Session 4

Time / Room	17:45 – 18:04	18:09 – 18:28	18:33 – 18:52	18:57 – 19:16
R1 SY05 Chair: Beldade P & Gibert P	D20SY05RT17:45R1 Bretman A , Mohorianu I, Dalmay T, Chapman T Plastic mating strategies: transcriptomics of male responses to mating rivals in <i>Drosophila melanogaster</i>	D20SY05RT18:09R1 Carter M , Head M, Moore A, Royle N Plasticity in signalling behaviour reflects genetics as well as relative size in burying beetles (<i>Nicrophorus vespilloides</i>)	D20SY05RT18:33R1 Lehmann P , Lytytinen A, Piironen S, Lindström L Loss of diapause related behavioral plasticity during northwards range expansion in the invasive Colorado potato beetle <i>Leptinotarsa decemlineata</i> (Say) in Europe	D20SY05RT18:57R1 Piironen S , Lytytinen A, Lindström L Temperature stress of preceding generations modifies the response to insecticide stress in the invasive Colorado potato beetle
R2 SY32 Chair: Hoffmann A & Santos M	D20SY32RT17:45R2 Mosca E , González-Martínez S, Neale D Environmental vs. geographical molecular adaptation in Alpine conifers	D20SY32RT18:09R2 Hedlund JSU , Jakobsson S, Fransson T, Kullberg C Long-term life-history responses to climate change in the Willow Warbler (<i>Phylloscopus trochilus</i>)	D20SY32RT18:33R2 Lohbeck K , Riebesell U, Collins S, Reusch TBH Potential and constraints of adaptation to ocean acidification in the globally important marine phytoplankton species <i>Emiliania huxleyi</i>	D20SY32RT18:57R2 Cortes A , Waeber S, Sedlacek J, Wheeler J, Van Kleunen M, Lexer C, Karrenberg S Patterns of gene flow and fine-scale genetic structure in phenologically-isolated alpine populations of dwarf willow (<i>Salix herbacea</i> L.)
R3 SY23 Chair: Jiggins C	D20SY23RT17:45R3 Roux C , Tsagkogeorga G, Bierne N, Galtier N Crossing the species barrier: genomic islands of introgression between two extremely divergent <i>Ciona intestinalis</i> species	D20SY23RT18:09R3 Sousa V , Carneiro M, Ferrand N, Hey J Identifying loci under selection against gene flow in isolation with migration models	D20SY23RT18:33R3 Burri R , Smeds L, Olason P, Backstrom N, Kawakami T, Kunstner A, Makinen H, Nadachowska-Brzyska K, Qvarnstrom A, Uebbing S, Wolf JBW, Saetre G, Saether S, Hogner S, Bures S, Garanszegi L, Moreno J, Ruzic M, Torok J, Ellegren H The landscape(s) of genome divergence in <i>Ficedula</i> flycatchers	D20SY23RT18:57R3 Kaiser T , Nguyen L, Neumann T, Sedlacek F, Zrim A, Von Haeseler A, Tessmar-Raible K The genomics of biological clocks: local adaptations in diurnal and lunar emergence time of the intertidal midge <i>Clunio marinus</i> (Chironomidae, Diptera)
R4 SY15 Chair: Vale P	D20SY15RT17:45R4 Hartfield M , Bull R, White P, Lloyd A, Luciani F, Alizon S Determining the effect of Hepatitis C genotype on virus outcome	D20SY15RT18:09R4 Friman V , Soanes-Brown D, Sierociński P, Johansen H, Molin S, Buckling A Phage therapy might not help everyone; bacterial resistance and phage infectivity evolution considerably varies between different Cystic Fibrosis patients	D20SY15RT18:33R4 Priest N Using model selection to deduce the influence of pathogen growth on the mortality trajectory of the host	D20SY15RT18:57R4 Ashby B Host-parasite coevolution: local interactions can limit the severity of fitness costs associated with range expansion
R5 SY33 Chair: Beldade R & Morrissey M	D20SY33RT17:45R5 Santos del Blanco L , Tudor E, Pannell J Fitness returns of inflorescence architecture in a wind pollinated annual plant	D20SY33RT18:09R5 Harrison X , York J, Young A The implications of reverse sex-biased dispersal for spatial genetic structure in a co-operatively breeding bird	D20SY33TL18:33R5 Duplouy A , Ikonen S, Hanski I Life-history of the Glanville fritillary butterfly in fragmented versus continuous landscapes	D20SY33RT18:57R5 Audzijonyte A , Kuparinen A, Fulton E Small fish, big fish: modelling ecological consequences of life-history evolution in harvested stocks
R6 SY22 Chair: Inglis F	D20SY22RT17:45R6 DeVisser A , Schenk M, Salverda M, Szendro I, Krug J Exploring the evolvability of an antibiotic resistance enzyme	D20SY22RT18:09R6 Moreno-Gomez S , Hill A, Rosenbloom DIS, Nowak M, Pennings P The role of drug penetration in the evolution of multi-drug resistance	D20SY22RT18:33R6 Ross-Gillespie A , Weigert M, Brown S, Kümmelri R Extracellular quenching of bacterial public goods as an 'evolution-proof' anti-virulence therapy: a case study with <i>Pseudomonas aeruginosa</i>	D20SY22RT18:57R6 Bedhomme S , Amorós-Moya D, Pujana M, Valero L, Bravo I Multilevel evolutionary changes after horizontal gene transfer of an antibiotic resistance gene
R7 SY26 Chair: Cresko W	D20SY26RT17:45R7 Wright D , Johnsson M, Andersson L, Jensen P A sexual ornament in chickens is determined by large-effect pleiotropic alleles at <i>HAO1</i> and <i>BMP2</i> , selected during domestication	D20SY26RT18:09R7 Fruciano C , Franchini P, Jones J, Spreitzer M, Elmer K, Henning F, Meyer A The genetic bases of body shape architecture of two sympatric Mesoamerican cichlid species: a RAD-QTL approach	D20SY26IT18:33R7 INVITED TALK Mitchell-Olds T , Olson-Manning C, Anderson J, Lee C, Prasad K, Song B Selection on the genes that control complex traits	

Time / Room	17:45 – 18:04	18:09 – 18:28	18:33 – 18:52	18:57 – 19:16
R8 SY21 Chair: Wellenreuther M & Hansson B	D20SY21RT17:45R8 Svensson E Ecology and mating interactions: temperature influences male-female conflict in a colour polymorphic damselfly	D20SY21RT18:09R8 Whitney J , Karl S Natural selection drives incipient divergence despite continuous gene flow in sympatric color morphs of a coral reef fish	D20SY21RT18:33R8 Seabra S , Rodrigues A, Silva S, Silva J, Marabuto E, Pina-Martins F, Gharbi K, Blaxter M, Borges PAV, Jiggins C, Quartau J, Paulo O Experimental and genomic approaches in the study of the balanced colour-polymorphism of the meadow spittlebug (<i>Philaenus spumarius</i>)	D20SY21RT18:57R8 Kim K , Pryke S, Griffith S, Burke T Genetic and genomic insights into a colour polymorphism of the Gouldian finch (<i>Erythrura gouldiae</i>)
R9 SY07 Chair: Ganem G	D20SY07IT17:45R9 INVITED TALK Mendelson T What is "species recognition"?		D20SY07RT18:33R9 Magellan K Innate sex recognition and learned species recognition in an invasive fish	D20SY07RT18:57R9 Ålund M , Immler S, Qvarnström A Sperm swimming ability and reproductive isolation in <i>Ficedula</i> flycatchers

Poster Session

Time / Room	19:16
Poster Area	SY05 SY07 SY12 SY15 SY19 SY22 SY23 SY26 SY29 SY32 SY33

POSTERS

TUESDAY 20

Symposium 5

Phenotypic plasticity: mechanisms, ecology and evolution

PS0022 - Reaction norms for size and time at maturity in insects: phenotypic plasticity versus constraints (D20SY05PS0022)

Vellau H, Tammaru T, Teder T

PS0031 - Females play it cool: plasticity of polyandry in North American Drosophila (D20SY05PS0031)

Taylor M, Price T, Wedell N

PS0047 - Between-host phylogenetic distance and performance of haematophagous ectoparasites (D20SY05PS0047)

Krasnov B, Khokhlova I, Fileden L

PS0068 - Stability of sex expression in the gynomonoecious-gynodioecious plant Silene italicica (D20SY05PS0068)

Maurice S

PS0072 - Gene expression differences among castes and life stages in the ant *Formica exsecta*, a transcriptome study (D20SY05PS0072)

Morandin C, Wheat C, Dhaygude K, Paviala J, Trontti K, Helanterä H

PS0095 - Modeling plastic and canalized phenotypic expression by the process of genetic accommodation (D20SY05PS0095)

Hazel W, Smock R, Steffen B

PS0150 - Genetic and phenotypic variation in developmental rate across geographic regions: a

photoperiod driven latitude compensating mechanism? (D20SY05PS0150)

Śniegula S, Johansson F, Drobniak S, Gołąb M

PS0152 - Eco-evolutionary dynamics of freshwater water fish communities in post glacial lakes (D20SY05PS0152)

Faulks L, Östman Ö, Svanbäck R

PS0221 - Adult conspecific cues affect molting rate, survival and claw morphology of early recruits of the shore crab *Carcinus maenas* (D20SY05PS0221)

Duarte R, Ré A, Flores AAV, Queiroga H

PS0224 - The evolution of pollinator emergence timing: modeling the influence of environmental variance, intraspecific competition, and longevity (D20SY05PS0224)

Mitesser O, Keller A, Poethke H

PS0230 - Learned predator recognition allows activation of defensive behaviour and enhances survival against alien predators (D20SY05PS0230)

Polo-Cavia N, Gomez-Mestre I

PS0231 - Temperature dependent gene expression and the invasion of new thermal environments in *Cottus* (D20SY05PS0231)

Czypionka T, Nolte A

PS0233 - How maternal caloric restriction during pregnancy affects appetite of the offspring in laboratory mammals: a meta-analysis (D20SY05PS0233)

Lagisz M, Blair H, Kenyon P, Uller T, Raubenheimer D, Nakagawa S

PS0255 - Role of behavior and phenotypic plasticity

in thermal strategies (D20SY05PS0255)
Gvozdik L

PS0319 - Ration dependent allocation to growth and reproduction in an annual killifish (D20SY05PS0319)
Vrtilek M, Reichard M

PS0320 - Plasticity and salmon growth: genetic determinism versus social competition
(D20SY05PS0320)
Sundström F

PS0322 - Fitness effects of warning signals through different life-stages and phenotypes
(D20SY05PS0322)
Galarza J, Suisto K, Mappes J

PS0338 - Jack of all traits, adapted to all: the highly plastic freshwater snail *Radix balthica* also show plasticity in mantle pigmentation (D20SY05PS0338)
Ahlgren J, Yang X, Hansson L, Brönmark C

PS0412 - Pathogen-induced hatching and population-specific life-history response to waterborne cues in brown trout (*Salmo trutta*)
(D20SY05PS0412)
Pompini M, Clark E, Wedekind C

PS0433 - Phenotypic adjustments and prophylaxis in *Anticarsia gemmatalis* larvae are triggered by the presence of conspecifics (D20SY05PS0433)
Silva F, Viol D, Faria S, Lima E, Valicente F, Elliot S

PS0447 - Habitat use and body shape evolution in all Australian frogs (D20SY05PS0447)
Vidal-Garcia M, Byrne P, Roberts JD, Keogh JSCOTT

PS0519 - The role of local adaptation and phenotypic plasticity in the population establishment and divergence of a freshwater protist (D20SY05PS0519)
Sassenhagen I, Rengefors K

PS0532 - The role of phenotypic plasticity in fast adaptive responses under natural conditions in Lake Victoria cichlids (D20SY05PS0532)
Van Rijssel J, Witte F

PS0559 - Introducing diversity? Variable strategies in new environments and consequences for infection dynamics (D20SY05PS0559)
Brunner F, Heckwolf M, Eizaguirre C

PS0582 - Contributions of a novel population to the understanding of the role of male hydrocarbon polymorphism in *Drosophila melanogaster*
(D20SY05PS0582)
Bontonou G, Denis B, Wicker-Thomas C

PS0594 - Gifts, colors and the *vagina dentata*: phenotypic plasticity, honest signaling and sexual conflict in a gift-giving butterfly (D20SY05PS0594)
Morehouse N, Bartoch C, Luna E, Roberts N, Saleh N

PS0659 - The nutritional unbalance on forest pest performance (D20SY05PS0659)
Garcia R, Baucé É

PS0690 - Water fleas require microbiota for survival, growth and reproduction (D20SY05PS0690)
Sison-Mangus M, Mushegian A, Ebert D

PS0696 - Correlated evolution of sexual dimorphism and male dimorphism in a lineage of Neotropical harvestmen (D20SY05PS0696)

Buzatto B, Tomkins J, Simmons L, Machado G

PS0703 - Modularity of polyphenic developmental reaction norm (D20SY05PS0703)
Nishimura K

PS0723 - The role of olfactory cues for the search behavior of a specialist and generalist butterfly
(D20SY05PS0723)
Schäpers A, Carlsson M, Gamberale-Stille G, Janz N

PS0737 - Plasticity of antioxidant defence responses to abiotic stress in natural populations of *Iris pumila*
(D20SY05PS0737)
Vučeta A, Manitašević Jovanović S, Tucić B

PS0744 - When does environmental change lead to selection on phenotypic plasticity? (D20SY05PS0744)
Gienapp P, Reed T

PS0749 - Lifetime patterns of cooperation and competition: behavioural syndromes through time and across contexts (D20SY05PS0749)
Sanderson J, Hodge S, Young A, Cant M

PS0763 - Deciphering the importance of genetics and environment in shaping the phenotype of low and high altitude vole populations: countergradient effect and cryptic evolution (D20SY05PS0763)
Bize P, Lehto M, Figeat L

PS0787 - Metabolism and energy storage strategies differ in nine-spined stickleback (*Pungitius pungitius*) populations from contrasting thermal environments (D20SY05PS0787)
Bruneaux M, Vasemägi A, Primmer C

PS0793 - Differential gene expression in the olfactory epithelium of the European eel *Anguilla anguilla* at different life stages (D20SY05PS0793)
Churcher A, Hubbard P, Huertas M, Canario AVM

PS0803 - Biochemical plasticity and environmental stress: *Iris pumila* as a case study (D20SY05PS0803)
Manitašević Jovanović S, Vučeta A, Tucić B

PS0809 - Variation of *Drosophila subobscura* wing morphometric traits induced by 25 µT electromagnetic field (D20SY05PS0809)
Patenković A, Savić T, Kurbača Novićić Z, Andelković M

PS0827 - Adaptive phenotypic plasticity in an ecologically relevant foraging trait (D20SY05PS0827)
Machado-Schiaffino G, Henning F, Meyer A

PS0851 - Phenotypic convergence in sea bass (*Dicentrarchus labrax*) escaping from fish farms: the effects of feralization? (D20SY05PS0851)
Garcia de Leaniz C, Toledo K, Brito A

PS0863 - The use of indirect cues in adaptive colour polyphenism in moth larvae (D20SY05PS0863)
Tammari T, Sandre S, Kaasik A, Eulitz U

PS0870 - Nine bacterial species can't be wrong: fluctuating temperature leads to asymmetric changes in thermal tolerance (D20SY05PS0870)
Saarinen K, Laakso J, Lindström L, Ketola T

PS0883 - Is social status influenced by individual problem-solving success in House Sparrows (*Passer domesticus*)? (D20SY05PS0883)
Preiszner B, Papp S, Vincze E, Seress G, Bókony V, Liker A

PS0941 - How plasticity in sexual advertisement

affects signal reliability and genetic variation for sexually selected traits (D20SY05PS0941)
Houslay T, Hunt J, Tinsley M, Bussière L

PS0946 - A common garden test of local adaptation in barnacle populations along a salinity gradient (D20SY05PS0946)
Wrangé A, André C, Jonsson P, Havenhand J

PS0950 - Seasonal phenotype specific gene expression during metamorphosis of the European Map Butterfly *Araschnia levana* (D20SY05PS0950)
Vilcinskas A, Vogel H

PS0956 - Demographic and behavioural landscape of damselfish reproductive success (D20SY05PS0956)
Mascolino S, Sacchi C, Boufana B, Gubili C, Woodward S, Mariani S

PS1061 - Quantitative genetics breeding design of the wing size and shape of cactophilic *Drosophila* species in different environment (D20SY05PS1061)
Santos C, Manfrin M

PS1086 - The effect of resource availability on host manipulation in the complex life cycle parasite *Schistocephalus solidus* – is manipulation costly? (D20SY05PS1086)
Hafer N, Benesh D

PS1141 - How does developmental plasticity contribute to phenotypic evolution? (D20SY05PS1141)
Mendes CCA, Sucena É, Mirth C

PS1167 - Biodiversity affects phenotypic plasticity in subtropical trees (D20SY05PS1167)
Blum J, Allan E, Durka W, Fischer M

PS1178 - Intraspecific and intersexual differences in UV stress response of neighboring freshwater copepod populations (D20SY05PS1178)
Schultheiß R, Sereda S, Wilke T

PS1180 - Variation of life span under different environmental conditions in *Drosophila melanogaster* collected along an altitudinal gradient (D20SY05PS1180)
Onder B, Güler P, Ayhan N

PS1196 - Testing evolutionary predictions of the Predictive Adaptive Response hypothesis in a pre-industrial human population (D20SY05PS1196)
Hayward A, Rickard I, Lummaa V

PS1209 - Population differentiation in phenology of the orange tip butterfly in Sweden and the UK (D20SY05PS1209)
Stålhandske S, Gotthard K, Leimar O

PS1215 - The role of *Drosophila* insulin-like peptides in nutrient-dependent lifespan and reproduction (D20SY05PS1215)
Zandveld J, Van den Heuvel J, Zwaan B, Piper MDW

PS1216 - From individuals to populations: linking thermal reaction norms to population dynamics in microcosms (D20SY05PS1216)
Tully T, Mallard F, Le Bourlot V

PS1223 - Linking phenotypic plasticity in development times to evolutionary origins of protandry: a meta-analysis in insects (D20SY05PS1223)
Teder T

PS1230 - Circadian fluctuation of gene expression along a bathymetrical cline in the marine angiosperm *Posidonia oceanica* (D20SY05PS1230)
Dattolo E, D'Esposito D, Lauritano C, Ruocco M, Procaccini G

PS1310 - Interacting phenotypes and the maintenance of behavioural phenotypic variation in Field crickets (D20SY05PS1310)
Santostefano F, Dingemanse N

PS1369 - Evolution of phenotypic plasticity in *Caenorhabditis elegans* populations (D20SY05PS1369)
Sandner P, Proulx S, Teotónio H

PS1397 - Symmetric and asymmetric variation on different hierarchical levels: plasticity of petal shape in *Heliosperma* (Caryophyllaceae) (D20SY05PS1397)
Flatscher R, Frajman B, Klingenberg C

PS1409 - Sexual selection can impede the evolution of phenotypic plasticity (D20SY05PS1409)
Nonaka E

PS1414 - The fate of seasonal plasticity under relaxed selection (D20SY05PS1414)
Brattstrom O, Oostra V, Brakefield P, Hiltemann Y, Zwaan B

PS1425 - Environmental cues and growth responses in wild yeast (D20SY05PS1425)
Knight C, Rash B, Robinson H, Houseley J

PS1455 - Temperature-plasticity of a seed beetle - a size-fecundity relationship? (D20SY05PS1455)
Lind M

PS1467 - Will kids be what grandparents ate? Transgenerational effects of different food quality revealed by *Daphnia* (D20SY05PS1467)
Wojewodzic M

Symposium 7

The nature and mechanisms of evolution of species recognition systems

PS0337 - Premating reproductive isolation between two closely related cricket species (D20SY07PS0337)
Blankers T, Hennig M

PS0349 - Rapid divergence in mating behavior versus sexual morphology among diverging populations in a widespread neotropical fly, *Archisepsis diversiformis* (Diptera: Sepsidae) (D20SY07PS0349)
Puniamoorthy N, Blanckenhorn W

PS0783 - Asymmetric reproductive interference among two spider mite species (D20SY07PS0783)
Clemente SGLH, Rodrigues L, Ponce A, Cruz C, Magalhães S

PS0874 - How can a sexually selected exaggerated male trait be reduced or lost? (D20SY07PS0874)
Jones J, Weber M, Henning F, Schartl M, Meyer A

PS1036 - An experimental test of a potential post-copulatory pre-zygotic reproductive barrier in a passerine species pair (D20SY07PS1036)
Cramer ERA, Laskemoen T, Eroukhmanoff F, Haas F, Hermansen J, Lifjeld J, Rowe M, Sætre G, Johnsen A

PS1082 - Ecological and molecular cues for colour

change in a marine fish (D20SY07PS1082)
Cortesi F, Cheney K, Marshall J, Salzburger W

PS1335 - Effect of Wolbachia infection on the courtship song of *Drosophila paulistorum* and *D. equinoxialis* (D20SY07PS1335)
Vigoder F, Schneider D, Ritchie M, Miller W

(D20SY12PS1373)
Vlcek J, Stefka J

Symposium 12

Studying multigene-family evolution in the post-genomic era: Towards a population genomic approach to MHC evolution

PS0391 - Mate choice, multiple mating and MHC variation in sea trout (*Salmo trutta*) (D20SY12PS0391)
Miller R, Martin S, Youngson A, Piertney S

PS0392 - Phylogenetic origin of the avian MHC class IIB (D20SY12PS0392)
Goebel J, Burri R, Promerová M, Fumagalli L

PS0401 - MHC evolutionary ecology in European barn owls (*Tyto alba*) (D20SY12PS0401)
Gaigher A, Burri R, Roulin A, Fumagalli L

PS0408 - Toll-like receptor (TLR) evolution in wild vertebrates (D20SY12PS0408)
Tschirren B

PS0475 - Genetic structure, selection and duplication in European eels MHC class II genes (D20SY12PS0475)
Wirth T, Galan M, Delgado S, Gilabert A

PS0524 - MHC Evolution in Neotropical Cichlids (*Amphilophus sp.*) (D20SY12PS0524)
Hofmann M, Bracamonte S, Eizaguirre C, Barluenga M

PS0933 - Next Generation Sequencing reveals high complexity of the Major Histocompatibility Complex class I exon 3 in sedge warbler (D20SY12PS0933)
Biedrzycka A, Radwan J, Westerdahl H

PS0939 - Evolution of two multigene families involved in subspecies recognition and sexual isolation in the house mouse: insights from a transcriptomic and genomic perspective (D20SY12PS0939)
Loire E, Boursot P, Smadja C

PS1085 - MHC variability and mate choice in a recovering wolf population (D20SY12PS1085)
Galaverni M, Caniglia R, Lapalombella S, Fabbri E, Randi E

PS1138 - Low genetic diversity in MHC loci in the critically endangered Iberian lynx (D20SY12PS1138)
Marmesat-Bertoli E, Mazzoni C, Soriano L, Sommer S, Godoy J

PS1170 - MHC-based qualitative and quantitative resistance to avian malaria in a wild bird population (D20SY12PS1170)
Sepil I, Lachich S, Hinks A, Sheldon B

PS1309 - The influence of MHC on fertility success in house sparrows (*Passer domesticus*) (D20SY12PS1309)
Lukasch B, Westerdahl H, Moodley Y, Winkler H

PS1373 - Variation in MHC II genes in the context of Galapagos Mockingbirds study system

Symposium 15

Attack and defense: evolutionary and ecological consequences of individual variation

PS0111 - Is there horizontal immune transfer in non-social but group-living insects? (D20SY15PS0111)
Eggert H, Peuß R, Joop G, Kurtz J, Armitage S

PS0145 - Which processes shape grapevine moth immune response against parasitism? (D20SY15PS0145)
Vogelweith F, Thiéry D, Moret Y, Moreau J

PS0179 - Relating the outcome of Hepatitis C virus (HCV) infection with different host SNP polymorphisms in a HCV-Human Immunodeficiency-1 virus (HIV) coinfecting Majorcan population treated with pegylated interferon plus Ribavirin (pegIFN+RBV). (D20SY15PS0179)
Castro J, Matas M, Cifuentes C, Payeras A, Homar F, González-Candelas F, López-Labrador F, Moya A, Picornell A, Ramon C

PS0191 - Genotypic and phenotypic variation in transmission traits of a trematode parasite (D20SY15PS0191)
Louhi K, Karvonen A, Rellstab C, Jokela J

PS0252 - Individual variation in viral life history (D20SY15PS0252)
Hamblin S, Tanaka M

PS0271 - Can parasitoid recognition of hosts be improved by conditioning to host mate-recognition cues? (D20SY15PS0271)
Keinan Y, Harari A, Keasar T

PS0278 - Nutrient and bacterial doses affect virulence and host-specificity of the opportunistic fish pathogen *Flavobacterium columnare* (D20SY15PS0278)
Kinnula H, Mappes J, Valkonen J, Bamford J, Pulkkinen K, Penttinen R, Sundberg L

PS0284 - Longitudinal study of intestinal nematode parasite dynamics in free-ranging brown mouse lemurs (*Microcebus rufus*) (D20SY15PS0284)
Aivelto T, Laakkonen J, Jernvall J

PS0288 - Within-species genetic variation for resistance in a P-limited environment: the *Daphnia*-parasite system as a case-study (D20SY15PS0288)
Reyserhove L, Van Colen W, Muylaert K, Decaestecker E

PS0290 - Adaptation of a fungal pathogen to individual versus social immunity in ants (D20SY15PS0290)
Stock M, Grasse A, Cremer S

PS0324 - Phenotypic changes in oak seedlings infected by powdery mildew: host tolerance response or host manipulation by the parasite? (D20SY15PS0324)
Dutech C

PS0335 - Examining the role of Dscam (Down syndrome cell adhesion molecule) in immune defence in two insect models (D20SY15PS0335)

Armitage SAO, Peuß R, Woestmann L, Wensing K, Scharsack J, Kurtz J

PS0351 - Strain-specific immune priming in wood tiger moth (*Parasemia plantaginis*) (D20SY15PS0351)
Mikronranta L, Freitak D, Kaukonen M, Mappes J

PS0463 - The maintenance of interspecific hybridization by parasitism in a freshwater snail (D20SY15PS0463)
Ben-Ami F, Guttel Y

PS0555 - Parasite-mediated selection promotes clonal diversity in a freshwater snail (D20SY15PS0555)
Dagan Y, Liljeroos K, Jokela J, Ben-Ami F

PS0560 - Individual variation in collective disease defenses of ants (D20SY15PS0560)
Ugelvig L, Cremer S

PS0587 - Local co-adaptation between a toxic primary producer and a herbivore in the aquatic: *Microcystis* and its grazer *Daphnia magna* (D20SY15PS0587)
Lemaire V, De Meester L

PS0592 - An invasive species reverses the roles in a host-parasite relationship (D20SY15PS0592)
Reichard M, Vrtilek M, Douda K, Smith C

PS0601 - Thermal changes alter the outcome of behavioural interactions between co-evolved host-parasitoid species (D20SY15PS0601)
LeLann C, Lodi M, Ellers J

PS0612 - Eco-evolutionary dynamics in host-parasite interactions (D20SY15PS0612)
Frickel J, Becks L

PS0635 - The expression of virulence in a crustacean-bacterium host-parasite system: age matters (D20SY15PS0635)
Izhar R, Ben-Ami F

PS0704 - Spatiotemporal relationship between malaria infection and environment (D20SY15PS0704)
Rybinski J, Kulma K, Qvarnström A

PS0721 - Spectacular variation in immune responses of bumblebees to a trypanosome parasite (D20SY15PS0721)
Baribeau S, Brunner F, Sadd B, Schmid-Hempel P

PS0725 - Seasonal changes in immune defense in the ant *Formica exsecta* (D20SY15PS0725)
Stucki D, Freitak D, Bos N, Sundström L

PS0739 - Preference for infection: pathogen manipulation or host decision? (D20SY15PS0739)
Pontieri L, Vojvodic S, Graham R, Pedersen J, Linksvayer T

PS0794 - Mechanisms of caterpillar behavioural manipulation by two virus species: spot the difference (D20SY15PS0794)
Van Houte S, Ros VID, Vlak J, Van Oers M

PS0811 - A Turandot family gene promotes immunity against sexually transmitted fungal infections in *Drosophila melanogaster* (D20SY15PS0811)
Zhong W, McClure C, Immonen E, Ritchie M, Priest N

PS0881 - Avian malaria parasites and paternity in the blue tit (D20SY15PS0881)

Podmokla E, Dubiec A, Arct A, Drobniak S, Gustafsson L, Cichon M

PS0892 - Genetic specificity in an insect virus interaction (D20SY15PS0892)
Wilfert L, Maguire M, Jiggins F

PS0932 - Mutualistic parasites (D20SY15PS0932)
Dionisio F, Gama J, Domingues I, Reis A, Mendes-Soares H, Matos A, Carvalho AFP

PS1038 - Out running the Red Queen? Host extinction as a result of host-parasite coevolution (D20SY15PS1038)
Rafaluk C, Mitschke A, Schulenburg H, Joop G

PS1050 - Exploring natural variation of entomopathogenic fungi in controlling malaria mosquitoes (D20SY15PS1050)
Valero-Jiménez C, Koenraadt CJM, Takken W, Zwaan B

PS1106 - On the multitrophic interactions between a fungus, a plant and two insect species (D20SY15PS1106)
Karlsson Green K, Van Nouhuys S, Saastamoinen MAK, Laine A

PS1128 - Unraveling the genomics of adaptation of *Colletotrichum kahawae* to *Coffea arabica* (D20SY15PS1128)
Vieira A, Silva D, Varzea V, Silva M, Paulo O, Batista D

PS1146 - Genetics of feeding behaviour in *Daphnia magna* and its influence on infection risk (D20SY15PS1146)
Arbore R, Andras J, Roulin A, Ebert D

PS1198 - Using population genomics to uncover the genetic structure, adaptive variation and evolution of *Hemileia vastatrix*, the plant pathogen causing coffee leaf rust (D20SY15PS1198)
Batista D, Silva D, Martins R, Pereira APAULA, Guimarães L, Talhahas P, Silva MCÉU, Várzea V, Paulo O

PS1316 - A microcosm approach to understand the effects of host demography on disease transmission (D20SY15PS1316)
Diaz A, Restif O

PS1317 - Analysis of Illumina RNA-seq data from a susceptible vs resistant coffee - *Colletotrichum kahawae* interaction (D20SY15PS1317)
Fino J, Figueiredo A, Loureiro A, Silva M, Batista D, Paulo O

PS1319 - Immunity evolves without extracting cost from other life history traits in *Drosophila melanogaster* (D20SY15PS1319)
Gupta V, Venkateshan S, Ali Z, Prasad NG

PS1336 - Are tolerant hosts more likely to be super-shedders of disease? (D20SY15PS1336)
Vale P

PS1349 - Field physiology meets genomics: the effect of proliferative kidney disease on host physiology and thermal tolerance in wild brown trout (D20SY15PS1349)
Vasemägi A, Bruneaux M, Gross R, Primmer C

PS1408 - Phage response to prokaryotic CRISPR defense (D20SY15PS1408)
Westra E, Hoegh S, Van Sluijs L, Buckling A

PS1430 - Fitness consequences of infection with

malaria parasites in the great tit – the medication experiment (D20SY15PS1430)
Dubiec A, Podmokla E, Zagalska-Neubauer M, Gustafsson L

PS1437 - Evolution of a generalist assemblage of blood parasites in a megadiverse community of tropical birds (D20SY15PS1437)
Moens M, Pérez Tris J

PS1460 - Oxidative stress in breeding Great tit (*Parus major*) infected by *Plasmodium spp.* (D20SY15PS1460)
Delhey J, Jenkins T, Christe P

Symposium 19

Evolutionary consequences of deception

PS0220 - Contrasting shape, color plasticity and habitat use indicate morph-specific roles in a marine shrimp (D20SY19PS0220)
Duarte R, Flores AAV

PS0456 - Cats developed spots and stripes to lure rodents. A multidisciplinary framework for understanding the functions of the colour pattern on cats. (D20SY19PS0456)
Benavides Hernández L, Benavides O

PS0817 - The cichlid and reef fish visual system as a model for speciation processes (D20SY19PS0817)
Stieb S, Marshall J, Salzburger W

PS1264 - Warning signals and handicap theory (D20SY19PS1264)
Holen Ø, Svennungsen T

PS1442 - Mimicry evolution: it's in the eye of the beholder (D20SY19PS1442)
Kazemi B, Leimar O, Gamberale-Stille G

Symposium 22

The evolution and genetics of drug resistance

PS0024 - An adaptive evolution of *Helicobacter pylori* (H.pylori): what is a role Cag-A loss in the era of antibacterial treatment? (D20SY22PS0024)
Nijevitch A

PS0153 - Implications of stress-induced genetic variation for minimizing multidrug resistance in bacteria (D20SY22PS0153)
Obolski U, Hadany L

PS0212 - Selection, characterization and the within-host ecology of drug resistant malaria parasites (D20SY22PS0212)
Pollitt L, Huijben S, Read A

PS0246 - The stochastic dynamics of rescue trajectories: the case of the bacterium *P. fluorescens* evolving resistance to the antibiotic streptomycin (D20SY22PS0246)
Martin G

PS0254 - Adaptation of *Pseudomonas aeruginosa* to different antibiotics (D20SY22PS0254)
Barbosa C, Schulenburg H, Jansen G

PS0309 - Understanding the dynamics of evolutionary rescue in terms of changing environments and reaction norms: an application to bacterial populations (D20SY22PS0309)
Wu Y, Saddler C, Valckenborgh F, Tanaka M

PS0325 - Azole resistance in *Aspergillus fumigatus*: condition-dependent mutations for resistance (D20SY22PS0325)
Zhang J

PS0389 - Modelling antibiotic resistance and plasmids (D20SY22PS0389)
Tazzyman S

PS0552 - CYP51 Paralogues and Azole Sensitivity in *Rhynchosporium commune* (D20SY22PS0552)
Hawkins N, Cools H, Fraaije B

PS0566 - Deadly antibiotics and evolutionary rescue via horizontal gene transfer (D20SY22PS0566)
Jalasvuori M, Ojala V, Mattila S

PS0626 - Loss of a cooperative trait affects strain competition in cystic fibrosis lung infections (D20SY22PS0626)
Ghoul M, Griffin A, West S

PS0684 - Efficient linkage mapping in *Schistosoma mansoni* using extreme QTL methods and exome sequencing (D20SY22PS0684)
Chevalier F, Valentim CLL, LoVerde P, Anderson TJC

PS0687 - Accurate exome sequencing in a microscopic invertebrate (D20SY22PS0687)
Chevalier F, LoVerde P, Anderson TJC

PS0847 - Understanding the genetic basis of drug resistance in *Trichomonas vaginalis* (D20SY22PS0847)
Badic M, Scheid P, Secor W, Carlton J

PS0989 - Hormesis as a resistance enhancer in *Stenotrophomonas maltophilia*: which consequences for clinical therapy? (D20SY22PS0989)
Serra J, Tenreiro R, Dias R

PS1035 - Modeling resistance to chemotherapeutics in salmon ectoparasites: the influence of treatment regimens and temperature (D20SY22PS1035)
Groner M, Cox R, Gettinby G, Revie C

PS1122 - Manipulation of the within-host environment prevents the emergence of resistant parasites (D20SY22PS1122)
Wale N, Sim D, Day T, Read A

PS1168 - Phylogenetics of HIV drug resistance: can resistant strains compete? (D20SY22PS1168)
Shirreff G, Stadler T, Kouyos R, Yang W, Yerly S, Böni J, Klimkait T, Aubert V, Günthard H, Bonhoeffer S

PS1261 - Mechanisms of balancing selection for antibiotic resistance in *Streptococcus pneumoniae* (D20SY22PS1261)
Cobey S, Lipsitch M

PS1327 - Macroevolutionary dynamics of intrinsic antibiotic resistance in *Pseudomonas* (D20SY22PS1327)
Furio V, MacLean C

PS1332 - Invasion of fungicide resistance: is spatial scale important? (D20SY22PS1332)
Mikaberidze A, Bonhoeffer S, McDonald B

PS1456 - Heavy metal driven co-selection of antibiotic resistances in aquatic environments and an evolution based concept of risk assessment (D20SY22PS1456)
Seiler C, Von Tümping W, Sachse R, Berendonk T

Symposium 23

Genomic Islands: their role in adaptation and speciation

PS0016 - FST Outlier Tests vs. Environment-Allele Associations in genome scans for local adaptation: when do they tell the truth and what are we missing? (D20SY23PS0016)
Lotterhos K, Whitlock M

PS0020 - The role of selection in driving landscape genomic structure of the waterflea *Daphnia magna* (D20SY23PS0020)
Orsini L, Megeay J, Spanier K, Vanoverbeke J, DeMeester L

PS0154 - Genetics of migration - insights from a willow warbler migratory divide (D20SY23PS0154)
Lundberg M, Liedvogel M, Åkesson S, Bensch S

PS0355 - Assessing patterns of hybridization between North Atlantic eels using Genome-Wide Single Nucleotide Polymorphisms generated by RAD-Sequencing (D20SY23PS0355)
Pujolar J, Jacobsen M, Hansen M

PS0357 - Questioning the status of the two FAW (*Spodoptera frugiperda*, Noctuidae) host races using integrative approaches (D20SY23PS0357)
Dumas P, Kergoat G, Clamens A, Gimenez S, D'Alençon E

PS0379 - A genomic approach to the plumage colour differences in the Willow grouse (*Lagopus lagopus*) (D20SY23PS0379)
Kozma R

PS0415 - Rapid evolution in the wild: unravelling the genetic basis of a wing mutation in field crickets (D20SY23PS0415)
Pascoal S, Cezard T, Eik-Nes A, Gharbi K, Majewska J, Payne E, Ritchie M, Zuk M, Bailey N

PS0426 - The effect of linkage on sojourn times and patterns of genomic divergence (D20SY23PS0426)
Aeschbacher S, Buerger R

PS0491 - Population genomics of adaptive divergence in three-spine stickleback using sequenced RAD tags (D20SY23PS0491)
Ferchaud A, Hansen M

PS0504 - Genetic diversity and hybridisation in ancient lime trees (*Tilia*) (D20SY23PS0504)
Wolff K, Phuekvilai P, Logan S

PS0522 - Inferring the history of inversions using sequenced restriction-site associated DNA (RAD) data from natural populations of mosquitoes (D20SY23PS0522)
Kemppainen P, Walton C, Kumar Sarma D, Prakash A, Hlaing T, Nuang Y, Samboon P

PS0572 - Complete mitochondrial genomes of the Baltic clam *Macoma balthica* (Bivalvia: Tellinidae): variable gene arrangements between and within lineages and genetic incompatibility (D20SY23PS0572)

Saunier A, Pante E, Bouchez O, Becquet V, Garcia P

PS0577 - Heterogeneous genomic differentiation in marine threespine sticklebacks: adaptation along an environmental gradient (D20SY23PS0577)
DeFaveri J, Shikano T, Shimada Y, Merilä J

PS0588 - Sympatric speciation in two wild rice species: insights from genome-wide SNPs and expression patterns (D20SY23PS0588)
Ge S

PS0622 - Strong selection on mitochondria-targeting proteins across secondary contact zones in *Macoma balthica* (D20SY23PS0622)
Pante E, Becquet V, Rohfritsch A, Garcia P

PS0671 - Genomic signatures of reproductive isolation in the white stickleback (D20SY23PS0671)
Samuk K, Schlüter D

PS0719 - A population genetic model of allopolyploid speciation (D20SY23PS0719)
Vogl C, Guo Y

PS0731 - Inference of selection using extended haplotype homozygosity (D20SY23PS0731)
De-Cara Á, Fernández J, Austerlitz F

PS0734 - Does "Coyne's Rule" apply to amphibians? Introgression of sex-linked and autosomal markers across a tree frog hybrid zone (D20SY23PS0734)
Breisford A, Dufresnes C, Perrin N

PS0935 - The evolution of genomic differentiation as speciation unfolds: coupling of pre- and post-zygotic barriers (D20SY23PS0935)
Loire E, Smadja C, Vitalis R

PS0948 - Genome wide association of high divergence, transmission ratio distortion and QTL for male fertility in hybrids between *Arabidopsis lyrata* subspecies (D20SY23PS0948)
Aalto E, Mattila T, Tyrmälä J, Savolainen O

PS0967 - Extremely low genetic diversity and population differentiation in a social inbreeding spider (D20SY23PS0967)
Settepani V, Bechsgaard J, Bilde T

PS1018 - Divergence between lake and stream populations in an East African cichlid fish (D20SY23PS1018)
Egger B, Theis A, Ronco F, Indermaur A, Roesti M, Berner D, Salzburger W

PS1030 - The genetic architecture of divergent pollinator attraction in sexually deceptive orchids (D20SY23PS1030)
Schlüter P, Sedeek KEM, Qi W, Xu S, Schiestl F

PS1065 - A young neo-sex chromosome is the site of divergence between incipient stickleback species (D20SY23PS1065)
Kitano J, Yoshida K

PS1134 - Quantitative transcriptome patterns in the allopolyploid *S. alburnoides* complex (D20SY23PS1134)
Matos I, Machado MMP, Schartl M, Coelho M

PS1143 - Efficient Benchtop Population Genomics and highly pooled population genetic screening with RESTiction fragment SEQuencing (RESTseq) (D20SY23PS1143)

Stolle E, Moritz RFA

PS1206 - Is hybrid speciation driven by stochastic or deterministic processes? (D20SY23PS1206)

Hermansen J, Haas F, Sætre G

PS1221 - Rate of molecular evolution for genes in regions with limited gene flow across the house mouse hybrid zone (D20SY23PS1221)

Janousek V, Wang L, Luzynski K, Dufková P, Mrkvicová Vyskočilová M, Nachman M, Munclinger P, Macholán M, Piálek J, Tucker P

PS1242 - Speciation history of the Atlantic eels

(D20SY23PS1242)

Jacobsen M, Puigolar J, Frydenberg J, Mayar J, Gilbert M, Bernatchez L, Als T, Hansen M

PS1247 - Ecologically driven morphological and genetic divergence between sheltered and exposed populations of the marine snail *Littorina fabalis* (D20SY23PS1247)

Faria R, Pereira C, Sotelo G, Galindo J

PS1370 - Testing the link between heterochromatin evolution and speciation in sticklebacks

(D20SY23PS1370)

Yoshida K, Makino T, Yamaguchi K, Shigenobu S, Hasebe M, Mori S, Peichel K, Kawata M, Toyoda A, Fujiyama A, Kitano J

PS1386 - CONSTANS is highly prone to natural selection in *Arabidopsis lyrata* (D20SY23PS1386)

Toivainen T, Aalto E, Mattila T, Niittyvuopio A, Savolainen O

PS1415 - Genetic changes underlying host plant resistance in *Drosophila sechellia* (D20SY23PS1415)

Bolívar Balbas P, Matute D, Hartl D, Ayroles J

PS1450 - From ecological specialization to cryptic speciation in the parasitic wasp *Cotesia sesamiae* (D20SY23PS1450)

Kaiser L, Le Ru BP, Kaoula F, Obonoyo J, Herniou E, Janceck S, Paillusson C, Branca A, Silvain J, Dupas S

Symposium 26

The genomic architecture of adaptive traits: do QTNS generally exist?

PS0406 - The genetic architecture of a reproductive trait in a wild bird population (D20SY26PS0406)

Armstrong J

PS0493 - Genetic exchange in a multigenomic fungus; *Rhizophagus irregularis* (D20SY26PS0493)

Rosikiewicz P, Sanders I

PS0496 - Annotated genes and non-annotated genomes: use of model organism gene annotation information for understanding the molecular basis of ecological and evolutionary importance (D20SY26PS0496)

Primmer C, Papakostas S, Leder E, Davis M, Ragan M

PS0647 - Genome-wide analysis of the genetic architecture of flowering time and fitness in wheat experimental populations (D20SY26PS0647)

Thépot S, Goldringer I, Mackay I, Enjalbert J

PS0655 - The genomic architecture of adaptive differentiation in seed dormancy and germination

timing between two natural populations of *Arabidopsis thaliana* (D20SY26PS0655)

Postma F, Ågren J

PS0717 - Genetic basis of leaf trichome density in natural populations of *Arabidopsis thaliana* (D20SY26PS0717)

Lundemo S, Breed M, Ågren J

PS0738 - Single gene polymorphism alters the foraging activity of a pest Lepidoptera (D20SY26PS0738)

Chardonnet F, Capdevielle-Dulac C, Chouquet B, Joly N, Harry M, Le Ru B, Silvain J, Kaiser L

PS0835 - The X Factor: the genomic distribution of eQTNs that regulate sexual dimorphism (D20SY26PS0835)

Dean R, Stocks M, Rogell B, Friberg U

PS1066 - The genetic architecture of skin prickling and body shape in hybridizing sculpins (*Cottus*) (D20SY26PS1066)

Cheng J, Nolte A

Symposium 29

Actively learning evolution: methods and resources

PS0424 - The role of chance in Evolution: how to teach it in the classroom (D20SY29PS0424)

Noguera-Solano R, Ruiz-Gutiérrez R, Alvarado V, Rodriguez-Caso J

PS1023 - Building scientific capacity in Cape Verde Islands: integrating different approaches to study the evolution of the endemic flora (D20SY29PS1023)

Romeiras M, Moura M, Sequeira M, Duarte M

PS1344 - Visualising the development of evolutionary thought: a graphical outreach project (D20SY29PS1344)

Jenkins T, Quick M, Posavec S

PS1359 - The mismatch between education and research on Evolutionary Biology in Spain (D20SY29PS1359)

Arroyo J, Serra M, Verdú M, González-Candelas F

Symposium 32

Climate change and evolution

PS0043 - Insights into the ecology and biogeography of *Amborella trichopoda*: intraspecific genetic differentiation in New Caledonia (D20SY32PS0043)

Poncet V, Muñoz F, Munzinger J, Pillon Y, Gomez C, Couderc M, Tranchant-Dubreuil C, Hamon S, Dekochko A

PS0165 - Genetic architecture and phenotypic mismatch at range limits in colour polymorphic damselflies (D20SY32PS0165)

Takahashi Y, Nagata N, Kawata M

PS0174 - Vanishing chromosomal inversion clines in *Drosophila subobscura* from Chile: is behavioral thermoregulation to blame? (D20SY32PS0174)

Castañeda L, Balanyà J, Rezende E, Santos M

- PS0197 - Host plant range and climate change: predictions for a butterfly** (D20SY32PS0197)
Audusseau H, Nylin S, Janz N
- PS0267 - Thermal adaptation genes: inversions, gene flux and selection** (D20SY32PS0267)
Mestres F, Pegueroles C, Martí-Solano M, Pascual M
- PS0306 - Facing a warming world: temperature adaptation and competition with an invasive species** (D20SY32PS0306)
Schulz F, Laurila A
- PS0317 - Fluctuating temperature leads to evolution of thermal generalism and pre-adaptation to novel environments** (D20SY32PS0317)
Ketola T, Mikonranta L, Zhang J, Saarinen K, Friman V, Örmälä A, Mappes J, Laakso J
- PS0339 - The fate of chromosomal inversion polymorphism during adaptation to a novel environment** (D20SY32PS0339)
Simões P, Fragata I, Lopes-Cunha M, Lima M, Kellen B, Bárbaro M, Santos J, Santos M, Matos M
- PS0393 - Variable association between inversions and wing traits in *Drosophila subobscura*: are there consistent differences between continents?** (D20SY32PS0393)
Cunha MAL, Simões P, Fragata I, Lima M, Kellen B, Bárbaro M, Santos M, Matos M
- PS0490 - Complex response in life history traits of the bulb mites in elevated thermal conditions – an experimental evolution approach** (D20SY32PS0490)
Plesnar-Bielak A, Jawor A, Kramarz P
- PS0529 - Climate change, host-parasite interactions and species invasions: an experiment initiated by Nature** (D20SY32PS0529)
Wendling C, Wegner M
- PS0595 - Ecological niche evolution, phylogeography and thermal adaptation studies in *Drosophila americana* suggest it is a plastic species** (D20SY32PS0595)
Morales-Hojas R, Sillero N, Reis M, Vieira C, Vieira J
- PS0634 - Adaptive potential in a snail population** (D20SY32PS0634)
Leicht K, Seppälä O
- PS0636 - Co-evolution overrides climate change in cuckoo and reed warbler arms-race** (D20SY32PS0636)
Markman S, Berkowic D, Stokke B, Meiri S
- PS0645 - The role of sexual selection during adaptation to a novel, stressful environment** (D20SY32PS0645)
Duffy E
- PS0775 - Climate and trematode-mollusk relationship** (D20SY32PS0775)
Taskinen J, Choo J
- PS0786 - Constraining signatures of thermal stability evolution in ray-finned fish mitochondrial DNA-encoded proteins** (D20SY32PS0786)
Bruneaux M, Thalmann O, Vasemägi A, Primmer C
- PS0819 - Local adaptation to climate change: a semi-natural study of the *Drosophila subobscura* model system** (D20SY32PS0819)
Porcelli D, Gaston K, Butlin R, Snook R
- PS0929 - Inter- and intrapopulation hybrids of *Drosophila subobscura* under temperature stress differ in fitness components** (D20SY32PS0929)
Tanaskovic M, Kurbalija Novicic Z, Kenig B, Savic Veselinovic M, Stamenkovic Radak M, Andjelkovic M
- PS1156 - Characterization of expression quantitative trait loci (eQTL) associated with response to thermal stress in the threespine stickleback, *Gasterosteus aculeatus*** (D20SY32PS1156)
Pritchard V, Merilä J, Nikinmaa M, Primmer C, Sävilammi T, Viitaniemi H, Leder E
- PS1207 - Sex-specific tolerance to a warmed-up environment distorts population sex ratio in a salmonid** (D20SY32PS1207)
Wedekind C, Von Siebenthal B, Pompini M
- PS1229 - Paleodistribution of altitudinal *actinote* (Lepidoptera: Nymphalidae) species in Brazilian Atlantic rainforest** (D20SY32PS1229)
Souza TSOBRAL, Solferini VNISAKA, Francini RBASTOS
- PS1253 - Transcriptome responses to thermal stress in two Iberian *Squalius* (Cyprinidae) species living in distinct river regimes** (D20SY32PS1253)
Jesus TFS, Val V, Coelho M
- PS1297 - Heritability and environmental variation for basal and induced thermotolerance in whitefly (*Bemisia tabaci* biotype B) populations** (D20SY32PS1297)
Diaz-Gonzalez F, Muñoz-Valencia V, Juvinao-Quintero D, Cardenas-Henao H, Toro-Perea N, Manzano M, Gonzalez-Obando R
- PS1435 - Climate warming: Who suffers more in a host-parasite** (D20SY32PS1435)
Dusi E, Krenek S, Sachse R, Kaltz O, Berendonk T
- PS1436 - Genetic conflict between the sexes and rates of adaptation to climate warming** (D20SY32PS1436)
Berger D, Grieshop K, Lind M, Goenaga J, Maklakov A, Arnqvist G
- PS1444 - The European brown crab (*Cancer pagurus*) as a model to study local adaptation in highly distributional marine decapods** (D20SY32PS1444)
Krämer P, Gerlach G
- PS1448 - A hotspot on fire: predicted impact of climate change on genetic diversity and disease tolerance in the endangered Apennine yellow-bellied toad *Bombina pachypus*** (D20SY32PS1448)
Zampiglia M, Canestrelli D, Bisconti R, Chiocchio A, Nascetti G

Symposium 33

Population ecology

- PS0028 - A newly discovered role of evolution in published consumer-resource dynamics** (D20SY33PS0028)
Hiltunen T, Hairston N, Hooker G, Jones L, Ellner S
- PS0045 - Aging and imperfect asymmetric division in bacteria** (D20SY33PS0045)
Steiner U, Ni M

PS0064 - Do prey respond appropriately to evolutionarily novel predators? (D20SY33PS0064)
Bleicher S, Brown J, Kotler B

PS0065 - Evolutionarily convergent rodents do not converge on predator evasion strategy (D20SY33PS0065)
Bleicher S, Brown J, Kotler B

PS0156 - The evolution of Fitness Associated Dispersal in homogeneous environments (D20SY33PS0156)
Gueijman A, Ayali A, Ram Y, Hadany L

PS0162 - Spatial genetic structure and reproductive success of a parasitoid wasp in a competitive environment (D20SY33PS0162)
Couchoux C, Seppä P, Van Nouhuys S

PS0166 - Density-dependent dispersal in Sable Island horses: rate and direction varies with sex and age but also scale at which density is assessed (D20SY33PS0166)
McLoughlin P, Marjamäki P, Contasti A, Coulson T

PS0188 - Genetic variation in the effect of monoamines on female mating receptivity and oviposition in the adzuki bean beetle (*Callosobruchus chinensis*) (D20SY33PS0188)
Yamane T

PS0223 - Regional and temporal variation in the biodiversity of Drosophila-parasitoid communities in eastern North America: Implications for coevolution (D20SY33PS0223)
Lue C, Birdsley J, Buffington M, Leips J

PS0259 - Genetic diversity patterns of macrobenthic populations from lagoonal ecosystems (D20SY33PS0259)
Vasileiadou K, Pavloudi C, Chatzinikolaou E, Gonzalez-Wanguemert M, Tsikopoulou I, Kotoulas G, Arvanitidis C

PS0300 - Dispersal, flight metabolism and flight-induced gene expression in the Glanville fritillary butterfly (D20SY33PS0300)
Mattila ALK, Somervuo P, Kvist J, Frilander M, Lehtonen R, Hanski I

PS0373 - Chemical anthropogenic pollution interferes in prey recognition systems (D20SY33PS0373)
Polo-Cavia N, Burraco P, Gomez-Mestre I

PS0407 - Genetic diversity and structure of *Oeceoclades maculata* (Lindl.) Lindl. Populations (D20SY33PS0407)
Ueno S, Rodrigues J, Veasey E

PS0502 - Size-assortative mating in the ant *Myrmica ruginodis* and its implication for speciation (D20SY33PS0502)
Wolf J, Seppä P

PS0536 - Increased risk of kin competition induces kin avoidance during shoaling behavior (D20SY33PS0536)
Thuenken T, Hesse S, Meuthen D

PS0537 - Rainsplash spore dispersal in *Colletotrichum gloeosporioides* infecting yams: dispersal distance and effect of ground contamination (D20SY33PS0537)
Penet LPM, Salles M, Briand S, Guyader S, Pétrô D, Bussière F

PS0538 - Male-male aggression peaks at intermediate relatedness in a social spider mite (D20SY33PS0538)
Egas M, Sato Y, Sabelis M, Mochizuki A

PS0545 - The population ecological fundement for life history evolution (D20SY33PS0545)
Witting L

PS0563 - Dispersal and evolution of the European eel shaped by variations of North Atlantic drift currents (D20SY33PS0563)
Baltazar-Soares M, Biastoch A, Harrod C, Hanel R, Marohn L, Prigge E, Evans D, Bodles K, Behrens E, Böning C, Eizaguirre C

PS0610 - Genetic structure of the endangered Amerindian yam (*Dioscorea trifida* L.) (D20SY33PS0610)
Nascimento W, Fernandes J, Koehler S, Gepts P, Silva E, Veasey E

PS0633 - Nature's ecological recorders: stable isotopes in Mycalesine butterflies (D20SY33PS0633)
Van Bergen E, Osborne C, Griffiths H, Brakefield P

PS0649 - Genetic diversity of cocoyam (*Xanthosoma* spp.) in Brazil, assessed with ISSR markers (D20SY33PS0649)
Cuenca ACP, Rodrigues J, Ueno S, Dequigiovanni G, Pereira A, Ming L, Rodrigues D, Clement C, Veasey E

PS0651 - Population genetic analyses of the endangered Brazilian Atlantic Forest '*Cattleya coccinea*' orchid complex (D20SY33PS0651)
Rodrigues J, Nascimento W, Tomé T, Oliveira GCX, Veasey E, Koehler S

PS0679 - Unmatedness promotes the evolution of helping more in diploidiploids than in haplodiploids (D20SY33PS0679)
Rautiala P, Helanterä H, Puurtinen M

PS0683 - Genetic diversity and gene flow of introduced populations of *Dyckia distachya* Hassler, a bromeliad extremely endangered (D20SY33PS0683)
Janke A, Reis M, Bered F

PS0707 - Factors affecting juvenile movement in a house sparrow metapopulation – the role of time of birth and habitat configuration (D20SY33PS0707)
Myhre A, Pärn H, Jensen H, Sæther B

PS0711 - Seasonal migrations and space use of non hunted moose population in the Biebrza Marshes Poland (D20SY33PS0711)
Duda N, Kowalczyk R, Świślicka M, Czajkowska M, Ratkiewicz M

PS0784 - The genetic consequences of social structure: a simulation approach (D20SY33PS0784)
Parreira B, Chikhi L

PS0800 - Spatio-temporal changes in the dispersal patterns of two sympatric Colobus Monkeys from Cantanhez National Park, Guinea-Bissau (D20SY33PS0800)
Minhós T, Nixon E, Sousa C, Vicente L, Ferreira da Silva M, Sá R, Bruford M

PS0818 - Fluctuation of salinity effect on the coexistence of two rotifer cryptic species (D20SY33PS0818)
Gabaldón C, Montero-Pau J, Carmona M, Serra M

PS0850 - A genetic approach of reef colonization by a surgeon fish (*Acanthurus triostegus*) in La Réunion Island (D20SY33PS0850)
Gelin P, Riou A, Collet A, Magalon H

PS0852 - Influence of stage specific availability of nutritional resources on the dynamics of laboratory populations of *Drosophila melanogaster* (D20SY33PS0852)
Tung S, Rajamani M, Joshi A, Dey S

PS0902 - gMETAPOP, a software for simulating the evolution of subdivided populations in species with complex demographic features (D20SY33PS0902)
Garnier-Géré P, Raspail F, Le Corre V, Mariette S, Machon N, Godelle B, Kremer A, Austerlitz F

PS0959 - A completely unknown lifecycle in mushrooms: cyclical inbreeding and haplo-diploidy (D20SY33PS0959)
Aanen D

PS0965 - Ecological divergence between lake-stream populations of an East African cichlid fish (D20SY33PS0965)
Ronco F, Egger B, Theis A, Indermaur A, Salzburger W

PS0994 - Morphological genetic diversity of yam (*Dioscorea cayenensis/D. rotundata* complex) local varieties in Brazil (D20SY33PS0994)
Veasey E, Silva LRG, Nascimento W, Mezette T, Silva E

PS1020 - Do native and invasive populations of *Oxalis pes-caprae* differ in reproductive traits? (D20SY33PS1020)
Castro M, Ferrero V, Costa J, Roiloa S, Loureiro J, Navarro L, Castro S

PS1101 - Habitat choice in the flat periwinkle (*Littorina fabalis*) Iberian ecotypes: an experimental approach (D20SY33PS1101)
Varela SAM, Marçal R, Altenrath C, Carvalho J, Costa D, Lago T, Galindo J, Rolán-Alvarez E, Faria R

PS1114 - Not everybody is social in social amoebae: *Dictyostelium discoideum* population partitioning into aggregating vs non-aggregating cells and its evolutionary significance in fluctuating environments (D20SY33PS1114)
Dubravcic D, Nizak C, Van Baalen M

PS1187 - Temporal genetic and kin structure in a boreal bird, the Siberian Jays (*Perisoreus infaustus*) (D20SY33PS1187)
Halvarsson P, Liu C, Vilà C

PS1244 - Male-biased dispersal promotes large scale gene flow in a subterranean army ant, *Dorylus (Typhlopone) fulvus* (D20SY33PS1244)
Barth B, Moritz RFA, Pirk CWW, Kraus B

PS1246 - Effect of crowding on hatching strategies of two cryptic species of cyclical parthenogens (D20SY33PS1246)
Ortells R, Parets C, Serra M, Carmona M

PS1273 - Frequent recombination shapes the epidemic population structure of a freshwater cyanobacterium (D20SY33PS1273)
D'Alelio D, Salmaso N, Gandolfi A

PS1281 - Good times bad times: Should I stay or should I go? (D20SY33PS1281)
Rodrigues AMM, Johnstone R

PS1305 - The interaction of *Saccharomyces paradoxus* with its natural competitors on oak bark (D20SY33PS1305)
Kowallik V, Greig D

PS1416 - Temporal population genetic patterns in a polychaete with multiple larval developmental modes (D20SY33PS1416)
Kesäniemi J, Knott K

PS1418 - Temporal and spatial variation in prevalence of the parasite *Syngamus trachea* in a metapopulation of House Sparrows (*Passer domesticus*) (D20SY33PS1418)
Ringsby T, Holand H, Jensen H, Tufto J, Sæther BERIK

PS1426 - Sex-specific fitness consequences of translocation in house sparrows (D20SY33PS1426)
Pärn H, Skjelseth S, Herfindal I, Sæther B, Stokke B, Ringsby T, Jensen H

PS1432 - Fine-scale population structure of humpback whales in South Africa coast (D20SY33PS1432)
Carvalho I, Barendse J, Best P, Pomilla C, Leslie M, Findlay K, Rosenbaum H

DETAILED PROGRAM

WEDNESDAY 21

Plenary Talk

Time / Room	08:30 – 09:30	09:30–10:30
Aula Magna	Dieter Ebert Zoological Intitute, University of Basel, Switzerland Population genetics of host-parasite coevolution Hosts evolve to minimize the fitness reduction caused by parasites, while parasites optimise the exploitation of their hosts. In models of this process high genetic specificity in host – parasite interactions is assumed. These interactions are in the centre of theory of host – parasite coevolution and determine important aspects of the coevolutionary process, such as its tempo and mode, the occurrence of cyclic allele frequencies, and the potential for evolutionary novelty. They are also crucial for the consequences of coevolution, such as the maintenance of sex and of genetic variation. In my presentation I will analyse the genetic architecture of host-parasite interactions and will test predictions and assumptions of models of host – parasite coevolution. Finally I will match predictions with patterns from long-term coevolution records.	Coffee Break

Session 5

Time /Room	10:30 – 10:49	10:54 – 11:13	11:18 – 11:37	11:42 – 12:01	12:01 – 14.00
R1 SY05 Chair: Beldade P	D21SY05IT10:30R1 INVITED TALK Zera A , Brisson J, Nantho Vellichirammal N Morph-specific circadian plasticity and G X E for juvenile hormone and gene expression in a wing-polymorphic cricket		D21SY05RT11:18R1 Araya-Ajoy Y , Dingemanse N Individual variation in behavioral plasticity and social environments	D21SY05RT11:42R1 Philippe A , Foucaud J, Moreno C, Mery F Phenotypic plasticity of social behavioural response in a spatial cognitive tasks	
R2 SY21 Chair: Wellenreuther M & Hansson B	D21SY21IT10:30R2 INVITED TALK Gillespie R , Brewer M, Croucher PJP, Oxford G The role of transient versus balanced color polymorphism In adaptive radiation: spiders in the Hawaiian Islands		D21SY21RT11:18R2 Henning F , Fukamachi S, Meyer A King Midas meets Mendel: unraveling the genetic basis of an evolutionarily relevant color polymorphism	D21SY21RT11:42R2 Field D , Tavares H, Couchman M, Coen E Selection on flower colour genes in a snapdragon hybrid zone	
R3 SY23 Chair: Faria R	D21SY23IT10:30R3 INVITED TALK Nosil P , Gompert Z, Parchman T, Buerkle A, Comeault A, Farkas T, Feder J Experimental insights into the processes driving genome evolution		D21SY23RT11:18R3 Delcourt M , Hohenlohe P Quantifying the neutral expectations of genomic patterns of divergence	D21SY23RT11:42R3 Geroldinger L , Bürger R The influence of the genetic architecture of a trait on local adaptation in a subdivided population	
R4 SY09 Chair: Schulenburg H	D21SY09IT10:30R4 INVITED TALK Jiggins F , Martinez J, Cao C, Chrostek E, Teixeira L The evolution and genetics of susceptibility to infectious disease		D21SY09RT11:18R4 Martins N , Faria V, Nolte V, Schlötterer C, Teixeira L, Sucena É, Magalhães S Experimental evolution for increased virus resistance in <i>Drosophila melanogaster</i> reveals no costs and a simple genetic basis	D21SY09RT11:42R4 Obbard D , Webster C Discovery, distribution and evolutionary genomics of viruses naturally infecting <i>Drosophila melanogaster</i>	
R5 SY10 Chair: Kawecki TJ & Ritchie MG	D21SY10IT10:30R5 INVITED TALK Kassen R Genomics of adaptation in evolving microbial populations		D21SY10RT11:18R5 Jansen G , Crummenerl L, Thänert R, Gilbert F, Gildenhard M, Schulenburg H Trample the weak - phenotypic and genomic evolution of <i>Pseudomonas aeruginosa</i> in immunocompromised hosts	D21SY10RT11:42R5 Fares M , Toft C, Ruiz-González M, Alvarez-Ponce D Experimental evolution of <i>Escherichia coli</i> under inefficient selection reveals the evolutionary trajectories of symbiotic bacteria	
R6 SY27 Eizaguirre C, Soares M & Stiebens V	D21SY27IT10:30R6 INVITED TALK Höglund J Why genetics, genomics, bioinformatics and evolutionary theory may matter for conservation		D21SY27RT11:18R6 Ekblom R , Smeds L, Johansson M, Magnusson J, Ellegren H Applied conservation genomics in the wolverine (<i>Gulo gulo</i>)	D21SY27RT11:42R6 Brekke P Does reintroduction affect the mating systems of threatened species? The impact of inbreeding in reintroduced populations of the hihi (<i>Notiomystis</i>)	Lunch

WEDNESDAY 21

Time / Room	10:30 – 10:49	10:54 – 11:13	11:18 – 11:37	11:42 – 12:01	12:01 – 14.00
R7 SY25 Chair: Székely T	D21SY25IT10:30R7 INVITED TALK Young L Sex Differences in the evolution and neural mechanisms of pair bonding in monogamous prairie voles	D21SY25IT11:18R7 INVITED TALK Kokko H Operational sex ratios, Bateman gradients, competition, care, and then some nasty interference from the deep evolutionary past		cincta)	
R8 SY013 Chair: Becks L	D21SY13RT10:30R8 O'Brien E , Bridle J What limits an evolutionary response to environmental change?	D21SY13RT10:54R8 Polechova J , Barton N When does genetic drift prevent expansion of a species' range?	D21SY13RT11:18R8 Carvalho G , Van Wijk S, Taylor M, Creer S, Dreyer C, Rodrigues F, Ramnarine I, Van Oosterhout C Rapid evolution in experimentally-harvested fish populations	D21SY13RT11:42R8 Thomann M , Imbert E, Cheptou P Using seedbanks to investigate contemporary evolution of plant reproductive traits facing global changes	
R9 SY07 Chair: Ganem G	D21SY07IT10:30R9 INVITED TALK Endler J The multiple functions of sexual displays and their implications for species recognition systems		D21SY07RT11:18R9 Rodgers G , Théry M, Belle Mbou M, Bayle F, Source S, Jean S Species recognition in heterogeneous sensory environments	D21SY07RT11:42R9 Gonzalez-Voyer A , Castelló A, Leonard J Evolution of acoustic and visual signals in Asian barbets	

Lunch

Session 6

Time / Room	14:00 – 14:19	14:24 – 14:43	14:48 – 15:07	15:12 – 15:31	15:31 – 15:45
R1 SY05 Chair: Belkadi P & Gilbert P	D21SY05RT14:00R1 Chevin L , Lande R Evolution of discrete phenotypes from continuous norms of reaction	D21SY05RT14:24R1 Harney E , Van Dooren TJM, Paterson S, Plaistow S Causes and consequences of developmental plasticity in <i>Daphnia</i> maturation	D21SY05RT14:48R1 Cortes P , Bacigalupe L, Contreras CCI, Varas V, Kemeid V, Blier PPU, Opazo JJC Discovering the genetic basis of torpor in a Chilean marsupial	D21SY05RT15:12R1 Ragsdale E , Müller M, Sommer R A developmental switch gene for a feeding dimorphism in <i>Pristionchus</i> nematodes is coupled to micro- and macroevolution of plasticity	
R2 SY21 Chair: Wellenreuther M & Hansson B	D21SY21IT14:00R2 INVITED TALK Slate J , Feulner PGD, Gratten J, Pemberton J The origins of two colour polymorphisms in a wild mammal population		D21SY21RT14:48R2 Jiggins C , Baxter S, Wallbank R, Martin S, Nadeau N Defining the regulatory regions that control <i>Heliconius</i> butterfly colour pattern mimicry	D21SY21RT15:12R2 Vijay N , Poelstra J, Bossu C, Baglione V, Grabherr M, Kruszewicz A, Lantz H, Müller I, Wikelski M, Wolf J Speciation genomics in the European crow: a magic hybrid zone where sexual selection and few major effect loci may promote speciation	
R3 SY23 Chair: Heyar S	D21SY23RT14:00R3 Pyhäjärvi T , Hufford M, Mezmouk S, Ross-Ibarra J Local adaptation, inversions and non-genic variation in teosinte	D21SY23RT14:24R3 Fraser B , Dreyer C, Weigel D Population genomics of parallel evolution in the Trinidadian guppy (<i>Poecilia reticulata</i>)	D21SY23RT14:48R3 Roesti M , Gavrilets S, Hendry A, Salzburger W, Berner D A novel genomic signature of adaptation from standing variation revealed in threespine stickleback	D21SY23RT15:12R3 Feulner PGD , Chain FJJ, Panchal M, Huang Y, Eizaguirre C, Kalbe M, Lenz T, Samonte I, Stoll M, Bornberg-Bauer E, Reusch T, Milinski M Genomic islands of divergence: a comparison of five parapatric lake-river population pairs of three-spined sticklebacks	
R4 SY09 Chair: Kurtz J	D21SY09RT14:00R4 Salazar-Jaramillo L , Jalvingh K, Wertheim B Parasitoid resistance in <i>Drosophila</i> : from short to long term evolutionary patterns	D21SY09RT14:24R4 Gauthier J , Gayral P, Le Ru B, Dupas S, Gaypay G, Jancek S, Kaiser L, Herniou E Genomic adaptation in the bracovirus of <i>Cotesia sesamiae</i> identified by targeted resequencing	D21SY09RT14:48R4 Bélicard T , Ashe A, Le Pen J, Frézal L, Sarkies P, Lehrbach N, Miska E, Félix M Identification of a major natural polymorphism responsible for the sensitivity to the Orsay Virus in <i>Caenorhabditis elegans</i>	D21SY09RT15:12R4 Gouy de Bellocq J , Uddin W, Baird SJE, Ribas A, Bryja J, Pialek J Matryoshka hybrid zones: the pinworm <i>Syphacia obvelata</i> in the European house mouse hybrid zone	

Break

Time / Room	14:00 – 14:19	14:24 – 14:43	14:48 – 15:07	15:12 – 15:31	15:31 – 15:45
R5 SY10 Chair: Kawecki TJ & Ritchie MG	D21SY10IT14:00R5 INVITED TALK Flatt T Genomic patterns of experimental evolution of <i>Drosophila</i> lifespan		D21SY10RT14:48R5 Jalvingh K , Chang P, Wertheim B, Nuzhdin S Genomic changes under rapid evolution: selection for parasitoid resistance	D21SY10RT15:12R5 Chenoweth S , Appleton N, Rundle H Understanding the relationship between natural and sexual selection using the evolve and resequence approach in a non-model insect	
R6 SY27 Chair: Elzaguirre C, Soares M & Stiebens V	D21SY27IT14:00R6 INVITED TALK Sommer S Ecology, immunogenomics and pathogen resistance in wildlife populations		D21SY27RT14:48R6 Wilfert L Declining pollinator populations – do viruses hold the smoking gun?	D21SY27RT15:12R6 Fourcade Y , Richardson D, Keijs O, Secondi J Decoupling population size, effective population size and pathogen prevalence in a periphery-core system in a migratory bird, the Corncrake	
R7 SY25 Chair: Jennings M	D21SY25RT11:18R7 Collet J , Dean R, Worley K, Richardson D, Pizzari T Dissecting the Bateman gradient: what it really tells us about sex roles	D21SY25RT11:42R7 Fritzsche K , Arnqvist G Homage to Bateman: sex roles predict sex differences in sexual selection	D21SY25RT14:48R7 Nordeide J , Kekäläinen J, Janhunen M, Kortet R Female fineries revisited – are they correlated with offspring quality?	D21SY25RT15:12R7 Requena G , Alonso S Should males invest more because they are fathers? Or are they fathers because they have invested more? The effect of male allocation in parental and reproductive efforts on paternity	
R8 SY013 Chair: Hiltunen T	D21SY13RT14:00R8 Usui-Heikkilä S , Whiteley A, Kuparinen A, Matsumura S, Venturelli P, Wolter C, Slate J, Primmer C, Arlinghaus R Rapid phenotypic and genetic changes in experimentally exploited fish populations	D21SY13RT14:24R8 Fragata I , Simões P, Lopes-Cunha M, Lima M, Kellen B, Bárbaro M, Santos J, Santos M, Matos M Quick adaptation to a new environment erases signature of history in natural populations	D21SY13RT14:48R8 Spaak P , Turko P Rapid evolution of metal tolerance revealed by resurrecting dormant propagules	D21SY13RT15:12R8 Koskella B Host-parasite coevolution at ecological time scales: bacteria-phage dynamics within a long-lived host	
R9 SY07 Chair: Endler J	D21SY07RT14:00R9 Ganem G From sexual communication to species recognition: examples from the house mouse	D21SY07RT14:24R9 Burdfield-Steel E , Shuker D, Dougherty L Why is there so little pre-copulatory choice in a promiscuous seed bug?	D21SY07RT14:48R9 Wheatcroft D , Price T Does incorporation of alarm calls into avian song increase rates of signal divergence across species?	D21SY07RT15:12R9 Espinosa A , Paz-y-Miño-C G <i>Entamoeba</i> varieties use biochemical signaling and behavioral aggregation to discriminate between members of distinctive strains	

Session 7

Time / Room	15:45 – 16:04	16:09 – 16:28	16:33 – 16:52	16:57 – 17:16	17:16 – 17:45
R1 SY05 Chair: Beldade P & Gilbert P	D21SY05RT15:45R1 Mateus A , Marques-Pita M, Oostra V, Lafuente E, Brakefield P, Zwaan B, Beldade P Spatio-temporal compartmentalization of ecdysteroid effects on post-growth patterning	D21SY05RT16:09R1 Ishikawa A , Kitano J Molecular and genetic mechanisms underlying variation in phenotypic plasticity in Sticklebacks	D21SY05RT16:33R1 Saastamoinen M , Brakefield P, Brommer J, Oostra V, Wheat C, Zwaan B Phenotypic and genetic responses of life-history traits to predictable and unpredictable developmental conditions in a seasonal butterfly	D21SY05RT16:57R1 Gunter H , Fan S, Xiong F, Schneider R, Franchini P, Fruciano C, Meyer A No strain no gain: genetic investigation of adaptive phenotypic plasticity in teleost jaws	
R2 SY30 Chair: Nichols R	D21SY30RT15:45R2 Chazot N , Willmott K, Jiggins C, Freitas AVL, Elias M Phylogenetic patterns of diversification and community structure reveal the role of ecological factors in generating and shaping Neotropical mimetic	D21SY30RT16:09R2 Miraldo A , Hanski I Large body size as a key innovation facilitating rapid radiation and geographical expansion in Malagasy dung beetles	D21SY30RT16:33R2 Hardy O Comparative phylogeography of African rain forest trees: a review of genetic signatures of vegetation history in the Guineo-Congolian region	D21SY30RT16:57R2 Rubio de Casas R , Soltis P, Mort M, Soltis D The effect of habitat on plant diversification: a macroevolutionary approach	

Coffee Break

Break

Coffee Break

Time / Room	15:45 – 16:04	16:09 – 16:28	16:33 – 16:52	16:57 – 17:16	17:16 – 17:45
	butterfly diversity				
R3 SY013 Chair: Hiltunen T	D21SY13IT15:45R3 INVITED TALK Neher R Observing evolution in action: HIV and its coevolution with the host immune system		D21SY13RT16:33R3 Milesi P , Labbe P, Weill M, Lenormand T Rapid evolution of insecticide resistance genes in mosquito populations: a quantitative approach	D21SY13RT16:57R3 Veltos P , Cezard T, Gharbi K, Snook R, Ritchie M DNA sequence response to experimental evolution at different sexual selection conditions	
R4 SY09 Chair: Schulenburg H	D21SY09RT15:45R4 Buckley J , Mable B Using RAD-seq and candidate gene sequencing to explore patterns of heterozygosity at disease resistance genes across naturally inbred and outcrossed plant populations	D21SY09RT16:09R4 Brunner P , Torriani SFF, Croll D, Stukenbrock E, McDonald B Coevolution and life cycle specialization of plant cell wall degrading enzymes in a hemibiotrophic pathogen	D21SY09RT16:33R4 De Bekker C , Lukasiewicz K, Hughes D In search of the fungal compounds that manipulate animal host behavior	D21SY09RT16:57R4 Didier B , Yves M, Marie-Christine C, Fabrice V, Christine B, Pierre G, Frédéric C Functional analysis of differentially expressed genes in the symbiotic association between the pill-bug <i>Armadillidium vulgare</i> and the feminising <i>Wolbachia</i>	
R5 SY10 Chair: Kawecki TJ & Ritchie MG	D21SY10RT15:45R5 Kapun M , Van Schalkwyk H, Nolte V, McAllister B, Flatt T, Schlötterer C The impact of chromosomal inversions on genetic variation in natural and laboratory populations of <i>D. melanogaster</i>	D21SY10RT16:09R5 Rogell B , Chen H, Maklakov A Genetic basis of ageing evolution under differential extrinsic mortality in a nematode	D21SY10RT16:33R5 Immonen E , Snook R, Ritchie M Effects of experimental mating system variation on transcriptome evolution and mating response in female <i>Drosophila pseudoobscura</i>	D21SY10RT16:57R5 Hollis B , Kawecki T, Keller L, Yan Z, Houle D Evolution under monogamy feminizes gene expression	
R6 SY27 Chair: Eizaguirre C, Soares M & Stiebens V	D21SY27IT15:45R6 INVITED TALK Bernatchez L Applied evolutionary genomics in fish conservation: some success stories and challenges for the future		D21SY27RT16:33R6 Primmer C , Johnstone S, Orell P, Niemilä E, Lien S, Kent M, Erkinaro J A genome-wide association study (GWAS) of age at maturity in Atlantic salmon: implications for conservation and management	D21SY27RT16:57R6 De-Cara Á , Villanueva B, Toro M, Fernández J Maintaining fitness and diversity in conservation programmes	
R7 SY25 Chair: Székely T	D21SY25RT15:45R7 Henshaw J , Kokko H, Jennions M, Marshall D Parent-gamete proximity and its consequences for the evolution of sex roles	D21SY25RT16:09R7 Lankinen Å , Strandh M, Larsson M, Walker III W, Madjidian J, Andersson S, Hersh E Sexual selection, sexual conflict and functional mechanisms of pollen-pistil interactions	D21SY25RT16:33R7 Young A , Cram D, York J, Harrison X The evolution of sex differences in cooperation in vertebrate societies	D21SY25RT16:57R7 Harrison F , Székely T, Liker A, Barta Z Social role specialisation promotes cooperation	
R8 SY16 Chair: Butlin R	D21SY16RT15:45R8 Shi S , He Z, Li X, Yang M Fragility and robustness – the evolution of tropical intertidal communities as sea level rises and falls	D21SY16RT16:09R8 Kong H Parallel petal losses within the buttercup family (<i>Ranunculaceae</i>) and their underlying mechanisms	D21SY16RT16:33R8 Zhu T Maximum likelihood implementation of an isolation-with-migration model with three species for testing speciation with gene flow	D21SY16RT16:57R8 Li H , Wiehe T, Li J Statistical test to reliably detect recent positive selection by utilizing tree shape and branch lengths	
R9 SY28 Chair: Roth O	D21SY28IT15:45R9 INVITED TALK Sadd B Costs and benefits of living in your mother's immunological shadow		D21SY28RT16:33R9 Beemelmanns A , Roth O Bi-parental immune priming in the sex-role reversed pipefish <i>Syngnathus typhle</i>	D21SY28RT16:57R9 Vilcinskas A , Freitak D, Schmidtberg H, Vogel H Transgenerational immune priming in Lepidoptera	

Session 8

Time / Room	17:45 – 18:04	18:09 – 18:28	18:33 – 18:52	18:57 – 19:16
R1 SY05 Chair: Beldade P & Gilbert P	D21SY05RT17:45R1 Burraco P , Arribas Ramos R, Gomez-Mestre I Is predator-induced phenotypic plasticity regulated by DNA-methylation in tadpoles?	D21SY05RT18:09R1 Schunter C , Vollmer S, Macpherson E, Pascual M Differential gene expression in a non-model fish species with alternative mating tactics	D21SY05RT18:33R1 Ramm S , Arbore R, Lengerer B, Pjeta R, Ladurner P, Berezikov E, Schärer L Sex allocation plasticity on a transcriptome scale	D21SY05RT18:57R1 Matsunami M , Kishida O, Kitano J, Michimae H, Miura T, Nishimura K Transcriptome analysis of predator- and prey-induced phenotypic plasticity in the Hokkaido Salamander (<i>Hynobius retardatus</i>)
R2 SY30 Chair: Nichols R	D21SY30RT17:45R2 Kotlik P , Markova S, Stratil A, Slechta V, Searle J Functional haemoglobin divergence between bank vole populations of different refugial origins	D21SY30RT18:09R2 Potts A , Hedderson T, Cowling R Comparative phylogeography of three tree species from the Albany Subtropical Thicket of South Africa: testing cornerstone hypotheses of a large-scale conservation network	D21SY30RT18:33R2 Clegg S , Olsson-Pons S, Clark N, Ishtiaq F Avian malaria diversity in southern Melanesia: exploring potential influences on distribution patterns and divergence of host bird species	D21SY30RT18:57R2 Helmlstetter A , Leroi A, Van Dooren TJM, Savolainen V Phylogeography and morphology of the South American Annual Killifish genus, <i>Austrolebias</i>
R3 SY013 Chair: Beck L	D21SY13IT17:45R3 INVITED TALK Uecker H , Otto S, Hermission J Evolutionary rescue in structured populations		D21SY13RT18:33R3 Anttila J , Ruokolainen L, Kaitala V, Laakso J Environmental variation and the evolution of virulence	D21SY13RT18:57R3 Le Rouzic A , Alvarez-Castro J, Hansen T Evolution of evolvability under fluctuating selection
R4 SY09 Chair: Kurtz J	D21SY09IT17:45R4 INVITED TALK Decaestecker E , De Gersem H, Michalakis Y, Rayemaekers JAM Host allelic diversity drives long-term host-parasite coevolutionary dynamics		D21SY09RT18:33R4 Wolinska J , Rusek J, Gonzalez-Tortuero E, Petrussek A, Giessler S Population structure of microparasites infecting <i>Daphnia</i> : spatio-temporal dynamics	D21SY09RT18:57R4 Bento G , Routtu J, Hall M, Ebert D Evolution of <i>Daphnia magna</i> resistance to the pathogen <i>Pasteuria ramosa</i>
R5 SY10 Chair: Kawecki TJ & Ritchie MG	D21SY10RT17:45R5 Otto S , Gerstein A Genomic scope of adaptive mutations to different environments	D21SY10RT18:09R5 Bank C , Hietpas R, Bolon DNA, Jensen J Shifting fitness landscapes in response to altered environments	D21SY10RT18:33R5 Reusch TBH , Lohbeck K, Riebesell U, Esser D, Rosenstiel P The genetic basis of adaptation to ocean acidification in <i>Emiliania huxleyi</i> , a key phytoplankton species	D21SY10RT18:57R5 Herniou E , Chateigner A, Pontlevé C, Jiolle D, Hebert A, Labrousse C, Bezier A Genomic adaptation to different hosts - What makes better-adapted viruses?
R6 SY27 Chair: Eizaguirre C, Soares M & Stiebens V	D21SY27RT17:45R6 Spurgin L , Wright D, Collar N, Komdeur J, Burke T, Richardson D Museum DNA reveals a drastic and recent bottleneck in the Seychelles warbler	D21SY27RT18:09R6 Charge R , Sorci G, Saint Jalme M, Lesobre L, Hingrat Y, Lacroix F, Teplitsky C Genetic changes in life history traits in response to unintentional selection in a supportive breeding	D21SY27RT18:33R6 Thomassen H , Fuller T, Buermann W, Mila B, Kieswetter C, Jarrin-V. P., Modro N, Cameron S, Mason E, Schweizer R, Schlunegger J, Chan J, Wang O, Peralvo M, Schneider C, Graham C, Pollinger J, Saatchi S, Wayne R, Smith T Incorporating intraspecific variation in conservation prioritization: a multi-taxa approach	D21SY27RT18:57R6 Vogel S , Sinclair J, Sherwin W A range-wide conservation genetic study of Little Penguins (<i>Eudyptula minor</i>): augmenting population genetics at neutral loci with an adaptive immune gene
R7 SY25 Chair: Jennings M	D21SY25RT17:45R7 Vallon M , Heubel K Context-dependent plasticity of reproduction in the common goby (<i>Pomatoschistus microps</i>)	D21SY25RT18:09R7 Fricke C , Green D, Mills W, Chapman T Female age dependent responses to a male signal can alter opportunities for sexual antagonistic co-evolution	D21SY25RT18:33R7 Nakadera Y , Hoffer JNA, Swart E, Den Boon O, Ellers J, Koene J Extending sex role research to hermaphroditism: post-copulatory alteration of male and female functions via seminal fluid in a freshwater snail	D21SY25RT18:57R7 Marie-Orleach L , Janicke T, Vizoso D, Schärer L Quantifying pre- and post-copulatory episodes of sexual selection in a simultaneous hermaphrodite
R8 SY16 Chair: Zeng K	D21SY16RT17:45R8 Lu J , White S, Clark AJIAN Co-evolution of PIWI-interacting RNAs (piRNAs) and transposable elements in <i>Drosophila</i>	D21SY16RT18:09R8 Tang T , Lyu Y, Shen Y, Li H, Zhao Y, Hungate E, Shi S, Wu C New microRNAs in <i>Drosophila</i> – Birth, death and immortality through cycles of evolution	D21SY16RT18:33R8 Hui J MicroRNA evolution by arms switching and bi-directional transcription	D21SY16RT18:57R8 Zhang G The 'omics' of non-model animals

Time / Room	17:45 – 18:04	18:09 – 18:28	18:33 – 18:52	18:57 – 19:16
R9 SY28 Chair: Joop G	D21SY28IT17:45R9 INVITED TALK Boots M Epidemiological and evolutionary implications of immune priming		D21SY28RT18:33R9 Boulinier T , Garnier R, Ramos R, Gandon S Evolution of a transgenerational response to parasites, the maternal transfer of antibodies: theory, experiments and comparative approaches	D21SY28RT18:57R9 Grindstaff J , Merrill L Maternal immune challenges exert both enhancing and suppressive effects on offspring immune responses

Poster Session

Time / Room	19:16
Poster Area	SY09 SY10 SY13 SY16 SY21 SY25 SY27 SY28 SY30

POSTERS

WEDNESDAY 21

Symposium 9

Genetics and genomics of host-parasite coevolution

PS0108 - Evasion or suppression? Infection strategies of a trypanosome gut parasite of bumblebees (D21SY09PS0108)
Näpflin K

PS0124 - Landscape genomic analysis highlights how parasite-driven processes affect neutral and adaptive genetic diversity in red grouse (D21SY09PS0124)
Wenzel M, Webster LMI, Paterson S, Pierney S

PS0128 - Variable patterns of host specialization in the generalist tick *Ixodes ricinus* (D21SY09PS0128)
Léger E, Noël V, McCoy K

PS0169 - Parasitic lifestyle and genomic reduction in metazoan parasites (D21SY09PS0169)
Sundberg L, Pulkkinen K

PS0227 - Experimental adaptation of the phytophagous spider mite, *Tetranychus urticae* to a new host plant (D21SY09PS0227)
Marinosci C, Devaux C, Olivieri I

PS0263 - Bioinformatic analysis of amplicon sequencing data to study spatial and temporal variation in a *Daphnia* microparasite (D21SY09PS0263)
Gonzalez Tortuero E, Rusek J, Giessler S, Petruska A, Wolinska J

PS0333 - The evolution of CRISPR-Cas in *Mycobacterium tuberculosis* (D21SY09PS0333)
Brites D, Coscolla M, Gagneux S

PS0358 - Antler quality in red deer: a test of Hamilton and Zuk hypothesis (D21SY09PS0358)
Buczek M, Radwan J, Okarma H

PS0381 - How malaria gets around: the genetic structure of a parasite, vector and host compared (D21SY09PS0381)
Witsenburg F, Clément L, Dutoit L, López Baucells A,

Palmeirim J, Pavlinić I, Scaravelli D, Ševčík M, Goudet J, Christe P

PS0383 - Private selective sweeps identified from next-generation pool-sequencing reveal convergent pathways in two inbred *Schistosoma mansoni* strains (D21SY09PS0383)

Toulza E, Clément JAJ, Gautier M, Parinello H, Roquis D, Boissier J, Rognon A, Moné H, Mouahid G, Buard J, Mitta G, Grunau C

PS0465 - Last minute passengers or priority travellers: view of a *Wolbachia* journey in *Armadillidium vulgare* ovaries (D21SY09PS0465)
Genty L, Raimond M, Bouchon D, Bertaux J

PS0479 - Genetic/epigenetic mechanisms to trigger off separate sex appearance example of intriguing dioecious parasite: *Schistosomatidae* (D21SY09PS0479)

Picard MAL, Rognon A, Duval D, Mouahid G, Grunau C, Cosseau C, Boissier J

PS0501 - Recent rapid spread of *Wolbachia* variants in east Australian *Drosophila simulans*: induced by protection against naturally occurring pathogens? (D21SY09PS0501)

Kriesner P, Hoffmann A, Lee S, Turelli M, Weeks A

PS0598 - Cell sacrifice in the gut: an adaptive response towards *Nosema* spp. infection in honey bees (D21SY09PS0598)
Kurze C, Huang Q, Moritz RFA

PS0602 - Tests of coevolution between virus and host in killer yeast strains (D21SY09PS0602)
Pieczyńska M

PS0611 - The evolution of recent antiviral gene duplicates in *Drosophila* (D21SY09PS0611)
Lewis S, Webster C, Obbard D

PS0630 - Host adaptation is contingent upon the infection route taken by pathogens (D21SY09PS0630)
Martins N, Faria V, Teixeira L, Magalhães S, Sucena É

PS0664 - Remarkable diversity of endogenous

viruses in the genome of an isopod crustacean

(D21SY09PS0664)

Gilbert C, Cordaux R

PS0672 - Sex-specific genetic variance for resistance and tolerance to infection

(D21SY09PS0672)

Vincent C, Sharp N

PS0736 - Walking with insects: molecular mechanisms behind parasitic manipulation of caterpillar behaviour (D21SY09PS0736)

Ros VID, Van Houte S, Van Oers M

PS0872 - Genetic structure of a nematode parasite (*Trichuris muris*) across the European house mouse hybrid zone (D21SY09PS0872)

Uddin W, Bryja J, Piálek J, Baird SJE, Ribas A, De Bellocq J

PS0876 - Host species specificity of *Borrelia afzelii* strains (D21SY09PS0876)

Strandh M, Råberg L

PS0878 - The potential for gene-for-gene and matching-allele coevolution in a protist host-parasite system (D21SY09PS0878)

Råberg L, Alacid E, Garces E, Figueroa R

PS0928 - Characterization of candidate genes from a QTL analysis of the skin microbiota in house mice

(D21SY09PS0928)

Belhouane M, Ibrahim S, Baines J

PS0949 - Erythrocyte polymorphisms associated with protection against *P. vivax* malaria in Papua New Guinea children (D21SY09PS0949)

Rosanas-Urgell A, Kattenberg E, Lin E, Robinson L, Rarau P, Nicolas S, Manning L, Moses L, Peter S, Ivo M

PS1004 - Tracing the evolutionary history of koala retrovirus: frequent host-shifts in a virus lineage of disease and conservation relevance (D21SY09PS1004)

Hayward A

PS1016 - The *Spironucleus salmonicida* Genome

(D21SY09PS1016)

Xu F, Jerlström-Hultqvist J, Einarsson E, Svärd S, Andersson J

PS1017 - Sequentially varying reproductive strategies in a parasitic flatworm: riding a population genomic roller coaster (D21SY09PS1017)

Aisala H, Hansen H, Lumme J

PS1026 - Reproductive barriers and candidate genes involved in the isolation of four closely related sexually deceptive orchids (D21SY09PS1026)

Sedeek KEM, Scopece G, Xu S, Qi W, Cozzolino S, Schiestl F, Schlüter P

PS1081 - Host dispersal shapes host-parasite co-evolutionary dynamics in cichlid fishes

(D21SY09PS1081)

Hablützel P, Grégoir A, Roose A, Volckaert FAM, Raeymaekers JAM

PS1084 - The genetic basis of variation in antiviral defense in *Drosophila melanogaster*

(D21SY09PS1084)

Cao C, Jiggins F

PS1166 - Contrasting evolutionary patterns in recent and deep time suggest old origins for East-African arenaviruses and strong specificity to their multimammate mouse hosts (D21SY09PS1166)

Gryseels S, Baird SJE, Makundi R, Borremans B, Bryjová A, Leirs H, Goüy de Bellocq J

PS1169 - Host specificity in a vector born disease

(D21SY09PS1169)

Lemoine M, Råberg L

PS1191 - Can differential gene expression explain differential host resistance? (D21SY09PS1191)

Konijnendijk N, Raeymaekers J, Howes T, Milan M,

Volckaert F

PS1241 - Phylogenomics: an evolutionary framework bridging Schistosome genomics and biology (D21SY09PS1241)

Silva L, Andrade L, Mourão M, Nahum L, Oliveira G

PS1251 - Heritable variation in parasite tolerance and resistance inferred from a wild host-parasite system (D21SY09PS1251)

Maze E

PS1322 - Capturing the population structure of microparasites: using ITS-sequence data and a pooled DNA approach (D21SY09PS1322)

Giessler S, Wolinska J

PS1325 - Linking parasite genetics with host disease phenotype, the case for human schistosomiasis

(D21SY09PS1325)

Huyse T, Boon N, Van den Broeck F, Chaturvedi A, Meurs L, Volckaert FAM, Polman K

PS1395 - Mapping immune gene variation across bottlenecked populations of an island bird

(D21SY09PS1395)

Gonzalez Quevedo C

PS1399 - Novel papillomaviruses in free-ranging Iberian bats challenge the dogmas: interspecies transmission, no virus-host coevolution and evidences for recombination (D21SY09PS1399)

Bravo I, Wibbelt G, Vázquez-Morón S, Ibáñez C, Echevarría J, Juste J, García-Pérez R

PS1402 - Toll-like receptor 9 and host defense to the infection caused by the human parasite *Trypanosoma cruzi* (D21SY09PS1402)

Bartholomeu D, Lemos D, Ropert C, Fujiwara R, Gazzinelli R, Lourdes R

PS1453 - Multiple-strain infections of *Borrelia afzelii* – a role for within-host interactions in the maintenance of antigenic diversity? (D21SY09PS1453)

Andersson M, Scherman K, Råberg L

Symposium 10**Genomics and experimental evolution****PS0098 - Experimental thermal evolution in *D. melanogaster* reveals temperature dependent population genomic signal of adaptation**

(D21SY10PS0098)

Tobler R, Orozco-terWengel P, Nolte V, Hermisson J, Schlötterer C

PS0157 - Experimental evolution and transcriptional plasticity in an insect-fungus interaction

(D21SY10PS0157)

Trienens M, Wertheim B

PS0182 - High resolution linkage analysis during

experimental evolution experiments

(D21SY10PS0182)

Franssen S, Kofler R, Schlötterer C

PS0183 - Rapid genomic changes in pathogenic *Bacillus thuringiensis* during adaptation to its nematode host (D21SY10PS0183)

Branca A, Masri L, Sheppard A, Rosenstiel P, Bornberg-Bauer E, Schulenburg H

PS0199 - Studying the effects of predation and sex on the evolution of prey defense traits in *Chlamydomonas reinhardtii* (D21SY10PS0199)

Koch H, Becks L

PS0450 - Experimental evolution of female traits under different levels of inter sexual conflict

(D21SY10PS0450)

Prasad N, Nandy B

PS0511 - A novel functional polymorphism in the Fatty Acid Desaturase 2 gene (FADS2): possible role in basal metabolic rate (D21SY10PS0511)

Czajkowska M, Swislocka M, Duda N, Dobrzyn P, Brzek P, Konarzewski M, Ratkiewicz M

PS0584 - From artificial selection to transcriptomics: The cognitive benefits of, and the gene responsible for, a large brain in fish (D21SY10PS0584)

Kotrschal A, Harrison P, Mank J, Kolm N

PS0681 - Detection of traces of selection with numerous SNP in small experimental populations undergoing directional selection (D21SY10PS0681)

Hospital F, Bed'Hom B, Gautier M, Silveri L, Bruneau N,

Coville J, Gourichon D, Pinard-van der Laan M

PS0718 - Experimental evolution and transcriptomics of *Tribolium castaneum* infections with *Bacillus thuringiensis* (D21SY10PS0718)

Kurtz J, Behrens S, Peuß R, Milutinovic B, Eggert H, Bornberg-Bauer E, Esser D, Rosenstiel P

PS0752 - Edaphic adaptation in the 'omics' era: a genomic view of the calcicole-calcifuge problem (D21SY10PS0752)

Guggisberg A, Fischer M, Zoller S, Widmer A

PS0773 - Evolution of sperm competitive ability as a correlated response to selection on environmental stress resistance (D21SY10PS0773)

Singh K, Prasad N

PS0986 - Population and sex differences in *Drosophila melanogaster* brain gene expression (D21SY10PS0986)

Catalán A, Hutter S, Parsch J

PS1124 - Loss of heterozygosity during asexual reproduction in *Daphnia* (D21SY10PS1124)

Dukic M, Haag C, Berner D, Ebert D

PS1136 - Transcriptomics of accessory gland proteins in sex peptide receptor-less *Drosophila melanogaster* populations (D21SY10PS1136)

Joag R

PS1137 - Meiotic drive in the yellow fever mosquito *Aedes aegypti* (D21SY10PS1137)

Ariani C, Short K, Juneja P, Jiggins F

PS1333 - The rate of adaptation *Escherichia coli* to the mouse gut (D21SY10PS1333)

Ramiro R, Sousa A, Barroso-Batista J, Gordo I

PS1439 - Genomics of adaptation during experimental evolution of legume symbionts

(D21SY10PS1439)

Clerissi C, Capela D, Remigi P, Torchet R, Cruveiller S, Rocha E, Masson-Boivin C

Symposium 13**Rapid evolution and population genetics****PS0001 - Stress-induced mutation in the presence of recombination** (D21SY13PS0001)

Ram Y, Hadany L

PS0044 - Could rapid adaptation be contributing to the success of invasive *Senecio madagascariensis* in Australia? Combining outlier and spatial analysis methods to detect putative selection

(D21SY13PS0044)

Dormontt E, Lowe A

PS0092 - Population genetic structure of water flea (*Daphnia pulex* spp.) from gradients of lakes and ponds in Ilulissat region of Greenland

(D21SY13PS0092)

Haileselassie T, Meester LDE, Meargay J

PS0171 - Lotka and Volterra kill the Red Queen

(D21SY13PS0171)

Schulenburg H, Gokhale C, Papkou A, Traulsen A

PS0184 - Comparing evolvabilities: common errors surrounding the calculation and use of coefficients of additive genetic variation (D21SY13PS0184)

Garcia-Gonzalez F, Simmons L, Tomkins J, Kotiaho J,

Evans J

PS0192 - Comparison of Haplotype Methods to detect selection (D21SY13PS0192)

Vatsiou A, MeLo De Lima C, Gaggiotti O

PS0214 - Incipient allochronic speciation in the pine processionary moth : molecular analysis of a divergent population (D21SY13PS0214)

Landes J, Burban C, Gautier M, Santos H, Branco M, Leblois R, Kerdelhué C

PS0295 - A two-fold advantage of sex

(D21SY13PS0295)

Park S, Krug J

PS0345 - Advantages of sex beyond recombination in a fungal model (D21SY13PS0345)

Schoustra S, Debets F, Giraud T, Lopez-Villavicencio M

PS0346 - Human-assisted admixture and invasion – a case study with zander (*Sander lucioperca*)

(D21SY13PS0346)

Eschbach E, Nolte A, Kohlmann K, Kersten P, Kail J, Arlinghaus R

PS0374 - First insights into the genetic diversity of the pinewood nematode *Bursaphelenchus xylophilus* in its native area and around the world

(D21SY13PS0374)

Mallez S, Castagnone C, Espada M, Vieira P, Eisenback J, Mota M, Guillemaud T, Castagnone-Sereno P

PS0375 - Clinal analysis of a temporary contact zone between two invading outbreaks to estimate dispersal of a major pest of maize (D21SY13PS0375)

Bermond G, Blin A, Vercken E, Ravigné V, Rieux A, Mallez S, Morel-Journel T, Guillemaud T

PS0376 - Evolution of environmental opportunist pathogens (D21SY13PS0376)
Merikanto I, Laakso J, Kaitala V

PS0508 - Evolution of inbreeding and outbreeding depression revealed in 100 generations of laboratory adaptation in *C. elegans* (D21SY13PS0508)
Chelo I, Carvalho S, Roque M, Teotónio H

PS0578 - Non directional epistasis increases selection limits through allelic reversals (D21SY13PS0578)
Paixão T, Barton N

PS0644 - Artificial selection for host-plant use of a seed-predator: fitness consequences, inbreeding depression, and genetic variation (D21SY13PS0644)
Muola A, Laukkanen L, Leimu R, Mutikainen P

PS0748 - Genetic differentiation of *Salmonidae* populations in Southern Baltic Sea identified from a SNP genotyping (D21SY13PS0748)
Poćwierz-Kotus A, Bernaś R, Drywa A, Wenne R

PS0754 - Population genetics of transcription binding sites in regulatory sequences (D21SY13PS0754)
Tugrul M, Paixao T, Tkacik G, Barton N

PS0795 - Characteristic of Atlantic cod (*Gadus morhua*, L.) populations in the Baltic Sea according to its adaptations to local environmental changes (D21SY13PS0795)
Kijewska A, Poćwierz-Kotus A, Wenne R

PS0799 - Variation in gene expression during embryogenesis in Drosophila strains and species (D21SY13PS0799)
Asli K

PS0841 - Saptio-temporal genetic diversity of blooms of *Alexandrium minutum* (D21SY13PS0841)
DIA A, Valero M, Guillou L, Destombe C

PS0853 - The signature of past population isolation on gene genealogies and DNA sequence data (D21SY13PS0853)
Alcala N, Jensen J, Vuilleumier S

PS0975 - Genetic diversity and differentiation of tetraploid *Primula halleri* based on a novel panel of 11 microsatellite loci (D21SY13PS0975)
Zhang L, Conti E, Nowak M

PS1031 - Rapid evolution in response to chemical pollution? Testing for the required additive genetic variance in whitefish (*Salmonidae*) (D21SY13PS1031)
Luca C, Clark E, Wedekind C

PS1037 - A little sex goes a long way: clonal interference due to spatial structure can be alleviated by low rates of recombination (D21SY13PS1037)
Weissman D, Barton N

PS1041 - Experimental population genetics in mice living under semi-natural conditions (D21SY13PS1041)
Linnenbrink M, Pfeifle C, Tautz D

PS1063 - Genetic diversity and population structure of *Rhizophora apiculata*, a mangrove tree in central Indo-West Pacific (D21SY13PS1063)
Chen Y, Zhou R, Shi S

PS1163 - Mutation and migration: when and where does diversity arise in early SIV infection? (D21SY13PS1163)
Shirreff G, Garcia V, Vanderford T, Silvestri G, Regoes R

PS1175 - Influence of temporal variability of mating system on the adaptation process after an environmental change (D21SY13PS1175)
Mousset MMM, Glémén S, Mignot A, Petit C, Ronce O, Ronfort J

PS1259 - Population genetics of copy number variable genes in natural mouse populations (D21SY13PS1259)
Pezer Sakac Z, Harr B, Teschke M, Babiker H, Tautz D

PS1268 - Inferring the invasion routes of an ancient invader, the mealybug pest species *Pseudococcus viburni* Signoret (Hemiptera: Pseudococcidae), by using microsatellite markers and DNA sequences (D21SY13PS1268)
Correa MCG, Malusa T, Crochard D, Zaviezo T, Lombaert E

PS1282 - Divergence in gene expression is uncoupled from divergence in coding sequence during rapid evolution in *Helianthus* (D21SY13PS1282)
Moyers B, Rieseberg L

PS1283 - Occupation of a novel environmental niche via hybridization in Central Asian water frogs *Pelophylax* (D21SY13PS1283)
Mazepa G, Litvinchuk S, Plötner J, Höglund J

PS1284 - Evolutionary biology of the invasive Northern Pacific seastar (*Asterias amurensis*) in Australia (D21SY13PS1284)
Sherman CDH, Richardson M

PS1285 - Linkage-based method for identifying selected loci and characterising selection intensity (D21SY13PS1285)
Jacobs G, Sluckin T, Kivisild T

PS1358 - Post-introduction evolutionary rescue (D21SY13PS1358)
Fonseca D

PS1372 - Adaptive evolution of the opsin genes in African crater lake cichlids? (D21SY13PS1372)
Musilova Z, Albergati L, Salzburger W

PS1422 - Inferring conservation and adaptation of molecular quantitative traits (D21SY13PS1422)
Nourmohammad A, Held T, Schiffels S, Laessig M

Symposium 16

Evolutionary biology in China

PS0454 - The phylogeography of a wide-ranging bird in Asia, the common pheasant *Phasianus colchicus* (D21SY16PS0454)
Liu Y, Liu X, Zhang Z

PS1145 - Forensic phylogeography of invasion: species exchanged between the U.S. and China (D21SY16PS1145)
Mauricio R

PS1294 - Recurrent gene flow versus incomplete lineage sorting: allele sharing between two

hybridizing pines with overlapping distributions

(D21SY16PS1294)

Zhou Y, Duvaux L, Liu J, Savolainen O

Symposium 21**The evolution and maintenance of heritable colour polymorphisms: from ecology to genomes****PS0059 - Maintenance of flower color polymorphism in *Iris lutescens* Lam. (Iridaceae) (D21SY21PS0059)**

Wang H, Conchou L, Bessiere J, Cazals G, Schatz B, Imbert E

PS0208 - Floral pigmentation evolution and movement through genetic space in snapdragons (*Antirrhineae*) (D21SY21PS0208)

Ellis T

PS0274 - Prey and predator community composition promotes polymorphic warning signals

(D21SY21PS0274)

Nokelainen O, Valkonen J, Lindstedt C, Mappes J

PS0514 - The genetic basis of adaptive plumage colour polymorphism in common buzzards

(D21SY21PS0514)

Mundy N, Pointer M, Krüger O

PS0567 - Investigating the role of dominance in the polymorphism of wing colour patterns in the mimic butterfly *Heliconius numata* (D21SY21PS0567)

Llaurens V, Le Poul Y, Annabel W, Joron M

PS0796 - Flower colour morphs of *Iris pumila* differ in the amounts of Hsp90 and phenolic compounds (D21SY21PS0796)

Tucić B, Manitašević Jovanović S, Vučeta A

PS0859 - Genomic instability in the locus responsible for a conspicuous polychromatism in Nicaraguan Midas Cichlid Fish (D21SY21PS0859)

Härer A, Henning F, Meyer A

PS0882 - Differential effects of pigmentary and non-pigmentary antioxidants on growth, plumage coloration and resistance to oxidative stress in wild great tits (D21SY21PS0882)

Marri V, Richner H

PS0903 - Expression levels of genes belonging to the melanocortin system are associated with melanin-based coloration in two colour polymorphic owl species (D21SY21PS0903)

Roulin A, Ducrest A

PS0912 - Being complex can be safe: testing predator avoidance of varying aposematic signals in a novel environment (D21SY21PS0912)

Rojas B, Rautiala P, Mappes J

PS1212 - Mapping of the guppy pigmentation gene *blond* using RAD-seq (D21SY21PS1212)

Kottler V, Künstner A, Hoffmann M, Weigel D, Dreyer C

PS1270 - Mapping the *Cepaea nemoralis* shell colour and banding supergene using RAD-Seq (D21SY21PS1270)

Richards P, Liu M, Lowe N, Davey J, Blaxter M, Davison A

PS1290 - The role of melanin pathway genes in natural variation of pigmentation traits in *Drosophila melanogaster* (D21SY21PS1290)

Ng R, True J

PS1366 - Role of frequency dependent selection on the maintenance of polymorphism in aposematic organisms (D21SY21PS1366)

Gordon S, Rojas B, Kokko H, Mappes J

Symposium 25**New directions in sex role research****PS0074 - Sex ratios favour an evolutionary transition in social behaviour and life-history**

(D21SY25PS0074)

Quiñones A, Pen I

PS0106 - No evidence for size-assortative mating in the wild despite mutual mate choice in two species of sex-role-reversed pipefish (D21SY25PS0106)

Mobley K, Chakra MABOU, Jones A

PS0142 - Paternity, sex roles and fish: Who cares?

(D21SY25PS0142)

Kahn A, Schwanz L, Kokko H

PS0198 - The composition of the sperm membrane across mammals is affected by mass-specific metabolic rate and the level of sperm competition (D21SY25PS0198)

DelBarco-Trillo J, Roldan E

PS0305 - Understanding promiscuity: when is seeking additional mates better than guarding an already found one? (D21SY25PS0305)

Harts AMF, Kokko H

PS0368 - Sexual selection of choosiness under direct benefits (D21SY25PS0368)

Etienne L, Rousset F, Godelle B, Courtiol A

PS0411 - Sexual selection can reduce mutation load in *Drosophila melanogaster* (D21SY25PS0411)

Sharp N, Vincent C, Agrawal A

PS0461 - Reassessment of Bateman's principles: insights from a meta-analysis (D21SY25PS0461)

Janicke T, Haederer I, Anthes N

PS0492 - Post-mating sexual selection and maintenance of colour polymorphism in an aposematic species (D21SY25PS0492)

Charge R, Lindstedt C, Hämäläinen L, Övermark E, Wedell N, Mappes J

PS0624 - Female moths do it all: advertise, compete and choose (D21SY25PS0624)

Harari A, Steinitz HHS, Sadeh AAS, Zahavi TTZ

PS0631 - The effect of sexual selection on sexual size dimorphism in mammals (D21SY25PS0631)

Gudde R, Venditti C

PS0742 - Deep RNA sequencing suggests a lack of global dosage compensation in threespine sticklebacks (D21SY25PS0742)

Schultheiß R, Viitaniemi H, Sävilammi T, Leder E

PS0766 - The role of mating behaviour and reproductive physiology in mating system evolution among dance flies (D21SY25PS0766)

Herridge E, Murray R, Kröger S, Bussière L

PS0821 - Exploring a female sexual signal (D21SY25PS0821)

Booksmythe I, Rundle H, Arnqvist G

PS0861 - A likely role for antagonistic selection in the maintenance of genetic variation at the arginine vasopressin receptors 1a (D21SY25PS0861)
Lönn E, Koskela E, Mappes T, Mokkonen M, Watts P

PS0895 - All eggs are made equal (D21SY25PS0895)
Rutkowska J, Dubiec A, Nakagawa S

PS0920 - Context-dependent plasticity of sex-roles (D21SY25PS0920)
Heubel K

PS0969 - The evolution of sexual segregation within inflorescences: the role of resource competition by flowers (D21SY25PS0969)
Afonso A, Castro S, Méndez M, Gómez J, Anderberg A, Torices R

PS0976 - Rapid change in the genetic architecture of sex-specific fitness in laboratory populations of fruitflies (D21SY25PS0976)
Reuter M, Collet J, Fuentes S, Fowler K

PS0987 - Sex roles in a demographic context: population consequences of individual fitness variance in sequential hermaphrodites (D21SY25PS0987)
Benvenuto C, Coscia I, Chopelet J, Sala-Bozano M, Mariani S

PS1002 - The genetic basis of cryptic female choice in Chinook salmon (*Oncorhynchus tshawytscha*) (D21SY25PS1002)
Gessner C, Rosengrave P, Zavodna M, Wing J, Gemmell N

PS1033 - Does mutational load can be reduced through selection on males? (D21SY25PS1033)
Savic Veselinovic M, Pavkovic-Lucic S, Kurbalija Novicic Z, Jelic M, Tanaskovic M, Andjelkovic M

PS1139 - The landscape of sexual selection (D21SY25PS1139)
Boughman J, Keagy J, Lettieri L

PS1195 - Sexual conflict predicts the evolution of sexual dimorphism in a diverse avian family, the Penduline tits (Remizidae) (D21SY25PS1195)
Ball A, Van Dijk R, Dorus S, Székely T

PS1269 - The role of extra-pair mating and cooperative behaviours for the evolution of avian mating systems (D21SY25PS1269)
Jørgensen C, Mangel M, Eliassen S

PS1275 - Promiscuity and evolution of cooperative neighbourhoods (D21SY25PS1275)
Eliassen S, Jørgensen C

PS1320 - The role of host sex in parasite evolution (D21SY25PS1320)
Duneau D, Ebert D, Lazzaro B

PS1428 - Transcriptome characterization by SSH-seq and RNA-seq of specific tissues involved in sexual mechanisms in an endemic Iberian cyprinid fish (D21SY25PS1428)
Machado MP, Inácio Â, Pinho J, Grosso AR, Matos I, Schartl M, Coelho MM

PS1429 - Higher aggression towards closer relatives by soldier larvae in a polyembryonic wasp (D21SY25PS1429)
Dunn J, Dunn D, Strand M, Hardy ICW

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Evolutionary conservation: the applied side of evolutionary biology

PS0003 - Consistent patterns of return cross-species application of SNP chips (D21SY27PS0003)
Miller J, Kijas J, Heaton M, McEwan J, Coltman D

PS0081 - Hybridization in a warmer world: combining approaches (D21SY27PS0081)
Sánchez-Guillén R

PS0086 - Interactive effects of inbreeding in a specialized plant-herbivore interaction (D21SY27PS0086)
Kalske A, Mutikainen P, Muola A, Laukkanen L, Scheepens J, Leimu R

PS0114 - Maintaining immunocompetence under inbreeding: the case of a selfing vertebrate (D21SY27PS0114)
Consuegra S, Ellison A

PS0126 - Can we use molecular techniques to measure inbreeding in wild populations of highly inbred, bottlenecked species? (D21SY27PS0126)
Taylor H, Ramstad K, Kardos M

PS0133 - Can reproductive barriers maintain differentiation in face of global changes? A case study in *Drosophila subobscura* (D21SY27PS0133)
Matos M, Bárbaro M, Mira M, Fragata I, Simões P, Lima M, Lopes-Cunha M, Kellen B, Santos J, Magalhães S

PS0228 - Genetic diversity and population structure of the common frog (*Rana temporaria*) in the Trentino region (south-eastern Alps) (D21SY27PS0228)
Marchesini A, Battisti A, Vernesi C

PS0328 - Mark-recapture and genetic estimates of population size in a protected moth (D21SY27PS0328)
Lopez-Vaamonde C, Naveira H, Marí-Mena N, Vila M

PS0331 - Characterization of MHC-class II DRB diversity in the lesser anteater (*Tamandua tetradactyla*) (D21SY27PS0331)
Clozato C, Moraes-Barros N, Morgante J, Sommer S

PS0334 - The “omics” of inbreeding depression: a gene and protein expression study of conditional lethality (D21SY27PS0334)
Vermeulen C

PS0452 - Native and invasive predators cause varying anti-predator responses in marine crustacean (*Idotea baltica*) (D21SY27PS0452)
Yli-Renko M, Pettay J, Vesakoski O

PS0472 - Species diversity in French traditional organic bread doughs (D21SY27PS0472)
Urien C, Lhomme E, Dousset X, Onno B, Legrand J, Sicard D

PS0523 - Snake head shape mimicry: implications to the conservation of the endangered mimic (D21SY27PS0523)
Valkonen J, Nokelainen O, Galarza J, Mappes J

PS0600 - Characterizing and tracking MHC variation of chytridiomycosis affected Chiricahua leopard frogs over time in natural populations (D21SY27PS0600)
Mulder K, Savage A

PS0621 - Linking fire adaptations with environmental niches: theoretical and phylogenetic prospects (D21SY27PS0621)

Tonnabel J, Ronce O, Schurr F, Van Dooren T, Mignot A, Douzery E, Midgley J, Boucher F, Lavergne S, Thuiller W, Olivieri I

PS0669 - Red grouse (*Lagopus lagopus scoticus*) in Ireland and Scotland: Adaptive genetic divergence and implications for conservation (D21SY27PS0669)

Meyer-Lucht Y, Mulder K, Höglund J

PS0673 - Major histocompatibility complex variation and its effects on fitness in the endangered red wolf (*Canis rufus*) (D21SY27PS0673)

Brzeski K, Chamberlain M, Rabon, Jr. D, Taylor S

PS0774 - MHC diversity & parasite associations in Finnish wolves (D21SY27PS0774)

Niskanen A, Kennedy L, Kojola I, Lohi H, Ruokonen M, Pyhäjärvi T, Aspi J

PS0833 - Living on the edge: how philopatry maintains adaptive potential (D21SY27PS0833)

Stiebens V, Merino S, Roder C, Chain FJJ, Lee PLM, Eizaguirre C

PS0840 - Effects of seasonal conditions on mortality and fertility in Asian elephants: implications for conservation (D21SY27PS0840)

Mumby H, Courtiol A, Mar K, Lummaa V

PS0843 - Life history, selection and effective population size shaping evolution during colonization – lessons from *Drosophila melanogaster* (D21SY27PS0843)

Santos M, Matos M, Rose M

PS0877 - Inbreeding affects social interactions in parents (D21SY27PS0877)

Mattey S, Smiseth P

PS0890 - Loss of variation at neutral and Mhc loci in Peary caribou over 100 years: drift is more important than selection (D21SY27PS0890)

Taylor S, Jenkins D, Arcese P

PS0927 - Evolutionary conservation of large blue butterflies (D21SY27PS0927)

Nash D, Andersen A

PS1019 - Comparison of estimators of effective population size: variation and bias in the methods (D21SY27PS1019)

Jimenez-Mena B, Hospital F, Verrier E

PS1046 - New ploidy levels and genome size estimates in wild *Beta* taxa using flow cytometry (D21SY27PS1046)

Castro S, Romeiras M, Castro M, Duarte M, Loureiro J

PS1148 - Use of nextRAD and RNA-seq to develop a conservation genomic resource for the endangered red colobus monkey (D21SY27PS1148)

Ruiz-Lopez M, Goldberg T, Chapman C, Jones J, Switzer W, Frost SDW, Gibson M, O'Connor D, Friedrich T, Lauck M, Sibley S, Etter P, Johnson E, Ting N

PS1150 - Species-genetic diversity correlation in Odonate communities (D21SY27PS1150)

Kahilainen A, Elo M, Hämäläinen H, Keränen I, Knott E, Kuitunen K, Marjeta M, Mönkkönen M, Kotiaho J

PS1194 - Identifying the genes of adaptation: extensive transcriptional plasticity to temperature

stress in sister freshwater fish species

(D21SY27PS1194)

Smith S, Bernatchez L, Beheregaray L

PS1203 - Life history trade-offs and human-driven microevolution in Maritime pine, a managed forest tree (D21SY27PS1203)

Santos del Blanco L, Sampedro L, Alia R, Zas R, Climent J

PS1205 - Outbreeding depression and heterosis are predicted by demography, environmental and cytogenetic contexts in natural populations (D21SY27PS1205)

Whitlock R, Stewart G, Goodman S, Piertney S, Butlin R, Pullin A, Burke T

PS1323 - Introgression levels of the Italian and carniolan honey bee subspecies into the black honey bee: a comparison between microsatellite and single nucleotide polymorphism (SNP) markers (D21SY27PS1323)

Henriques D, Jara L, Chávez-Galarza J, Rufino Amaro J, De la Rúa P, Pinto M

PS1330 - Spatio-temporal dynamics of genetic variation and effective population size in fragmented house sparrow populations (D21SY27PS1330)

Jensen H, Baalsrud H, Hagen I, Myhre A, Holand A, Billing A, Tufto J, Pärn H, Ringsby T, Slate J, Sæther B

PS1374 - Small scale genetic structuring in the neotropical palm tree *Euterpe edulis* (Arecaceae) (D21SY27PS1374)

Solferini V, Ramos R, José J

PS1405 - Genomic consequences of inbreeding and hybridization in pigs and wild boars (D21SY27PS1405)

Bosse M, Madsen O, Megens H, Frantz LAF, Paudel Y, Crooijmans RPMA, Groenen MAM

PS1407 - Life history trade-offs and human-driven microevolution in Maritime pine, a managed forest tree (D21SY27PS1407)

Climent J, Santos del Blanco L, Sampedro L, Rafael Z, Ricardo A

PS1445 - Population structure and gene flow of dogwhelk (*Nucella lapillus*) in Western Scotland and England (D21SY27PS1445)

Karuwancharoen R, Lucas M, Hoelzel ARUS

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Non-genetic transfer of immunity across generations – evolution and underlying mechanisms

PS0084 - The temporal dynamics of immune gene expression and pathogen load reveal resistance and tolerance of bacteria infection by trans-generationally primed flour beetles (D21SY28PS0084)

Tate A, Andolfatto P, Graham A

PS0232 - Immune-based maternal effects in response to experimental manipulation of bacterial load in tree swallow nests (D21SY28PS0232)

Forsman A

PS0272 - Oral immune priming in the red flour beetle *Tribolium castaneum* (D21SY28PS0272)

Milutinovic B, Fritzlar S, Kurtz J

PS0409 - Maternal investment and larval fitness in

the burying beetle *Nicrophorus vespilloides*

(D21SY28PS0409)

Littlefair J, Arce A, Rozen D, Knell R

PS0431 - Priming against pathogen attack in *Caenorhabditis elegans* – effect of probiotics or immune system activation? (D21SY28PS0431)

Schulte R, Hanke-Uhe M, Kubela A

PS0581 - Foster care-givers influence brood pathogen resistance in ants (D21SY28PS0581)

Purcell J, Chapuisat M

PS0716 - Context-dependent paternal effects of infection on offspring survival and condition (D21SY28PS0716)

Kaufmann J, Lenz T, Milinski M, Eizaguirre C

PS1008 - The role of maternal effects on the ontogeny of constitutive immunity in wild birds (D21SY28PS1008)

Arriero E, Martin T

PS1088 - Changes in feeding rate can explain the maternal effect of food on disease resistance in *Daphnia magna* (D21SY28PS1088)

Garbutt J, Wilson P, Little T

PS1263 - Transcriptome analysis of immune priming in the bumblebee (*Bombus terrestris*)

(D21SY28PS1263)

Lattorff M, Flemming T

PS1296 - Avian maternal transfer of antibodies: are they affecting the specific immune response of their chicks? (D21SY28PS1296)

Broggi J, Soriguer R, Figuerola J

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Phylogenetics and phylogeography

PS0011 - The phylogeny and biogeography of Blenniidae (Perciformes) (D21SY30PS0011)

Levy A, Almada V

PS0053 - Tephritoidea (Insects: Diptera) phylogeny, based on morphological and molecular data (D21SY30PS0053)

Galinskaya T

PS0076 - Phylogenetic and morphometric analysis of the species of *Orestias* (Teleostei; Cyprinodontidae) of the southern Chilean Altiplano support the hypothesis of a recent origin of the species of the Lauca National Park modulated by the collapse of the Parinacota volcano (D21SY30PS0076)

Morales P, Cruz F, Vila I, Guerrero C, Poulin E, Esquer Y, Gaubert P, Hugueny B, Mendez M

PS0105 - Revealing Phylogenetic Relationship among *Secale* Species (D21SY30PS0105)

Maraci-Karaoglan N, Bilgin R, Özkan H

PS0119 - Comparative transcriptomics of early Dipteran development (D21SY30PS0119)

Jimenez-Guri E, Huerta-Cepas J, Cozzuto L, Wotton K, Roma G, Gabaldon T, Jaeger J

PS0139 - Sympatric speciation in the Gulf of Guinea islands finches is supported by multiple independent molecular markers (D21SY30PS0139)

Melo M, Stervander M, Hansson B

PS0141 - Morphological convergence and disparity in Malagasy tenrecs (Afrosoricida, Tenrecidae)

(D21SY30PS0141)

Finlay S, Cooper N

PS0262 - Connectivity in fragmented marine environments: a comparative approach between methods in two low dispersive species (D21SY30PS0262)

Aurelle D, Moktar-Jamaï K, Pratlong M, Jean-Baptiste L

PS0279 - Analysis of population structure of guppies in north-eastern Venezuela, the area of putative incipient speciation (D21SY30PS0279)

Herdegen M, Alexander H, Babik W, Radwan J, Mavárez J, Breden F

PS0301 - Speciation by depth in an oceanic fish? (D21SY30PS0301)

Shum P, Pampoulie C, Sacchi C, Mariani S

PS0327 - Effects of connectivity and size of local sites on species diversity-gene diversity correlations within (meta)communities : insights from neutral theories (D21SY30PS0327)

Laroche F, Jarne P, David P, Lamy T, Massol F

PS0347 - Ecology and sexual selection: the evolution of wing pigmentation and sexual dimorphism in calopterygid damselflies (D21SY30PS0347)

Waller J, Svensson E

PS0398 - Glacial and postglacial history of *Betula humilis* in Poland and Belarus (D21SY30PS0398)

Jadwiszczak K, Banaszek A

PS0422 - Phylogeographic studies reveal diverse speciation patterns in central African tropical herbs (Marantaceae) (D21SY30PS0422)

Ley A, Hardy O

PS0432 - A phylogeny of subtribe Ferulinae (tribe Scandiceae, Apiaceae) inferred from nuclear rDNA ITS and cpDNA (*rps16*, *rpoC1* introns and *rpoB-trnC* spacer) sequence variation (D21SY30PS0432)

Panahi M, Spalik K, Banasiak Ł

PS0462 - Genetic structure of an alpine shrub *Rhododendron ferrugineum* (Ericaceae)

(D21SY30PS0462)

Charrier O, Escaravage N, Pondon A

PS0464 - Deep phylogenetic signal in the distribution of angiosperm diversity along elevational gradients in a Mediterranean Biodiversity Hotspot (D21SY30PS0464)

Molina-Venegas R, Slingsby J, Aparicio A, Arroyo J

PS0480 - Using Next-Gen Sequencing to resolve the phylogeny of tropical tree family (D21SY30PS0480)

Malé P, Bardon L, Coissac E, Tinaut A, Engel J, Scotti-

Saintagne C, Chave J

PS0503 - An island called India: Phylogenetic patterns across multiple taxonomic groups reveal endemic radiations (D21SY30PS0503)

Karanth P

PS0512 - Genetic diversity of a relic moose population, *Alces alces* in the Biebrza Valley, NE Poland (D21SY30PS0512)

Swislocka M, Ratkiewicz M, Duda N, Czajkowska M

PS0540 - I have a gut feeling: putative sulfide-dependent distribution of bacterial mollicute gut

- sybionts in *Niphargus* amphipods** (D21SY30PS0540)
Groeneveld L, Wilkening A, Dattagupta S
- PS0548 - Radiation patterns within the endemic genus *Pericallis*: a model taxon for contrasting patterns of diversity between Macaronesian oceanic archipelagos** (D21SY30PS0548)
Jones K, Carine M, Hiscock S
- PS0553 - Phylogeny of Palaearctic *Callophrys* (Lepidoptera, Lycaenidae) based on molecular data, morphology and biology** (D21SY30PS0553)
Krupitsky A
- PS0579 - Constructing supermatrices from fungal INSD data – problems and solutions** (D21SY30PS0579)
Ryberg M, Matheny P
- PS0593 - Phylogenetics and species delimitation in the orchid genus *Brasiliorchis*** (D21SY30PS0593)
Novello M, Veasey E, Koehler S
- PS0605 - West vs East Mediterranean Sea: origin and genetic differentiation of the sea cucumber *Holothuria polii*** (D21SY30PS0605)
Valente S, González-Wangüemert M, Serrão E
- PS0620 - Worldwide colonisation history of the seabird tick *Ixodes uriae* and what it can tell us about the evolution of host specialisation** (D21SY30PS0620)
McCoy K, Boulinier T, Dietrich M
- PS0625 - Evolution of heterostyly across the phylogeny of South African flax species (*Linum*, *Linaceae*)** (D21SY30PS0625)
Ruiz-Martin J, Perez-Barrales R, Midgley J, Arroyo J
- PS0656 - Not bothered by your sperm: positive selection in a gamete recognition gene is not driven by reinforcement in two congeneric sea stars** (D21SY30PS0656)
Popovic I, Hart M
- PS0661 - Was Darwin right? Pollinators, floral traits and heterostyly, an old question revisited in the light of comparative evidence** (D21SY30PS0661)
Santos-Gally R, Gonzalez-Voyer A, Arroyo J
- PS0730 - Detecting recent changes in the demographic parameters of drosophilid populations from Western and central Africa** (D21SY30PS0730)
Bouiges A, Yassin A, Ikogou M, Lelarge C, Sikoa A, Mona S, Veuille M
- PS0759 - Phylogeography and population genetic structure of an alien lizard** (D21SY30PS0759)
Michaelides S, While G, Bell C, Uller T
- PS0764 - European brook and river lampreys, species or ecotypes: new insights using microsatellite loci** (D21SY30PS0764)
Mateus C, Almeida P, Mesquita N, Quintella B, Alves J
- PS0767 - Diversification and geographic progression in *Populus* (Salicaceae)** (D21SY30PS0767)
Levsen N, Wu Y, Liu J, Wang L, Olson M
- PS0768 - Revealing the origin of an invasive insect using ancient DNA and historical herbaria** (D21SY30PS0768)
Lopez-Vaamonde C, Lees D, Lack W, Rougerie R, Hernandez Lopez A, Raus T, Avtzis N, Augustin S
- PS0770 - Pleistocene speciation and biogeographic history of arctic-alpine plants** (D21SY30PS0770)
Ikeda H, Setoguchi H
- PS0771 - Nucleotide variation in the *Plantago* mitochondrial genome** (D21SY30PS0771)
Levsen N, Wolff K
- PS0772 - Demographic inference of past variations in population size :what is the gain of combining different genetic markers such as DNA sequences, SNPs and microsatellites** (D21SY30PS0772)
Rousset F, Beeravolu C, Leblois R, Pudlo P
- PS0776 - Testing environmental and genetic effects in correlated landscapes** (D21SY30PS0776)
Rousset F, Ferdy J
- PS0781 - Connectivity of the coral *Pocillopora eydouxi* in the Southwestern Indian Ocean: a taxonomic challenge** (D21SY30PS0781)
Magalon H, Bigot L, Gélin P
- PS0789 - Dispersal and survival in Pacific Rim peat mosses (*Sphagnum*)** (D21SY30PS0789)
Stenøien H, Shaw J, Shaw B, Flatberg K
- PS0804 - Inter and intra island introgression in a wolf spider radiation from the Galápagos, and its implications for parallel evolution** (D21SY30PS0804)
De Busschere C, Van Belleghem S, Hendrickx F
- PS0814 - MtDNA evolution and biogeography of the genus *Pinus*** (D21SY30PS0814)
Wang B, Wang X
- PS0820 - Accommodating hybrid/introgressed lineages in the multispecies coalescent: the complex evolutionary history of *Antirrhinum* unraveled** (D21SY30PS0820)
Liberal I, Blanco-Pastor J, Pfeil B, Vargas P
- PS0824 - Systematics in presence of reticulation and incomplete lineage sorting: the case of *Linaria* sect. *Supinae*** (D21SY30PS0824)
Blanco-Pastor J, Vargas P, Pfeil B
- PS0832 - The phylogeography of the common hamster, the species endangered in Europe** (D21SY30PS0832)
Banaszek A, Jadwiszczak K, Rusin M
- PS0834 - Evolutionary dynamics in the Southwest Indian Ocean marine biodiversity hotspot: a perspective from the rocky shore gastropod genus *Nerita*** (D21SY30PS0834)
Bautisse P, Bruggemann J, Magalon H, Faure B
- PS0844 - Speciation in a large tropical amphibian radiation** (D21SY30PS0844)
Vieites D, Nieto-Román S, Peso-Fernández M
- PS0846 - Habitat use and sexual dimorphism in *Podarcis* wall lizards: micro- and macroevolutionary patterns of morphological variation** (D21SY30PS0846)
Kaliontzopoulou A, Adams D, Carretero M
- PS0855 - Population genetic and phylogeographic structure of hadal amphipods** (D21SY30PS0855)
Ritchie H, Jamieson A, Piertney S
- PS0856 - Reconstructing the origin and spread of yellow-necked mouse *Apodemus flavicollis* (Rodentia, Muridae) in the Balkans** (D21SY30PS0856)
Adnađević T, Jovanović V, Bugarski-Stanojević V,

Blagojević J, Vujošević M

PS0865 - *Pisum* genome variability detected by AFLP and RGA profiling (D21SY30PS0865)
Kochieva E, Dyachenko E

PS0910 - Are the divergent migration destinations of Bogong moths *Agrotis infusa* (Noctuidae: Lepidoptera) related to genetic differentiation? (D21SY30PS0910)

Marques J, Heinze S, Fatarova M, Svensson G, Anderbrant O, Green K, Warrant E

PS0916 - Hybridization in a recently rediscovered dolphin species, *Stenella clymene* (D21SY30PS0916)
Amaral A, Lovewell G, Coelho M, Amato G, Rosenbaum H

PS0943 - High relatedness and chaotic genetic patchiness of a polychaete in a heterogeneous estuarine landscape (D21SY30PS0943)

Knott E, Kesäniemi J, Banta G, Hansen B

PS0958 - Patterns of genetic differentiation in a widespread predator insect species associated with greenhouse crops, *Coenosia attenuata* (Diptera: Muscidae) (D21SY30PS0958)

Brás P, Martins R, Martins J, Rebelo M, Franco J, Mateus C, Paulo O, Figueiredo E, Seabra S

PS0963 - Drawing geographic and genetic boundaries in a plant biodiversity hotspot: cryptic *Narcissus* species from the southern Iberian Baetic Ranges (D21SY30PS0963)

Medrano Martínez M, Herrera Maliani C

PS0978 - Low genetic diversity in Bornean elephants (*Elephas maximus borneensis*) confirmed by high throughput sequencing methods (D21SY30PS0978)

Sharma R, Goossens B, Kun-Rodrigues C, Teixeira T, Othman N, Boone J, Jue N, Obergfell C, O'Neill R, Chikhi L

PS0983 - Cryptic avian diversity in the Sulawesi sub-region: a case study from the Wakatobi islands (D21SY30PS0983)

Kelly SBA, Kelly D, Cooper N, Bahrun A, Analuddin K, Marples N

PS0988 - On the origin of the endemic pigeon *Columba palumbus azorica* (D21SY30PS0988)

Dourado C, Silva I, Paulo O, Dias D

PS0999 - Phylogeographic history of the flat periwinkles, *Littorina fabalis* and *L. obtusata* (D21SY30PS0999)

Sotelo G, Costa D, Duvetorp M, Panova M, Johannesson K, Faria R

PS1001 - Phylogeography of *Ortgiesia* subgenus (Bromeliaceae) as a contribution to the effort in understanding the historical processes involved in the species diversification in Southern portion of the Brazilian Atlantic forest (D21SY30PS1001)

Bered F, Zanella C, Buttow M, Capra F, Silva C, Goetze M

PS1005 - Evolution of haploid chromosome numbers in the sunflower family (D21SY30PS1005)

Mota L, Torices R, Loureiro J

PS1014 - A first genetic study of *Microcebus tavaratra*, a little known mouse lemur from the north of Madagascar (D21SY30PS1014)

Pais IGA, Salmona J, Kun-Rodrigues C, Viana Meyler S, Rabarivola C, Mohamed-Thani I, Chikhi L

PS1021 - Mitogenomics and the phylogeny of frogs

(D21SY30PS1021)
Irisarri I, Zardoya R

PS1022 - Evolutionary and biogeographic history of the Macaronesian Beta-Patellifolia species (Amaranthaceae): combining phylogenetic and ecological studies (D21SY30PS1022)

Romeiras M, Duarte M, Santos-Guerra A, Moura M, Batista D, Vieira A, Paulo O

PS1029 - Phylogeographic structure of the spittlebug *Philaenus spumarius* (Hemiptera, Aphrophoridae) based on mitochondrial DNA and RAD sequencing (D21SY30PS1029)

Rodrigues A, Silva S, Marabuto E, Silva D, Silva J, Wilson M, Thompson V, Yurtsever S, Halkka A, Gharbi K, Blaxter M, Borges PAV, Quartau J, Jiggins C, Paulo O, Seabra S

PS1045 - Deep divergence between populations of *Araneus venatrix* (Araneae: Araneidae) from Brazilian Rainforests (D21SY30PS1045)

Peres E, Solferini V

PS1047 - Coagulation cascade: an evolutionary perspective across vertebrates (D21SY30PS1047)

Ribeiro Â, Zepeda L, Gilbert T, Da Fonseca R

PS1048 - Phylogeny and phylogeography of the freshwater fish genus *Squalius* (Teleostei, Cyprinidae) in Balkan region (D21SY30PS1048)

Perea S, Zupančič P, Doadrio I

PS1049 - Plio-Pleistocene effects on the phylogeny, phylogeography and historical evolution of freshwater fish species *Luciobarbus sclateri* (Teleostei, Cyprinidae) in the western Mediterranean region (D21SY30PS1049)

Casal M, Sousa-Santos C, Robalo J, Almada V, Doadrio I

PS1052 - Phylogeographical patterns of *Nephila clavipes* (Araneae: Nephilidae) in Neotropical Rainforests (D21SY30PS1052)

Bartoleti L, Solferini V

PS1080 - Phylogeny reconstruction in the presence of intra-individual site polymorphisms: getting your support back (D21SY30PS1080)

Potts A, Hedderson T, Grimm G

PS1092 - Fine-scale spatial genetic structure of a protected forest insect (D21SY30PS1092)

Marí-Mena N, Segelbacher G, Lopez-Vaamonde C, Vila M

PS1100 - Mutual exclusion between cryptic species generates most beta-diversity in West Mediterranean butterflies (D21SY30PS1100)

Vila R, Voda R, Dapporto L, Dinca V

PS1103 - Polymorphism in the Pain-1 Vacuolar Invertase gene in *Solanum* species (D21SY30PS1103)

Slugina M, Kochieva E

PS1111 - Comparative phylogeography and genetic population structure of two butterfly species from the Iberian Peninsula (D21SY30PS1111)

Marabuto E, Martins R, Silva D, Seabra S, Paulo O

PS1116 - Cryptic genetic differentiation of *Gambusia puncticulata* (Teleostei: Poeciliidae) populations across Cuba (D21SY30PS1116)

Nattier R, Ponce de León J, Michel-Salzat A, Laborde L, Casane D, García-Machado E

PS1129 - Microscale phylogeographical study of *Aglaoctenus lagotis* (Araneae, Lycosidae), a

- Neotropical web spider** (D21SY30PS1129)
Fontes FVHM, Solferini V, Macrini C
- PS1151 - Cryptic Crypto's: Using a targeted DNA capture approach for phylogenomic analysis**
(D21SY30PS1151)
Blom MPK, Bragg J, Potter S, Adams M, Moritz C
- PS1173 - Speciation patterns in sky islands – a case study on *Leptopelis* frogs from the Eastern Arc Mountains, Tanzania** (D21SY30PS1173)
Gvozdik V, Menegon M, Loader S
- PS1185 - Relaxed functional constraints on a triplicate alpha-globin gene in the bank vole**
(D21SY30PS1185)
Marková S, Searle J, Kotlík P
- PS1192 - Resolving species trees and rewriting taxonomy: Using next-gen sequencing data to unravel a recent radiation of a passerine bird on an island system** (D21SY30PS1192)
Gohli J, Johnsen A, Popp M, Leder E, Lifjeld J
- PS1199 - Reliability of estimating phylogenies using multidimensional quantitative characters**
(D21SY30PS1199)
Varón C, Whelan S, Klingenberg C
- PS1219 - Problems with DNA-based species delimitation with a Bayesian statistical approach because of upstream errors involving individual assignments to putative species** (D21SY30PS1219)
Olave M, Solà E, Knowles L
- PS1227 - Exposing adaptive differentiation in ancient Scottish Pinewoods (*Pinus sylvestris* L.) via the controlled application of water-stress**
(D21SY30PS1227)
Donnelly K, Cavers S, Cottrell J, Ennoss R
- PS1239 - The root of all weevils: towards a tribal-level molecular phylogeny of the Curculionidae (Insecta: Coleoptera)** (D21SY30PS1239)
Gillett CPDT, Emerson B
- PS1265 - Phylogeographic analysis of species of the freshwater pseudocrabs of the Family Aeglidae of southern South America** (D21SY30PS1265)
Giri F, Cabrera J, Rueda E, Loretan G, Collins P
- PS1272 - The carapace structure of freshwater pseudocrabs of the Aeglidae family. An adaptation or exaptation case?** (D21SY30PS1272)
Giri F, Collins P
- PS1278 - Spatial and temporal scales of evolution of a pigmentation phenotype in cichlid fishes**
(D21SY30PS1278)
Gante H, Salzburger W
- PS1280 - Semi-permeable species boundaries and time-dependent reproductive isolation in Iberian *Barbus* and *Luciobarbus* (Teleostei, Cyprinidae)**
(D21SY30PS1280)
Gante H, Doadrio I, Alves MJUDITE, Dowling T
- PS1287 - Unravelling landscape factors shaping spatial genetic structures of species involved in a specific plant-insect mutualism** (D21SY30PS1287)
Suchan T, Alvarez N
- PS1288 - Time scales of anuran speciation inferred from hybrid zones of Palearctic green toads (*Bufo viridis* subgroup) in a phylogeographic framework**
- (D21SY30PS1288)
Stöck M, Dufresnes C, Betto-Colliard C, Bonato L, Kornilios P, Lymberakis P, Novarini N, Savary R, Sicilia A, Turrisi G, Perrin N
- PS1304 - Spatial genetics of infectious disease; identifying multiple unknown sources**
(D21SY30PS1304)
Verity R
- PS1306 - Species limits and phylogeography of the *Leptidea* cryptic species complex (Lepidoptera: Pieridae)** (D21SY30PS1306)
Dinca V, Friberg M, Lukhtanov V, Wiklund C, Vila R
- PS1313 - Prelude to the story of domestic goose in Europe** (D21SY30PS1313)
Heikkinen M, Mundee M, Pyhäjärvi T, White T, Aspi J, Searle J, Ruokonen M
- PS1337 - Cryptic divergence and evolutionary convergence in the diversification of the songbird genus *Junco* (Aves: Emberizidae)** (D21SY30PS1337)
Mila B, Friis G, Aleixandre P
- PS1347 - The effect of recombination on population differentiation** (D21SY30PS1347)
Azevedo RBR
- PS1351 - Delineation of the sand fly (Diptera: Psychodidae) species within the 'major group' of turkey** (D21SY30PS1351)
Erisoz Kasap O, Votypka J, Alten B
- PS1353 - Cryptic diversity in *Pteronotus parnellii* (Mormoopidae) from the Guiana Shield: evidences from molecular, morphometric and bioacoustic tools** (D21SY30PS1353)
Pavan A, De Thoisy B, Catzeffis F, Marroig G
- PS1356 - Unexpected genetic population structure in the Kea (*Nestor notabilis*)** (D21SY30PS1356)
Dussex N
- PS1381 - Evolution of MutT protein and the emergence of the aerobic word** (D21SY30PS1381)
Rodríguez-Rojas A
- PS1400 - Speciation beyond expectation: the evolution of *Laparocerus* (Curculionidae) in the Canary Islands** (D21SY30PS1400)
Faria CMA, Machado A, Amorim I, Borges PAV, Gage MJG, Emerson B
- PS1447 - Comparing patterns of genetic differentiation between island and mainland populations of two mountain newts** (D21SY30PS1447)
Chiocchio A, Bisconti R, Canestrelli D, Zampiglia M, Naselli G
- PS1452 - Phylogeographic analysis of the Mexican freshwater fish complex *Catostomus nebuliferus-plebeius*** (D21SY30PS1452)
Corona-Santiago D, Tovar L, Pérez-Rodríguez R, Domínguez-Domínguez O, Doadrio I
- PS1464 - Evolution of polyploidy and functional diploidization in sturgeon: microsatellite analysis in ten sturgeon species** (D21SY30PS1464)
Rajkov J, Shao Z, Berrebi P
- PS1465 - Diversity, host associations and phylogeography of *Hypomyces* (Hypocreales, Ascomycota) causing the cobweb disease of wild and cultivated mushrooms** (D21SY30PS1465)
Pöldmaa K, Tamm H

DETAILED PROGRAM

THURSDAY 22

Plenary Talk

Time / Room	08:30 – 09:30	09:30–10:30
Aula Magna	<p>Mel Greaves The Institute of Cancer Research, United Kingdom</p> <p>Cancer through the eye of evolutionary medicine</p> <p>There are two striking examples of somatic cell evolution in humans (and vertebrates in general): the immune system and cancer. In the former, recombinase enzymes target diversification of the immunoglobulin and T cell receptor loci in lymphocytes provides the substrate (>10¹¹ variants) for natural selection by infectious antigenic epitopes. In cancer, stochastic mutational processes drive genetic diversification of clones of cell that under natural selection within complex tissue ecosystems and in response to therapeutic pressure. Starting from a single founder cell, cancer clones evolve over time frames of 1 to 50 years, often in a covert fashion, but the end result is the generation of a robust and weed-like quasi-species of immortal and invasive cells that hijack normal tissue function. In exceptional circumstances, cancer cells transit, parasitic like, individual to individual. Therapy itself inadvertently provides positive selective pressure for the emergence of drug-resistant mutant sub-clones.</p> <p>Whole genome sequencing reveals the extent of genetic, mutational complexity in cancer and when interrogated at the single cell level, it is clear that cancers have tree-like clonal phylogenies with variegated genetics of sub-clones. Within sub-clones, cells with stem cell properties sustain and propel clonal expansion and provide the cellular units of selection. Cancer's Darwinian character has substantial implications for prevention, prognosis and treatment.</p>	Coffee Break

Session 9

Time / Room	10:30 – 10:49	10:54 – 11:13	11:18 – 11:37	11:42 – 12:01	12:01 – 14.00
R1 SY02 Chairs: Tregenza T & Blide T	D22SY02IT10:30R1 INVITED TALK Johnston S , Gratten J, Berenos C, Pilkington J, Clutton-Brock T, Pemberton J, Slate J Gene mapping reveals why sexually-selected genetic variation is maintained in a wild mammal population.		D22SY02RT11:18R1 Rodríguez-Muñoz R , Tregenza T Age related changes in fitness traits in a wild field cricket population	D22SY02RT11:42R1 López-Sepulcre A , Coulson T, Gordon S, Bentzen P, Ghamambor C, Travis J, Reznick D Common gardens and uncommon streams: environment-dependent life history and body size evolution in the trinidadian guppy	
R2 SY01 Chair: DeVisser A & Elena SF	D22SY01IT10:30R2 INVITED TALK Krug J Epistatic constraints and evolutionary predictability on empirical fitness landscapes		D22SY01RT11:18R2 Perfeito L , Godinho Ferreira M Impact of gene architecture on the adaptation rate	D22SY01RT11:42R2 Melnik A , Kassen R Landscape ruggedness reduces genomic parallelism in experimental populations of <i>Pseudomonas</i>	
R3 SY17 Chair: Slamini A & Robinson-Rechavi M	D22SY17IT10:30R3 INVITED TALK Beldade P Genetic basis of variation and diversity in a model novel trait		D22SY17RT11:18R3 Wright A , Harrison P, Pointer M, Mank J Short- and long-term evolution of gene expression and sequence divergence on the avian Z chromosome	D22SY17RT11:42R3 Chain FJJ , Feulner PGD, Panchal M, Huang Y, Eizaguirre C, Kalbe M, Lenz T, Samonte I, Stoll M, Bornberg-Bauer E, Reusch TBH, Milinski M Genome evolution and structural variation in sticklebacks across different stages of divergence	
R4 SY31 Chair: Sucena E & Mirth C	D22SY31IT10:30R4 INVITED TALK Snell-Rood E Learning-like mechanisms across development: insights for the evolution of life histories and complex traits		D22SY31RT11:18R4 Khan I , Prasad NNG Sex-specific effects of pathogenic bacterial infection on fitness components, reproductive behaviour and mate choice in <i>Drosophila melanogaster</i>	D22SY31RT11:42R4 Gluckman T , Mundy N Evolutionary pathways to convergence in plumage pattern phenotypes	

THURSDAY 22

Lunch

Time /Room	10:30 – 10:49	10:54 – 11:13	11:18 – 11:37	11:42 – 12:01	12:01 – 14.00
R5 SY06 Chair: Aanen Dk & Michod R	D22SY06IT10:30R5 INVITED TALK Bourke A Major transitions, the evolution of multicellularity and the size-complexity hypothesis		D22SY06RT11:18R5 Bastiaans E , Debets AJM, Aanen D Genotypes that cheat on multicellularity can evolve quickly in fungi	D22SY06RT11:42R5 Aanen D , Czaran T, Hoekstra R Allorecognition stabilizes multicellularity	
R6 SY14 Chair: Pujol B	D22SY14IT10:30R6 INVITED TALK Danchin E Genetic and nongenetic inheritance		D22SY14RT11:18R6 English S , Shea N, Pen I, Uller T The information value of non-genetic inheritance in heterogeneous environments	D22SY14RT11:42R6 Collin H , Paterson S, Plaistow S Non-genetic inheritance generated by exposure to anthropogenic stressors in the water flea (<i>Daphnia pulex</i>)	
R7 SY24 Chair: Liow LH & Hanssen T	D22SY24IT10:30R7 INVITED TALK Hunt G The fossil record of lineage evolution		D22SY24RT11:18R7 Knell R Sexually selected traits in the fossil record	D22SY24RT11:42R7 Hopkins M Decoupling of taxonomic diversity and morphological disparity during decline of the Cambrian trilobite family <i>Ptercephalidae</i>	
R8 SY09 Chair: Kurtz J	D22SY09RT10:30R8 Roth O , Haase D, Wegber M, Reusch TBH Male pregnancy and immune defence anomaly	D22SY09RT10:54R8 Zueva K , Lumme J, Veselov A, Kent M, Lien S, Primmer C Footprints of directional selection in wild populations of Atlantic salmon: evidence for parasite-driven evolution?	D22SY09RT11:18R8 El Nagar A , MacColl A Can parasites drive population divergence in three-spined stickleback?	D22SY09RT11:42R8 Henrich T , Kalbe M Host-specificity in hybrids of two <i>Schistocephalus</i> species with different stickleback hosts	
R9 SY30 Chair: Nichols R	D22SY30RT10:30R9 Seixas F , Cheng E, Alves P, Mills S, Melo-Ferreira J The hidden history of the Snowshoe hare (<i>Lepus americanus</i>): deep intraspecific divergence and massive mitochondrial DNA introgression	D22SY30RT10:54R9 Quéméré E , Roussel J, Baglinière J, Launey S Influence of seascape and migratory patterns on coastal brown trout genetic structure (<i>Salmo trutta</i>)	D22SY30RT11:18R9 Fernández-Mazuecos M , Blanco-Pastor J, Gómez J, Vargas P Pollinator-restrictive flower traits determine evolutionary optima with differential diversification rates in bifid toadflaxes (<i>Linaria sect. Versicolores</i>)	D22SY30RT11:42R9 Martínez-Rodríguez P , Arroyo-Yebras F, Bella J Co-divergence between bacteria and host: Consequences of <i>Wolbachia</i> infection in the <i>Chorthippus parallelus</i> hybrid zone	

Lunch

Mid-Congress Tours

Time	14:00
See details on page 72 and 73.	

DETAILED PROGRAM

FRIDAY 23

Plenary Talk

Time / Room	08:30 – 09:30	09:30–10:30
Aula Magna	Trudy Mackay Department of Genetics, North Carolina State University Charting the Genotype-Phenotype map: Lessons from <i>Drosophila</i> Quantitative traits are affected by multiple interacting loci with individually small and environmentally sensitive effects. Knowledge of the detailed genetic architecture of quantitative traits is important from the perspectives of evolutionary biology, human health and plant and animal breeding. Understanding the genetic architecture of quantitative traits begins with identifying the genes regulating these traits, mapping the subset of genetically varying quantitative trait loci (QTLs) in natural populations, and pinpointing the molecular polymorphisms defining QTL alleles. <i>Drosophila</i> brings an impressive toolkit to the challenge of genetically dissecting quantitative traits. I will discuss insights into the complex genetic architecture of quantitative traits obtained from genome wide association mapping in the <i>Drosophila melanogaster</i> Genetic Reference Panel (DGRP), which consists of 192 sequenced inbred lines derived from the Raleigh, USA population. These studies indicate that epistatic gene action is common, and additivity can be an emergent property of underlying genetic interaction networks. Epistasis causes hidden quantitative genetic variation in natural populations, the potential for rapid speciation, and negatively impacts the predictive ability of additive models. These observations offer valuable lessons for understanding the genetic basis of variation for quantitative traits in other organisms.	Coffee Break

Session 10

Time / Room	10:30 – 10:49	10:54 – 11:13	11:18 – 11:37	11:42 – 12:01	12:01 – 14:00
R1 SY02 Chair: Treguenza T & Bilde T	D23SY02IT10:30R1 INVITED TALK Hoffmann AA Clinal selection in <i>Drosophila</i> : what have we learnt, where are we going?		D23SY02RT11:18R1 Sapir Y , Lavi R Pollinator-mediated selection on floral size and color in two <i>Iris</i> species	D23SY02RT11:42R1 Tarka M , Hansson B, Hasselquist D Evolutionary potential of arrival date on breeding grounds: selection, heritability and microevolution	
R2 SY01 Chair: Devisser A & Elena SF	D23SY01IT10:30R2 INVITED TALK Cooper T Epistasis and evolvability in experimentally evolved populations of <i>Escherichia coli</i>		D23SY01RT11:18R2 Hawkins N , Cools H, Fraaije B Mapping the adaptive landscape of <i>Mycosphaerella graminicola</i> CYP51 under selection by azole fungicides	D23SY01RT11:42R2 Lachapelle J , Colegrave N Selection in different levels of stress and its effects on fitness across a gradient of environmental conditions	
R3 SY17 Chair: Slamini A & Robinson-Rechavi M	D23SY17IT10:30R3 INVITED TALK Excoffier L , Daub J Detection of polygenic selection at different evolutionary levels		D23SY17RT11:18R3 Muschick M , Soria-Carrasco V, Nosil P Genomic basis of the adaptive radiation of <i>Timema</i> stick insects	D23SY17RT11:42R3 Quilez J , Lorente-Galdos B, Twigg D, Sirakov S, Ramirez O, Olalde I, Berglund J, Bustamante C, Freeman A, Webster M, Novembre J, Boyko A, Wayne R, Vila C, Kidd J, Marques-Bonet T Analysis of genomic structural diversity and uncharacterized novel sequences in wolves and dogs	
R4 SY20 Chair: Zwaan B	D23SY20IT10:30R4 INVITED TALK Stearns S Comparing phenotypic, quantitative genetic, and genomic approaches to measuring tradeoffs in a contemporary human population		D23SY20RT11:18R4 Jousset A , Fernkorn F, Lapouge K, Stefan S Evolution of food preferences drives pleiotropic fitness trade-offs in bacteria	D23SY20RT11:42R4 Jacob S , Parthuisot N, Callat-Michel A, Helfenstein F, Heeb P Microbiome mediates oxidative costs of reproduction	

Coffee Break

Lunch

FRIDAY 23

Time / Room	10:30 – 10:49	10:54 – 11:13	11:18 – 11:37	11:42 – 12:01	12:01 – 14:00
R5 SY06 Chair: Aanen DK & Michod R	D23SY06IT10:30R5 INVITED TALK Arnheim N , Calabrese P What is advantageous for the germline may be bad for the soma; the impact of germline selection on the mutational load in humans		D23SY06RT11:18R5 Heininger K Change of paradigm: aging is selected for, adaptive and programmed	D23SY06RT11:42R5 Fisher R Relatedness and the evolution of multicellularity	
R6 SY14 Chair: Pujol B	D23SY14RT10:30R6 East M , Höner O, Wachter B, Wilhelm K, Burke T, Hofer H Maternal effects on offspring growth, survival and social status in spotted hyenas	D23SY14RT10:54R6 Grace J , Ryden P, Friberg U Paternal effects on lifespan and aging in the fruit fly (<i>Drosophila melanogaster</i>)	D23SY14RT11:18R6 Hoyle R , Ezard THG, Prizak R The fitness implications of adaptation via phenotypic plasticity and maternal effects	D23SY14RT11:42R6 Crean A , Kopps A, Bonduriansky R Like father like son? Nongenetic paternal effects reinvigorate the possibility of telegony	
R7 SY24 Chair: Liow LH & Hanssen T	D23SY24IT10:30R7 INVITED TALK Bokma F Tempo and mode in evolution of complex organisms.		D23SY24RT11:18R7 Clarke J , Friedman M 150 million years of morphological and functional evolution in neopterygian fish: implications for notions of teleost superiority	D23SY24RT11:42R7 Voje K , Mazzarella A, Hansen T, Østbye K, Klepaker T, Bass A, Herland A, Bærum K, Gregersen F, Vøllestad A Allometric constraints on adaptive radiation in sticklebacks	
R8 SY30 Chair: Nichols R	D23SY30RT10:30R8 Rougemont Q , Gaigher A, Launey S, Lasne E, Besnard A, Évanno G Dispersal, gene flow and ecological speciation in lampreys	D23SY30RT10:54R8 Westram A , Galindo J, Grahame J, Butlin R Genetic basis and geographical patterns of adaptive divergence in an intertidal snail	D23SY30RT11:18R8 Almeida P , Bensasson D, Sampaio J Tracing the origins of domestication in the wine yeast <i>Saccharomyces cerevisiae</i>	D23SY30RT11:42R8 Marabuto E , Rebelo M, Paulo O From Africa and back again: biogeography and differentiation of a specialist west-Mediterranean butterfly in a fragmented glacial refuge	
R9 SY31 Chair: Sucena E & Mirth C	D23SY31RT10:30R9 Liefting M Correlated evolution of learning rate studied by artificial selection in a parasitic wasp	D23SY31RT10:54R9 Healy K , McNally L, Ruxton G, Cooper N, Jackson A Metabolic rate and body size linked with perception of temporal information	D23SY31RT11:18R9 Anholt RRH , Swarup S, Huang W, Arya G, Mackay T Neurogenetic networks as substrates for natural variation in olfactory behaviour in <i>Drosophila melanogaster</i>	D23SY31RT11:42R9 Bailey N , Hoskins J, Ritchie M Testing evolutionary models for the maintenance of same-sex sexual behaviour	

Session 11

Time / Room	14:00 – 14:19	14:24 – 14:43	14:48 – 15:07	15:12 – 15:31	15:31 – 15:45
R1 SY02 Chairs: Tregenza T & Blidet T	D23SY02RT14:00R1 Castro S , Ferrero V, Costa J, Castro M, Navarro L, Loureiro J Evolutionary changes in the sexual reproductive system: the case study of the invasive tristylos Oxalis pes-caprae	D23SY02RT14:24R1 Kawakami T , Backström N, Olason P, Burri R, Husby A, Smeds L, Qvarnström A, Ellegren H Recombination landscape of <i>Ficedula flycatchers</i>	D23SY02RT14:48R1 Radersma R , Garroway C, Santure A, De Cauwer I, Slate J, Sheldon B How social structure affects gene flow in a wild passerine population	D23SY02RT15:12R1 Adams M , Robinson M, Hatchwell B Indirect genetic and environmental effects on parental and alloparental effort	
R2 SY01 Chairs: DeVisser A & Elena SF	D23SY01RT14:00R2 Martin G Can we predict adaptation trajectories on simple fitness landscapes?	D23SY01RT14:24R2 Duncan A , Jacob F, Dusi E, Hochberg M, Kaltz O Experimental host-parasite coevolution in temporally variable environments	D23SY01RT14:48R2 Goldhill D , Turner P Genetic robustness and environmental robustness in an RNA virus	D23SY01RT15:12R2 Ono J , Gerstein A, Otto S Genetic interactions between beneficial mutations in <i>Saccharomyces cerevisiae</i>	
R3 SY17 Chair: Sliamim A & Robinson-Rechavi M	D23SY17RT14:00R3 Whitlock M , Lotterhos K Equilibrium and non-equilibrium demographic history and the distribution of FST: deviations from the island model can strongly affect the conclusions of QST and FST outlier tests	D23SY17RT14:24R3 DeMaio N , Schlötterer C, Kosiol C Polymorphisms-aware phylogenetic models	D23SY17RT14:48R3 Kryuchkova N , Robinson-Rechavi M Determinants of protein evolutionary rates in light of ENCODE functional genomics	D23SY17RT15:12R3 Dib L , Salamin N Evolution of correlated sites in the melanocortin system	

Lunch

Break

Time / Room	14:00 – 14:19	14:24 – 14:43	14:48 – 15:07	15:12 – 15:31	15:31 – 15:45
R4 SY20 Chair: Zwaan B	D23SY20RT14:00R4 McClure C , Zhong W, Priest N Hsp83 and TotC are Required for Pathogen-Induced Hormesis in the Fruit Fly	D23SY20RT14:24R4 Sanderson J , Young A, Hodge S, Walker S, Cant M Testosterone mediation of a trade-off between offspring care and reproduction in the cooperatively-breeding banded mongoose (<i>Mungos mungo</i>).	D23SY20RT14:48R4 Sims A , Sneddon L, Pottinger T, Watts P How do aggressive fish win fights? An insight from transcriptomics	D23SY20RT15:12R4 Garratt M , Pichaud N, Brooks R Life-history constraints are exposed when genetically-modified mice compete with con-specifics	
R5 SY18 Chair: Steiner UK	D23SY18IT14:00R5 INVITED TALK Sear R Human evolutionary demography: illustrated with reference to the importance of kin for human reproductive success		D23SY18RT14:48R5 Cotto O , Ronce O Evolution of senescence in heterogeneous landscapes	D23SY18RT15:12R5 Plaistow S , Shirley C, Harney E, Collin H Maternal-age effects on rates of senescence differ between clones of the water flea, <i>Daphnia pulex</i> : causes and consequences	
R6 SY14 Chair: Puig B	D23SY14IT14:00R6 INVITED TALK Laland K , Morgan T, Fogarty L, Mesoudi A, Feldman M, Smith G Genetic control of non-genetic inheritance: fact or fallacy?		D23SY14RT14:48R6 Schroeder J , Dugdale H, Burke T, Nakagawa S Sex specific social genetic effects in parental-care behaviour	D23SY14RT15:12R6 Hallsson L , Chenoweth S, Bonduriansky R The relative importance of genetic and nongenetic inheritance in relation to trait plasticity	
R7 SY04 Chair: King K, Ruiz-González MX, Orivel J & Wolinska J	D23SY04IT14:00R7 INVITED TALK Vorburger C Symbiont-mediated coevolution between aphid hosts and parasitoids		D23SY04RT14:48R7 Grigorescu A , Foray V, Sabri A, Haubruge E, Lognay G, Francis F, Wathelet J, Hance T, Thonart P <i>Serratia symbiotica</i> from <i>Aphis fabae</i> : a step forward in understanding the genomic evolution of a lifestyle transition from free-living to aphid-dependent	D23SY04RT15:12R7 Harrison E , Truman J No host is an island: the impact of multiple symbionts on pairwise interactions	
R8 SY30 Chair: Nichols R	D23SY30RT14:00R8 Pina-Martins F , Vieira B, Seabra S, Batista D, Paulo O Making the best of your 454 dataset using the 4Pipe4 analysis pipeline – from an unknown genome to a detailed SNPs analysis: A case study with a <i>Quercus suber</i> dataset	D23SY30RT14:24R8 Heckel G , Excoffier L, Lischer HEL Ignoring heterozygosity biases phylogenomic estimates of divergence times: implications for the evolutionary history of <i>Microtus</i> voles	D23SY30RT14:48R8 Arnqvist G , Kazancioğlu E The maintenance of mitochondrial genetic variation by negative frequency-dependent selection	D23SY30RT15:12R8 Trucchi E , Gratton P, Le Bohec C, Stenseth N How to use RADseq data to infer past demography in a multi-locus coalescent-based framework	
R9 SY31 Chair: Sucena E & Mirth C	D23SY31RT14:00R9 Wotton K , Jimenez Guri E, Jaeger J A tale of two ends: axis polarity in the scuttle fly <i>Megaselia abdita</i>	D23SY31RT14:24R9 Schiffer P , Kroher M, Kraus C, Koutsopoulos G, Blaxter M, Schierenberg E Major changes in the core developmental pathways of nematodes: <i>Romanomermis culicivorax</i> reveals the derived status of the <i>Caenorhabditis elegans</i> model	D23SY31RT14:48R9 Matamoro-Vidal A , Houle D, Salazar-Ciudad I Generating morphological variation from basic developmental process: the example of the <i>Drosophila</i> wing	D23SY31RT15:12R9 Hager R , Lu L, Rosen G, Williams R Genetic evidence for mosaic brain evolution in mammals	

Session 12

Time / Room	15:45 – 16:04	16:09 – 16:28	16:33 – 16:52	16:57 – 17:16	17:16 – 17:45
R1 SY31 Chair: Sucena E & Mirth C	D23SY31IT15:45R1 INVITED TALK Lavine L , Gotoh H, Miyakawa H, Ishikawa A, Ishikawa Y, Sugime Y, Emlen D, Miura T Developmental links between sex and nutrition; Interactions between the sex determination pathway and hormonal signaling in stag beetles		D23SY31RT16:33R1 Laine V , Shikano T, Herczeg G, Vilki J, Merilä J Quantitative trait loci for behavior, growth and body size in the nine-spined stickleback <i>Pungitius pungitius</i> L.	D23SY31RT16:57R1 Meyer A , Gunter H, Fan S Revisiting Gavin de Beer's classic example of heterochrony: the developmental basis of jaw growth in halfbeaks and needlefish	Coffee Break

Time / Room	15:45 – 16:04	16:09 – 16:28	16:33 – 16:52	16:57 – 17:16	17:16 – 17:45
R2 SY03 Chairs: Brunet F & Ponce R	D23SY03IT15:45R2 INVITED TALK Katju V Copy-number changes in experimental evolution: rates, fitness effects and adaptive significance		D23SY03RT16:33R2 Necsulea A , Soumillon M, Liechti A, Daish T, Grutzner F, Kaessmann H Origins and functional evolution of long non-coding RNAs in tetrapods	D23SY03RT16:57R2 Van Doninck K , Danchin EGJ, Flot J Horizontal gene transfer is an innovative mechanism in asexual eukaryotes to acquire novel functions	
R3 SY02 Chairs: Treguenza T & Bilde T	D23SY02RT15:45R3 Lahdenperä M , Mar K, Lummaa V Selection on post-reproductive lifespan in Asian elephants	D23SY02RT16:09R3 Paczesiak D , Neiman M, Klappert K, Kopp K, Liljeroos K, Lively C, Adolfsson S, Jokela J Evidence for cost of sex and parasite-mediated selection in a natural population of co-existing sexual and asexual snails	D23SY02RT16:33R3 Valverde J , Lorite J, Corral J, Sharbel T, Jiménez N, Gómez J, Perfectti F Genetic and ecological consequences of individual generalization in plant-pollinator systems	D23SY02RT16:57R3 Ågren J , Ehrlén J Mutualists and antagonists drive among-population variation in selection and evolution of floral display in a perennial herb	
R4 SY20 Chair: Flatt T	D23SY20RT15:45R4 Schräer L , Sekii K, Arbore R, Berezikov E, Ladurner P Phenotypic engineering of testicular and ovarian function reveals a sex allocation trade-off in a simultaneously hermaphroditic flatworm	D23SY20RT16:09R4 Rundle H , Mallet M, Arbuthnott D, Pawlowsky-Glahn V, Egozcue JJOSÉ, Bonduriansky R Experimental insight into condition-dependent trait expression: near-orthogonal effects of environmental vs. genetic manipulations in <i>Drosophila melanogaster</i>	D23SY20RT16:33R4 Schilder R , Vellichirammal N, Wehrkamp C, Riethoven J, Zera A, Brisson J Transcriptomics of a life history trade-off in the wing polymorphic cricket (<i>Gryllus firmus</i>)	D23SY20RT16:57R4 Sicard D , Albertin W, Spor A, Kvitek D, Wang S, Nidelet T, Martin J, Marullo P, Bely M, Bourgais A, Langella O, Balliau T, Valot B, Da Silva T, Dillmann C, Gavin S, De Vienne D Linking protein structure and trade-off between life-history traits	
R5 SY18 Chair: Pietrzak B	D23SY18RT15:45R5 Mautz B , Bonduriansky R, Rundle H The influence of nutrient type on longevity and reproductive senescence in wild and laboratory populations of the Antler Fly (<i>Protopiophila litigata</i>)	D23SY18RT16:09R5 Schrempf A , Kramer B, Klein A, Scheuerlein A, Gampe J, Heinze J Growth, maintenance and reproduction in ant colonies	D23SY18RT16:33R5 Camus F , Wolf JBW, Dowling D Examining the link between genotype and phenotype: mitochondrial gene expression levels across distinct haplotypes, sexes, and ages	D23SY18RT16:57R5 Dunn P , Levitis D Ontogenescence and the Barnacle: an experimental examination of early life mortality in the estuarine barnacle <i>Amphibalanus improvisus</i>	
R6 SY08 Chair: Verhoeven K	D23SY08IT15:45R6 INVITED TALK Richards C Epigenetic response to novel and changing environments		D23SY08RT16:33R6 Svennungsen T , Holen Ø Epigenetic inheritance in invasive species	D23SY08RT16:57R6 Kronholm I , Collins S Investigating the contribution of epimutations to long-term adaptation using models and experiments	
R7 SY04 Chair: King K, Ruiz-González MX, Orivel J & Wolinska J	D23SY04RT15:45R7 Ellegaard K , Klasson L, Näslund K, Bourtzis K, Andersson S Comparative Genomics of <i>Wolbachia</i> and the Bacterial Species Concept	D23SY04RT16:09R7 Leroy C , Lauth J, Malé P, Ruiz-González M, Séjalon-Delmas N, Dejean A, Orivel J Plant performance disparities in tripartite mutualistic associations	D23SY04RT16:33R7 Henry L Facultative symbionts as a eukaryotic horizontal gene pool	D23SY04RT16:57R7 Andersen S , Hansen L, Sapountzis P, Sørensen S, Boomsma J Specificity and stability of the <i>Acromyrmex-Pseudonocardia</i> symbiosis in changing environments	
R8 SY30 Chair: Nichols R	D23SY30RT15:45R8 Heller R , Chikhi L, Siegismund H Assessing the confounding effect of population structure on Bayesian skyline plot inferences of demographic history	D23SY30RT16:09R8 Babik W , Zieliński P, Stuglik M Divergence and gene flow in <i>Lissotriton</i> newts	D23SY30RT16:33R8 Delgado S , Gilabert A, Wirth T Multi-loci Bayesian inference of the <i>Anguilla</i> sp. genus radiation and comparative population genetics of the main lineages	D23SY30RT16:57R8 Martins S , Sim-Sim M, Stech M Phylogeny and evolution of the Pleurocarpous moss genus <i>Andoa</i> (Hypnaceae)	
R9 SY11 Chair: Rickard I	D23SY11IT15:45R9 INVITED TALK Larmuseau MHD , Van Geystelen A, Decorte R Genetic genealogy comes of age: advances in the use of deep-rooted pedigrees in human evolutionary research		D23SY11RT16:33R9 O'Brien M Trees, thickets, or something in between? Recent theoretical and empirical work in cultural phylogeny	D23SY11RT16:57R9 Ko W , Rajan P, Gomez F, Schelinfeldt L, Froment A, Lema G, Nyambo T, Omar S, Wambebe C, Ranciaro A, Hirbo J, Thompson S, Tishkoff S Identifying recent Darwinian selection acting on different human <i>APOL1</i>	

Coffee Break

Time / Room	15:45 – 16:04	16:09 – 16:28	16:33 – 16:52	16:57 – 17:16	17:16 – 17:45
				variants among diverse African populations in trypanosomiasis endemic areas	

Session 13

Time / Room	17:45 – 18:04	18:09 – 18:28	18:33 – 18:52	18:57 – 19:16
R1 SY31 Chair: Sucena E & Mirth C	D23SY31IT17:45R1 INVITED TALK Jeffery W , Yoshizawa M Evolution of a novel adaptive behavior may promote eye regression in <i>Astyanax</i> Cavefish		D23SY31RT18:33R1 Santos E The molecular basis of a novel pigment trait in cichlid fishes	D23SY31RT18:57R1 Rennison D , Owens G, Veen T, Schluter D Visual adaptation of threespine stickleback (<i>Gasterosteus aculeatus</i>) to divergent spectral regimes
R2 SY03 Chairs: Brunet F & Ponce R	D23SY03IT17:45R2 INVITED TALK Andersson D Evolution of new genes by gene amplification and divergence		D23SY03RT18:33R2 Abby S , Rocha EPC Molecular tinkering of nanomachines: the evolution of a direct protein delivery system from the bacterial flagellum	D23SY03RT18:57R2 Cordaux R , Badawi M, Grève P, Giraud I, Ernenwein L, Leclercq S Evolutionary innovations in sex determination mechanisms driven by Wolbachia bacterial endosymbionts in the isopod <i>Armadillidium vulgare</i>
R3 SY02 Chairs: Tregenza T & Blilde T	D23SY02RT17:45R3 Merilä J Uncovering adaptative differentiation it the wild	D23SY02RT18:09R3 Järvinen P , Calhim S, Schuett W, Veltmala W, Laaksonen T Interactive effects of paternal genotype and growth environment on offspring condition: a cross-fostering experiment in the pied flycatcher	D23SY02RT18:33R3 Sundstrom L , Vitikainen E Sex-biased dispersal, inbreeding and fitness in a social insect	D23SY02RT18:57R3 Gienapp P , Van Noordwijk A, Visser M Ontogenetic effects can inflate estimates of genetic variance depending on pedigree structure
R4 SY20 Chair: Flatt T	D23SY20RT17:45R4 Carvalho S , Teotónio H Tests of life-history theory under self- and cross-fertilization in <i>Caenorhabditis elegans</i>	D23SY20RT18:09R4 Zwaan B , Doroszuk A, Jonker M, Breit T The reproduction-survival trade-off at the transcriptional level	D23SY20IT18:33R4 INVITED TALK Keurentjes J Regulatory mechanisms of robustness and evolvability in biological systems	
R5 SY18 Chair: Steiner UK	D23SY18RT17:45R5 Fox G , Kendall B Demographic heterogeneity, selection, and population response	D23SY18RT18:09R5 Nitsch A , Faurie C, Lummaa V Should I stay or should my siblings go? Sibship effects on dispersal behaviour	D23SY18RT18:33R5 Kvalnes T , Engen S, Sæther B, Jensen H Estimating fluctuating selection in age-structured populations	D23SY18RT18:57R5 Wensink M , Wrycza T, Baudisch A Indicators of selection pressure, and changes in vital rates at multiple ages: a general method
R6 SY08 Chair: Bossdorf O	D23SY08IT17:45R6 INVITED TALK Herrera C , Medrano M, Bazaga P Ecological epigenetics of non-model plants: exploring the evolutionary relevance of epigenetic variation in natural plant populations		D23SY08RT18:33R6 Jensen P , Nätt D, Jonsson M, Beltéky J, Wright D Selection on epigenetic variation may have been important in domestication of chickens	D23SY08RT18:57R6 Cosseau C , Lepesant JM, Roquis D, Arancibia N, Grunau C Environmentally induced epigenetic plasticity in the human parasite <i>Schistosoma mansoni</i>
R7 SY04 Chair: King K, Ruiz-González MX, Orivel J & Wołinska J	D23SY04RT17:45R7 Parratt S , King K, Hurst GDD Symbiont Mediated Extinction: Examining the spread and effects of a male-killer	D23SY04RT18:09R7 Joy J Symbioses catalyses niche expansion and diversification	D23SY04RT18:33R7 Thomas-Poulsen M The gut microbiome of fungus-growing termites expresses two orders of magnitude more decomposition genes than the termites of their fungus-garden symbiont	D23SY04RT18:57R7 Charlat S , Simoes P, Cariou M, Bailly-Bechet M, Mialdea G, Sagot M Quantifying the Wolbachia turnover
R8 SY30 Chair: Nichols R	D23SY30RT17:45R8 Wielgoss S , Velicer G Putting social microbes on the map: a phylogenomics approach	D23SY30RT18:09R8 Marí-Mena N , Lopez-Vaamonde C, Naveira H, Auger-Rozenberg M, Vila M Phylogeography and	D23SY30RT18:33R8 Martins A , De Aguiar MAM, Bar-Yam Y How do different geographical barriers affect ring species	D23SY30RT18:57R8 Kutschera V , Hailer F A range-wide synthesis and timeline for phylogeographic events in the red fox (<i>Vulpes</i>

Time / Room	17:45 – 18:04	18:09 – 18:28	18:33 – 18:52	18:57 – 19:16
		conservation of a protected moth	formation and persistence?	(<i>vulpes</i>)
R9 SY11 Chair: Rickard I & Adams M	D23SY11RT17:45R9 Bolund E , Lummaa V How has the genetic architecture of key life history traits responded to the demographic transition in a human population?	D23SY11RT18:09R9 Klingenberg C , Martínez-Abadías N, Esparza M, Sjøvold T, Hernández M Quantitative genetic variation, selection and secular change of skull shape in humans	D23SY11RT18:33R9 Somel M , Wilson-Sayres M, Jordan G, Huerta-Sánchez E, Fumagalli M, Ferrer-Admetlla A, Nielsen R A genome-wide scan for relaxation of constraints in the human lineage affecting specific functional processes	D23SY11RT18:57R9 Álvarez-Castro J A quantitative genetics approach to equilibrium assessment and equilibrium fitness estimation; an application to study the polymorphism of the human ACP1 in Europe

Poster Session

Time / Room	19:16
Poster Area	SY01 SY02 SY03 SY04 SY06 SY08 SY11 SY14 SY17 SY18 SY20 SY24 SY31 SY34

POSTERS

FRIDAY 23

Symposium 1

Experimental evolution on empirical fitness landscapes

PS0027 - Empirical fitness landscapes reveals a limited number of accessible adaptive pathways for an RNA virus (D23SY01PS0027)
Elena S, Lalic J, Franke J, DelaIglesia F

PS0107 - Experimental evolution for growth rate and its implications for infection success, co-infection dynamics, and virulence in a trypanosome parasite of bumblebees (D23SY01PS0107)
Marxer M

PS0151 - Viral experimental evolution reveals genotypic but not phenotypic historical contingency (D23SY01PS0151)
Bedhomme S, Lafforgue G, Elena S

PS0203 - Experimental evolution uncovers environment dependent fitness differences among *Wolbachia* strains in *Drosophila melanogaster* (D23SY01PS0203)
Versace E, Schlötterer C

PS0353 - Evolving in an unpredictable world - the *E. coli* story (D23SY01PS0353)
Karve S, Daniel S, Chavan Y, Anand A, Dey S

PS0494 - Experimental evolution of heavy metal tolerance in changing environments (D23SY01PS0494)
Gorter F, Aarts MMG, Zwaan B, De Visser JGM

PS0507 - Evading genetic drift: an experimental test of the probability of fixation of new genetic variants (D23SY01PS0507)
Chelo I, Nédli J, Gordo I, Teotónio H

PS0539 - The evolution of bacterial mutation rates under simultaneous selection by inter-specific and social parasitism (D23SY01PS0539)

O'Brien S, Rodrigues AMM, Buckling A

PS0557 - Reproductive assurance drives mating system transitions to selfing (D23SY01PS0557)
Theologidis I, Chelo I, Teotónio H

PS0637 - Experimental evolution of an RNA virus in mixed host environments (D23SY01PS0637)
Morley V, Usme Ciro J, Wasik B, Turner P

PS0765 - Exploring the validity of representing high-dimensional fitness landscapes with a quadratic approximation (D23SY01PS0765)
Du Plessis L, Bonhoeffer S

PS1054 - Evolutionary consequences of female promiscuity (D23SY01PS1054)
Timmermeyer N, Michiels N, Phillips P

PS1186 - Social interactions determine mutation rate in *Escherichia coli* (D23SY01PS1186)
Krasovec R, Belavkin R, Aston J, Channon A, Knight C

PS1391 - Short-time response function of the modular dilute Sherrington-Kirkpatrick model (D23SY01PS1391)
Park J

Symposium 2

Selection and evolution in natural populations

PS0014 - Transcriptomic divergence in relation to mating success of lekking great snipes (*Gallinago media*) (D23SY02PS0014)
Ekblom R, Wang B, Blom MPK, Kålås J, Horsburgh G, Burke T, Höglund J

PS0094 - Natural selection, quantitative genetics and bioenergetics of an invasive species: the land snail *Cornu aspersum* (D23SY02PS0094)
Nespolo R, Bartheld J, Artacho P, Gonzalez A, Bruning A, Roff D

PS0101 - Evolution of natural microbial populations in traditional fermented products (D23SY02PS0101)
Schoustra S

PS0134 - Using both divergence and allele frequency information in a unified framework for sweep detection (D23SY02PS0134)
Huber C, DeGiorgio M, Nielsen R, Hellmann I

PS0140 - Sexually antagonistic genes in a natural population of African buffalo (D23SY02PS0140)
van-Hooft P, Greylings B, Getz W, Van-Helden P, Zwaan B, Bastos ADS

PS0189 - Whole-genome methylation patterns in the Khomani Bushmen of South Africa (D23SY02PS0189)
Carja O

PS0202 - A potential role for ecologically mediated sexual selection in the divergence of Tropical Pacific honeyeaters (*Myzomela*) (D23SY02PS0202)
Thomassen H, Waider C, Dekker RWRJ, Smith T

PS0207 - Rejection of the clonal erosion hypothesis: a study of hybridizing *Daphnia* from ten neighboring lakes (D23SY02PS0207)
Yin M, Gießler S, Wolinska J

PS0215 - Sexual selection and autosomal versus sex-linked inheritance of colour ornamentation in the blue tit (D23SY02PS0215)
Charmantier A, Grégoire A, Thion M, Doutrelant C

PS0264 - Mating patterns and sexual selection in a snapdragon hybrid zone (D23SY02PS0264)
Ellis T

PS0350 - Cross-continental variation in sexual selection and its effect on the contrasting reversal of sexual size dimorphism in closely related sepsid fly species (Sepsidae: Diptera) (D23SY02PS0350)
Rohner P, Blanckenhorn W, Puniamoorthy N

PS0366 - Phenotypic divergence among west European Populations of Reed Bunting *Emberiza schoeniclus* agrees with migratory and foraging behaviours indicating local adaptation (D23SY02PS0366)
Neto J, Gordinho L, Newton J

PS0367 - Population genomics of a spreading exotic plant species (D23SY02PS0367)
Vandepitte K

PS0377 - Unexpected benefit of the social parasite *Microdon mutabilis* for a key fitness component of its ant host (D23SY02PS0377)
Hovestadt T, Thomas J, Mitesser O, Elmes G, Schönrogge K

PS0380 - Can a hybrid outcompete its parental species? - a story about a "super clone" (*Daphnia galeata* × *longispina* hybrid) (D23SY02PS0380)
Griebel J, Poxleitner M, Navas Faria A, Giessler S, Wolinska J

PS0390 - Why do inbred ants live longer? (D23SY02PS0390)
Bos N, Freitak D, Pulliainen U, Sundström L

PS0404 - Signal design and perception in Iberian reed buntings (D23SY02PS0404)
Gordinho L, Neto J

PS0427 - Population genomic scan for natural

variation and selection across central metabolism (D23SY02PS0427)
Hornett E, Wheat C

PS0434 - Inter- and intraspecific relationships between performance and temperature in a cryptic-species complex of the rotifer *Brachionus plicatilis* (D23SY02PS0434)
Walczyska A, Serra M

PS0441 - Identification of X-linked loci affecting cold stress resistance in *Drosophila melanogaster* by means of combined quantitative trait loci and selective sweep mapping approaches (D23SY02PS0441)
Wilches R, Duchen P, Voigt S, Stephan W

PS0448 - Complex genetic architectures in natural populations: a screen for coadapted mitochondrial-nuclear allelic interactions for male fertility across disjunct populations (D23SY02PS0448)
Dobler R, Yee WKW, Reinhardt K, Dowling D

PS0449 - The genetic architecture of the latitudinal variation in sexual dimorphism of medaka (D23SY02PS0449)
Kawajiri M, Kohta Y, Fujimoto S, Mokodongan D, Yamahira K, Kitano J

PS0460 - Differentiation of photosynthetic characteristics between coastal and freshwater lake populations of the coastal plant *Lathyrus japonicus* (Fabaceae) (D23SY02PS0460)
Ohtsuki T, Mori I, Katsuhara M, Takami T, Setoguchi H

PS0468 - Neutral and selection-driven decay of sexual traits under asexuality (D23SY02PS0468)
Schwander T, Van der Kooi C

PS0471 - Linking phenotype to transcriptome: Sexual dimorphism and sex-specific selection in birds with different mating systems (D23SY02PS0471)
Harrison P, Wright A, Zimmer F, Pointer M, Mank J

PS0495 - Varying patterns of genetic correlations between morphological traits along the ontogeny of blue tit nestlings (D23SY02PS0495)
Drobniaik S, Arct A, Lars G, Cichoń M

PS0521 - The hotter the better: temperature induced differences in growth and mortality (D23SY02PS0521)
Johansson M

PS0530 - Differences in mtDNA copy number between individuals with long and short haplotypes from a natural population of *Drosophila subobscura* (D23SY02PS0530)
Kalajdzic P, Jelic M, Andjelkovic M, Ladoukakis E

PS0534 - News on the natural ecology and evolution of the model nematode *C. elegans* (D23SY02PS0534)
Petersen C, Schulenburg H

PS0542 - Genetics of parallel phenotypic evolution in ninespine sticklebacks (*Pungitius pungitius*) – a comparative genomic approach (D23SY02PS0542)
Eberlein C, Guo B, Shikano T, Merilä J

PS0573 - Evidence of cyto-nuclear epistasis in *Drosophila subobscura* (D23SY02PS0573)
Jelić M, Kenig B, Kurbalija Novićić Z, Tanasković M, Filipović L, Stamenković-Radak M, Andđelković M

- PS0574 - Unlocking poor quality Daphnia samples by SNP genotyping** (D23SY02PS0574)
 Rusek J, Tellenbach C, Ayan G, Theodosiou L, Turko P, Giessler S, Spaak P, Wolinska J
- PS0606 - Assortative mating strength and selection of morphological characters in natural populations of two closely related damselfly species**
 (D23SY02PS0606)
 Nordén A, Svensson E, Waller J
- PS0615 - Inbreeding depression in male primary sexual characters: a meta-analysis and an empirical study in wild song sparrows** (D23SY02PS0615)
 Losdat S
- PS0640 - Molecular evolution in three Polycomb genes reveals a low level of variation in the nonrecombining dot-like chromosome of *D. subobscura*** (D23SY02PS0640)
 Calvo J, Aguadé M, Segarra C, Papaceit M
- PS0660 - Distortion of the sex ratio in forest pests: an ecological alternative for self-regulation of populations** (D23SY02PS0660)
 Garcia R, Bauce É
- PS0689 - Why parasitize only a third of the available hosts?** (D23SY02PS0689)
 Van Nouhuys S, Sullivan Montovan K, Couchoux C, Reeve H
- PS0691 - Assessing caribou ecotypes using functional genes** (D23SY02PS0691)
 Marques A
- PS0760 - The role of pollinators on disassortative mating in non-reciprocal style morphs of *Narcissus papyraceus*** (D23SY02PS0760)
 Simón-Porcar V, Santos-Gally R, Meagher T, Arroyo J
- PS0778 - Signals of a divergent evolutionary history in the vomeronasal receptor genes of two sympatric mouse lemur species** (D23SY02PS0778)
 Hohenbrink P, Mundy N, Zimmermann E, Radespiel U
- PS0782 - Dynamics of a fast evolving sex-ratio system in natural populations of *Drosophila***
 (D23SY02PS0782)
 Gerard P
- PS0791 - Assessing the effects of human selection through fishery on sea cucumber genetic structure and population dynamics** (D23SY02PS0791)
 Valente S, Sen O, Ciftci Y, Aydin M, Serrão E, González-Wangüemert M
- PS0807 - Spiny hair in wild rodents: a role for the *Ectodysplasin A receptor* (*Edar*) gene?**
 (D23SY02PS0807)
 Goncalves G, Moreira GRP, Freitas TRO, Hoekstra H
- PS0812 - Sexual Networks: measuring selection in structured populations** (D23SY02PS0812)
 McDonald G, James R, Krause J, Pizzari T
- PS0885 - Divergent selection on, but no genetic conflict over, female and male timing and rate of reproduction in a human population**
 (D23SY02PS0885)
 Bolund E, Bouwhuis S, Pettay J, Lummaa V
- PS0922 - Strong adaptive differentiation between populations of the alpine perennial herb *Arabis alpina* in northern and southern Europe**
- (D23SY02PS0922)
 Toräng P, Wunder J, Obeso J, Coupland G, Ågren J
- PS0924 - Detecting and measuring selection on quantitative traits in a range expansion scenario with spatially-explicit simulations** (D23SY02PS0924)
 Kanitz R, Neuenschwander S, Goudet J
- PS0942 - Macro-ecology of parental care in arthropods: are the benefits of egg protection higher in the tropics?** (D23SY02PS0942)
 Machado G, Bueno P, Gilbert J, Santos ESA
- PS0955 - The fitness impact of seed fecundity in a long-lived understory shrub: a 12-year study**
 (D23SY02PS0955)
 Alonso C
- PS0960 - Mutual ornaments in pied flycatchers: geographical patterns of assortative mating**
 (D23SY02PS0960)
 Calhim S, Sirkiä P, Adamík P, Artemyev A, Belskii E, Both C, Bureš S, Burgess M, Bushuev A, Doligez B, Forsman J, Grinkov V, Hoffmann D, Hoffman U, Järvinen A, Král M, Krams I, Lampe H, Moreno J, Mägi M, Nord A, Potti J, Ravussin P, Sokolov L, Laaksonen T
- PS0979 - Patterns of cork oak (*Quercus suber* L.) population differentiation in candidate genes for adaptive traits** (D23SY02PS0979)
 Ribeiro CAM, Almeida H, Rodrigues A, Glushkova M, Batista D, Paulo O
- PS0990 - Identifying signatures of natural selection in cork oak (*Quercus suber* L.) genes**
 (D23SY02PS0990)
 Modesto I, Miguel C, Pina-Martins F, Glushkova M, Veloso M, Batista D, Paulo O
- PS0996 - Characterizing the adaptive history of infection in Human Cytomegalovirus (HCMV)**
 (D23SY02PS0996)
 Pokalyuk C, Renzette N, Kowalik T, Jensen J
- PS1009 - Comparative transcriptomics analysis to identify candidate genes for a pigment trait in a cichlid fish** (D23SY02PS1009)
 Gu L, Salzburger W
- PS1040 - Genetic basis of local and temporal adaptation in natural *Daphnia* populations**
 (D23SY02PS1040)
 Herrmann M, Kreuzer P, Cordellier M, Schwenk K
- PS1110 - Boys and girls and plant-eaters: Is herbivory sex-biased in *Mercurialis perennis*?**
 (D23SY02PS1110)
 Rubinjoni L, Vujić V, Selaković S, Cvetković D
- PS1155 - Ant preadaptation to the urbanized territories: case study** (D23SY02PS1155)
 Lysenkov S, Oparina N
- PS1236 - Adaptive TE insertions in *Drosophila*: NATs, miRNAs, and piRNAs** (D23SY02PS1236)
 Gonzalez J, Ullastres A, Mateo L
- PS1301 - Skin-mucus bacteria communities in *Cottus* (Pisces) species inhabiting secondary contact zones** (D23SY02PS1301)
 Ellendt S, Nolte A
- PS1392 - Signatures of divergence in peripatric populations of the invasive ant *Cardiocondyla obscurior*** (D23SY02PS1392)

Oettler J, Schrader L, Heinze J

PS1419 - Tropical African cattle a unique model for the study of livestock adaptation (D23SY02PS1419)
Bahbahani HMAHDI, Hanotte O

PS1458 - Navigation system and spatial memory of a solitary wasp (D23SY02PS1458)
Reschka W

PS1459 - Genomics of introgression across a species barrier: half a million SNPs across the european house mouse hybrid zone (D23SY02PS1459)
Baird SJE, Macholan M, Munclinger P, Pialek J

Symposium 3

Molecular evolutionary innovations

PS0018 - Genomic structures and gene evolution on mammalian X chromosomes (D23SY03PS0018)
Katsura Y, Satta Y

PS0122 - Gene duplications: a role in adaptive evolution (D23SY03PS0122)
Labbé P, Milesi P, Weill M, Lenormand T

PS0277 - Multifunctional vitellogenin – Can the evolution of a pleiotropic gene be linked to the domain architecture of its protein product? (D23SY03PS0277)
Havukainen H, Amdam G

PS0297 - Hotwiring the flagellum: Rapid, repeatable rewiring of a gene regulatory network in *Pseudomonas fluorescens* (D23SY03PS0297)
Taylor T, Mulley G, Alsohim A, Silby M, Brockhurst M, Jackson R

PS0394 - How important are sex chromosomes in sexual dimorphism? (D23SY03PS0394)
Zimmer F, Harrison P, Mank J

PS0535 - On the fast track to extinction? Origin, divergence and mutation rates of asexual organisms (D23SY03PS0535)
Schiffer P, Stier G, Kroher M, Schierenberg E

PS0543 - Evolutionary "tinkering" in the origin of the insect terminal patterning system (D23SY03PS0543)
Chipman A, Weisbrod A

PS0546 - Genetic architecture promotes the evolution and maintenance of cooperation: the evolutionary constraint of coding overlaps on functionally unrelated genes (D23SY03PS0546)
Frénay A, Taddei F, Misevic D

PS0708 - Protein domain emergence and arrangements bear high potential for rapid evolutionary innovations and environmental adaptation (D23SY03PS0708)
Grath S

PS0915 - Genomic changes during the evolution of increasing specialization in fungus-farming ants (D23SY03PS0915)
Nygaard S, Li C, Schiøtt M, Zhang G, Xiao J, Meng X, Wang J, Boomsma J

PS0961 - Primary and secondary structures of group II intron NadI gene in Petota species

(D23SY03PS0961)
Ryzhova N, Slugina M

PS1043 - The extent of horizontal gene transfer and its role in the evolution of bacterial species (D23SY03PS1043)
Nowell R, Green S, Laue B, Sharp P

PS1105 - cis-regulatory evolution and functional diversification of gene duplicates in Diptera (D23SY03PS1105)
Tanaka K, Hazbun A, Vreede B, Diekmann Y, Roch F, Sucena É

PS1188 - Are there patterns in the formation and expression of novel genes? (D23SY03PS1188)
Martinsen L, Ponce R

PS1292 - Detection of selection in the Genetic Networks involved in the signaling of thymopoiesis (D23SY03PS1292)
Costa B, Neves H, Zilhão R, Paulo O

PS1404 - Half of the sox genes remained duplicated since the teleost specific whole genome duplication (D23SY03PS1404)
Brunet F, Volodire E, Volff J, Galiana D

PS1417 - The pancreatic lipase-colipase complex: an unexpected old duo (D23SY03PS1417)
Lopes-Marques M, Santos M, Castro L

PS1441 - Evolutionary study of RDH10 gene family reveals a novel member retained in ectothermic vertebrates (D23SY03PS1441)
Ruivo R, Lopes-Marques M, Santos M, Castro L

Symposium 4

Evolution of Symbiotic Interactions in Communities: Novel Approaches

PS0104 - Hotspots of social parasites of Myrmica ants (D23SY04PS0104)
Witek M

PS0238 - Variation in Wolbachia-mediated antiviral protection and effects on viral titers across the Wolbachia phylogeny (D23SY04PS0238)
Martinez J, Bauer S, Jiggins F

PS0313 - A cryptic co-evolution between an obligatory pathogen and its vector when each has a different distinct host plant (D23SY04PS0313)
Sharon RRAKEFET, Naor V, Raz R, Harari A, Dafni-Yelin M, Tomer M, Sofer-Arad C, Weintraub P, Zahavi T

PS0318 - Is your niche really yours? Symbiotic microbes determine adaptation to the abiotic environment (D23SY04PS0318)
Nougué O, Gallet R, Chevin L, Lenormand T

PS0329 - Bacterial communities influenced by Wolbachia? Bacterial community structure and major players in the terrestrial isopod microbiome (D23SY04PS0329)
Dittmer J, Lesobre J, Johnson M, Bouchon D

PS0382 - Evolving as allies?Ecology and Evolution of the symbiosis between *Burkholderia* bacteria and tenebrionid beetles (*Lagria* spp.) (D23SY04PS0382)
Florez L, Kaltenpoth M

PS0429 - Intra-host parasite interactions and how they depend on the presence of a host

(D23SY04PS0429)

Schulte R, Joy B, Michaela K

PS0487 - Identifying symbiotic gut-bacteria of fungus growing ants and mapping them on the phylogenetic tree (D23SY04PS0487)

Sapountzis P, Boomsma J, Schiøtt M

PS0550 - The influence of naturally associated microbes on *Caenorhabditis elegans* life history

(D23SY04PS0550)

Dirksen P, Rosenstiel P, Schulenburg H

PS0565 - Dynamics of protective symbiosis

(D23SY04PS0565)

Polin S, Leclair M, Simon J, Outreman Y

PS0597 - Comparative genomics of insect endosymbionts extracted from single hosts

(D23SY04PS0597)

Tamarit D, Klasson L, Andersson SGE

PS0628 - Floral display differentially affects siring success and seed production in the insect-pollinated herb *Primula farinosa* (D23SY04PS0628)

Madeć C, Ehrlén J, Ågren J

PS0758 - Metagenomic analysis of gut bacteria from the red flour beetle *Tribolium castaneum*

(D23SY04PS0758)

Futo M, Mitschke A, Rosenstiel P, Schulenburg H, Joop G, Kurtz J

PS0893 - Culture-independent characterisation of the core gut microbiome of fungus-growing termites

(D23SY04PS0893)

Otani S, Mikaelyan A, Nobre T, Hansen L, Sørensen S, Aanen D, Boomsma J, Brune A, Poulsen M

PS0952 - Chrysomelina leaf beetles profit from widely exploiting their host plants: ABC transporters are involved in the sequestration of poisonous phytochemicals (D23SY04PS0952)

Burse A, Strauss A, Peters S, Boland W

PS1093 - Friends or foes: ecological relationship dictates spatial structuring in polymicrobial communities (D23SY04PS1093)

Estrela S, Brown S

PS1176 - The evolution of cuticular hydrocarbon profiles in ant-ant associations (D23SY04PS1176)

Menzel F, Schmitt T

PS1214 - Macroevolution of Heliconiini butterflies is strongly correlated with diversification of Passifloraceae host plants (D23SY04PS1214)

Kozak K

PS1238 - Intense competition between arbuscular mycorrhizal mutualists in an *in vitro* root microbiome negatively affects total fungal abundance (D23SY04PS1238)

Engelmoer DJP, Behm J, Kiers T

PS1248 - Bargaining power and a biological market analysis of the plant-mycorrhizal symbiosis

(D23SY04PS1248)

Wyatt GAK, Kiers E, Gardner A, West S

PS1267 - Comparative analysis of symbiotic communities in Hippoboscidae (D23SY04PS1267)

Novakova E, Husník F, Hypša V

PS1299 - The bacterial community of social spiders

(D23SY04PS1299)

Vanthournout B, Bilde T, Bechsgaard J

PS1326 - Microbiota, vertically transmitted infections, and diapause in *Daphnia* (D23SY04PS1326)

Mushegian A, Ebert D

PS1389 - Specificity and transmission of bacterial endosymbionts in *Megalomyrmex* social parasites and their fungus-growing ant hosts (D23SY04PS1389)

Liberti J, Sapountzis P, Hansen L, Sørensen S, Adams RMM, Boomsma J

PS1424 - Microbiota of avian brood parasites shaped by foster parent species:a role in enhanced immunity of Cowbirds? (D23SY04PS1424)

Hahn C, Oyler-McCance S, Pepe-Ranney C, Hall E

Symposium 6

Evolutionary consequences of an early germ-soma segregation

PS1266 - Can cheating stabilize allorecognition? Experimental evidence in fungi (D23SY06PS1266)

Bastiaans E, Debets AJM, Aanen D

PS1279 - Haplodiploidy and the evolution of eusociality: worker revolution (D23SY06PS1279)

Alpedrinha J, Gardner A, West S

Symposium 8

Evolutionary significance of epigenetic variation

PS0694 - The environment as a source of epigenetic variations (D23SY08PS0694)

Leung C, Breton S, Angers B

PS1027 - Behavioural epigenetics and the effects of domestication in the chicken (D23SY08PS1027)

Bélteky J, Jensen P

PS1383 - A genome-wide comparative study of DNA methylation in great apes (D23SY08PS1383)

Hernando Herráez I, Prado-Martínez J, Garg P, Fernandez-Callejo M, Heyn H, Hvilsom C, Navarro A, Esteller M, Sharp A, Marques-Bonet T

PS1396 - Can epigenetic differentiation cause the formation of ecotypes? Insights from stable altitudinal variants in the mountain plant *Heliosperma pusillum* (Caryophyllaceae)

(D23SY08PS1396)

Flatscher R, Schönswetter P, Paun O, Frajman B

Symposium 11

Advances in quantitative approaches to recent evolutionary change in humans

PS0257 - Genetic constraints underlying human reproductive timing in a pre-modern Swiss village

(D23SY11PS0257)

Bürkli A, Postma E

PS0735 - Fitness meets fitness: taking an

evolutionary approach to physical fitness in humans (D23SY11PS0735)
Postma E

PS0747 - Experimental studies of human social learning strategies: exploring sex differences (D23SY11PS0747)
Cross C, Brown G, Morgan T, Laland K

PS0751 - The evolution of language and stone tool manufacture (D23SY11PS0751)
Morgan T, Uomini N, Rendell L, Cross C, Evans C, Lewis H, Street S, Thuly L, Kearney R, De la Torre I, Whiten A, Laland K

PS0802 - Evolution of a co-expression network involved in primate brain functions: clues to the evolution of human specific cognitive abilities (D23SY11PS0802)
Nowick K, Berto S

PS0905 - Multiple instances of ancient balancing selection shared between humans and chimpanzees (D23SY11PS0905)
Leffler E, Gao Z, Pfeifer S, Ségurel L, Auton A, Venn O, Bowden R, Bontrop R, Wall J, Sella G, Donnelly P, McVean G, Przeworski M

PS1097 - The demographic transition influences variance in fitness and selection on height and BMI in rural Gambia (D23SY11PS1097)
Courtiol A

PS1202 - Why is childbirth so hard in humans? (D23SY11PS1202)
Fischer B

PS1226 - Investigating the co-evolution between human lactase gene and dairy culture in Europe (D23SY11PS1226)
Papoli Yazdi H, Gautier M, Vitalis R

PS1367 - The Value of Reputation (D23SY11PS1367)
Pfeiffer T, Tran L, Krumme C, Rand D

Symposium 14

Non genetic inheritance

PS0061 - The molecular basis of adaptive maternal effects in amphibians (D23SY14PS0061)
Shu L, Suter M, Laurila A, Räsänen K

PS0129 - (Non)-genetic inheritance: a historical overview (D23SY14PS0129)
Pocheville A

PS0143 - The benefits, costs and evolutionary consequences of genomic imprinting (D23SY14PS0143)
Holman L, Kokko H

PS0316 - Maternal exposure to predators: how to prepare offspring to a risky natal environment? (D23SY14PS0316)
Bestion E, Teyssier A, Cote J

PS0396 - Diffusion of social information within Drosophila group (D23SY14PS0396)
Battesti M, Moreno C, Joly D, Mery F

PS0724 - Transgenerational plasticity in marine sticklebacks: maternal effects mediate impacts of a

warming ocean (D23SY14PS0724)
Shama LNS, Wegner M

PS0746 - Larval diet alters associations with commensal gut bacterial and induces trans-generational effects on host fitness in Ceratitis capitata (D23SY14PS0746)
Leftwich P, Friend L, Chapman T

PS0887 - Sex determination in the haplodiploid ant species Cardiocondyla obscurior (D23SY14PS0887)
Klein A, Heinze J, Oettler J

PS1069 - Matching or mismatching: effects of maternal heat stress are modified by postnatal heat stress in Japanese quails (D23SY14PS1069)
Henriksen R, Rettenbacher S, Groothuis T

PS1210 - Pronounced maternal effect on hybrid gene expression in Arabidopsis (D23SY14PS1210)
Videvall E, Sletvold N, Hagenblad J, Ågren J, Hansson B

Symposium 17

Linking genome evolution at different time scales

PS0219 - Bgee, a database for the study of gene expression evolution (D23SY17PS0219)
Robinson-Rechavi M, Team B, Bastian F

PS0250 - Surprising Patterns of Allelic Diversity of V1R genes in Toothcombed Primates (D23SY17PS0250)
Yoder A, Chan L, Dos Reis M, Larsen P, Bielawski J, Yang Z

PS0310 - Within-population estimation of selective constraint (D23SY17PS0310)
Chan CHS, Tanaka M

PS0425 - Evolutionary history of the 17q21 human polymorphic inversion (D23SY17PS0425)
Alves JMF, Lopes A, Heutink P, Chikhi L, Amorim A

PS0528 - Within-population variation in genome size in Brachionus plicatilis rotifers (D23SY17PS0528)
Stelzer C

PS0614 - Relationship between evolutionary rate variation, protein secondary structure and codon usage in protein-coding genes (D23SY17PS0614)
Du Plessis L, Anisimova M

PS0732 - Genome-wide patterns of genetic variation in European aspen (*Populus tremula*) (D23SY17PS0732)
Wang J, Ingvarsson P

PS0756 - Inter- and intraspecific genetic divergence in genus Apodemus (Rodentia, Muridae): a framework for NGS (D23SY17PS0756)
Jovanovic V, Adnađević T, Blagojević J, Stamenković G, Vujošević M

PS0761 - Evolutionary inferences using nucleotide polymorphism and divergence data in the tomato clade (D23SY17PS0761)
Margot P, Jean-Claude W, Ana F, Thomas S

PS0822 - Repetitive DNA and insights into genome evolution in insects (D23SY17PS0822)
Stolle E, Moritz RFA

PS1113 - Genomic basis and possible evolutionary

consequences of ectosymbiotic lifestyle in a sulfide-rich environment (D23SY17PS1113)
Cerveau N, Bauermeister J, Dattagupta S

PS1123 - Phylogenomics unravels major evolutionary trends of the Basidiomycota (D23SY17PS1123)
Silva D, Vieira A, Talhinhas P, Azinheira H, Silva M, Fernandez D, Duplessis S, Batista D, Paulo O

PS1164 - X and Y chromosome divergence in threespine stickleback: what happens when chromosomes cease to recombine? (D23SY17PS1164)
Viitaniemi H, Leder E

PS1172 - Insights from single cell genomics and metagenomics into microdiversification processes in freshwater bacteria of the SAR11 clade (D23SY17PS1172)
Zaremba-Niedzwiedzka K, Wiklund J, Zhao W, McMahon K, Ast J, Bertilsson S, Stepanauskas R, Andersson SGE

PS1302 - Consequence of the evolution of social behavior in spiders on the intensity of selection (D23SY17PS1302)
Bechsgaard J, Settepani V, Bilde T

PS1401 - Evolutionary dynamics of the human nadph oxidase genes CYBB, CYBA, NCF2 and NCF4: functional implications (D23SY17PS1401)
Tarazona-Santos E, Machado M, Magalhães WCS, Redondo RAF, Yeager M, Chanock S

PS1440 - Evolution of heme-copper oxidases superfamily: reconciling gene duplications, losses and transfers to understand the origin of aerobic respiration (D23SY17PS1440)
Rocha S, Fonseca M, Posada D, Pereira M

PS1446 - Species tree and population size estimation of Iberian and North African Podarcis (D23SY17PS1446)
Schliep K, Couto A, Pinho C, Posada D

Symposium 18

Evolutionary demography

PS0046 - AgeGuess crowdsourcing human aging research (D23SY18PS0046)
Steiner U, Misevic D

PS0089 - Is the X-chromosome a hotspot for genes affecting sex differences in lifespan and ageing? (D23SY18PS0089)
Griffin R, Friberg U

PS0127 - Why do the well-fed die young? An eco-evolutionary perspective on the effects of dietary restriction (D23SY18PS0127)
Adler M, Bonduriansky R

PS0158 - The ecology of sexual conflict: parallel evolution of male harm and female resistance in experimental populations of *Drosophila melanogaster* (D23SY18PS0158)
Arbuthnott D, Dutton E, Agrawal A, Rundle H

PS0185 - Group formation and individual mortality (D23SY18PS0185)
Giaimo S, Baudisch A

PS0282 - The influence of population size on host-

parasite coevolution (D23SY18PS0282)
Papkou A, Schalkowski R, Barg M, Schulenburg H

PS0336 - Reproduction and lifespan: only age at last reproduction matters (D23SY18PS0336)
Nenko I, Jasienska G

PS0360 - Exploring variation in longevity: transcriptomic studies in long-lived ant queens (D23SY18PS0360)
Wyschetzki K

PS0509 - Age-specific breeding success in a wild mammalian population: selection, constraint, restraint and senescence (D20SY18PS0509)
Dugdale H, Lisa P, Newman C, Macdonald D, Burke T

PS0547 - Modeling stem cell dynamics to understand negligible senescence in Hydra (D23SY18PS0547)
Dańko M, Kozłowski J, Schaible R

PS0589 - Modeling demographic risk due to distant interspecific hybridization (D23SY18PS0589)
Quilodran C, Currat M, Montoya-Burgos J

PS0639 - Uncoupling individual intrinsic quality from habitat preference and quality in a territorial songbird (D23SY18PS0639)
Germain R, Arcese P

PS0670 - Mother-daughter contract and age at menopause (D23SY18PS0670)
Galbarczyk A, Jasienska G

PS0728 - A comparison between heritabilities of life history and morphological traits in human populations (D23SY18PS0728)
Esparza M, Martínez-Abadías N, Sjovold T, González-José R, Hernández M

PS0757 - Inference of the demographic history of *Drosophila subobscura* using Approximate Bayesian Computation: a multilocus analysis along chromosome J (D23SY18PS0757)
Pratdesaba R, Segarra C, Aguadé M

PS0860 - Cooperation and conflict in humans in traditional large joint families (D23SY18PS0860)
Pettay J, Lahdenperä M, Lummaa V

PS0919 - Variation in colony type drives demography in a red ant (D23SY18PS0919)
Huszar D, Carlsen S, Larsen R, Pedersen J

PS1068 - The impact of age-related changes in fertility: implications for sexual conflict (D23SY18PS1068)
Mokkonen M, Koskela E, Mappes T, Schroderus E

PS1142 - Effects of climate on survival of Asian elephants (D23SY18PS1142)
Mumby H, Courtiol A, Mar K, Lummaa V

PS1222 - Evolutionary demography of microbes: growth, sex and death in a marine planktonic diatom (D23SY18PS1222)
D'Alelio D, Scalco E, Ribera d'Alcalà M, Montresor M

PS1237 - Disposable springtails: highly plastic ageing patterns are explained by resource allocation trade-offs in *Folsomia candida* (D23SY18PS1237)
Mallard F, Tully T

PS1254 - Studying the emergence and evolution of

apoptosis using Evolutionary Game Theory and Agent Based Modelling (D23SY18PS1254)

Vinayak A, Grüning A

PS1413 - Perceived predation risk accelerates aging in water fleas (D23SY18PS1413)

Pietrzak B, Dawidowicz P, Prędko P, Dańko M

PS1454 - Mismatching the Medfly: demographic effects of dietary carbohydrates in *Ceratitis capitata* (D23SY18PS1454)

Nash W, Chapman T

Symposium 20

Mechanisms of trade-offs

PS0115 - Masking sickness in public results in costs for the magnitude of the immune response (D23SY20PS0115)

Lopes P, Springthorpe D, Bentley G

PS0130 - Ageing as a trade-off mechanism: what telomeres actually tell us? (D23SY20PS0130)

Criscuolo F, Reichert S, Stier A, Zahn S, Massemim S

PS0144 - Modeling the relationship between age specific fecundity and lifespan in a cohort of fruit flies (D23SY20PS0144)

Van den Heuvel J, Brakefield P, Kirkwood TBL, Zwaan B, Shanley D

PS0234 - Individual heterogeneity and a trade-off between two competing life-history traits within species (D23SY20PS0234)

Nakagawa S, Senior A, Lim N

PS0256 - Comparison of oxidative stress related enzyme activities in two Atlantic salmon (*Salmo salar* L) populations: Insight to the trade-offs between physiology and survival during early life stages (D23SY20PS0256)

Kahar S, Vuori K, Vähä J, Vasemägi A

PS0302 - Extrinsic mortality and life span in birds and mammals (D23SY20PS0302)

Cooper N

PS0348 - Optimal foraging of Little Egrets and their prey in a foraging game in a patchy environment (D23SY20PS0348)

Wacht Katz M, Abramsky Z, Kotler B, Alteshtein O, Rosenzweig M

PS0473 - Inbreeding dependent trade-offs in the ant *Formica exsecta* (D23SY20PS0473)

Freitak D, Bos N, Stucki D, Sundström L

PS0474 - Genetic trade-offs and the evolution of human life-histories (D23SY20PS0474)

Hayward A, Lummaa V

PS0489 - Live smart, die young – sex differences in cognitive ageing in the dioecious nematode, *Caenorhabditis remanei* (D23SY20PS0489)

Zwoinska M, Maklakov A

PS0544 - On the evolution of life history trade-offs and phenotypic correlations (D23SY20PS0544)

Witting L

PS0569 - Life history response does not reveal fitness cost in lead selected *Drosophila subobscura* population (D23SY20PS0569)

Kenig B, Kalajdžić P, Stamenković-Radak M, Andelković M

PS0663 - What makes a good mother? How trade-offs maintain different maternal investment strategies within populations (D23SY20PS0663)

Pick J, Tscherren B

PS0709 - Life-history traits important in overwintering: phenotypic correlation and genetic background (D23SY20PS0709)

Tyukmaeva V

PS0720 - Discovering life-history trade-offs with suppression of tomato defence in the invasive spider mite *Tetranychus evansi* (D23SY20PS0720)

Knegt B, Egas M, Sabelis M

PS0826 - Crab osmoregulation and habitat diversification: does salinity drive physiological evolution? (D23SY20PS0826)

Faria S, Thurman C, McNamara J

PS0869 - Interaction of parasite- and predator-induced maternal effects in the Great tit (*Parus major*) (D23SY20PS0869)

Basso A, Coslowsky M, Richner H

PS0925 - Experimental manipulation of reproductive costs during the pre-breeding period reveals condition depending trade-offs in a long-lived, social bird species (D23SY20PS0925)

Griesser M, Wagner G

PS1058 - Trade-offs between personal immunity and reproduction in the burying beetle (*N. vespilloides*) (D23SY20PS1058)

Reavey C, Cotter S

PS1075 - Does increased stress resistance reduce the ability to deal with biotic challenges? A test through selection experiments on *Drosophila melanogaster* (D23SY20PS1075)

Hangartner S, Hoffmann A

PS1098 - External vs. internal immune defence in the Red Flour Beetle (*Tribolium castaneum*)? (D23SY20PS1098)

Joop G, Roth O, Schmid-Hempel P, Kurtz J

PS1120 - Evolution of male reproductive ageing under differential risk of death: the role of condition-dependent mortality (D23SY20PS1120)

Spagopoulou F, Chen H, Maklakov A

PS1131 - Fitness effects of a transposable element insertion depend on environmental conditions in *Drosophila melanogaster* (D23SY20PS1131)

Gonzalez J, Guió L

PS1183 - Reconciling overall virulence with virulence evolution under conditions of frequent multiple infections: insights from the *Daphnia-Pasteuria* host-parasite system (D23SY20PS1183)

Ben-Ami F

PS1197 - Metabolic rate as a proximate mechanism underlying life history strategies in flycatchers (D23SY20PS1197)

McFarlane E, Husby A, Qvarnström A

PS1228 - Big houses, big cars, superguppies and the costs of producing sperm (D23SY20PS1228)

Di Nisio A, Pilastro A

PS1286 - Life history and reproductive trade offs in

caecilian amphibians (D23SY20PS1286)
Kupfer A, Kuehnel S, Reinhard S

PS1380 - Longevity and reproductive performance strategies (D23SY20PS1380)
Sendeka J, Gustafsson L, Griesser M, Drobniak S

PS1388 - Phenotypic and genetic correlations for several potentially interacting traits in Mediterranean mussel (*Mytilus galloprovincialis*) (D23SY20PS1388)
Álvarez-Castro J, Pino-Querido A, Vera M, Pardo B, Blanco J, Fuentes J, Martínez P

PS1449 - Neither female reproductive costs nor male gonadal androgens drive development of sexual size dimorphism in lizards (D23SY20PS1449)
Kratochvíl L, Starostová Z, Golinski A, Kubicka L

PS1451 - A single molecule assay to study the fitness effects of leaky gene expression in individual cells (D23SY20PS1451)
Baltekin Ö, Leroy P, Elf J

Symposium 24

Unifying paleobiological and comparative perspectives on character evolution

PS0186 - Evolutionary ecology and extinct species: how do fossils change our interpretation of present-day biodiversity patterns? Using primates as an example (D23SY24PS0186)
Guillerme T, Cooper N

PS0195 - Adaptive radiations in alpha and beta niche dimensions (D23SY24PS0195)
Ripa J

PS0311 - Developmental mechanisms and evolution of shell coiling in gastropods (D23SY24PS0311)
Shimizu K, Endo K

PS0845 - Reassessing the temporal evolution of salamanders: the integrative evaluation of time constraints challenges current hypotheses (D23SY24PS0845)
Vieites D, Nieto-Román S

PS0848 - Insights on neuroanatomy evolution of early mammalian ancestors from a new Permian dicynodont from Mozambique (D23SY24PS0848)
Castañinha R, Araújo R, Costa Júnior L, Angielczyk K, Martins R, Martins G

PS0900 - Giants from dwarfs: support for sympatric processes of size divergence in *Austrolebias* South-American annual killifish (D23SY24PS0900)
Van Dooren TJM, Thomassen H, Kraaijeveld-Smit FJL

PS1208 - New approach to old vertebrae – a morphometric comparison of Miocene and extant snakes (D23SY24PS1208)
Cvetković D, Rubinjoni L, Vujić V, Đurić D

PS1276 - How good is good enough? An investigation of tree-based analyses using paleontological phylogenies (D23SY24PS1276)
Soul L, Friedman M

PS1387 - Stingless bee nest evolution is characterized by multiple gain and loss of brood cells cohesiveness (D23SY24PS1387)

Da Silva F, Werneck H, Campos LAO

Symposium 31

Development, behaviour and evolution

PS0048 - Personality and life history trade-offs in wandering albatross (D23SY31PS0048)
Patrick S, Weimerskirch H

PS0057 - How far do wasps fly and how do they return home? (D23SY31PS0057)
Mandal S, Gadagkar R

PS0082 - Potential pitfalls of cross-fostering to test parent-offspring conflict and coadaptation (D23SY31PS0082)
Estramil N, Eens M, Müller W

PS0096 - Uses and abuses of the term conflict in developmental biology and evolutionary medicine (D23SY31PS0096)
Donovan E, Buklijas T, Beedle A, Gluckman P

PS0121 - Wing pigmentation and the evolution of wing shape (D23SY31PS0121)
Outomuro D, Johansson F

PS0131 - Social conflict in ant larvae: a case for cannibalism (D23SY31PS0131)
Schultner E, D'Ettorre P, Helanterä H

PS0163 - It smells like blue (D23SY31PS0163)
Népoux V, Mery F

PS0237 - Genetics of sex determination and sexual traits in the parasitoid wasp genus *Asobara* (D23SY31PS0237)
Ma W, Pannebakker B, Beukeboom L, Schwander T, Wertheim B, Van de Zande L

PS0244 - Life-history pathways associated with sequential reproductive tactics in the peacock blenny (*Salarias pavo*) (D23SY31PS0244)
Oliveira R, Gonçalves D, Fagundes T, Saraiva J

PS0258 - No space for a large brain? Testing constructional constraints on brain size evolution in Lake Tanganyika Cichlids (D23SY31PS0258)
Tsuboi M, Gonzalez-Voyer A, Kolm N

PS0266 - Invasive crayfish have a greater impact on amphibian larval survival and pond structure than native predators (D23SY31PS0266)
Arribas Ramos R, Diaz Paniagua C, Gomez-Mestre I

PS0268 - Nutritional ecology and contest behaviour in parasitoid wasps (D23SY31PS0268)
Kapranas A, Snart C, Hardy I

PS0315 - Conflict and co-adaptation: the evolution of parental care in a wild bird species (D23SY31PS0315)
Lucass C, Eens M, Müller W

PS0343 - Mating success and morphological traits in *Drosophila melanogaster* strains developed in different nutritive environments (D23SY31PS0343)
Filipović L, Trajković J, Pavković-Lučić S, Savić T

PS0344 - Quantitative trait genes for fearful behaviour under chicken domestication (D23SY31PS0344)
Johnsson M, Gustafsson I, Jensen P, Wright D

PS0361 - Nest distribution affects behaviour and reproductive success of a marine fish

(D23SY31PS0361)

Mück I, Wacker S, Myhre L, Amundsen T

PS0371 - Molecular characterization of postzygotic isolation barriers in wild tomatoes: the endosperm transcriptome of *Solanum peruvianum*

(D23SY31PS0371)

Florez-Rueda A

PS0453 - The neural implications of sexual selection

(D23SY31PS0453)

Hoops D, Whiting M, Keogh JSCOTT

PS0482 - Small RNA regulation of post mating response to sex peptide in female *Drosophila melanogaster* (D23SY31PS0482)

Smith D, Mohorianu I, Dalmay T, Chapman T

PS0498 - Why do spider mites re-mate?

(D23SY31PS0498)

Rodrigues L, Clemente S, Carvalho J, Duarte F, Ponce R, Varela S, Olivier I, Magalhães S

PS0561 - Sexual selection on a cryptic wing pattern trait in *Drosophila* (D23SY31PS0561)

Abbott J, Katayama N, Kjaerandsen J, Svensson E

PS0608 - Vultures acquire information on carcass location from scavenging eagles –the evolution of a producer-scrounger game (D23SY31PS0608)

Kane A

PS0722 - Daily and seasonal changes in the locomotor activity of *Drosophila montana* flies is accompanied by changes in the expression of two circadian genes, period and timeless

(D23SY31PS0722)

Kauranen H, Hoikkala A, Kankare M

PS0740 - Quantifying gene expression patterns for understanding development and evolution

(D23SY31PS0740)

Martínez-Abadías N, Niksic M, Sharpe J

PS0867 - Characterization of sex-biased genes from the transcriptome of amale-dimorphic mite

(D23SY31PS0867)

Stuglik M, Babik W, Radwan J

PS0886 - Positive selection drives the transcriptional evolution of the *Drosophila* chemosensory gene families (D23SY31PS0886)

Librado P, Rozas J

PS0896 - A resampling-based approach to study variation in morphological modularity

(D23SY31PS0896)

Fruciano C, Franchini P, Meyer A

PS0906 - Sex-biased gene expression in a broadcast spawning dioecious brown algae, *Fucus vesiculosus*

(D23SY31PS0906)

Martins M, Mota C, Pearson G

PS0930 - A novel approach to study phenotypic evolution in an adaptive radiation: x-ray images provide novel insights into the adaptive radiation of cichlid fishes in East African Lake Tanganyika

(D23SY31PS0930)

Colombo M, Meury F, Büscher H, Salzburger W

PS0957 - The costs of helping behaviour in cooperatively breeding warblers (D23SY31PS0957)

Kingma S, Komdeur J, Richardson D

PS0977 - Alteration of HPA/HPG axis reactivity as a consequence of chicken domestication

(D23SY31PS0977)

Fallahshahrodi A, Ericsson M, Bergquist J, Kushnir M, Jensen P

PS0982 - Effects of a mutation in the adrenergic receptor gene ADRA2C, selected during chicken domestication, on gene expression, receptor density and behaviour (D23SY31PS0982)

Elfwing M, Fallahshahrodi A, Altimiras J, Jensen P

PS0991 - Exploratory performance in an open field test of bank voles (*Myodes glareolus*) from multidirectional artificial selection experiment (D23SY31PS0991)

Maiti U, Chrząścik K, Rudolf A, Sadowska E, Koteja P

PS0993 - Genetic insights into the behavioural and morphological diversity of African mole-rats (family: Bathyergidae) (D23SY31PS0993)

Davies KTJ, Bennett N, Tsagkogeorga G, Parker J, Rossiter S, Faulkes C

PS1056 - Gene expression differences in Arctic charr ecomorphs during head development

(D23SY31PS1056)

Pashay Ahi E, Guðbrandsson J, Pálsson A, Kapralova K, Franzdóttir S, Snorrason S, Maier V, Jónsson Z

PS1087 - Co-option of host-alternating polyphenism in the evolution of caste polyphenism in social aphids (D23SY31PS1087)

Uematsu K, Shibao H

PS1135 - Experimental evolution reveals the "mother's curse": Sperm competition and cytonuclear interactions in *Drosophila*

(D23SY31PS1135)

Kimber C, Chippindale A

PS1144 - TSHR -a possible domestication gene

(D23SY31PS1144)

Karlsson A, Svemer F, Eriksson J, Andersson L, Jensen P

PS1161 - The influence of cyto-nuclear interactions on life-history traits and behaviour (D23SY31PS1161)

Lovlie H, Arnqvist G

PS1184 - Evolutionary diversification at multiple levels of variation in *Drosophila* Wing Shape

(D23SY31PS1184)

Benitez H, Klingenberg C

PS1211 - Effect of male reproductive proteins on female fitness in seed beetles (D23SY31PS1211)

Goenaga J, Yamane T, Rönn J, Arnqvist G

PS1307 - Hormonal effects on the vocal communication and anti-predator behaviour of cooperative breeding meerkats (*Suricata suricatta*)

(D23SY31PS1307)

Braga Goncalves I, Manser M

PS1350 - Anthropogenic disturbances on the development and physiology of marine species

(D23SY31PS1350)

Mills S, Beldade R, Bernardi G, Bigot L, Chabanet P, Holles S, Mourrier J, O'Donnell J, Planes S, Radford A, Simpson S

PS1385 - A general mechanism for conditional expression of sexually-selected traits

(D23SY31PS1385)

Warren I

PS1423 - On the condition dependence of male genital spines in the seed beetle *C. maculatus* (D23SY31PS1423)
Grieshop K, Hotzy C, Rönn J, Arnqvist G

PS1438 - Repeated lake-stream divergence in Stickleback life history within a Central European lake basin (D23SY31PS1438)
Moser D, Berner D

PS1461 - Brain size and personality: artificial selection reveals a positive genetic correlation between brain size and proactivity in the guppy (D23SY31PS1461)
Lievens EJP, Kotrschal A, Dahlbom J, Bundsen A, Semenova S, Sundvik M, Maklakov A, Winberg S, Panula P, Kolm N

Symposium 34

General Symposium

PS0008 - Variation of anal fin egg-spots along an environmental gradient in a haplochromine cichlid fish (D23SY34PS0008)
Theis A, Salzburger W, Egger B

PS0083 - Quantifying sex roles during incubation in songbirds: a comparative analysis (D23SY34PS0083)
Remes V, Matysiokova B

PS0120 - Nucleosome positions in eukaryotes and archaea primarily reflect rather than affect sequence evolution (D23SY34PS0120)
Warnecke T, Becker E, Facciotti M, Supek F, Nislow C, Lehner B

PS0147 - The evolution of punishment in public goods games (D23SY34PS0147)
Traulsen A

PS0417 - Species recognition in two sympatric European cicadas of genus *Tettigettalna* (Hemiptera, Cicadidae): is acoustic behaviour enough? (D23SY34PS0417)
Nunes V, Mendes R, Quartau J, Seabra S, Paulo O, Simões P

PS0520 - Fewer invited talks by women in evolutionary biology: men accept invitations to speak more often than women (D20SY34PS0520)
Duggdale H, Schroeder J, Radersma R, Hinsch M, Buehler D, Saul J, Porter L, Liker A, De Cauwer I, Johnson P, Santure A, Griffin A, Bolund E, Ross L, Webb T, Feulner PGD, Winney I, Szulkin M, Komdeur J, Versteegh M, Hemelrijk C, Svensson E, Edwards H, Karlsson M, West S, Barrett ELB, Richardson D, Van den Brink V, Wimpenny J, Ellwood S, Rees M, Matson K, Charmantier A, Dos Remedios N, Schneider N, Teplitsky C, Laurance W, Butlin R, Horrocks N

PS0596 - Polymorphism at Frost gene explains developmental time variability in *Drosophila americana* (D23SY34PS0596)
Vieira J, Reis M, Páscoa I, Rocha H, Aguiar B, Vieira C

PS0638 - The scent of inbreeding: a male sex pheromone betrays inbred males (D23SY34PS0638)
Van Bergen E, Brakefield P, Heuskin S, Zwaan B, Nieberding C

PS0695 - Reproductive biology of the 'Zygopetalum maculatum' orchid complex and its consequences

for species diversification (D23SY34PS0695)
Koehler S, Campacci TVS, Oliveira RLF, Suzuki R, Catharino ELM

PS0806 - Maintenance of co-operation by positive feedback in quorum sensing networks (D23SY34PS0806)
Allen R, Brown S

PS0889 - Engineering microsatellite markers to study and compare a wide range of species (D23SY34PS0889)
Dawson D

PS0997 - Pollinator selection on floral traits in a natural hybrid zone of two generalist plant species (D23SY34PS0997)
De Oliveira JPMCM, Agudo A, Afonso A, Castro S, Álvarez I, Loureiro J, Torices R

PS1062 - Hsp70 gene family evolution and differential expression in microbial eukaryotes (D23SY34PS1062)
Krenek S, Schlegel M, Berendonk T

PS1127 - Sex and cooperation in digital communities (D23SY34PS1127)
Misevic D, Frénay A, Taddei F

PS1153 - Testing the role of reproductive proteins in the ecological speciation of *Littorina* species (D23SY34PS1153)
Sá-Pinto A, Flot J, Seguin-Orlando A, Martínez-Fernández M, Ferreira Z, Baird SJE

PS1231 - Sequencing the genome of *Fraxinus excelsior* (European Ash) (D23SY34PS1231)
Zohren J, Sollars ESA, Clark J, Boshier D, Joecker A, Buggs RJA

PS1355 - Strategic sperm allocation in relation to male age in the lek-mating lesser wax moth *Achroia grisella* (D23SY34PS1355)
Schmoll T, Ruoff M, Cordes N, Engqvist L

PS1412 - Functional impact of gene loss in genome evolution and animal diversity: the chordate *Oikopleura dioica* as a case study (D23SY34PS1412)
Cañestro C, Martí-Solans J, Badia-Ramentol J, Godoy-Marin H, Albalat R

PS1421 - Historical contingency and parallel parapatric divergence between lake and stream stickleback pairs of variable age (D23SY34PS1421)
Lucek K, Sivasundar A, Kristjánsson B, Skúlason S, Seehausen O

PS1427 - Females bite back: sexual conflict and the evolution of venom proteins in the reproductive tract of female anole lizards (D23SY34PS1427)
Duryea K, Calsbeek R, Kern A

PS1431 - Transcriptomics reveals patterning and pigmentation genes shaping the *Heliconius melpomene* wing colour variation (D23SY34PS1431)
Pardo C, Jiggins C

PS1462 - Ontogenetic growth models and life history theory (D23SY34PS1462)
Kwiatkowski M, Koella J

PS1466 - Cooperative niche construction facilitates zoonosis in pathogenic bacteria (D23SY34PS1466)
McNally L, Viana M, Brown S

DETAILED PROGRAM

SATURDAY 24

Plenary Talk

Room / Time	08:30 – 09:30	09:30–10:30
Aula Magna	<p>Virpi Lummaa Department of Animal and Plant Sciences, University of Sheffield, United Kingdom</p> <p>Sex differences in natural selection on reproductive scheduling and longevity in humans</p> <p>Despite senescence with age, most animals retain ability to reproduce until relatively close to death. Humans provide an interesting case because with mid-life menopause, women show a radical de-coupling of senescence in reproductive and somatic systems, leading to up to half of total lifespan spent post-reproductive. By contrast, men maintain reproductive ability until much later ages. Although men thus sire offspring at older ages than women, nearly all contemporary human populations exhibit sexual dimorphism in lifespan with women outliving men by on average of five years. While proximate causes for such fertility and lifespan differences between the sexes are well-known, our understanding of the underlying evolutionary forces is much more limited. I use pedigree data on pre-industrial Finnish men and women collected by local clergymen: (1) to address different evolutionary hypothesis for the benefits of menopause and post-reproductive longevity in women; (2) to assess whether selection on overall lifespan differs between the sexes; (3) and to estimate sex-specific heritabilities for, and genetic correlations between, lifespan and fitness to predict evolutionary trajectories for lifespan and sexual dimorphism. Understanding sex differences in rates of senescence in reproduction and survival, both key life-history traits, provides insights into how differing selection pressures can mould rates of senescence and ultimate longevity within a species. I hope to illustrate that although evolutionary studies on contemporary human populations suffer from many limitations, some of the data available on humans offer interesting research opportunities also for evolutionary biologists with potential implications for studies on demography, public health or anthropology.</p>	Coffee Break

Session 14

Time /Room	10:30 – 10:49	10:54 – 11:13	11:18 – 11:37	11:42 – 12:01	12:01 – 13.00
R1 SY30 Chair: Nichols R	D24SY30IT10:30R1 INVITED TALK Knowles L Testing the when, where, and how of divergence with species-specific predictions of genetic variation under alternative hypotheses		D24SY30IT11:18R1 INVITED TALK Lemmon EM Anchored Phylogenomics: Accelerating the Resolution of Life		
R2 SY31 Chair: Sucena E & Mirth C	D24SY31IT10:30R2 INVITED TALK Ledon-Rettig C , Womble M, Nascone-Yoder N Altered developmental programs underlying the novel gut morphology of a cannibalistic anuran larva		D24SY31RT11:18R2 Vijendravarma R , Narasimha S, Kawecki T Predatory cannibalism in <i>Drosophila melanogaster</i> larvae	D24SY31RT11:42R2 Winkelmann K , Genner M, Rüber L Competition driven ecological speciation in Lake Tanganyika cichlids	
R3 SY02 Chair: Treguenza T & Bilde T	D24SY02IT10:30R3 INVITED TALK Reid J Quantitative genetic covariances underlying selection on polyandry in a natural song sparrow population		D24SY02RT11:18R3 Raeymaekers JAM , Chaturvedi A, Konijnendijk N, Maes G, Volckaert F Adaptive divergence in two coexisting stickleback species	D24SY02RT11:42R3 Kraemer S , Kassen R Drawing a natural fitness landscape in space and time: temporal adaptation of soil bacterial communities	
R4 SY11 Chair: Rickard I & Adams M	D24SY11IT10:30R4 INVITED TALK Stearns S The demographic transition and the global burden of degenerative disease		D24SY11RT11:18R4 Van Geystelen A , Wenseleers T, Decorte R, Larmuseau MHD Updating the Y-chromosomal phylogeny based on SNPs in available WGS data	D24SY11RT11:42R4 Mautz B , Jennions M, Peters R, Wong BBM Selection on penis size, body shape and height in humans: a simple multivariate method to quantify female preferences based on male physical attractiveness	
R5 SY18 Chair: Pietrzak B	D24SY18IT10:30R5 INVITED TALK Coulson T Using evolutionary demography to link evolution and ecology		D24SY18RT11:18R5 Chantepie S , Téplitsky C, Sarrazin F, Robert A Actuarial senescence increases the risk of extinction of mammal populations	D24SY18RT11:42R5 Lohr J , David P, Haag C Reduced lifespan and increased ageing driven by genetic drift in small populations	Lunch

SATURDAY 24

Time / Room	10:30 – 10:49	10:54 – 11:13	11:18 – 11:37	11:42 – 12:01	12:01 – 13.00
R6 SY08 Chair: Bossdorf O	D24SY08IT10:30R6 INVITED TALK Johannes F Mapping the transgenerational epigenetic basis of complex traits in <i>Arabidopsis</i>		D24SY08RT11:18R6 Van Dooren TJM Adaptive dynamics modelling with evolving epigenetics	D24SY08RT11:42R6 Carja O , Feldman M Evolution with stochastic epigenetic variation: a role for recombination	
R7 SY04 Chair: King K, Ruiz-González MX, Orivel J & Wolinska J	D24SY04IT10:30R7 INVITED TALK Boomsma J Using molecular and 'omics' approaches to understand the evolutionary complexities of ant fungus-farming		D24SY04RT11:18R7 Duarte ALF , Welch M, Kilner R Interactions between species shape parental investment in the burying beetle	D24SY04RT11:42R7 Schär S , Pierce N, Vila R, Nash D Ecological consequences of different kinds and degrees of ant-butterfly symbioses	
R8 SY03 Chair: Brunet F & Ponce R	D24SY03RT10:30R8 Wurm Y , Wang J, Nipitwattanaphon M, Ribagrognuz O, Huang Y, Shoemaker D, Keller L AY-like social chromosome causes alternative colony organization in fire ants	D24SY03RT10:54R8 Schlötterer C , Palmieri N, Nolte V, Kosiol C The rapid life cycle of <i>Drosophila</i> orphans	D24SY03RT11:18R8 Bilgin T , Wagner A Unstable tandem repeats in primate promoters enhance expression divergence	D24SY03RT11:42R8 Vieira C , Aguiar B, Vieira J, Cunha A, Iezzoni A, VanNocker S The paradigm of irreversibility in gametophytic self-incompatibility: the Malus and Prunus systems	
R9 SY34 Chair: Magalhães S & Matos M	D24SY34RT10:30R9 Becks L Eco-evolutionary dynamics and the evolution of sex	D24SY34RT10:54R9 Tatiana D , Julien B, Ariel L, François T Bacterial sex can enhance cooperation	D24SY34RT11:18R9 Tognetti A , Raymond M, Ganem G, Faurie C Is sexual selection involved in the maintenance of the cooperative mound-building in <i>Mus spicilegus</i> ?	D24SY34RT11:42R9 Wigby S , Sirot L, Perry J, Kim Y Condition and molecular mating strategies in <i>Drosophila melanogaster</i> : large females get more, small males try harder	Lunch

ESEB Members Meeting

Time / Room	13:00 – 14:00	14:00 – 14:30
Aula Magna	ESEB Members Meeting All delegates are invited to attend and hear about the new elected officers, the growing membership as well as accomplishments of the society during the last two years.	Break

Presidential Address

Time / Room	14:30 – 15:30	15:30 – 15:45
Aula Magna	Roger Butlin Department of Animal and Plant Sciences, University of Sheffield, United Kingdom Reinforcement (and other modes of speciation) Reinforcement is often considered special among modes of speciation because natural selection favours the build-up of barriers to gene flow: reproductive isolation is not just an incidental consequence of divergence, it is a device to prevent maladaptive hybridization. The idea is controversial partly because the term 'reinforcement' is used in various different ways. More importantly, reinforcement is hard to demonstrate and so it remains uncertain how much it contributes to speciation. Like other processes, it is only ever part of the speciation story. I will discuss the role of reinforcement in association with various other elements of speciation, using evidence from some of my favourite organisms.	Break

John Maynard Smith Prize

Time / Room	15:45 – 16:45	16:45 – 17:00
Aula Magna	Rich FitzJohn Department of Biological Science, Macquarie University, Australia What drives biological diversification? Detecting traits under species selection	Break

Aula Magna	<p>Species selection - heritable trait-dependent differences in rates of speciation or extinction - may be responsible for variation in both taxonomic and trait diversity among clades. While initially controversial, interest in species selection has been revived by the accumulation of evidence of widespread trait dependent diversification. I will present several methods for investigating species selection by detecting the association between species traits and speciation or extinction rates. These methods are explicitly phylogenetic and incorporate simple, but commonly used, models of speciation, extinction, and trait evolution. Using these methods, I will present several examples where traits are correlated with speciation or extinction rates in plants and mammals. All methods have assumptions and limitations, and I will discuss the pitfalls that arise when applying these methods (and the widely used methods that they derive from) to messy biological data. Comparative phylogenetic methods must be used with caution, but allow testing of long-standing hypotheses about causes of variation in biological diversity.</p>	Break
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Distinguished Fellow Ceremony

Time / Room	17:00 – 18:00	18:00 – 18:30
Aula Magna	<p>Rolf Hoekstra Laboratory of Genetics, Wageningen University, Netherlands ♀ ♂ + - Over a timespan of some 30 years I have intermittently worked on understanding the origin of sexual asymmetry. I greatly enjoyed it, but the problem remains...</p>	Closing Ceremony

SOCIAL PROGRAM AND TOURS

Welcome Reception / Barbecue

All delegates are invited to attend our Welcome Reception, which will be held on Monday evening (19 August, 19.00 – 22.00h) in the Building C6 of the Faculty of Sciences of the University of Lisbon, right after Registration. Don't miss the opportunity to network with seasoned professionals or newcomers and reunite with friends and colleagues. Food and drinks will be served.

Congress Dinner

The Congress Dinner takes place on Saturday evening (24 August) at Pátio da Galé situated in heart of the city, in the west wing of Praça do Comércio, a great reference of the European Enlightenment of the 18th-century.

Pátio da Galé is a building from the Pombaline era, that maintains its original architectural design, enriched with avantgarde elements and concepts that reflects the innovative and modern atmosphere associated to Lisbon. It has also a privileged location near the Tagus River and Lisbon's main avenues that allow you to enjoy and experience the city.

The best way to get Pátio da Galé is by Metro / Underground. There is a Metro/Underground station at Praça do Comércio (Terreiro do Paço – Blue Line). Tickets must be purchased in machines inside the station and cost 1.25€ per ride + 0.50€ Reusable Transport card. For more details please visit <http://www.metrolisboa.pt/eng/>.

Guided Tours and Excursions

Lisbon by Night with Fado Show

August 22, departure at 20h00 from the Faculty of Sciences.

Departure to a typical Restaurant located in an old borough of Lisbon for a Portuguese dinner. While dinner are being served one attends a floor show of the traditional Lisbon song the Fado, which may be a love lament or may describe the beauties of the city and of her "eternal lover" the River Tagus. The singer may be male or female and is always accompanied by two guitar players, being one a 12 strings Portuguese guitar. This Lisbon by Night tour will enable the possibility of enjoying the gastronomy and wines of Portugal as well as its traditions.

No recommended attire.

Price per person: € 69,00

Minimum of 25 people per bus is required.

Half day tour to Sintra / Cascais

August 22, departure at 14h00 from the Faculty of Sciences.

Departure to Sintra, a small delightful town in the forest covered Mountain of Sintra, immortalized as "Glorious Eden" by the World famous poet Lord Byron. Located about 30 kilometers northwest of

Lisbon, there will be a visit to the Royal Palace of Sintra, a fabulous royal residence of many Portuguese Kings, with wings and halls dating from the 13/14th Centuries. Sintra is excellent for shopping souvenirs and handicraft, and there will be time at leisure. Descending the mountain on to Cape Roca, the Western-most point of continental Europe, a stop will be made by the cliffs over the Atlantic Ocean. Then following the coastline the tour will pass by Guincho Beach, *Boca do Inferno* (Hell's Mouth) an ocean carved spectacle in rock. Arriving at the old fishermen village of Cascais that in the 1940's was chosen as residence by exiled European Royalty, a stop will be made by the lovely bay filled with fishing boats. Time at leisure in Cascais, and return to Lisbon via the Estoril coastal road.

Price per person: € 46,00

Minimum of 25 people per bus is required.

Half day tour to Sesimbra / Arrábida

August 22, departure at 14h00 from the Faculty of Sciences.

Departure heading South of Lisbon crossing the Bridge 25th April over the River Tagus and continuing to Azeitão. This region is famous for a small creamy lamb's cheese and for the excellence of its wines.

Continuation to Sesimbra passing by the old Castle before descending to the well known fishing village with the traditional trawlers moored in the jetty. Sesimbra is also favoured by sports fishermen due to the sword-fish/marlin. All streets of Sesimbra lead to the beaches with calm waters where one may watch the heavy nets being pulled on to the golden sands.

From Sesimbra the tour proceeds for a scenic drive by the coastal road along the Arrábida Mountain, a preserved Natural Park due to its unique vegetation in Europe, and with a superb view over the mouth of the River Sado and the Atlantic Ocean.

Price per person: € 45,00

Minimum of 25 people per bus is required.

Full day tour to Évora

(August 25, departure at 09h30 from the Faculty of Sciences)

Departure by the Bridge 25th April over the River Tagus passing by Montemor on to Évora. Classified as "Museum Town and World Heritage" by the Unesco in 1986, Évora was first known by the Celts as Ebora, by the first Roman settlers as Ebora Cerealis and in 27 BC as Liberitas Julia. In the suburbs of Évora there are cromlechs, menirs and dolmens as well as remains from the Neolithic 3.500 BC.

In Medieval times the town held the courts of the Portuguese Kings of the 1st dynasty (Afonso I) since 1165 and of the 2nd dynasty (Afonso II) up to 1559. The Roman-Gothic Cathedral dating from 1186, the Church of St. Francis built in 1480 with the macabre Chapel of Bones, the ruins of the Roman Temple of

Diana are some of the places of great interest that may be visited.

Lunch will be served at a regional restaurant. Small streets with Manuelle (Gothic – Naturalist) geminated - windows and porticos as well as the

"Moucharabieh" verandahs of Mudejar influence, lead to the Praça do Giraldo, the meeting point of Évora's inhabitants. Time at leisure.

Price per person: € 78,00

Minimum of 25 people per bus is required.

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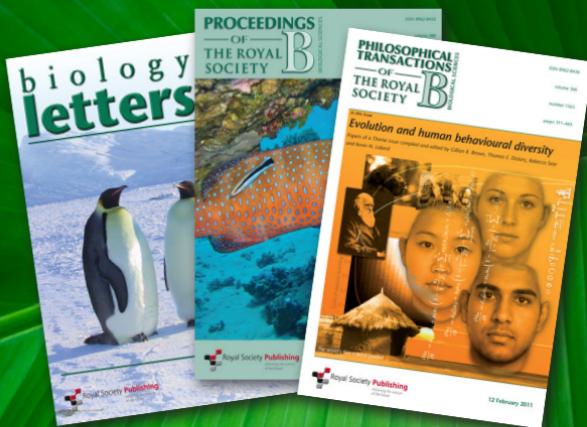
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