



ESEB

XVI Congress

Groningen, The Netherlands



20-25 August 2017

Download the official ESEB2017 mobile application!





Thank you for joining!



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WELCOME

Dear guests,

We welcome you to the 16th international meeting of the European Society of Evolutionary Biology (ESEB 2017) at the MartiniPlaza in Groningen! As we say here “*er gaat niets boven Groningen*” (nothing tops Groningen), which refers both to the very nice atmosphere of this university town, as well as to its location in the Northern part of the Netherlands close to the Wadden Sea.

This year's meeting is special for two reasons. The year 2017 marks the 30th anniversary of the European Society of Evolutionary Biology. The second is that it foresees in a fostering between medical scientists of the International Society for Evolution, Medicine & Public Health (ISEMPH) and evolutionary biologists of ESEB. This will be accomplished by having Monday, August 21 as a joint first day of ESEB 2017 and last day of the 3rd ISEMPH meeting with a focus on evolutionary medicine related symposia. In addition, there is a joint welcome reception on Sunday, August 20 with a keynote lecture on the evolution of ageing.

In the tradition of ESEB, the 5-day programme consists of 35 symposia covering a wide range of topics, and one afternoon of excursions. We are proud to have each day opened by outstanding keynote speakers. A unique feature of ESEB 2017 is that the more than 800 posters will be on display during the whole meeting. We have daily outreach activities at the Noorderzon festival in town that we recommend for an evening visit. Last but not least, there is the opportunity for social gathering in the Pavillion, where you can have a meal, drinks and enjoy the dynamic Dutch weather in an outdoor setting.

We wish you a productive and enjoyable meeting!

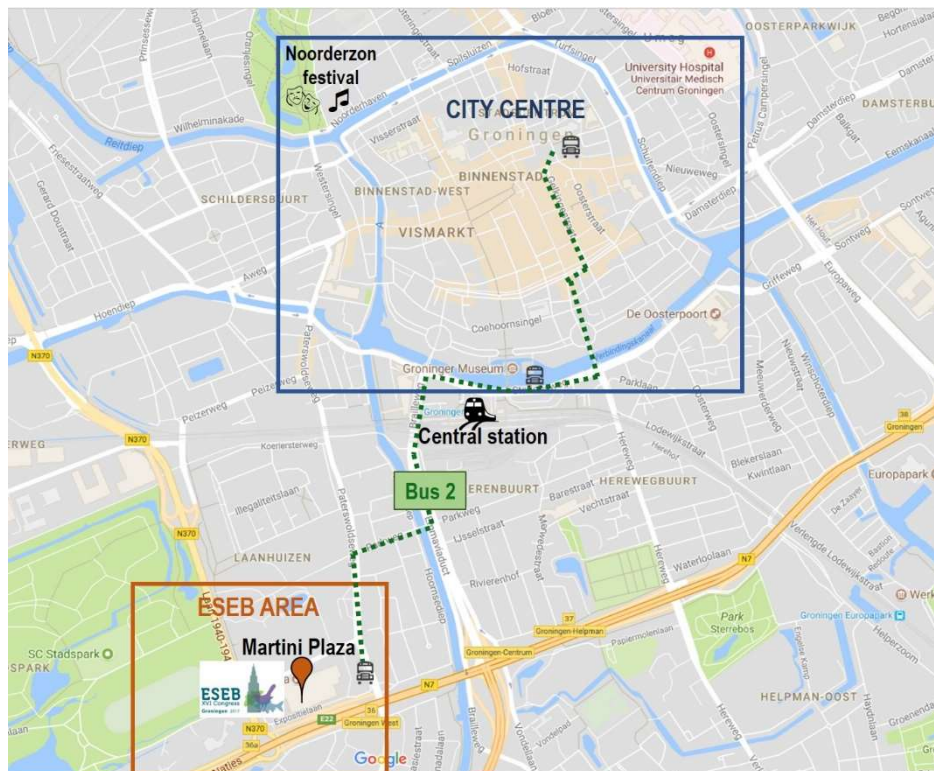
Leo Beukeboom (chair organising committee), Martine Maan, Mariska Pater (Groningen Congress Bureau), Emma Plender- Hartman, Paul Steerenberg, Simon Verhulst, Bregje Wertheim & Franjo Weissing (chair scientific committee).

TABLE OF CONTENTS

VENUE LOCATION.....	1
ESEB AREA.....	2
MARTINIPLAZA PLAN	3
KEY INFORMATION	5
PLENARY LECTURES.....	9
SATELLITE ACTIVITIES	10
SOCIAL EVENTS.....	13
OUTREACH	15
LIST OF SYMPOSIA	16
PROGRAMME SUMMARY	21
PROGRAMME	22
POSTER LIST	66
NOTES.....	95

VENUE LOCATION

The Congress will take place at the Congress Centre MartiniPlaza (Leonard Springerlaan 2, NL-9727 KB) Groningen, The Netherlands.



For a more detailed map, scan the QR code with your phone, use the ESEB 2017 app, visit the website or use the following link:

<https://www.google.com/maps/d/u/0/edit?mid=1tN50tu4AaFpA8mDT6FlzaDWGPLY&ll=53.20645276939627%2C6.550367348828104&z=13>



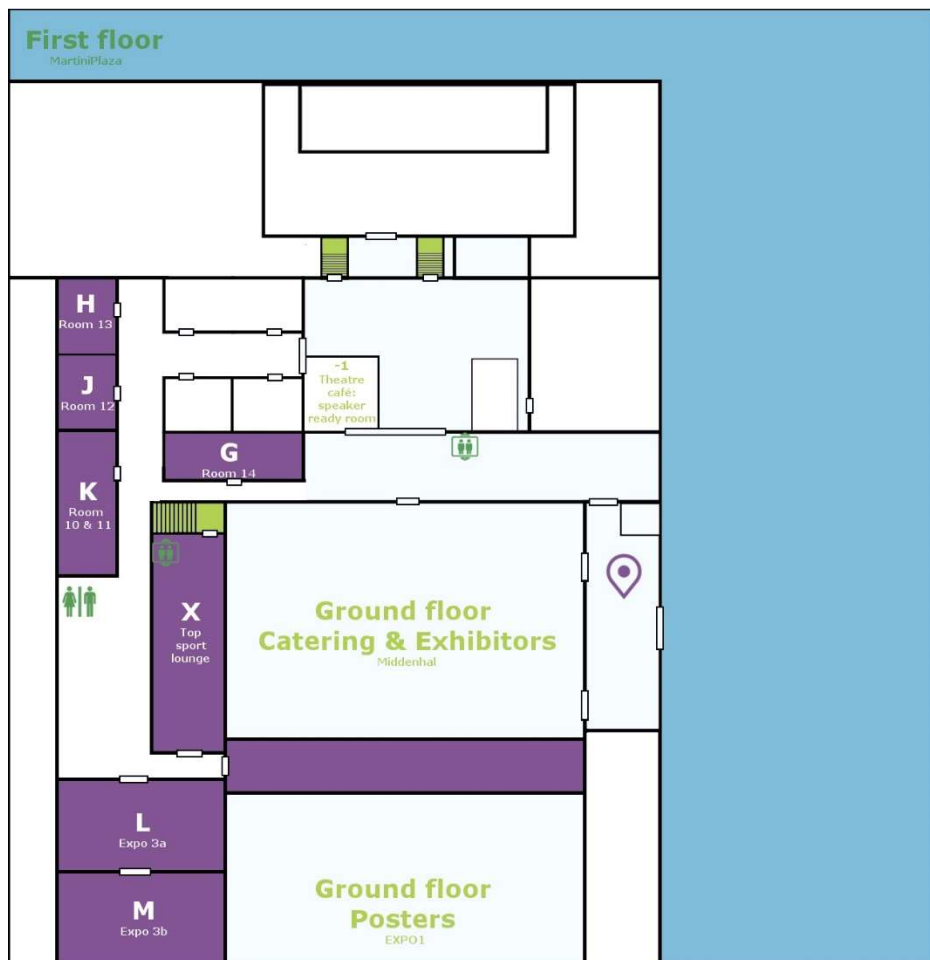
ESEB AREA



MARTINIPLAZA PLAN

INFORMATION





KEY INFORMATION

TRAVEL AND TRANSPORT

Groningen is easily accessible through Schiphol Amsterdam Airport (direct train to Groningen), City Airport Bremen (shuttle to Groningen) or Groningen Airport Eelde (selective number of European connections).

Arriving by train: Busses (line 2, direction ‘Hoornsemeer’) are leaving from the Main Railway Station Groningen to the Martiniplaza.

Arriving by car: The Martiniplaza is situated next to Motorway A7 (Amsterdam/Drachten, Hoogezand/Germany) and nearby Motorway A28 (Assen/Zwolle). Please note that car traffic in the city centre is restricted and street parking is very limited. Also, be aware of the numerous cyclists that may not exactly follow the traffic regulations. There are ten parking garages located near the centre. More information on car parking in Groningen, including the street parking regulations, can be found on the website.

Parking facilities: There is a paid parking garage opposite of the main entrance of the MartiniPlaza.

By bus: The ESEB organisation arranged that all participants can travel easily by bus in Groningen. After receiving your conference badge, you can travel for free with Qbuzz. The logo is printed on the badge, which means this is your (free) bus travel ticket from August 20 – August 25. You can find all bus schedules or plan your bus trip on 9292.nl/en.

Walking distance: The Martiniplaza is situated nearby the City Centre and the Main Railway Station Groningen. It takes about 15 minutes walking from the Railway Station. For more information (only Dutch) about the Venue: www.martiniplaza.nl

By bike: It is possible to rent a bike (€ 10, - per day) at Fietsverda Fietsen (Poelestraat 56, Groningen; 050 – 3114308; info@fietsverda.nl). Some hotels also have bikes available.

Planning your journey in the Netherlands

You might find the website www.9292.nl/en very useful for planning your journey in the Netherlands. The planner combines all available public transportation - trains, buses, trams, metro, and boats - to provide an optimal route. You can fill in Martiniplaza as final station and departure station 'Grote Markt' or 'Central station'.

Taxis in Groningen

Taxi Groningen: +31 (0)50 541 8452; Taxi Noord: +31 (0)50 549 4940; Taxi VTG: +31 (0)50 535 0088

CONFERENCE INFORMATION

Registration and information desk

General information can be obtained at the information desk. The information desk will be open during the entire conference (both the morning and the afternoon). Participants can always go to the desk for questions.

Staff

Congress staff will be easily identified by their purple ESEB 2017 T-shirt with "crew" written on the back. The staff will be available to answer any questions and provide help during the conference.

The Pavillion

There will be a social area in the Pavillion, opposite the MartiniPlaza and bordering a park, open on the evenings (19.30-23.00) of Monday 21, Tuesday 22, and Thursday 24 August. The pre-ordered meals will be served here and there will be a cash bar. The conference dinner on Friday 25 August will also be in and around the Pavillion.

Breaks, lunch and dinner

Coffee/tea breaks and lunch are included. Pre-booked, low cost dinners will be served at the Pavillion. These dinners can still be booked until 12.00 (noon) of the same day at the information desk for Monday 21, Tuesday 22, or Thursday 24 August. There is a broad assortment of restaurants in the city, advance booking is recommended.

Talks and Posters

The talk and poster abstracts are available on the scientific programme on the website (just click on the title to see it). The abstracts will also be available on the Conference App. There is a room (identified as “speaker ready”) where the presenters should upload their talks at least half a day in advance. The use of personal laptops in the conference rooms is not possible. The posters can be installed in EXPO1 on Sunday afternoon 20 August or Monday morning 21 August. They can stay on display during the entire week. Poster boards will be available, numbered and grouped per symposium. Material to mount the posters will be available. Student helpers will be present for assistance.

The ESEB 2017 poster prizes

There will be approximately 800 posters presented at ESEB 2017, and six of these will be awarded a prize. In addition to the eternal fame that comes with being an ESEB poster prize recipient there will be a modest monetary prize (€250, €150, and €100 for one 1st, two 2nd and three 3rd prizes respectively). All conference attendees can contribute to the selection of the prize winners through the Conference App, by nominating up to 15 posters for a prize. You can nominate the posters by giving stars to the abstracts. Votes will be counted on Friday morning 25 August and prize winners will be announced at the closing ceremony.

ADDITIONAL INFORMATION

Internet

The internet can be accessed via “eduroam” or the network from MartiniPlaza (Network name: martiniplaza; username: martiniplaza; password: martiniplaza).

Childcare

Childcare is available during the conference. If childcare was not requested in advance, please go to the information desk.

Contact information

For questions concerning your registration or your hotel reservation please contact: Groningen Congress Bureau (+31 50 316 88 77, e-mail: info@gcb.nl).

Emergency number: 112

Use only when you need to reach emergency services (ambulance, fire and rescue, police).

Conference App

The 2017 Congress of the European Society for Evolutionary Biology has a free, official mobile application. You can download the free official ESEB2017 app for our event.

You'll be able to:

- View the event agenda and plan your schedule.
- Find attendees, send in-app messages and exchange contact info.
- Receive update notifications from the organizers.
- Access the floorplan.

The ESEB2017 app is also used to nominate posters.

- Open the scientific program.
- Find the poster session.
- Select the poster you want to nominate.
- Press 'rate' and select stars

The ESEB2017 app is available on:



PLENARY LECTURES

(ROOM A)

Linda PartridgeSunday 20th, 18:00-19:00

Max Planck Institute for Biology of Ageing

Opening keynote lecture: *"Evolutionary biology and healthy ageing"***Svante Pääbo**Monday 21st, 9:00-9:50

Max Planck Institute for Evolutionary Anthropology

*"A Neandertal Perspective on the Human Genome"***Steve Stearns**Monday 21st, 16:45-17:25

Yale University

*"The relations between evolution and medicine, journals and societies"***Nicole Dubilier**Tuesday 22nd, 9:00-9:50

Max Planck Institute for Marine Microbiology

*"Diversity matters: Horizontal gene transfer and symbiont strain heterogeneity provide multiple benefits to deep-sea mussels from hydrothermal vents"***Andreas Wagner**Wednesday 23rd, 9:00-9:50

University of Zurich

*"The power of recombination to create new adaptations and innovations"***Renee Duckworth**Thursday 24th, 9:00-9:50

University of Arizona

*"Individual variation, ecological dynamics and evolutionary feedbacks"***Chris Jiggins**Friday 25th, 9:00-9:50

University of Cambridge

*"From jungles to genomes: Insights into adaptation and speciation from brightly coloured Heliconius butterflies"***Nina Wedell, ESEB Presidential address**Friday 25th, 15:10-15:50

University of Exeter

*"Evolution in the 21st Century"**John Maynard Smith Prize winners:*Friday 25th, 16:20-17:20(2016) **E. Keith Bowers**, University of Memphis*"Silver spoons, sexy sons, and constraints on sex allocation"*(2017) **Amanda Kyle Gibson**, Emory University*"What use is sex?"*

SATELLITE ACTIVITIES

MEETINGS

Monday 21st

13:30-14:30. (*Room X*). **Speed date: ESEB meets ISEMPH**

Tuesday 22nd

13:30-14:30. (*Room H*) **Research in Germany Science lunch: “Evolutionary biology in Germany and funding programs”**

13:30-14:30. (*Room J*) **National Science Foundation (USA) information session**

15:00-17:00. (*Room J*) **DrosEU: ESEB STN European *Drosophila* Population Genomics**

Thursday 24th

13:30-14:30. (*Room H*) **Royal Society Meet the Editors**

Friday 25th

14:10-15:10. (*Room A*) **ESEB Members meeting**

WORKSHOPS

Tuesday 22nd

13:30-15:00. (*Room X*) **Evolutionary biology and open science: practices, challenges and opportunities**

Organiser: Antica Culina, Netherlands Institute of Ecology, Netherlands, A.Culina@nioo.knaw.nl

This workshop aims at helping evolutionary biologist to greatly benefit from (and actively participate in) the transition to Open Science. Open Science is

amongst the most prominent movements in the scientific world today, and facilitated by shifts in scientific culture, technological improvements, and policies and mandates imposed by funders, governments, institutions, and publishers. The workshop particularity focuses on finding evolutionary datasets, and conducting transparent and more powerful evolutionary synthesis.

Workshop structure

- 1) Introduction to the main concepts of Open Science (15min)
- 2) Where to find the data I need? We will Introduce the Open Data landscape, and platforms where researchers can easily find datasets (similar as, for example, Web of Science does for papers). Participants will have some time to familiarise themselves with these platforms (45 min)
- 3) Evolutionary meta-analysis and Open Science: showcasing new frameworks that utilises data (along with published studies) and guidelines on how to make the meta-analysis (or any other scientific work) to comply with the Open principles (30 min)

Requirements:

For those participants that would like to practice finding data-sets, please bring your laptop, and think about the type of data you would like to find.

Thursday 24th

13:30-15:30. (*Room X*) **Science policies: how should evolutionary biology be funded?**

Organisers: Stephanie Meirmans, Leiden University, Netherlands, s.meirmans@hum.leidenuniv.nl
Maurine Neiman, University of Iowa, USA, maurine-neiman@uiowa.edu

For organizational purposes, please let the organizers know that you plan to attend the workshop.

The main goal of our workshop is to trigger a translatable discussion of how funding affects scientific quality, what scientific quality is, and whether and

how the current funding system could improve. We invite you as active researchers to participate and make contributions to this discussion. Our ultimate aim is for you to return to your home institutions and countries and continue these discussions with colleagues, funding agencies, etc. Our workshop focus is important to virtually every evolutionary biologist and is particularly topical because of recent changes in how science is funded worldwide: increasingly, funding is both assessed by internal scientific quality and by external criteria such as societal relevance and technological-economic impact. These changes have created across-country differences in funding policies, inviting a critical systematic reflection that could have real impact in a time when funding policies are in a phase of transition in many countries.

The workshop will consist of a short comment on this topic by Stephen Stearns, two panel discussions, and one talk by an internationally recognized invited speaker with direct involvement in research funding, Leslie Rissler (US National Science Foundation). The two panels will consist of Roger Butlin, George Gilchrist, Hanna Kokko, and Stephen Stearns (Panel 1), and Anne Charmantier, Jan Engelstädter, Astrid Groot, Kayla King, Pleuni Pennings and Jane Reid (Panel 2). The audience will be invited to actively participate in the discussion, so please come prepared with questions and insights.

This event is funded by the American Genetic Association (AGA).

SOCIAL EVENTS

Welcome reception (Sunday 20th at 19:00-21.00, *Room A*)

A welcome reception will take place on Sunday, August 20th.

The Pavillion

There will be a social area in the Pavillion, opposite the MartiniPlaza and bordering a park, **open in the evenings** (19.30-23.00) of Monday, Tuesday, and Thursday. The pre-ordered meals will be served here and there will be a cash bar. The conference dinner on Friday will also be in and around the Pavillion.

Conference dinner (Friday 25th, starting at 19:00)

The conference dinner will be held on the final evening of the conference on Friday, 25 August. After the dinner, there will be a closing party in the same location (Pavillion + Stadspark).

Excursions: Wednesday 23rd

Information for all the excursions is available on the ESEB 2017 website. Additional information will be provided at the information desk. Excursions leaving early will include a lunch box.

- **Unesco's World Heritage site: The Wadden Sea**
Departure: 13:15 in front of MartiniPlaza (lunch box in the bus).
Return: around 18:15.
- **A walk through the City of Groningen**
Departure: 15:00 at the base of the Tower of Saint Martin (in the city centre). It will finish around 18:00.
- **Hooghoudt distillery: tour & tasting**
Departure: 14:30 in front of MartiniPlaza. Return: around 18:00.
- **Walking tours & Cycling tours Onlanden & Drentse Aa**
Departure: 13:45 in front of MartiniPlaza. Return: around 18:00.
- **Birdwatchers excursions**
Departure: 13:15 in front of MartiniPlaza (lunch box in the bus).
Return: around 19:30.

- **Boating tour Weerribben**

Departure: 13:15 in front of MartiniPlaza (lunch box in the bus).

Return: around 19:30.

Excursion Saturday 26 August: ESEB Way home tour

Departure meeting places:

09.30 Martini hotel

09.45 Hotel de Ville

10.00 Mercure hotel

OUTREACH

Evolve: public outreach programme in Groningen city centre

On the occasion of ESEB2017, the local ESEB organising committee and ScienceLinX, the University of Groningen science centre, have jointly organised a public outreach programme on evolutionary biology in Groningen city centre. The programme is hosted by the Noorderzon performing arts festival in the Noorderplantsoen park (see map).

The Evolve programme runs from Sunday, 20 August through Thursday, 24 August, daily from 14:00 to 22:00. During the day, we have an interactive programme with **workshops, experiments** and a **safari through the park**. In the evenings, there are lectures and a theatre show (both in Dutch).

Inspired by the 'meet-the-scientist' sessions in Lausanne (ESEB 2015), we also host an **evolution café**, where people can talk to evolutionary biologists. For more information on the programme, see <http://www.rug.nl/sciencelinx/noorderzon>.

One of the highlights of the programme is a **public lecture on evolutionary medicine by Prof. Randy Nesse**, Tuesday 22 August at 20:00. We have reserved a limited number of free tickets for ESEB participants, on a first-come first-serve basis - please claim your ticket before Monday 19:30 at the information desk in the conference venue.

The Noorderzon festival is held annually and presents theatre, dance, music, literature and visual art, as well as a diverse selection of eateries. This year, it runs from 17 – 27 August, daily from 14:00 to 01:00. The festival terrain is freely accessible, but some of the performances require a ticket. Some of the acts are in Dutch but others are in English or do not involve any language use. For more information, see www.noorderzon.nl.

We invite you to visit our Evolve stage (Sun-Thu) as well as the rest of the festival!

LIST OF SYMPOSIA

1. Parasite evolution in response to treatment

Organisers: Sébastien Lion, Nicole Mideo

Invited speakers: Pleuni Pennings, Sebastian Bonhoeffer

2. The spread and evolution of ancient infectious diseases

Organisers: Maciej Henneberg, Bruce Rothschild, Frank Rühli

Invited speakers: Helene Donoghue and Dong Hoon Shin

3. Network-based approaches in evolutionary biology and medicine

Organisers: Oana Carja, Nicole Creanza

Invited speakers: Danielle Bassett, Laura Hindersin

4. Evolution of immune diversity

Organisers: Paul Norman, Emily Wroblewski

Invited speakers: Tobias Lenz, Stephen Leslie

5. Evolutionary biology of ageing: integrating function and mechanism

Organisers: Alexei Maklakov, Ido Pen, Simon Verhulst

Invited speakers: Russell Bonduriansky & Thomas Flatt

6. Evolutionary significance of biological clocks

Organisers: Roelof Hut, Tobias Kaiser

Invited speakers: Steven Reppert, Takashi Yoshimura

7. Sociality and disease

Organisers: Matthias Fürst, Barbara Milutinovic, Christopher Pull

Invited speakers: Rebecca Kilner, Charles Nunn

8. Major transitions in evolution

Organisers: Abel Bernadou, Christian Kost, Boris Kramer, Karen Meusemann, William Ratcliff

Invited speakers: Richard Michod, Silvia de Monte

9. Fitness and evolution in a social environment: from theory to reality

Organisers: Loeske Kruuk, Jane Reid

Invited speakers: Piter Bijma, Florence Debarre

10. Cognitive evolution

Organisers: Gabriella Gamberale-Stille, Alexander Kotrschal
 Invited speakers: Judith Burkhardt, Reuven Dukas

11. Evolution of communication signals

Organisers: Wouter Halfwerk, Katharina Riebel
 Invited speakers: Candy Rowe, Astrid Groot

12. Environmental effects on sexual selection

Organisers: Carlos Camacho, Karen de Jong, Katja Heubel, Jesús Martínez-Padilla, Jaime Potti
 Invited speakers: Ulrika Candolin, Erik Svensson

13. Modern quantitative genetics and the study of adaptation

Organisers: Robert Griffin, Fiona Ingleby
 Invited speakers: Mark Blows, Anne Charmantier

14. Fitness landscapes, big data and the predictability of evolution

Organisers: Santiago Elena, Inês Fragata, Sebastian Matuszewski, Arjan de Visser
 Invited speakers: Michael Lässig, Thomas Bataillon

15. Experimental evolution in complex environments

Organisers: Akos Kovacs, Marjon de Vos
 Invited speakers: Michael Brockhurst, Ivana Gudelj

16. Genomics of adaptation

Organisers: Ben Blackman, Maaike de Jong, Bart Pannebakker, Noah Whiteman, Jelle Zandveld
 Invited speakers: Susan Johnston, Peter Tiffin

17. Evolutionary causes and consequences of variation in recombination rate

Organisers: Susan Johnston, Anna Santure, Jessica Stapley
 Invited speakers: Abraham Korol, Irene Tiemann-Boege

18. The evolutionary significance of chromosomal inversions

Organisers: Thomas Flatt, Martin Kapun
 Invited speakers: Mathieu Joron, Michael Fontaine

19. Evolution of gene expression regulation

Organisers: Oana Carja, Joshua Plotkin, Premal Shah

Invited speakers: Balazs Papp, Judit Villen

20. Evolutionary implications of transposable elements, epigenetics, and non-genetic inheritance

Organisers: Josefa Gonzalez, Willian Silva, Foteini Spagopoulou, Cristina Vieira

Invited speakers: Severine Chambeyron, Tobias Uller

21. Genetic exchange in microbial adaptation and infectious disease

Organisers: Jan Engelstaedter, Alex Hall, Ellie Harrison

Invited speakers: Didier Mazel, Alvaro San Millan

22. Coevolution of hosts and their microbiome

Organisers: Antton Alberdi, Philipp Heeb, Alexandre Jousset, Morten Limborg, Irene Tieleman, Friman Ville, Zhong Wei

Invited speakers: Seth Bordenstein, Philippe Vandenkoornhuysen

23. Rapid evolution revisited

Organisers: Swanne Gordon, Andres Lopez-Sepulcre, Katja Räsänen

Invited speakers: Loeske Kruuk, Kimberly Hughes

24. Eco-evolutionary dynamics

Organisers: Franziska Brunner, Jacques Deere, Martijn Egas, Christophe Eizaguirre, Joost Raeymaekers

Invited speakers: Jonathan Pruitt, Jen Schweitzer

25. Spatial evolution

Organisers: Emanuel Fronhofer, Flora Jay, Benjamin Peter, Marjo Saastamoinen

Invited speakers: Stéphane Joost, Hanna Kokko

26. Adaptation to global climate change

Organisers: Fredrik Jutfeld, Lesley Lancaster, Irja Ratikainen, Justin Travis

Invited speakers: Michael Angilletta, Yngvild Vindenes

27. Evolutionary implications of hybridization

Organisers: Fabrice Eroukmanoff, Glenn-Peter Sætre, Ole Seehausen, Matthias Stöck, Justyna Wolinska

Invited speakers: Nicola Nadeau, Mario Vallejo-Marin

28. Intragenomic conflicts and cytonuclear incompatibilities as engines of speciation

Organisers: Wiesław Babik, Tracey Chapman, Radwan Jacek, Horacio Naveira, Antón Vila-Sanjurjo
 Invited speakers: Dan Mishmar, Daven Presgraves

29. Integration of micro- and macroevolution

Organisers: Eric Schranz, Jostein Starrfelt, Kjetil Voje, Bas Zwaan
 Invited speakers: Christen Bossu, Thomas Ezard

30. Phylogenetics in the genomic era

Organisers: Mozes Blom, Matthew Fujita
 Invited speakers: Scott Edwards, Ziheng Yang

31. Evolution across the mutualist-parasite continuum

Organisers: Ana Duarte, Francisco Encinas-Viso, Aniek Ivens, Kayla King, Ellie Harrison
 Invited speakers: Ellen Decaestecker, Hinrich Schulenburg

32. Coevolution in antagonistic ecological interactions

Organisers: Bram Knegt, Felipe Lemos
 Invited speakers: Candace Low, Minus van Baalen

33. Urban evolution

Organisers: Anne Charmantier, Marta Szulkin
 Invited speakers: Caroline Isaksson, Jason Munshi-South

34. Applications of evolutionary biology in agriculture and industry

Organisers: Duur Aanen, Niels Anten, Bas Zwaan
 Invited speakers: Piter Bijma, Ford Denison

35. Open symposium

Organisers: Scientific Committee



Research in Germany at the ESEB 2017

Come and visit us!

Find out more about funding opportunities and research in the fields of ecology and evolutionary biology in Germany at the following events:



Information Booth

August 21–25, 2017. During exhibition hours, MartiniPlaza, Booth 7

Meet representatives of:

German Research Foundation (DFG)

Alexander von Humboldt Foundation (AvH)

German Academic Exchange Service (DAAD)

Leibniz Research Alliance Infections `21

Volkswagen Foundation



“Meet the Scientist” at the Information Booth

August 21–24, 2017. 11am–1pm and 2–4pm, MartiniPlaza, Booth 7

Speak to renowned scientists of:

Evolutionary Biology in Plant Science, Cologne

Kiel Evolution Center

MPI for Evolutionary Biology

Priority Programme “Rapid Evolutionary Adaptation: Potential and Constraints”

Research Training Group “Evolutionary Processes in Adaptation and Disease”

Research Unit “Sociality and the Reversal of the Fecundity-Longevity Trade-off”



Science Lunch

August 22, 2017. 1.30–2.30pm, MartiniPlaza

Contact the booth for further information

Exchange with scientists from various German research institutions as well as alumni and representatives of different funding programmes over lunch.

More information and a detailed list of contact persons are available at:

www.research-in-germany.org/ESEB2017

We look forward to seeing you!



PROGRAMME SUMMARY

Sun 20 Mon 21 Tues 22 Wed 23 Thu 24 Fri 25

Announcements					
Keynote Lecture					
Symposia	Symposia	Symposia	Symposia	Symposia	Symposia
S1 S4	S8 S12	S3 S7	S9 S20	S6 S10	
S5 S11	S13 S15	S16 S24	S24 S25	S16 S18	
S17 S22	S16 S19	S28 S33	S26 S27	S25 S26	
S23 S30	S24 S34	S35	S29 S31	S32 S35	
ESEB meets ISEMPH	Satellite meetings	LUNCH		Satellite meetings	
Symposia	Symposia	Excursions	Symposia	Member meeting	
S2 S5	S8 S12		S9 S20	Presidential address	
S11 S14	S13 S15		S25 S26	MS prize	
S17 S22	S16 S19		S27 S29	Closing ceremony	
S23 S30	S21 S24		S31 S35		
Welcome Reception	POSTER SESSION 1	POSTER SESSION 2	POSTER SESSION 3	Conference dinner	

PROGRAMME

PROGRAMME

Sunday, 20 August

17:30	Opening: Leo Beukeboom Room A
17:40	
18:00	Opening address: Sibrand Poppema Room A
19:00	Opening Keynote Lecture: Linda Partridge Evolutionary biology and healthy ageing Room A
21:00	Welcome reception Room A foyer

Monday, 21 August

PROGRAMME

8:50	Announcements (Room A)			
9:00	Keynote Lecture: Svante Pääbo A Neandertal Perspective on the Human Genome Room A			
9:50				
	Room A	Room B	Room C	Room F
	Symposium 5	Symposium 22	Symposium 4	Symposium 30
	Evolutionary biology of ageing: interacting function and mechanism	Coevolution of host and their microbiome	Evolution of immune diversity	Phylogenetics in the genomic era
10:00				
	Evolutionary and Functional Links Between Longevity and Immunity	On the Origin of Species: From Genes to Holobionts	Evolutionary trade-offs in the adaptive immune system shape genomic diversity of the MHC	Bayesian species tree inference under the multispecies coalescent using genomic sequence data
	T. Flatt	S. Bordenstein	T. Lenz	Z. Yang
10:30				
	Incorporating epigenetics into the evolutionary theory of ageing	From plant to plant-holobiont, a revolution	HLA typing in large cohorts: Insights for studies of disease	Comparative genomics, the anomaly zone, and the phylogeny of palaeognathous birds
	R. Bonduriansky	P. Vandenkoornhuyse	S. Leslie	S. Edwards
11:00				
11:30	BREAK			

Room G	Room K	Room L	Room M
Symposium 1	Symposium 11	Symposium 17	Symposium 23
Parasite evolution in response to treatment	Evolution of communication signals	Evolutionary causes and consequences of variation in recombination rate	Rapid evolution revisited
Combination therapy and the evolution of drug resistance	New insights in the evolution of sexual communication signals (final)	Evolvability of recombination features	Little evidence for rapid evolution in wild populations?
S. Bonhoeffer	A.T. Groot	S. Rybnikov	L. Kruuk
Why study drug resistance evolution in HIV and what have we learned?	Evolution and maintenance of variation in antipredator defences	Determinants of recombination activity—the alternative hotspot view	Predictability of evolution in fish and flies
P. Pennings	J. Mappes	I. Tiemann-Boege	K. Hughes

Monday, August 21TH

PROGRAMME

	Room A	Room B	Room C	Room F
11:30	Symposium 5 Evolutionary biology of ageing: interacting function and mechanism	Symposium 22 Coevolution of host and their microbiome	Symposium 4 Evolution of immune diversity	Symposium 30 Phylogenetics in the genomic era
11:50	Sex-differences in lifespan extension and their relevance to the evolutionary biology of aging M. Garratt	Unraveling the processes shaping mammalian gut microbiomes over evolutionary time M. Groussin	Immunological memory in natural populations of an insect- variation, selection and evolution I. Khan	A comprehensive evaluation of species tree methods in the presence of incomplete lineage sorting D. Mallo
12:10	Rapid increase in lifespan under increased condition-dependent mortality explained by shifting mutation-selection balance for robustness M. Driessen	Biodiversity of the human gut microbiome: influence of diet and parasitism L. Segurel	Parasites confer a selective advantage on novel MHC variants in guppy fish A.M. Radwan	Inferring molecular rates and dates using StarBEAST2 H. Ogilvie

Room G	Room K	Room L	Room M
Symposium 1 Parasite evolution in response to treatment	Symposium 11 Evolution of communication signals	Symposium 17 Evolutionary causes and consequences of variation in recombination rate	Symposium 23 Rapid evolution revisited
An evolutionary model to predict the frequency of antibiotic resistance under changing antibiotic use F. Blanquart	Multimodal courtship in a small marine fish is affected by noise K. de Jong	Solving the recombination hotspots paradox F. Ubeda	Coevolution of plasticity and adaptive traits: The case of extremely rapid evolution in wild crickets N.W. Bailey
Quantifying the establishment probability of an antibiotic-resistant bacterial strain H.K. Alexander	Seen but not heard: vestigial calls in earless frogs S. Goutte	Natural diversity in the reproductive isolation gene <i>Prdm9</i> : Lessons from Madeiran Robertsonian house mice C. Vara	Robust inference of selection for plasticity M. Morrissey

Monday, 21 August

PROGRAMME

	Room A	Room B	Room C	Room F
12:10	Symposium 5 Evolutionary biology of ageing: interacting function and mechanism	Symposium 22 Coevolution of host and their microbiome	Symposium 4 Evolution of immune diversity	Symposium 30 Phylogenetics in the genomic era
12:30	Disentangling the causes and consequences of parental age effects on offspring fitness in humans E. Postma	Evolution of hosts, parasites and their microbiomes N. Dheilly	Shared variability in selected innate immune receptors (TLRs) in tit family (<i>Paridae</i>) M. Tešický	Bayesian divergence-time estimation with genome-wide SNP data M. Matschiner
12:50	Bearing sons rather than daughters increases mortality and morbidity of present-day mothers B. Hollegaard	The role of gut microorganisms in dietary niche expansion O. Aizpurua	Is TCR diversity associated with MHC gene copy number? Testing the optimality hypothesis M. Migalska	Combining relaxed clocks with lateral gene transfers to date species trees B. Boussau
13:10	Good mums die young: artificial selection reveals a trade-off between reproductive investment and survival B. Tschirren	Experimental evolution of reduced dependence on gut microbiota for development under nutritional stress T.J. Kawecki	Highly polymorphic loci through allelic division of labour: a mathematical model of heterozygote advantage M. Siljestam	Modeling trait-dependent evolution on a random species tree D. Tahir
14:30	LUNCH 13:30-14:30 Speed date: ESEB meets ISEMPH (Room X)			

Room G	Room K	Room L	Room M
Symposium 1 Parasite evolution in response to treatment	Symposium 11 Evolution of communication signals	Symposium 17 Evolutionary causes and consequences of variation in recombination rate	Symposium 23 Rapid evolution revisited
The role of antibiotic exposure in bacterial adaptation to phages F.I. Arias Sánchez	Song evolution in gomphocerine grasshoppers: a support of rapid and convergent changes in complex courtship V. Vedenina	Is there indirect selection on recombination modifiers in the great apes? D. Castellano	Dynamics of seasonal adaptation in <i>Drosophila melanogaster</i> E.L. Behrman
Within-host competition and evolution of drug resistance in <i>Plasmodium falciparum</i> malaria M. Bushman	Development and inter-sexual communication in damselflies: combining experimental and phylogenetic approaches B. Willink	Exploring the variation in recombination rates in eutherian mammals A. Ruiz-Herrera	Evolutionary responses to catastrophic environmental change C.E. Lee
The potential of fast and random drug changes to constrain antibiotic resistance evolution H. Schulenburg	Paternal care and reproductive costs drive the evolution of female ornamentation: comparative analyses in songbirds A. Fargevieille	The molecular genetic basis of recombination variation in adaptively diverging stickleback fish V. Venu	Epigenetics and adaptation in an asexual invader J.M. Thorson

Monday, 21 August

PROGRAMME

	Room A	Room B	Room C	Room F
14:30	Symposium 5 Evolutionary biology of ageing: interacting function and mechanism	Symposium 22 Coevolution of host and their microbiome	Symposium 14 Fitness landscape, big data and the predictability of evolution	Symposium 30 Phylogenetics in the genomic era
14:50	Survival-reproduction trade-offs in long-lived, income breeders A. Culina	Host plant diet affects gut microbial community composition across development in monarch butterflies E. Harris	The antigenicity-stability seascape: a minimal fitness model for evolutionary predictions M. Lässig	Polymorphism-aware phylogenetic models and their application to baboon species C. Kosiol
15:00	Growth rates are associated with lifespan, but not metabolic rate, in a clade of killifishes W. Sowersby	Beyond nutrition: host-microbiota interactions drive shifts in the behavioural phenotypes of cockroaches T. Sieksmeyer		Fitness Landscapes: how little do we know? T. Bataillon
15:10	The mechanisms of dietary restriction: insight from a combined theoretical and empirical perspective in flies M. Simons	Rapid experimental evolution of host-microbial associations in a novel environment A. Agarwal	Disentangling phylogenetic evolution of rock-wallabies informs the pattern and process of chromosome evolution S. Potter	
15:30				
15:50	BREAK			

Room G	Room K	Room L	Room M
Symposium 2 The spread and evolution of ancient diseases	Symposium 11 Evolution of communication signals	Symposium 17 Evolutionary causes and consequences of variation in recombination rate	Symposium 23 Rapid evolution revisited
The spread and evolution of ancient tuberculosis and leprosy	Proximity of signallers can maintain sexual signal variation under stabilizing selection M. van Wijk	Sexual antagonism drives the evolution of the guppy sex chromosomes A. Wright	DNA methylation and gene expression patterns in a fish meta-population following rapid thermal adaption T. Sävillammi
H. Donoghue	Sending Mixed Signals: Communication cues for species recognition differ between two African weakly electric fish R.N. Nagel	Sex-chromosome recombination: what role for sexually antagonistic genes? N. Perrin	HSP90 as a capacitor for rapid evolution in the red flour beetle <i>Tribolium castaneum</i> J. Kurtz
The scientific studies on ancient parasite infection of East Asia by microscopic and genetic researches D.H. Shin	Exploring the hidden landscape of female preferences for complex signals S. Reichert	Recombination in the eggs and sperm in a simultaneously hermaphroditic vertebrate L. Theodosiou	Very rapid, cyclical evolution of resistance in a natural plankton population D. Ebert

Monday, 21 August

PROGRAMME

	Room A	Room B	Room C	Room F
15:50	Symposium 5 Evolutionary biology of ageing: interacting function and mechanism	Symposium 22 Coevolution of host and their microbiome	Symposium 14 Fitness landscape, big data and the predictability of evolution	Symposium 30 Phylogenetics in the genomic era
16:20	Disease spread in age structured populations with maternal age effects J. Clark	Host- defensive mutualist coevolution results in specificity of enhanced protection C. Rafaluk	Population size and the repeatability of antibiotic resistance evolution M.P. Zwart	Phylogenomics of microendemic frogs of the Brazilian Atlantic Forest: species delimitation and phylogenetic relationships M.R. Pie
16:40	Does early infection shape the rate of aging? An experimental test with pro- and anti-inflammatory parasites G. Sorci	Host-parasite coevolution: from experimental evolution studies to evolutionary medicine J. Kurtz	"Ghost peaks" in epistatic models of high-throughput fitness data: predicted high-fitness sequences predominantly false positives D. McCandlish	Phylogenomics at the tips C. Moritz
16:45	Keynote lecture and closure ISEMPH 2017: Stephen Stearns The relations between evolution and medicine, journals and societies Room A			
17:25				
17:30	Poster Session 1 (EXPO 1) S1, S2,S4,S5, S11, S14, S17, S22, S23, S30, S35, ISEMPH			
19:30				
23:00	PAVILLION			

Room G	Room K	Room L	Room M
Symposium 2 The spread and evolution of ancient diseases	Symposium 11 Evolution of communication signals	Symposium 17 Evolutionary causes and consequences of variation in recombination rate	Symposium 23 Rapid evolution revisited
Ancient origins, dispersal and Neanderthal transmission to modern humans of HPV16, the most oncogenic human-papillomavirus I.G. Bravo	Effects of inbreeding on parent-offspring communication in the burying beetle <i>Nicrophorus vespilloides</i> J. Richardson	The influence of high recombination rate on genetic diversity in the invasive ant <i>Cardiocondyla obscurior</i> J. Oettler	Maternal RNA is able to transmit temperature information across generations in wild fish I. A. Kalchhauser
Were language borders “cultural” barriers for the spread of influenza 1889-94 and 1918-19 in the canton of Bern, Switzerland? K. Staub	Signaling about information which is already publicly available S.M. Caro	The role of recombination in preventing viral divergence C. Jenkins	Replicated rapid evolution of sea-run threespine stickleback fish After colonizing Alaskan lakes M. Bell

Tuesday, 22 August

PROGRAMME

8:50	Announcements (Room A)			
9:00	Keynote Lecture: Nicole Dubilier Diversity matters: Horizontal gene transfer and symbiont strain heterogeneity provide multiple benefits to deep-sea mussels from hydrothermal vents Room A			
9:50				
	Room A	Room B	Room C	Room F
	Symposium 16	Symposium 24	Symposium 19	Symposium 8
	Genomics of adaptation	Eco-evolutionary dynamics	Evolution of gene expression regulation	Major transitions in evolution
10:00				
	Genomics of variation and adaptation in a model mutualism	Eco-evolutionary dynamics in Galapagos	Evolution of protein phosphorylation across 18 fungal species.	Coupled evolution of collective function and structure
	P.T. Tiffin	A.P. Hendry	J.V. Villen	S. de Monte
10:30				
	The genetic and molecular architecture of phenotypic diversity in sticklebacks	Plant-soil-nutrient feedback contributes to genetic divergence across a species range	Stereotypic transcriptional response contributes to the fitness impact of genetic perturbations in yeast	A Darwinian approach to the major transitions: Evolution of individuality in the volvocine green algae
	C.L. Peichel	A. Schweitzer	B. Papp	E. Michod
11:00				
11:30	BREAK			

Room G	Room K	Room L	Room M
Symposium 34	Symposium 15	Symposium 12	Symposium 13
Applications of evolutionary biology in agriculture and industry	Experimental evolution in complex environments	Environmental effects on sexual selection	Modern quantitative genetics and the study of adaptation
Breeding social animals: the use of kin and group-selection to improve traits affected by IGE	Evolution of microbial interactions in complex environments	The importance of an environmental perspective: Integrating sexual selection with population biology, macroecology and biogeography	Testing for local adaptation in tits: from phenotypic to genetic approaches
P. Bijma	A. Brockhurst	E.I. Svensson	A.C. Charmantier
Domestication versus "taming" (manipulation) of crop plants and their symbionts	Harbouring public good cheats within a pathogen population can increase both fitness and virulence	Sexual selection in changing environments: effects on populations and communities	The distribution of genetic variance across phenotypic space
R.F. Denison	I. Gudelj	U.C. Candolin	W. Blows

Tuesday, 22 August

	Room A	Room B	Room C	Room F
11:30	Symposium 16 Genomics of adaptation	Symposium 24 Eco-evolutionary dynamics	Symposium 19 Evolution of gene expression regulation	Symposium 8 Major transitions in evolution
11:50	Marked differences in local adaptations of orangutan species T. Bilgin Sonay	From resurrection ecology to eco-evolutionary feedbacks on ecosystem features L. de Meester	Genomic sources of morphological innovation: the evolution of wing pigmentation in <i>Drosophila</i> M.P. Paris	What are major transitions? L. Clarke
12:10		Biotic interactions and the eco-evolutionary dynamics of range expansions E.A.F. Fronhofer	Saccharomyces hybrid expression profiles are similar to the fitter parent in some environments J.P.B. Bernardes	What is adaptation and how should it be measured? J.R.P. Peck
12:30	The timing of diapause termination is controlled by multiple independent loci in <i>Daphnia magna</i> T.C. Cypionka	Repeated rapid evolution dictates population dynamics in orchard populations of <i>Drosophila melanogaster</i> S.M. Rudman	Deciphering the expression-fitness landscape across genes and environments I.F. Fragata	The evolution of host-symbiont dependence M. Fisher

Room G	Room K	Room L	Room M
Symposium 34 Applications of evolutionary biology in agriculture and industry	Symposium 15 Experimental evolution in complex environments	Symposium 12 Environmental effects on sexual selection	Symposium 13 Modern quantitative genetics and the study of adaptation
Experimentally evolved <i>Bacillus thuringiensis</i> overcome insect host resistance T.D. Dimitriu	Public goods cooperation under harsh environmental conditions M.V. Vasse	Effects of social environment on female mate choice in a cooperative breeder G.K. Hajduk	A genome-wide test of the modular structure of pleiotropy J.M. Collet
Bacterial symbionts, antibiotics and sustainable farming T. Innocent	Giving up the fight - Evolution towards lower virulence in an opportunistic pathogen E.T. Granato	Does sexual selection improve population fitness in the face of biotic and abiotic environmental challenges? L. Godwin	Conserved genetic architecture of morphological and life-history traits across four wild populations of Blue tit B.D. Delahaie
Estimating the mixing ability of wheat genotypes for variety mixtures E.F. Forst	Experimental evolution for host adaptation in a tick-borne pathogen S. Becker	Ecology relaxes sexual conflict: heterospecific males reduce mating harassment and increase female survival M.G. Miguel	Evolutionary responses of morphological traits across different life-history stages and heterogeneous environments D.G. Garant

Tuesday, 22 August

PROGRAMME

	Room A	Room B	Room C	Room F
12:30	Symposium 16 Genomics of adaptation	Symposium 24 Eco-evolutionary dynamics	Symposium 19 Evolution of gene expression regulation	Symposium 8 Major transitions in evolution
12:50	Sex-linked inheritance of diapause induction in a temperate butterfly P. Pruischer	Connecting antibiotic resistance problem and eco-evolutionary community dynamics T. Hiltunen	Regulation of gene expression divergence in closely related <i>Drosophila</i> species N.P. Posnien	Hypermutation, death, and the division of labour in <i>Streptomyces</i> colonies D.E. Rozen
13:10	From genome to function: Timing adaptations in the intertidal insect <i>Clunio marinus</i> T.S. Kaiser	Trade-offs in multidimensional trait space explain maintenance of diversity in an experimental predator-prey system N.W. Woltermann	The evolution of polymorphic gene expression in regulatory networks under sexually antagonistic selection M.S.H. Hill	The evolution of the germ-soma divide G.A.C. Cooper
14:30	LUNCH	13:30-14:30 satellite meeting Research in Germany Room H 13:30-14:30 Satellite meeting National Science Foundation Room J 13:30-15:00 Workshop Evolutionary biology and open science: practices, challenges and opportunities Room X		

Room G	Room K	Room L	Room M
Symposium 34 Applications of evolutionary biology in agriculture and industry	Symposium 15 Experimental evolution in complex environments	Symposium 12 Environmental effects on sexual selection	Symposium 13 Modern quantitative genetics and the study of adaptation
Natural variation for high-yielding, potentially cooperative traits in <i>Arabidopsis</i>	Experimental evolution for host adaptation in a tick-borne pathogen	Ecology relaxes sexual conflict: heterospecific males reduce mating harassment and increase female survival	Selection on skewed characters and the paradox of stasis
J.M. Biernaskie	S. Becker	M.G. Miguel	S.B. Bonamour
Creating strain-specific genetic markers for beneficial insects: a genomic approach	Tripartite interactions between phage, bacteria and plasmid shapes the trajectory of evolution	Ecological divergence and reproductive isolation in a colour polymorphic Anolis lizard	Genetic variance for lifetime fitness explained by sex-specific genetic (co)variances among ontogenic fitness components
K.B. Ferguson	E.H. Harrison	J. Stapley	M.E.W. Wolak

Tuesday, 22 August

	Room A	Room B	Room C	Room F
	Symposium 16 Genomics of adaptation	Symposium 24 Eco-evolutionary dynamics	Symposium 19 Evolution of gene expression regulation	Symposium 8 Major transitions in evolution
14:30				
	Genetic architecture of a locally adapted life-history trait with strong sexual variation: age-at-maturity in salmon	Experimental adaptation of <i>E. coli</i> to a complex and structured environment	Cnidarian microRNAs shed new light on the evolution of post-transcriptional regulation of gene expression	What is intra-genomic conflict?
14:50	T. Aykanat	A.P.M. Marques	Y.M. Moran	F. Ubeda de Torres
15:00*	The genomics of acquisition and allocation in <i>Drosophila melanogaster</i> experimentally evolved for late reproduction	The most efficient microbial community dominates during community coalescence	Genomic analysis reveals major determinants of cis-regulatory variation in <i>Capsella grandiflora</i>	A germline-soma-analogy for understanding the remoulding of the fecundity/longevity trade-off in a highly social termite
15:10	J. van den Heuvel	P. Sierocinski	T. Slotte	D. Elsner
15:30	The genetic architecture of thermal plasticity	Host-parasite eco-evolutionary dynamics in a tangled bank	Evolution of new regulatory functions on biophysically realistic fitness landscapes	Social exploitation selects against aggregative multicellularity
	E.P.L. Lacey	A. Betts	T.F. Friedlander	J.T. Pentz
15:50	The genomics of local adaptation in Swedish <i>Arabidopsis</i> : Two complementary field approaches	Rapid parasitoid adaptation to a symbiont protected host	Between chaos and determinism: the evolution of stochastic gene expression	Coming together is a poor predictor of keeping together in the major evolutionary transitions
	D.L. Filiault	A.B.D. Dennis	Y. Dutheil	J.J. Boomsma
16:20	BREAK	*15:00-17:00 Satellite meeting: DrosEU STN European <i>Drosophila</i> Population Genomics Room J		

Room G	Room K	Room L	Room M
Symposium 21 Genetic exchange in microbial adaptation and infectious disease	Symposium 15 Experimental evolution in complex environments	Symposium 12 Environmental effects on sexual selection	Symposium 13 Modern quantitative genetics and the study of adaptation
Integrins: adaptation on demand D. Mazel	Synergistic coevolution accelerates molecular evolution D.P. Preußger	Influence of male-male competition on the evolution of sexual dimorphism in a wind-pollinated herb J.T. Tonnabel	Exploring the power of 'genomic' relatedness estimates for quantitative genetics P. Gienapp
Evolution of plasmid-mediated carbapenem resistance in a hospital setting A. San Millan	Sex promotes Evolutionary rescue in an environment deteriorating in a simple and complex manner N.P. Petkovic	Direct and indirect effects of climate on extra-pair paternities in a population of Alpine marmots C.B. Bichet	What makes inbreeding so depressing? M. Bosse
	Genomics of adaptation depends on the rate of environmental change in experimental <i>Saccharomyces cerevisiae</i> populations F.A. Gorter	Evaluating ecological, neutral and spatial hypotheses for a sexual arms race among water strider populations C. Perry	Parallel selection as a means for identifying loci involved in polygenic traits D. Tautz
Evolution of a naturally varying CRISPR-Cas system: interactions between phage, bacteria and avian host K.N. NÄpfli	The genomics of speciation with gene flow by means of experimental evolution S. Tusso Gomez	Sex-specific strategies to maximize fitness under environmental stress in butterflies L.W. Woestmann	Evolvability constrains evolution of sexual dimorphism M. Tarka

Tuesday, 22 August

	Room A	Room B	Room C	Room F
16:20	Symposium 16 Genomics of adaptation	Symposium 24 Eco-evolutionary dynamics	Symposium 19 Evolution of gene expression regulation	Symposium 8 Major transitions in evolution
16:40	Into the genomic wild: exploring real-time selective allele frequency shifts in stickleback, through a release-experiment T. Laurentino	Between the hammer and the anvil: Parasitoid genotype alters aphid phenotype influenced by intraguild predation A. Purkiss	Intermolecular epistasis increases phenotypic variation in a gene regulatory system M.L. Lagator	Evolution of the Hymenopteran superorganism and its entailing queen signalling system J.S. van Zweden
17:00	Evolutionary necessities for invading buildings, comparative and population genomic analyses in the dry rot fungus I. Skrede	Host age effects in host-parasite interactions: Generalized insights from different invertebrate-parasite systems F. Ben	Highly expressed genes are more likely to evolve new functions J.J. M. Villena	Social group augmentation alone can generate lasting behavioral specialization and enhance fitness Y. Ulrich
17:20	Genomic adaptation of <i>Penicillium</i> molds to cheese A.B. Branca	Genetic specificity of a plant-insect food web: Implications for linking genetic variation to network complexity M. Barbour	Protein-mRNA correlation under contemporary evolution may be influenced by level of gene expression control S.P. Papakostas	Formal models of evolutionary transitions in individuality C. Thies
17:30	Poster Session 2 (EXPO 1) S8, S12, S13, S15, S16, S19, S21, S24, S34, S35			
19:30				
23:00	PAVILLION			

Room G	Room K	Room L	Room M
Symposium 21 Genetic exchange in microbial adaptation and infectious disease	Symposium 15 Experimental evolution in complex environments	Symposium 12 Environmental effects on sexual selection	Symposium 13 Modern quantitative genetics and the study of adaptation
Bacterial heteroplasmy increases phenotypic plasticity during evolutionary innovation of antibiotic resistance. J. Rodríguez-Beltrán	Temporal dynamics of diversification under selection by competition and predation G. Ayan	Microevolution of coloured ornaments: space and time matter C. Doutrelant	Evolutionary persistence of sexually antagonistic haplotypes across the <i>Drosophila melanogaster</i> phylogeny F. Ruzicka
Genomic changes after horizontal gene transfer of an antibiotic resistance gene S. Bedhomme	Experimental evolution of resistance to cheating in the social amoeba E.A. Ostrowski	The belligerence of breeding: mating mediates female aggression E.J. Bath	Genetic variance as estimate for evolutionary potential and importance of gene expression for adaptation E.K. Koch
Patterns of genomic variation in the emerging fungal pathogen <i>Candida glabrata</i> reveals recombination within species and a secondary association to the human host. L. Carreté	Competition and spatial heterogeneity shape eco-evolutionary dynamics of ecological specialization K.B. Bisschop	Sperm competition risk affects phenotypic plasticity in the baculum morphology of house mice G. Igreja	Quantitative genetic analysis with genomic tools: Application of genomic prediction to haplodiploid insects S. Xia

Wednesday, 23 August

PROGRAMME

8:50	Announcements (Room A)			
9:00	Keynote Lecture: Andreas Wagner The power of recombination to create new adaptations and innovations Room A			
9:50	Room A	Room B	Room C	Room F
10:00	Symposium 16 Genomics of adaptation	Symposium 24 Eco-evolutionary dynamics	Symposium 3 Network-based approaches in evolutionary biology and medicine	Symposium 7 Sociality and disease
10:20	The evolution of individual recombination rates in natural populations.	Ecological and evolutionary contributions to metacommunity structure H. Pantel	The network architecture of human thought.	Infectious disease and group size: The Social Bottleneck Hypothesis
10:30	S.E. Johnston	Eco-evolutionary dynamics of colonization rate, patch occupancy and food chain length in model metacommunities	S. Bassett	C.L.N. Nunn
10:40	Adaptive significance and genetic basis of the dorsal colour polymorphism of <i>Philaenus spumarius</i>	F.M. Massol A cybernetic evolution theory: evolutionary duality of environmental stochasticity and natural selection	The effect of spatial population structure on evolutionary outcomes	Social immune function and the management of a bacterial community: experiments with burying beetles
11:00	S. Paulo	K. Heininger	L.H. Hindersin	M. Kilner
11:30	BREAK			

Room G	Room K	Room L	Room M
Symposium 33 Urban evolution	Symposium 35 Open symposium	Symposium 28 Intragenomic conflicts and cytonuclear incompatibilities as engines of speciation	Symposium 35 Open symposium
Adaptation or acclimation to urban anthropogenic stressors: A case study of the great tit P. Bijma	Multilevel selection in kin selection language J. Lehtonen	Sex chromosomes, genetic conflict, and complex speciation in <i>Drosophila</i> D.C.P. Presgraves	Endosymbiont-induced asexual reproduction in parasitoid wasps E. Geuverink
A Tale of Two Rodents: evolution of deer mice and rats in New York City J. Munshi-South	The effect of brain size in the assessment of attractiveness during mate choice A. Corral-Lopez	Mito-nuclear interactions underlie insipient speciation – the role of mtDNA transcription D.M. Mishmar	Can sexual and asexual grasshoppers co-exist because they are characterized by different ecological niches? K.G. Ghali
	Intrafamily and intragenomic conflicts in human warfare A.J.C.M. Micheletti		When to make males: the timing of sex and male production in <i>Daphnia</i> I. Booksmythe

	Room A	Room B	Room C	Room F
11:30	Symposium 16 Genomics of adaptation	Symposium 24 Eco-evolutionary dynamics	Symposium 3 Network-based approaches in evolutionary biology and medicine	Symposium 7 Sociality and disease
11:50	Pleiotropy of pigmentation genes explains phenotypic differences among sympatric color morphs in a lizard P. Andrade	Explaining antiphase predator-prey cycles E. van Velzen	A subterranean ant-trophobiont-microbe network as a model for mutualism evolution A.B.F. Ivens	Immunity and social contact in male and female <i>Drosophila melanogaster</i> T.A.L. Leech
12:10	Using population genetics and field experiments to study molecular adaptation at the Agouti gene S.L. Laurent	Evolutionary rescue in a stochastic environment L.M. Chevin	Evolving out of control: Does controllability of a system coevolve with its complexity? A.V. Badyaev	Caste-specific expression of constitutive and induced immunity in the ant <i>Formica exsecta</i> L.S. Sundstrom
12:30	Insights into floral trait evolution through a break from pollinator syndrome A.E. Berardi	The perfect female's search for mates, negotiating complex eco-evolutionary feedbacks E. Kisdi	The architecture of an empirical genotype-phenotype map J.L.P. Payne	Infection history of the social environment shapes individual parasite avoidance I. Klemme

Room G	Room K	Room L	Room M
Symposium 33 Urban evolution	Symposium 35 Open symposium	Symposium 28 Intragenomic conflicts and cytonuclear incompatibilities as engines of speciation	Symposium 35 Open symposium
Global urban signatures of phenotypic change in animal and plant populations M. Alberti	Avian brood parasitism: Defend early or wait and see? H. Holen	Mito-Y chromosome interactions and local adaptation to the mother's curse J. Ågren	Towards the understanding of sex chromosome evolution in frogs L. Jeffries
Rapid thermal evolution driven by urbanisation shapes predator-prey dynamics N.T. Tüzün	Microbial effects on stored sperm reduce female fitness if sperm and microbes are not co-adapted O. Otti	Pulling together and pulling apart: opposite selective forces operate on ant hybrids but why? J.K. Kulmuni	Sex-chromosome structure and sexual system in the tadpole shrimp <i>Triops cancriformis</i> M. Gomez
What telomeres can tell about the experienced stress? A special focus on urban populations. M.C. Chatelain	Phenotypic and transcriptional responses from co-evolving hosts and their invasive parasites M.E. Feis	Unorthodox transmission modes of endosymbionts in hybrids and the symbiotic origin of speciation W.J. Miller	Incomplete dosage compensation in songbirds with simultaneous sex-linkage of the proto-X and the proto-Z chromosomes B. Hansson

Wednesday, 23 August

PROGRAMME

	Room A	Room B	Room C	Room F
	Symposium 16 Genomics of adaptation	Symposium 24 Eco-evolutionary dynamics	Symposium 3 Network-based approaches in evolutionary biology and medicine	Symposium 7 Sociality and disease
12:30				
12:50	Genetic variation in parasitoid resistance in natural populations of <i>Drosophila melanogaster</i> S. Gerritsma	Sexual selection within a species deepens interspecific reproductive interference D.K. Kyogoku	Cooperation increases robustness to ecological disturbance in networks of cross-feeding bacteria L.O. Oña	Social status mediates the fitness cost of infection during a virulent disease epidemic S. Benhaïem
13:10	Historical and modern rabbit populations reveal parallel adaptation to myxoma virus across two continents J.M. Alves	Genotype-dependent gut microbiota drives zooplankton resistance to toxic cyanobacteria E.M. Macke	Network analysis of common disease identifies shared inherited risk pathways across independent datasets consistent with evolutionary mismatch and trade-offs and a mechanism for disease progression K. Buetow	The evolution of termite immunity D.P. McMahon
14:30	LUNCH			
19:30	Excursions			

Room G	Room K	Room L	Room M
Symposium 33 Urban evolution	Symposium 35 Open symposium	Symposium 12 Environmental effects on sexual selection	Symposium 35 Open symposium
RAD-sequencing reveals genomic footprints of selection along a urbanization gradient in great tits P.C. Perrier	A potential role for microbes in the infectious process of the cestode parasite <i>Schistocephalus solidus</i> M. Hahn	The interplay between <i>Wolbachia</i> and morph-associated reproductive barriers among populations of <i>Tetranychus urticae</i> F.Z. Zélé	Quantifying the strength and form of sexual selection along pre- and postcopulatory episodes of selection L. Marie-Orleach
Parallel adaptive clines to urbanization gradients across multiple cities M.J. Johnson	Epigenetics affects phenotypic plasticity in the fungus <i>Neurospora crassa</i> I.K. Kronholm	Mitochondrial haplotypes exert sex-specific effects on the metabolic rate in fruit flies V. Nagarajan-Radha	Evolutionary allometry reveals a shift in selection pressures on horn size M.T. Tidiere

Thursday, 24 August

PROGRAMME

8:50	Announcements (Room A)			
9:00	Keynote Lecture: Renée Duckworth Individual variation, ecological dynamics and evolutionary feedbacks Room A			
9:50				
	Room A	Room B	Room C	Room F
	Symposium 26	Symposium 24	Symposium 29	Symposium 9
	Adaptation to global climate change	Eco-evolutionary dynamics	Integration of micro- and macroevolution	Fitness and evolution in a social environment: from theory to reality
10:00				
	How biologists model ecological and evolutionary impacts of climate change	Towards a general understanding of population-level, eco-evolutionary dynamics using an energy budget approach	Inferring incipient speciation through changes in trait covariation.	Social evolution of fitness: quantitative genetic connections of theory and reality
	M.J. Angilletta	I.M. Smallegange	T. Ezard	P. Bijma
10:30				
	Eco-evolutionary responses to changing climate variability	Selection on colony foraging aggressiveness favors social susceptibility in social spiders	Phylogenomic and demographic inferences of Pieris butterflies	Fidelity of parent- offspring transmission and the evolution of social behaviour in structured populations
	Y.V. Vindenes	N. Pruitt	C.M. Bossu	F. Débarre
11:00				
11:30	BREAK			

Room G	Room K	Room L	Room M
Symposium 31	Symposium 25	Symposium 27	Symposium 20
Evolution across the mutualist-parasite continuum	Spatial evolution	Evolutionary implication of hybridization	Evolutionary implication of transposable elements, epigenetics, and non-genetic inheritance
The nematode <i>C. elegans</i> as a powerful model for experimental analysis of symbiont adaptation	A sex-specific guide to using spatially varying resources	Hybridisation and genome duplication under global change: Rapid speciation in an invasive plant	Non-genetic inheritance and evolution
H. Schulenburg	H.K. Kokko	M. Vallejo-Marin	T. Uller
The role of the <i>Daphnia</i> microbiome along the parasitism–mutualist continuum	Current challenge in landscape genomics: what about the environmental counterpart of high-throughput genomic data?	Genome-wide patterns of divergence and gene flow across a butterfly radiation	Genome integrity maintenance through transgenerationally inherited piRNAs
E. Decaestecker	S.J. Joost	N.J. Nadeau	S.C. Chambeyron

	Room A	Room B	Room C	Room F
11:30	Symposium 26 Adaptation to global climate change	Symposium 24 Eco-evolutionary dynamics	Symposium 29 Integration of micro- and macroevolution	Symposium 9 Fitness and evolution in a social environment: from theory to reality
11:50	Coping with ocean climate change: transgenerational plasticity, bet-hedging and cryptic genetic variation in marine sticklebacks N.S. Shama	Evolutionary implications of r- and K-selection in a fluctuating environment B.E. Saether	Philosophical insights on integration: When, why and how? S. Meirmans	Individual, group, and population-level determinants of fitness in cooperatively breeding birds M. Busana
12:10	A tropical opportunistic breeder uses rainfall to phenologically match reproduction to peak arthropod abundance A. Peters	Partitioning community trait variation in time and space into ecological, evolutionary and eco-evolutionary components G.L. Govaert	Tempo and mode in genome size evolution and transposable elements content in fly genomes A.H. Haudry	The effect of sibling genes on body-size evolution in blue tits D. Hadfield
12:30	Sex differences in thermal plasticity of development time: a meta-analysis in insects K.T. Taits	How organismal complexity affects biological diversification: an eco-evolutionary model P.V. Vasconcelos	Connecting micro and macroevolution through quantitative genetics: a study on New World Marsupials A.P. Porto	How do parental effects evolve in social environments? A.L.W. Kuijper

Room G	Room K	Room L	Room M
Symposium 31 Evolution across the mutualist- parasite continuum	Symposium 25 Spatial evolution	Symposium 27 Evolutionary implication of hybridization	Symposium 20 Evolutionary implication of transposable elements, epigenetics, and non-genetic inheritance
Virulence and virus evolution following pathogen host shifts	Role of spatial heterogeneity in evolutionary transitions between plant sexual systems	Genomic signatures of introgression at the late stage of stickleback speciation	The transgenerational fitness effects of maternal mating history
B. Longdon	R. Pannell	J.K. Kitano	R.K. Zajitschek
The penguin and the tick: evolutionary impacts of host's aquatic dispersal on its terrestrial parasite	Co-evolution of sexual reproduction and ecological functions in facultative sexual organisms	Balancing selection facilitates introgression of new immune genes	Lamarckian inheritance of telomere length?! A longitudinal study in free-living jackdaws
K.L. Moon	N.G. Gerber	W. Babik	C. Bauch
Loose association and abiotic effects create complex coevolutionary patterns in burying beetles and their mites	Genetic variation in seasonal reaction norms along latitudinal and altitudinal clines in a butterfly	Are incidental islands less likely to introgress? Insights from haplotype-resolved genomes in European sea bass.	Paternal effects as life-history traits: uncovering the costs of nongenetic inheritance
V.N. Nehring	N.K.O.L. Lindestad	M.D. Duranton	E.L. Macartney

Thursday, 24 August

PROGRAMME

	Room A	Room B	Room C	Room F
12:30	Symposium 26 Adaptation to global climate change	Symposium 24 Eco-evolutionary dynamics	Symposium 29 Integration of micro- and macroevolution	Symposium 9 Fitness and evolution in a social environment: from theory to reality
12:50	Climate-driven shifts in adult sex ratios via sex reversals: the type of sex determination matters V.B. Bókony	The importance of plastic and genetic factors for <i>Daphnia</i> populations revealed by Integral Projection Modeling M. Bruijning	Comparative mitogenomics in <i>Termitomyces</i> reveals a large inverted repeat and abundant selfish elements M. Nieuwenhuis	Adapting to life without parental care: Rapid evolution of parental and offspring adaptations D. Rebar
13:10	The effect of phenotypic variation on adaptation to unpredictable environments in the common lizard J. Kaufmann	The role of interaction structure in eco-evolutionary dynamics K.M. Gotanda	Dissecting brain-body allometry through time: Linking micro- and macroevolution M.T. Tsuboi	Consequences of a bidirectional selection on begging for associated fitness traits N.F. Fresneau
14:30	LUNCH	13:30-14:30 Satellite meeting: Royal Society Meet the Editors Room H 13:30-15:30 Workshop Science policies: how should evolutionary biology be funded? Room X		

Room G	Room K	Room L	Room M
Symposium 31 Evolution across the mutualist- parasite continuum	Symposium 25 Spatial evolution	Symposium 27 Evolutionary implication of hybridization	Symposium 20 Evolutionary implication of transposable elements, epigenetics, and non-genetic inheritance
The evolution of tolerance against Tasmanian Devil Facial Tumour Disease.	Selection for increased condition-dependent dispersal leads to evolution of multiple dispersal components and kernel simultaneously	Haplotype block dynamics in hybrid populations	Protein diet alters paternal epigenetic transmission in male Wild guinea pigs
M.Ruiz-Aravena	S.T. Tung	T. Janzen	A.W. Weyrich
Privatization rescues pathogenic bacteria following loss of cooperative trait	The effect of habitat fragmentation on optimal body size distributions in food webs	Genomic divergence and local adaptation within a hybrid species	Determining the inheritance of paternal effects on offspring pathogen resistance in sticklebacks
S.B. Andersen	J.H. Hillaert	A.C. Cuevas	K.S. Sagonas

Thursday, 24 August

	Room A	Room B	Room C	Room F
14:30	Symposium 26 Adaptation to global climate change	Symposium 35 Open symposium	Symposium 29 Integration of micro- and macroevolution	Symposium 9 Fitness and evolution in a social environment: from theory to reality
14:50	Influence of adaptive habitat choice on species responses to climate change F.P. Pellerin	Footprints of adaptive evolution on Z chromosome in <i>Ficedula</i> flycatchers K.Nadachowska-Brzyska	Evolution of eye size and head morphology between <i>Drosophila americana</i> and <i>D. novamexicana</i> M.R. Reis	Social effects of plant reproductive traits R.T. Torices
15:10	Pollen dispersal slows geographical range shift and accelerates ecological niche shift under climate change O. Ronce	Multiple hypotheses explain variation in extra-pair paternity in a highly variable avian family L. Brouwer	Mechanistic basis for genetic accommodation of ancestral developmental plasticity in spadefoot toad tadpoles I. Gomez-Mestre	Social influences on helping behaviours in a cooperative breeder C.K. Kasper
15:30	Stepping-stone range shifts in response to climate change in fragmented ecosystems E.T. Trucchi	Inflated effect sizes in ecology and evolution: assortative mating in birds as an example M.R. Wang	Studies of evolution under environmental variation suggest that short-term constraint may be long-term adaptation M. Simons	Some mongooses are more equal than others: life-history variation in a cooperatively breeding mammal E. Vitikainen
15:50	Underling mechanisms of response to global warming in an ectothermic insect using a space-for-time approach J.S. Swaegers	Increased evolvability under stress in bacteria: separating the effects of stress-induced mutagenesis and death A.F. Frenoy	What predicts rates of avian bill evolution? A.M. Chira	The eco-evolutionary dynamics of social dominance A.E.G. Lee
16:20	BREAK			

Room G	Room K	Room L	Room M
Symposium 31 Evolution across the mutualist- parasite continuum	Symposium 25 Spatial evolution	Symposium 27 Evolutionary implication of hybridization	Symposium 20 Evolutionary implication of transposable elements, epigenetics, and non-genetic inheritance
Different ways to resistance – coevolution of bacteria and temperate phages along the parasitism-mutualism continuum C. Wendling	The importance of evolution for spatial demography (and back) R.B. Bonte	The role of hybridization in the formation of supergenes P.J. Jay	The role of nucleic acid methylating enzymes (DNMTs) in the red flour beetle <i>Tribolium castaneum</i> K.E. Schulz
Evolution of prudent virulence as a stepping stone to mutualism in an insect gut symbiont B. Raymond	Gene flow favours local adaptation under habitat choice S.J. Jacob	Shedding light on the grey zone of speciation along a continuum of genomic divergence C.F. Fraïsse	The epigenetics of genomic imprinting in mealworms L. Ross
Symbiont switching and alternative resource acquisition strategies but not shifts to parasitism drive mutualism G.D.A. Werner	An eco-evolutionary model of body condition-dependent dispersal C. Baines	Could hybridization create a new genetic basis of sex in <i>Cottus</i> ? G. Le Pennec	Effects of transposable element silencing on gene expression shape selection against transposable elements in <i>Capsella</i> R.H. Horvath
Dual RNAseq to understand costs of symbiont-conferred resistance to parasitoids H.K. Kaeck	An integral projection modelling approach to study density-dependent dispersal S. de Bona	Human-caused eutrophication affects taxonomic composition and patterns of hybridisation in the <i>Daphnia longispina-galeata-cucullata</i> complex P. Spaak	Invasion of experimental populations by a transposable element and interactions between copies A. Hua-van

Thursday, 24 August

PROGRAMME

	Room A	Room B	Room C	Room F
16:20	Symposium 26 Adaptation to global climate change	Symposium 35 Open symposium	Symposium 29 Integration of micro- and macroevolution	Symposium 9 Fitness and evolution in a social environment: from theory to reality
16:40	Impact of climate change on odonate phenology declines with latitude but not with elevation D.R. Khelifa	Inference of past historical events using ABC and MCMC methods: Applications to human populations. F. Austerlitz	Ecomorphological convergence in Caribbean frogs: A new case of parallel radiations A. Gonzalez Voyer	How does social context shape an individual and colony level phenotype and/or fitness J.R. Gadau
17:00	Local adaptation of Swiss stone pine (<i>Pinus cembra</i>) to changing climate at the colonization front C.R. Rellstab	Applying population and landscape genetics to study the Finnish dialects T.H. Honkola	Bacterial genome evolution: reconciling experiments with phylogeny D. Agashe	Evolution of sex roles: the significance of sex-biased social environments J. Eberhart-Phillips
17:20	Using field transplant experiments to test evolutionary responses to climate change in rainforest fruitfly communities J.R. Bridle	Childhood environment mediates sex differences in adult mortality in humans R.M. Griffin	<i>Mycalesina</i> in morphospace: How developmental bias and phenotypic plasticity shape evolutionary diversification in butterflies O.T. Brattstrom	Sexual selection modulates genetic conflicts and patterns of genomic imprinting G.S.F. Faria
17:30	Poster Session 3 (EXPO 1) S3, S6, S7, S10, S16, S18, S20, S24, S25, S26, S27, S28, S29, S31, S32, S33			
19:30				
19:30	PAVILLION			
23:00				

Room G	Room K	Room L	Room M
Symposium 31 Evolution across the mutualist- parasite continuum	Symposium 25 Spatial evolution	Symposium 27 Evolutionary implication of hybridization	Symposium 20 Evolutionary implication of transposable elements, epigenetics, and non-genetic inheritance
Bacteria transition between plant pathogenicity and insect defensive mutualism.	Parasitism and spatial selection in experimental metapopulations of <i>Paramecium</i>	Mechanisms behind rapid build-up of habitat and temporal isolation in a young avian hybrid zone	Impact of transposable elements on genetic diversity in the grass <i>Brachypodium distachyon</i>
L.F. Florez	O. Kaltz	A. Qvarnström	A. Roulin
Loss of the mutualistic phenotype at ecologically-relevant temperatures in a <i>Drosophila</i> protective symbiont	Spatial evolutionary ecology: short- and long-term theory	Anthropogenic influences on hybridization in sympatric alpine charr assemblages	
C.C. Corbin	S. Lion	C.D. Doenz	
Selection of suboptimal fungal strains by fungus-growing termites	The strange behaviour of genotype frequencies in a hierarchically structured host-parasite metapopulation	The genomic structure of rapid adaptive radiation in Lake Victoria cichlid fishes	The role of epigenetic mechanisms in the adaptive evolution
M. Wisselink	R.D. Dünner	J.I.M. Meier	D.S. Stajic

Friday, 25 August

PROGRAMME

8:50	Announcements (Room A)			
9:00	Keynote Lecture: Chris Jiggins From jungles to genomes: Insights into adaptation and speciation from brightly coloured <i>Heliconius</i> butterflies.			
9:50	Room A			
	Room A	Room B	Room C	Room F
	Symposium 26	Symposium 16	Symposium 10	Symposium 6
10:00	Adaptation to global climate change	Genomics of adaptation	Cognitive evolution	Evolutionary significance of biological clock
10:20	Niche convergence in the macroevolution of the thermal sensitivity of phytoplankton growth rate D.G. Kontopoulos	Using hybrid zones to understand the link between genotype, phenotype and divergent selection A.M.W. Westram	The evolution of general intelligence. M. Burkart	Circadian clocks and monarch butterfly migration S.M.R. Reppert
10:30	Forecasting species persistence to future global change by learning from past evolutionary dynamics M. Cambroner	Divergence at the <i>Heliconius erato</i> species boundaries S.V.B. van Belleghem		
10:40	Evolution of short-term insurance versus long-term bet-hedging strategies in response to fluctuating survival threshold T.R.H. Haaland	Genetic architecture of life-history traits in the <i>Melitaea cinxia</i> butterfly V. Ahola	Evolutionary biology of social cognition: fruit flies as a model system B. Dukas	Molecular basis of vertebrate seasonal adaptation T.Y. Yoshimura
11:00	BREAK			
11:30				

Room G	Room K	Room L	Room M
Symposium 18 The evolutionary significance of chromosomal inversion	Symposium 25 Spatial evolution	Symposium 32 Coevolution in antagonistic ecological interactions	Symposium 35 Open symposium
Inversion polymorphism at a mimicry supergene shaped by opposing frequency dependent selection pressures M.J. Joron	Microbes in Da Hood: The phylogeography of cooperation and kin discrimination across microbial neighbourhoods S.W. Wielgoss	Information use and misuse in interacting populations M. van Baalen	On the road to divergence: wood tiger moth populations in the Caucasus, Western Asia B. Rojas
Evolution of salt-water tolerant species in the <i>Anopheles gambiae</i> complex from a comparative genomic perspective M.C. Fontaine	Landscape genomics and local adaptation in Atlantic salmon N.J. Barson		Comparing speciation genetics approaches: Why don't hybrid sterility loci stand out in the genomic landscape? L.M. Turner
	Landscape resistance contributes to spatial genetic structure of a butterfly metapopulation F. Dileo	Optimal control dynamics and cold war dynamics between plant and herbivore D.R. Low	Speciation cube trajectories cluster around three modes of parapatric speciation J. Ripa

Friday, 25 August

	Room A	Room B	Room C	Room F
	Symposium 26 Adaptation to global climate change	Symposium 16 Genomics of adaptation	Symposium 10 Cognitive evolution	Symposium 6 Evolutionary significance of biological clock
11:30				
	Fluctuating temperatures mediate the evolution of trans-generational effects on fitness and select for short lifespan	The genomic basis of local adaptation of the rotifer <i>Brachionus plicatilis</i>	Maternal dietary restriction impairs offspring's learning abilities less critical for survival	The genetics of diurnal/nocturnal preference in <i>Drosophila</i>
11:50	M.I. Lind	L.F. Franch-Gras	S.N. Nakagawa	E. Tauber
	Adaptive transgenerational plasticity in Baltic Sea sticklebacks.	Targets of selection and the evolution of a butterfly mimicry supergene	Changes in brain anatomy, behavior and life history during artificial selection on schooling behavior	The development, diversity, and ecology of solar tracking in sunflowers
12:10	M.J.H. Heckwolf	M.A.R. de Cara	Kolm	K. Blackman
	Plasticity, seasonality and population persistence in a changing climate	Recent environmental adaptation in an invasive species: house mice the Americas	Cognitive ability is affected by sperm competition cues in male <i>D. melanogaster</i>	Allochrony and genetic divergence in an Equatorial songbird with strong circannual rhythms
12:30	V. Oostra	M.V Phifer-Rixey	J.L. Rouse	B.H. Helm

Room G	Room K	Room L	Room M
Symposium 18 The evolutionary significance of chromosomal inversion	Symposium 25 Spatial evolution	Symposium 32 Coevolution in antagonistic ecological interactions	Symposium 35 Open symposium
Evolutionary Forces that Establish Chromosomal Inversions in <i>Drosophila pseudoobscura</i> S.W.S. Schaeffer	Micro-geographic divergence in tree populations I.S. Scotti	Social transmission facilitates the spread of defences R. Thorogood	The evolution of a novel trait: the genetics and ecology of the <i>Rhagoletia</i> fan M.E. Santos
Natural history and genomics of an inversion cline in the seaweed fly (<i>Coelopa frigida</i>) E.B. Berdan	Limits to a species' range in two-dimensional habitats J. Polechová	Monarch butterflies hijack host plant chemicals as a defense against their parasites J.C. de Roode	Evolutionary constraints on caste specific gene expression across 15 ant species C.M. Morandin
Genome-wide analysis of African honeybees (<i>Apis mellifera</i>) identifies haplotypes associated with adaptation to high altitudes P.J. Wallberg	Isolated populations constitute a reservoir of adaptive mutations for a widespread species K. Olofsson	Genetic basis of behavior - evolution within a parasitic slavemaker-host system. A. Alleman	Sexual maturation relates to sexual selection and adult sex ratios in birds: a comparative approach S. Ancona

Friday, 25 August

	Room A	Room B	Room C	Room F
	Symposium 26 Adaptation to global climate change	Symposium 16 Genomics of adaptation	Symposium 10 Cognitive evolution	Symposium 6 Evolutionary significance of biological clock
12:30				
	Adaptation to 30 years of warming in the Baltic Sea	Environmental factors driving local adaptation in the Alpine Brassicaceae <i>Arabis alpina</i>	Genomic and regulatory basis of improved learning ability in parasitoid wasp selection lines	Genetic mechanisms underlying variation in seasonal reproduction in sticklebacks
12:50	A. Laurila	A.R. Rogivue	J. Ellers	A.I. Ishikawa
	Assessing condition dependent mutation rates and their fitness effects under climate warming	Genomic signatures of adaptation and speciation during sympatric divergence in Neotropical crater lake cichlid fishes	Repetitive nature of genes underlying neurons in great tit	Clock gene expression and timing differences between butterflies and moths
13:10	D.B. Berger	A.F.K. Kautt	V.H.S. Da Silva	N.W. Niepoth
14:10	LUNCH			
15:10	ESEB Members meeting (Room A)			
15:50	ESEB Presidential Address: Nina Wedell Evolution in the 21st Century Room A			
16:20	BREAK			
16:50	MS prize winner 2016 E. Keith Bowers (Room A)			
17:20	MS prize winner 2017 Amanda Kyle Gibson (Room A)			
17:50	Closing ceremony (Room A)			
19:00 21:00	Conference Dinner (Pavillion & Stadspark)			
01:00	Party (Pavillion & Stadspark)			

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POSTER LIST

Poster session 1

Monday, 21 August 2017 17:30-19:30

EXPO 1 - poster area

Symposium 1. Parasite evolution in response to treatment

Antibiotic and phage resistance in natural and clinical isolates of <i>Escherichia coli</i>	Allen R. et al.	1
When 1 + 1 is not 2: exploring the prevalence of epistasis during adaptation	Dench J. et al.	2
<i>Drosophila</i> host genotype role on the relationship between virulence and transmission	Eugénio A. et al.	3
Are there trade-offs between the individual and population level for low and high dose treatments?	Hoze N. et al.	4
Real-time evolution of mutualistic microbes on plant roots.	Li E. et al.	5
Parasitism in a long-lived vertebrate; individual variation in susceptibility and response to treatment.	Lynsdale L. et al.	6
Reducing the individual drug doses in combination therapy - how low can one go?	Uecker H. et al.	7
Detecting regions under selection due to drug treatment through genomic scanning of parasitic worms	Wit J. et al.	8
Differential expression of immune genes between two beetle species following attack by <i>Asecodes parviclava</i>	Yang X. et al.	9

Symposium 2. The spread and evolution of ancient infectious diseases

Evolution of infectious diseases: methodologies in use and specific examples	Rühli F. et al.	1
Investigating historic malaria and beta-thalassemia in Sardinia.	Bouwman A. et al.	2
Bone lesions and lipid biomarkers indicate a zoonotic origin for tuberculosis in Pleistocene megafauna	Minnikin E. et al.	3

Symposium 4. Evolution of immune diversity

Widespread balancing selection at a resistance locus in the water flea <i>Daphnia magna</i>	Bourgeois Y. et al.	1
Signatures of historical selection acting on MHC reveal differential selection patterns along a latitudinal gradient	Cortázar Chinarro M. et al.	2
Temperature-dependent melanism and phenoloxidase activity in the dimorphic fly <i>Sepsis thoracica</i>	Gourgoulianni N. et al.	3
Challenges of characterizing high MHC diversity with different sequencing platforms	Rekdal S. et al.	4
Sex differences in immune responses: Hormonal effects, antagonistic selection, and evolutionary consequences	Roved J. et al.	5
Comparison of the immunity and cuticular melanisation in highland vs. lowland population of the bushcricket	Sevgili H. et al.	6
Experimental analysis of individual MHC-dependent TCR repertoire diversity	Teles A. et al.	7
Effect of population size on diversity of MHC II and Toll-like receptors in Galapagos Mockingbirds	Vlcek V. et al.	8
Age, pathogen exposure, but not maternal care shape offspring immunity in a subsocial insect	Vogelweith F. et al.	9

Symposium 5. Evolutionary biology of ageing

The genomic toolbox to transform short lived social bees into long lived social parasites	Aumer D. et al.	1
Is senescence slower and later in long-lived women and men?	Berger V. et al.	2
Oxidative stress, ageing and reproductive status in a clonal ant species	Bernadou A. et al.	3
Assessing the evolutionary causes for sex differences in lifespan	Brengdahl M. et al.	4
Redox-state and hypoxia gene expression associated with division of labor in honeybee workers	Cervoni M. et al.	5
Disease spread in age structured populations with maternal age effects	Clark J. et al.	6
Genetic and environmental effects on telomere length in a natural population	Dugdale H. et al.	7
Genomic and transcriptional signatures of selection for longevity in drosophila melanogaster	Garschall K. et al.	8
Does activation of the immune response entail physiological or life-history trade-offs during early life?	Hernandez A. et al.	9
The genomic basis of experimental evolution of aging in Drosophila: how individual SNPs affect lifespan	Hoedjes K. et al.	10
Sex dependent effects of genetic and environmental quality on the expression of condition-dependent traits	Hooper A. et al.	11
Female ageing is influenced by both direct and indirect genetic effects due to mitonuclear epistasis	Immonen E. et al.	12
Mechanisms leading to male reproductive ageing in Drosophila melanogaster	Koppik M. et al.	13
Early-life environment effects on senescence in European badgers (<i>Meles meles</i>)	Lieshout H. et al.	14
Understanding the biology of ageing through the demography of death	Mccracken A. et al.	15
Increased fecundity and its consequences in a wood-dwelling termite	Meusemann K. et al.	16
The royals age while the commoners don't: gene expression and aging in <i>Cryptotermes secundus</i> .	Monroy Kuhn J. et al.	17
Baseline glucose may link developmental and adult conditions to lifespan	Montoya B. et al.	18
Increased expression of repair genes with age in the fat body of <i>Temnothorax</i> ant queens	Negróni M. et al.	19
Intercellular competition and the inevitability of multicellular aging	Nelson P. et al.	20
Environment, ageing and cancer risk: from naked mole rats to modern humans	Noble J. et al.	21
Consequences of opposing body size selection regimes on telomere dynamics in wild house sparrows	Pedersen M. et al.	22
Senescence in the face of threat: age-dependence and phenotypic modulation	Pietrzak B. et al.	23
Life history trade-offs promote late-age immune protection, not immunosenescence	Priest K. et al.	24
Limited sex-specific aging in African annual fishes	Reichard M. et al.	25
Effects of maternal age on offspring life history trajectories in the Asian elephant	Reichert S. et al.	26
Telomeres reveal the impact of inbreeding on individual biological age	Richardson D. et al.	27

Response to artificial selection on body size in a wild passerine bird, the house sparrow (<i>Passer domesticus</i>)	Kvalnes T. et al.	28
Early life condition effects on ageing of males, females and their offspring	Spagopoulou F. et al.	29
A comparative perspective on longevity: the effect of body size dominates over ecology in insects	Tammaru T. et al.	30
A molecular test of the mutation accumulation theory of aging	Turan Z. et al.	31
Epigenetic selection and the epigenomic signals of maternal adversity	Zwaan B. et al.	32
Experimental evolution of slowed cognitive aging in <i>Drosophila melanogaster</i>	Zwoinska M. et al.	33

Symposium 11. Evolution of communication signals

The role of acoustic signals in courtship behavior of <i>Drosophila virilis</i> group species	Belkina E. et al.	1
Jack of all trades or master of one? Targeted chemical defence in wood tiger moths	Burdfieldsteel E. et al.	2
What drives signal evolution in birds?	Cooney C. et al.	3
Signals of evolutionary history in a learned behavior: song reflects phylogeny in Emberizid sparrows	Creanza N. et al.	4
Conspicuous plumage colours are highly variable	Delhey K. et al.	5
Experimentally testing dynamic cuttlefish camouflage on fish as visual predators	El Nagar A. et al.	6
Microevolutionary pattern at Macroevolutionary scale: Evolution of defense ensembles in Papilionidae	Gaitonde N. et al.	7
Multiple interacting processes maintain colour polymorphism in the wood tiger moth	Gordon S. et al.	8
Kittiwake eggs viewed by conspecifics and predators: implications for colour signal evolution	Holveck M. et al.	9
From piccolos to tubas in <i>Salpichroa</i> : the concerted evolution of trumpet-flowered Andean nightshades	Ibañez A. et al.	10
Influence of malaria infection on the structural and the carotenoid-based colouration in the blue tit	Janas K. et al.	11
Heritable age-dependent plasticity in the sexual communication signal of a noctuid moth	Lievers R. et al.	12
Comparative gene expression in throats of sticklebacks from populations with varying color dimorphism	Mckinnon J. et al.	13
Odor diversity decreases with inbreeding in the ant <i>Hypoponera opacior</i>	Menzel F. et al.	14
Convergent evolution of body coloration in genus <i>Oryzias</i> and <i>Nomorhamphus</i> in Sulawesi-tenggara, Indonesia.	Montenegro J. et al.	15
Queen pheromones and fertility cues in vespine wasps	Oi C. et al.	16
Wing structural colors allow species- and sex-specific flickering visual cues during sexual flights	Outomuro D. et al.	17
Bumblebee workers bend the knee to honeybee QMP	Princen S. et al.	19
Chemical signalling in the dark: courtship behaviour of the noctuid moth <i>Heliothis virescens</i>	Zweerus N. et al.	20

Symposium 14. Fitness landscapes, big data and the predictability of evolution

Testing evolution predictability using the aeol software	Beslon G. et al.	1
The shape of antibiotic resistance fitness landscapes characterised through selection and mutation accumulation	Gifford D. et al.	2

On the (un)predictability of a large intragenic fitness landscape	Matuszewski S. et al.	3
Why sex? Testing the benefits of recombination with an antibiotic-resistance enzyme	Pesce D. et al.	4
Predictability of evolution of populations with contrasting initial history varies across biological levels	Simões P. et al.	5

Symposium 17. Evolutionary causes and consequences of variation in recombination rate

Sex vs Asex: Do expressed genes evolve at different rates?	Bast J. et al.	1
Understanding variation in nucleotide diversity across the genome of wild house mice	Booker R. et al.	2
Effective purifying selection in asexual oribatid mites	Brandt A. et al.	3
Feminized males and the dynamics of SA genes and deleterious mutations	Cavoto E. et al.	4
The origin, recombination rate and turnover of guppy sex chromosomes	Darolti I. et al.	5
Recombination suppression with minimal differentiation in the homomorphic sex chromosomes of the African clawed frog	Furman B. et al.	6
The genomic landscape of recombination during divergence	James M. et al.	7
Fine-scale analysis of meiotic recombination in Prdm9-deficient canine species	Jeschke A. et al.	8
High-resolution recombination mapping of a sex chromosome-autosome fusion in the Japan Sea stickleback	Josephson M. et al.	9
High-resolution mapping of crossover recombination events in bees	Kawakami T. et al.	10
Trans-regulation into and out of non-recombining regions: insight from gene expression in <i>Drosophila</i>	Kimber C. et al.	11
Patchy recombination in the genome of an asexual springtail	Kraaijeveld K. et al.	12
The evolution of sex within mutualisms	Leeks A. et al.	13
Degeneration of an avian neo-sex chromosome	Sigeman H. et al.	14
Joint inference of demography and local recombination rate along a genome alignment	Valadares Barroso G. et al.	15

Symposium 22. Coevolution of hosts and their microbiome

Phylogenetic, environmental, dietary and social patterns of gut microbiota variation across European cave-dwelling bats	Alberdi A. et al.	1
Nest bacterial environment affects development and survival of spotless starling nestlings	Azcárate-García M. et al.	2
The language hologenome	Benítez-Burraco A. et al.	3
Experimental old nest material affects hoopoe (<i>Upupa epops</i>) microbial and ecto-parasitic loads increasing breeding success	Díaz Lora S. et al.	4
Do environmental factors influence the development of the gut microbiome in young birds?	Dietz M. et al.	5
Is there local adaptation of the microbiome in a panmictic large distribution host population?	Gillingham M. et al.	6
Host plant diet affects gut microbial community composition and disease outcome in monarch butterflies	Harris E. et al.	7
Parasites and the eukaryotic biome - diversity is associated with social rank in spotted hyena	Heitlinger E. et al.	8
Rapid evolution of life history strategies in <i>Pseudomonas</i>	Jousset A. et al.	9

fluorescens introduced into non-sterile soil

Contrasting patterns of <i>Wolbachia</i> infection in bisexual and parthenogenetic sibling weevils: example of genus <i>Strophosoma</i>	Kajtoch L. et al.	10
Molecular untangling of relations among <i>Crioceris</i> leaf beetles, Asparagus host plants and endosymbiotic bacteria <i>Wolbachia</i>	Kolasa M. et al.	11
Factors effecting gut microbiota in zebra finches: potential impact of gut symbionts on kin recognition	Maraci O. et al.	12
The effect of social contact on the microbial community of <i>Drosophila melanogaster</i>	Mcdowall L. et al.	13
Parasitoid infection shapes the natural microbiota of the Glanville Fritillary Butterfly.	Minard G. et al.	14
NOD2 influences intestinal resilience and fungal signatures after antibiotic perturbation	Moltzau Anderson J. et al.	15
The evolution of obligate intracellular symbiosis across the insects	Padje A. et al.	16
Bacterial communities associated with butterflies and their impact on butterfly fitness	Phalnikar K. et al.	17
Endosymbiont mediates trade-off between division of labor and disease defence in <i>Camponotus</i> ants	Sinotte V. et al.	18
Effect of host species and feeding substrates on bacterial communities of three earthworm species	Surat M. et al.	19
Uncovering disease communities and their ecological and evolutionary relevance	Susi H. et al.	20
Microplastics in freshwater: changes in gut microbiota across trophic levels	Vargas J. et al.	21
A metacommunity perspective sheds light on the evolutionary and ecological processes of vertebrate microbiome assembly	Veelen H. et al.	22

Symposium 23. Rapid evolution revisited

Rapid evolution of tail fin size and shape following introduction in the guppy (<i>Poecilia reticulata</i>)	Arendt J. et al.	1
Environmental variation drives rapid coevolution and eco-evolutionary feedbacks across replicate host-parasite populations	Auld K. et al.	2
Population level phenotypic plasticity in response to food and temperature variation	Brunner F. et al.	3
Selective processes influencing historical invasion success: comparative genomics of <i>Corophium volutator</i> and <i>Hediste diversicolor</i>	Einfeldt L. et al.	4
Experimental evidence that parasites drive rapid eco-evolutionary feedbacks	Eizaguirre C. et al.	5
Rapid parallel adaptation to cold climate in lizard embryos: insights from gene expression	Feiner N. et al.	6
Rapid evolution in domestication – the ‘domestication syndrome’ in tame wild house mice (<i>Mus musculus</i>)	Geiger M. et al.	7
Evolution of the visual system in Neotropical cichlids: how to adapt to novel light environments	Härer A. et al.	8
Multi-species comparative transcriptomics of marine mollusc larvae in response to climate change stressors	Harney E. et al.	9
Interactive effects of predation and habitat structure on phenotypic evolution of isopods	Lürig M. et al.	10
ABC a new tool in the box to unravel the genetic basis of coevolutionary interactions?	Märkle H. et al.	11

Spatial heterogeneity affects selection gradients in a natural population of the legume <i>Medicago truncatula</i>	Rode O. et al.	12
Eco-evolutionary dynamics in natural communities of fermenting bacteria	Schoustra S. et al.	13
Effective polyploidy causes phenotypic delay and constrains bacterial evolvability	Sun L. et al.	14
Adaptation to unpredictable environments: an experimental evolution approach in the rotifer <i>Brachionus plicatilis</i> .	Tarazona E. et al.	15

Symposium 30. Phylogenetics in the genomic era

Dissecting broad introgression using exon capture data in Rainbow skinks across the Kimberley (Australia)	Afonso Silva A. et al.	1
Multiple full-length haplotypes of the Brassicaceae self-incompatibility locus resolved by single-molecule real-time sequencing	Bachmann J. et al.	2
Comparing phylogenies inferred with few or many genes in a flatworm genus	Brand J. et al.	3
Using repeat abundance to obtain insights into the phylogeny of species in section Ciconium (Geraniaceae)	Breman F. et al.	4
Impact of enrichment conditions on cross-species capture of fresh and degraded DNA	Foerster W. et al.	5
Phylogenetic and genetic studies in the section Otites of the genus <i>Silene</i>	Janousek B. et al.	6
DnaK-dependent accelerated evolutionary rate in prokaryotes	Kadibalban A. et al.	7
Inferring speciation of rock geckos (genus <i>Cnemaspis</i> <i>Strauch</i> 1887) from southern Vietnam with next-generation sequencing	Nguyen H. et al.	8
Phylogenetic relationship in the genus <i>Drosophila</i> (Diptera: Drosophilidae): evolutionary relationships inferred from multilocus DNA data	Onder B. et al.	9
Resolving the evolutionary relationships of pteropods with phylogenomic tools	Peijnenburg K. et al.	10
Among genes heterogeneity of the phylogenetic signal in genome data	Rota-Stabelli O. et al.	11
Nuclear sequences of mitochondrial origin (Numts) and genetic diversity of ancestral population of <i>D. virilis</i>	Sorokina S. et al.	12
'Missing links' to the fungi domesticated by termites	van de Peppel L. et al.	13
Mending broken promises: RADseq resolves evolutionary relationships within a species complex of sympatric intertidal isopods	Wenzel M. et al.	14
An evolutionary history of papillomaviruses	Willemsen A. et al.	15
Complete coding sequence of DENV-4 isolated from field-caught mosquitoes: its sequence features and evolution	Wonnapijit M. et al.	16
A first insight into the genome of the haemosporidian parasite <i>Polychromophilus</i> sp.	Ziegler E. et al.	17

Symposium 35. Open symposium

The genetic basis of sexually dimorphic traits in an Indonesian medaka fish, <i>Oryzias latipes</i>	Ansai S. et al.	1
Where did they come from? A male group of sperm whales under investigation	Autenrieth M. et al.	3
How does selection for <i>Varroa</i> resistance affect the evolution of virulence of Deformed Wing Virus?	Beekman M. et al.	5
Evolution of genetic dominance in polygenic quantitative	Bocedi G. et al.	7

traits

Different temporal dynamics of adult sex ratio and operational sex ratio in the wild	Carmona-Isunza M. et al.	9
The genetic architecture of the divergent ecotypes of <i>Littorina saxatilis</i>	Chaube M. et al.	11
Sociality impedes pathogen adaptation in an ant host - fungal pathogen system	Cremer S. et al.	15
Light, sex and time: patterns of differential herbivory on a dioecious forest perennial	Cvetkovic C. et al.	17
Jumping in trees: modeling the dynamics of parasite spread within clades of host species	Engelstaedter J. et al.	19
Redefining the 'super' in superfetation: Are pregnant live-bearing fish with more superfetation better swimmers?	Fleuren M. et al.	21
A first glimpse into the ants' virome	Fürst M. et al.	23
Specific dynamic action under normoxia and hypoxia in ground beetle <i>Carabus nemoralis</i>	Gudowska A. et al.	25
The genetics and evolution of reproduction in a booklouse species	Hodson N. et al.	29
Reconstructing past history from whole-genomes: an ABC approach handling recombining data.	Jay F. et al.	31
Inbreeding in the ant <i>Formica exsecta</i>	Johansson H. et al.	33
Jamestown Canyon Virus epidemiology in the USA, 2012-2016	Kinsella C. et al.	35
Concerted evolution of brain region volumes during artificial selection for relative brain size	Kotrschal A. et al.	37
Host genotype influences resistance, but not tolerance, towards two bacteria species	Kutzer M. et al.	39
Rates and traits: does life history drive genome size evolution in amphibians	Liedtke H. et al.	41
Seven at one blow – functional analysis of myoglobin diversity of lungfish	Lüdemann J. et al.	43
Ecology and genomics of toxicity in <i>Heliconius</i> butterflies	Mattila L. et al.	45
A systems biology approach to the maintenance and evolution of larval haemocyte proportions in <i>Drosophila</i>	Morais A. et al.	47
Scaling up the effects of inbreeding depression from individuals to metapopulations	Nonaka E. et al.	49
Cumulative cultural evolution in an island-structured population	Ohtsuki H. et al.	51
Phylogeographic structure in populations of <i>Telmatobius chusmisensis</i> (Anura: Telmatobiidae)	Otalora K. et al.	53
Genome-wide association mapping for hatching failure in the zebra finch, <i>Taeniopygia guttata</i>	Pei Y. et al.	55
Group competition boosts innovation and cultural development	Puurtinen M. et al.	56
Complex genital morphology has complex function: Laser surgery reveals multiple roles of male genital spines	Rodriguez-Exposito E. et al.	59
Co-option of sex chromosomes in amniotes: lacertid lizards picked mammalian X for their Z	Rovatsos M. et al.	61
Is igf2 expressed in a parent-of-origin manner in a matrotrophic fish?	Saldivar Lemus Y. et al.	63
Latitudinal variation of sexual traits in the false blister beetle <i>Oedemera sexualis</i>	Satomi D. et al.	65
A genomic approach for defining conservation units of	Sinclair-Waters M. et al.	67

Atlantic Cod in coastal Labrador, Canada

Of Seals and Man - genetic signatures of population bottlenecks in pinnipeds	Stoffel M. et al.	69
The maintenance of genetic variation in polyandry: negative frequency-dependent selection?	Sutter A. et al.	71
Evolution of scale insect neoteny from the adult specifier E93 and juvenile hormone perspective	Vea I. et al.	73
Evolution of semi-independent homomorphic Y chromosomes in an annual plant species complex	Veltsos P. et al.	75
More than meets the eye - predator-induced plasticity in multiple traits in crucian carp: adaptations for a safe nightlife?	Vinterstare J. et al.	77
Selection on tolerance to environmental concentrations of psychoactive pharmaceuticals in wild zebrafish (<i>Danio rerio</i>)	Vossen L. et al.	79
Identification and gene-knockdown of putative seminal fluid proteins in a simultaneously hermaphroditic flatworm	Weber M. et al.	81
The evolution of ecological specialization in a broadly-distributed nearshore species (<i>Syngnathus typhle</i>)	Wilson B. et al.	83

Poster session 2

Tuesday, 22 August 2017 17:30-19:30

EXPO 1 - poster area

Symposium 8. Major transitions in evolution

Modularity and timescale	Christie J. et al.	2
Evolutionary patterns of jaw shape and biomechanical performance in extant cingulates	de Esteban-Trivigno S. et al.	3
Experimental evolution reveals that high relatedness protects multicellular cooperation from cheaters	Grum-Grzhimaylo A. et al.	4
Gene network rewiring of convergent evolution of innovative anal fin pigmentation patterns in cichlid fishes	Gu L. et al.	5
Cranial fenestration and adaptive potential in the two basal clades of modern birds.	Gussekløo S. et al.	6
The evolution of eusociality in cockroaches is associated with gene family contractions	Harrison C. et al.	7
Superorganisms, anisogamy and the major transitions in evolution	Helanterä O. et al.	8
Predation and multicellular group formation in algae	Kapsetaki S. et al.	9
The transcriptomic and epigenetic basis of broodcare behavior and behavioral flexibility in ants	Kohlmeier P. et al.	10
Evolution and comparative ecology of asexuality	Kooi C. et al.	11
Asymmetrical gene expression patterns regulate cyclic transitions between reproduction and brood care in clonal ants	Libbrecht R. et al.	12
From super-organism to super-colony? Using gene expression to explore the selection shaping an evolutionary transition	Martinez-Ruiz C. et al.	13
A model of the evolution of endosymbiosis grounded in cross-level exchanges of energy and information	Mathé-Hubert H. et al.	14
On the difficult transition from the free-living lifestyle to obligate symbiosis	Nguyen L. et al.	15

Postponed nuclear fusion in fungi – do two haploid nuclei equal one diploid nucleus?	Nygren K. et al.	16
Lineage selection and the evolution of multicellularity	Remigi P. et al.	17
The adaptive value of non-clonality in fungal networks	Scott T. et al.	18
Genetic underpinning of eusociality in the facultative eusocial sweat bee <i>Halictus rubicundus</i>	Soro A. et al.	19
Endosymbiosis, the original sin? How early eukaryotic sex could have evolved to counter mitochondrial meltdown	Tilquin A. et al.	20
<i>Malus domestica</i> gametophytic self-incompatibility system: players and features of the pollen component determining specificity recognition	Vieira P. et al.	21
Illustrating evolutionary concepts by experimental evolution of drawings	Zandveld J. et al.	22

Symposium 12. Environmental effects on sexual selection

Stowaways: Sexually transmitted opportunistic microbes in the common bedbug <i>Cimex lectularius</i> ?	Bellinvia S. et al.	1
Sex- and genotype-effects on nutrient-dependent fitness landscapes in <i>D. melanogaster</i>	Camus F. et al.	2
Are sexy males more symmetric? A study on sexual selection and fluctuating asymmetry.	Chechi T. et al.	3
How deleterious mutations affect behavioural traits subject to mating preferences?	Herdegen-Radwan M. et al.	4
Identification of reliable sexually selected signals of male quality in changing environment in a butterfly	Holveck M. et al.	5
Sexual reproduction as bet-hedging	Li X. et al.	7
Love makes blind as a mate-guarding or honest signalling strategy	Liberti J. et al.	8
What ecological factors favour asexual over sexual reproduction? A study on mayflies in natural populations.	Liegeois M. et al.	9
Developmental series of sex-biased gene expression in three 'sex-races' associated with climate in common frogs	Ma W. et al.	10
Genotype-by-Environment Interactions for Seminal Fluid Investment	Patlar B. et al.	11
Fitness consequences of the condition-dependent expression of forelegs in male <i>Drosophila prolongata</i>	Perdigón Ferreira J. et al.	12
Male-mediated effects of diet and oxidative stress on post-fertilization fitness outcomes	Polak M. et al.	13
Male guppy color spots predict the number of grandchildren	Przesmycka K. et al.	14
Adaptive divergence in East African cichlid fish: testing for pre- and postzygotic reproductive barriers	Rajkov J. et al.	15
The impact of temperature fluctuation during development on male mating success in rainforest <i>Drosophila</i>	Saxon A. et al.	16
The role of lifecycle in azole-resistance development in <i>Aspergillus fumigatus</i> .	Snelders E. et al.	17
Evolution of parental care in frogs and toads: life history, ecology and sexual selection	Vagi B. et al.	18
Variation in male courtship behaviour in the Trinidadian guppy along the high-low predation intensity continuum	Yong L. et al.	19
Male × male × female interactions in <i>Drosophila melanogaster</i>	Zeender V. et al.	20

Symposium 13. Modern quantitative genetics and the study of adaptation

Gene-by-gene interaction in a clonal invertebrate: the clone	Balzarini V. et al.	1
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wars.

The efficiency of adaptation by selection on quantitative traits	Barton N. et al.	2
Genetic basis for natural variation in leaflet number of <i>Cardamine hirsuta</i>	Baumgarten L. et al.	3
Causative genes for quantitative variation in red colouration	Fogelholm J. et al.	4
Repeated evolution of adaptive color patterns in east African cichlid fish	Gerwin J. et al.	5
Adaptations of the brain to hypoxia induced by diving in marine mammals	Geßner C. et al.	6
The geometry and genetics of organismal shape	González C. et al.	7
Complexity of the gene expression patterns in a gene connected to cold adaptation	Hopkins D. et al.	8
Temporal variation in selection in a soay sheep population	Hunter D. et al.	9
Unbiased genetic variance estimation using variation in IBD sharing among full sibs	Husby A. et al.	10
Color vision by rod opsin photoreceptors in deep sea fishes	Musilova Z. et al.	11
Mapping the genetic basis of reproductive timing in Cape Verde Islands <i>Arabidopsis</i>	Neto C. et al.	12
A reference genome of great gerbil – a highly plague-resistant rodent host	Nilsson P. et al.	13
Identifying the genetic basis of rapid adaptive trait loss in crickets without a reference genome	Risse J. et al.	14
Basal metabolic rate in wild house sparrow populations: genetic basis and effects on fitness.	Rønning B. et al.	15
Environmental stress correlates with increases in genetic and residual variances: a meta-analysis of animal studies	Rowinski P. et al.	16
Dominance status is heritable and predicts survival but not reproductive success in the wild	Sanchez-Tojar A. et al.	17
Population response of <i>Drosophila subobscura</i> to high lead concentration	Savic Veselinovic M. et al.	18
Sex-specific adaptation at sexually antagonistic loci through single-sex experimental evolution in the housefly <i>Musca domestica</i>	Schenkel M. et al.	19
Expectations for proportions of additive and non-additive genetic variance	Staehler A. et al.	20
Long term selection to low lead concentration increases fitness in <i>Drosophila subobscura</i>	Tanaskovc M. et al.	21
The effects of changes in population size on the opportunity for selection in wild snapdragons	Thomson C. et al.	22
Developmental plasticity of opsin gene expression in European cyprinid fishes	Truhlárová V. et al.	23
The impact of exploitation on the genomes of ancient and historic walrus genomes.	Weber X. et al.	24
Are life-history trade-offs influenced by the environment?	Winney I. et al.	25

Symposium 15. Experimental evolution in complex environments

Antibiotic hypersensitivity reversal in drug resistant <i>Pseudomonas aeruginosa</i>	Barbosa C. et al.	1
Long-term evolution of multidrug resistant bacteria under antibiotic selection	Bottery M. et al.	2
The evolution of resistance and sex in changing environments	Boynton P. et al.	3

Emergence of cooperation and division of labour in the primitively eusocial wasp <i>Ropalidia marginata</i>	Brahma A. et al.	4
Can hoarding of secreted exoproducts limit exploitation by public goods cheats?	Bruce J. et al.	5
Taming the inner beast: phage-driven adaptations to fluctuating temperatures in a bacterial host	Bruneaux M. et al.	6
Predicting viral behaviour patterns in differing abiotic environments	Butt L. et al.	7
Neuroactive compounds associated with social environment transitions during colony foundation by <i>Lasius niger</i> ant queens	Cherasse S. et al.	8
Feedback loops between traits under selection and environment in batch experimental evolution: a mathematical analysis	Collot C. et al.	9
Self-medication: How mixing diets saves your life	Dickel F. et al.	10
To what level are reproducible evolutionary trajectories predictable? A case study in <i>Saccharomyces cerevisiae</i> .	Diepeveen E. et al.	11
Virus evolution in multi-host pathogen: experimental evolution of coinfections and recombination	Doublet V. et al.	12
Metabolic Analysis of <i>Drosophila melanogaster</i> adapted to chronic juvenile malnutrition	Dupuis C. et al.	13
Growth strategies and drug adaptations in clinical strains of the fungal human pathogen <i>Candida glabrata</i>	Duxbury S. et al.	14
Spatio-temporal dynamics of antimicrobial resistance in heterogeneous environments	Fuentes-Hernandez A. et al.	15
Bacteria suffer more from their temperate phages in future ocean conditions	Goehlich H. et al.	16
Ecology and evolution of microbial communities in Mabisi, a traditional product of spontaneous milk fermentation.	Groenenboom A. et al.	17
Social evolution in complex ecological networks	Hesse E. et al.	18
The evolutionary and ecological implications of mito-nuclear epistasis	Kurbalija Novicic Z. et al.	19
Recent adaptation to novel temperature fluctuations results in maladaptive thermal plasticity	Leonard A. et al.	20
Specialized host exploitation constrains the evolution of generalism in microsporidian parasites of <i>Artemia</i>	Lievens E. et al.	21
Kin selection promotes female productivity and cooperation between the sexes	Lukasiewicz A. et al.	22
Effects of functional diversity and species richness on the evolution of a synthetic bacterial ecosystem	Mallon C. et al.	23
Experimental evolution of dispersal and of its plasticity in response to heterogeneous or homogeneous density	Nieberding C. et al.	24
Temperate phage accelerate the loss of siderophore cooperation in <i>Psuedomonas aeruginosa</i>	O'Brien S. et al.	25
Most-likely evolutionary route(s) for cooperative cross-feeding	Rahman M. et al.	26
How do experimentally altered sex ratios affect the evolution of sex-specific life-history syndromes?	Stångberg E. et al.	27
Revising the ecology to evolution link of eco-evolutionary dynamics - not only selection matters	Theodosiou L. et al.	28
Interference competition between bacteria as a mechanism to survive in complex environments	Unterweger D. et al.	29
Dobzhansky and Levene revisited: Experimental evolutionary genomics of herbivorous insects on multiple host plant species	Whiteman K. et al.	30

Exploring the ecological interactions of host-virus-virophage populations	del Arco A. et al.	31
Bacteria-phage local adaptation and resistance-virulence trade-offs shape plant health	Wei Z. et al.	32
Symposium 16. Genomics of adaptation		
Adaptation and divergence across bottlenecked populations of an island endemic	Armstrong C. et al.	1
Co-evolution of house mouse and an intracellular parasite, <i>Eimeria</i> spp.	Balard A. et al.	3
Testing for convergent signatures of Arctic adaptation in the Brassicaceae family	Birkeland S. et al.	5
Invasion history and selection in a recently introduced Ambrosia biocontrol candidate	Bouchemousse S. et al.	7
The genetic basis of cold acclimation in <i>Drosophila</i>	Cook N. et al.	9
The genetic architecture of convergent iridescence in Heliconius butterflies	Curran E. et al.	11
Evidence for pollution driven rapid evolution in <i>Daphnia galeata</i>	Dennis R. et al.	13
Forecasting genomic adaptation to climate change in Arabidopsis thaliana	Exposito-Alonso M. et al.	15
The genome of a parabiatic ant species <i>Crematogaster levior</i> with highly diverse cuticular hydrocarbon profile	Feldmeyer B. et al.	17
Genomics of ecological speciation across the Swiss Alpine whitefish radiation	Feulner P. et al.	19
Widespread signatures of selection on standing variation for athletic performance and navigation in racing pigeons	Gazda M. et al.	21
Characterization of adaptive regulatory variation and its effect on Drosophila melanogaster size and wing loading	Glaser-Schmitt A. et al.	23
Genomics of rapid adaptation on seasonal timescales in <i>D. melanogaster</i>	Greenblum S. et al.	25
Signatures of selective sweeps with self-fertilisation	Hartfield M. et al.	27
Population genomics for a remarkable ecological radiation in Hawaiian Islands	Izuno A. et al.	29
Genetical genomics of domestication in a wild by domestic chicken intercross	Johnsson M. et al.	31
Adaptive evolution of clinal inversion polymorphisms in <i>Drosophila melanogaster</i>	Kapun M. et al.	33
The opsin genes of Cameroonian crater lake cichlids	Klodawska M. et al.	35
Genetic and developmental bases of variation in plasticity in <i>D. melanogaster</i>	Lafuente E. et al.	37
Inbreeding depression in a wild passerine bird	Laine V. et al.	39
Commemorating 60 years of bidirectional selection: Applying genomics to the Virginia body weight chicken lines	Lillie M. et al.	41
Comparative analysis of Stramenopile genomes reveals processes of genomic reduction in <i>Blastocystis hominis</i>	Low R. et al.	43
Using transcriptomics to understand complex behaviour using an avian model	Maher K. et al.	45
European phylogeography of <i>Apodemus flavicollis</i> and <i>Apodemus sylvaticus</i> using restriction site-associated DNA sequencing (RADseq)	Martin Cerezo M. et al.	47
Endocrine basis of predator- and prey-induced phenotypic plasticity in the Hokkaido Salamander (<i>Hynobius retardatus</i>)	Matsunami M. et al.	49

Whole-genome re-sequencing insights into <i>Littorina saxatilis</i> ecotype local adaptation	Morales H. et al.	51
Advances in understanding the genetic basis of female limited melanic morphs in <i>Pieris napi</i> .	Neethiraj R. et al.	53
What happens to sex-biased gene expression following a transition to asexuality?	Parker D. et al.	55
Parallel adaptation to pollinators in Mediterranean orchids	Piñeiro Fernandez L. et al.	57
Adaptive divergence in a common landscape	Raeymaekers A. et al.	59
The population genomics of adaptive differentiation along a latitudinal gradient in moor frogs (<i>Rana arvalis</i>)	Rödin Mörch P. et al.	61
Different genomic changes underlie adaptive evolution in <i>Drosophila subobscura</i> populations of contrasting biogeographical history	Seabra S. et al.	63
Genomic organization and standing structural variation of the Major Histocompatibility Complex of the threespined stickleback	Sengupta M. et al.	65
Adaptive genetic variation at salivary protein genes in blood-feeding generalist ectoparasites	Talbot B. et al.	67
Genomics of adaptive divergence in an East African cichlid fish: a comparative approach	Weber A. et al.	69
The complex genomic organization of male determining loci in the housefly	Wu Y. et al.	71
A complex multi-locus, multi-allelic genetic architecture underlying the long-term selection-response in Virginia chicken body-weight lines	Zan Y. et al.	73

Symposium 19. Evolution of gene expression regulation

Evolution of head and eye size and shape in <i>Drosophila melanogaster</i> and <i>Drosophila mauritiana</i>	Buchberger E. et al.	1
Adaptive remodeling of the transcriptional response to drought stress in <i>Arabidopsis lyrata</i>	de Meaux E. et al.	2
Parasite-induced changes in host behaviour and lifespan through interference with host gene expression	Foitzik S. et al.	3
Transcriptional changes due to haploid selection	Francis R. et al.	4
Evolution of microRNAs and their roles in the development of the sea anemone <i>Nematostella vectensis</i>	Fridrich A. et al.	5
Mode of gene regulation – activation or repression – theoretically studied from crosstalk perspective	Grah R. et al.	6
Global mQTL analysis identifies genetic polymorphisms underlying methylation and gene expression differences in the chicken	Höglund A. et al.	7
Sex chromosome dosage compensation and sex-biased gene expression on the Z chromosome of Lepidoptera GF15058, a novel candidate gene for cold adaptation in <i>Drosophila ananassae</i>	Huylmans A. et al.	8
Phylogenetic diversification and developmental implications of poly-(R)-3-hydroxyalkanoate gene cluster assembly in prokaryotes	Königer A. et al.	9
Why and how genetic canalization evolves in gene regulatory networks	Kutralam-Muniasamy G. et al.	10
Non-coding RNA regulation in <i>Apis mellifera</i> and <i>Tribolium castaneum</i> infected with <i>Nosema</i> parasites.	Le Rouzic A. et al.	11
Hormonal effects on gene expression and growth rate in zebra finch embryos	Lopez A. et al.	12
	Lutyk D. et al.	13

The role of doublesex in sex specific pigmentation in the parasitic wasp, <i>Nasonia</i> .	Verhulst E. et al.	14
Differing house finch cytokine responses to original and evolved isolates of a newly emerged pathogen	Vinkler M. et al.	15

Symposium 21. Genetic exchange in microbial adaptation and infectious disease

Effect of protozoan predation on spread and maintenance of antibiotic resistance plasmid	Cairns J. et al.	1
Diversity and prevalence of type II toxin-antitoxin systems of <i>Pseudomonas aeruginosa</i> infecting cystic fibrosis lungs	Ghoul M. et al.	2
Do phage-associated genes cause <i>Wolbachia</i> -induced parthenogenesis?	Kampfraath A. et al.	3

Symposium 24. Eco-evolutionary dynamics

Effects of <i>Aedes aegypti</i> larval nourishment on adult susceptibility to Dengue virus	Alcalay Y. et al.	1
Evolutionary compromises to environmental toxins: urea and ammonia tolerance in <i>Drosophila suzukii</i> and <i>Drosophila melanogaster</i>	Belloni V. et al.	3
Carabid wing state and flight capability in age-structured temperate forests, North Carolina, U. S. A.	Browne R. et al.	5
The causes of genetic variation in susceptibility to infectious disease in natural populations	Duxbury M. et al.	7
Coevolutionary dynamics of mutualistic networks	Encinas-Viso F. et al.	9
A new macroevolutionary model for island biogeography	Etienne R. et al.	11
The effect of host age at exposure on the parasite's penetration ability	Gilboa C. et al.	13
How two bats solve the cocktail party problem?	Guérin C. et al.	15
Long-term genomic coevolution of host-parasite interaction in a natural environment	Hoikkala V. et al.	17
Proximate causes of dwarfism in close continental amphibian populations	Hyeun-Ji H. et al.	19
Consequences of demographic processes for effective population size in house sparrows	Jensen H. et al.	21
Evolutionary history of <i>Georissa</i> (Gastropoda: Hydrocenidae) from Malaysian Borneo	Khalik M. et al.	23
Testing the species pump hypothesis to understand causes of high diversity clades	Laudanno G. et al.	25
Visual adaptation and microhabitat choice in two-closely related cichlid species from Lake Victoria	Mameri D. et al.	27
Evolutionary ecology of insect growth: from geographic patterns to biochemical trade-offs	Meister H. et al.	29
Informed dispersal and the effect on ecological specialization: a modeling approach	Mortier F. et al.	31
The adaptive capacity of the niche-constructing species <i>Orchestia gammarellus</i> and consequences for ecosystem processes	Oosten A. et al.	33
Investigating evolution of population stability in <i>Drosophila melanogaster</i> populations selected for adaptation to larval crowding	Pandey N. et al.	35
Genomics of eco-evolutionary dynamics in antagonistically coevolving populations	Retel C. et al.	37
Phylogeny and traits of early metazoans	Santos M. et al.	39
Non-parallel adaptive divergence of a sexual trait in a	Scherrer R. et al.	41

Caribbean lizard, *Anolis sagrei*

Landscape wide effects of Pgi genotypes on population dynamics of the Glanville fritillary butterfly	Schulz T. et al.	43
Population dynamics and developmental mode variation of a spionid polychaete - nature vs. nurture.	Thonig A. et al.	45
A global analysis of the role of habitat in avian diversification.	van Els P. et al.	47
Genetic diversity in fluctuating environmental conditions through ddRAD sequencing	Vasileiadou K. et al.	49
Host-parasite coevolution promotes the evolution of seed banking as a bet hedging strategy	Verin M. et al.	51
Investigating host-pathogen coevolution in associations between human HLA and <i>Mycobacterium tuberculosis</i> genetics	Winternitz J. et al.	53
Can we infer diversity-dependent diversification from phylogenies under multiple locations model?	Xu L. et al.	55

Symposium 34. Applications of evolutionary biology in agriculture and industry

Linking pollinator behavior to gene flow risk to predict transgene escape in insect-pollinated crops	Brunet J. et al.	1
The spatial and temporal genetic structure of <i>Rhopalosiphum padi</i> in the UK	Morales-Hojas R. et al.	2
SNP assay validation for introgression analysis in the dark honey bee using MALDI-TOF MS	Muñoz I. et al.	3
The genome of <i>Drosophila subpulchrella</i> and the importance of sister-species comparison in agricultural pest science	Rota-Stabelli O. et al.	4

Symposium 35. Open symposium

Population structure and linkage disequilibrium of the dengue mosquito across Thailand using nuclear DNA sequences	Arunyawat U. et al.	2
TiBi – Teaching the importance of biodiversity at lower organizational levels	Becks L. et al.	4
Evolving brain morphology in prey-predator interactions	Bijl W. et al.	6
The breeding brain: Increased neural investment during reproduction in stickleback	Buechel S. et al.	8
The age of morphological stasis: absence of interspecific morphological differentiation despite pronounced genetic divergence	Cerca de Oliveira J. et al.	10
Genome-wide evidence for adaptive evolution in two wild passerine species with different effective population sizes	Corcoran P. et al.	12
Is bigger better? The relationship between size and reproduction in female Asian elephants	Crawley A. et al.	14
Ontogenetic stage, plant vigor and sex mediate herbivory loads in dioecious <i>Mercurialis perennis</i>	Cvetkovic C. et al.	16
Value based decision making in cellular metabolic pathway activation	Encarnación Segura A. et al.	18
Coevolution of cancer defences and body size: can birds beat cancer?	Erten E. et al.	20
What doesn't kill you makes your offspring stronger	Fuchs M. et al.	22
Sperm characteristics vary with social environment but not male age	Girndt A. et al.	24
Estimation of diversification rates of dragonflies and damselflies (Insecta: Odonata)	Gutiérrez-Ramírez L. et al.	26
Karyotype analysis and multiple sex chromosome system in	Hladová I. et al.	28

ermine moths of genus *Yponomeuta*

Population history of an endemic flightless grasshopper: expansion, demography and migration rates in Cantabrian Mountains	Illera J. et al.	30
Evolutionary implications of glucocorticoids are sex-dependent in non-breeding zebra finches	Jimeno B. et al.	32
Genetic structure and ecological traits differentiation among flower color polymorphism within population in <i>Hepatica nobilis</i>	Kameoka K. et al.	34
Meta-analysis reveals intraspecific variation for plant-mediated interactions between herbivores	Knegt B. et al.	36
Stable sex chromosomes enable molecular sexing in about 4,000 species of reptiles	Kratochvíl L. et al.	38
Demography and mating system shape the genome-wide impact of purifying selection in <i>Arabidopsis alpina</i>	Laenen B. et al.	40
Reproductive dormancy in <i>Drosophila</i> : cell death during oogenesis	Lirakis M. et al.	42
Life history trade-off between strains selected for dispersal ability, in the red flour beetle.	Matsumura K. et al.	44
Severe inbreeding depression in hermaphrodites impedes genetic erosion in small populations of a gynodioecious herb	Meer S. et al.	46
Minke whale, <i>Balaenoptera acutorostrata</i> , population genetic structure across the North Atlantic Ocean	Moreira Lopes X. et al.	48
An evolutionary approach to the hormonal regulation of immunity outputs in insects	Nunes C. et al.	50
Inferring historic demographic changes (bottlenecks) using genetic data, case study: North Atlantic blue whale	Oosting T. et al.	52
How to use or not use a master sex determination gene: the <i>Esociformes</i> (teleost) case	Pan Q. et al.	54
Sexual selection of scorpions: patterns and mechanisms in Neotropical species	Peretti A. et al.	56
How vulnerable are the fin whales in the Gulf of California?	Rivera Leon V. et al.	58
Controlling for body size leads to inferential biases in the biological sciences	Rogell B. et al.	60
Experimentally manipulated incubation periods in house wrens: whither the costs of incubation?	Sakaluk K. et al.	62
The effect of genomic imprinting on the QST-FST contrast	Santure W. et al.	64
Spatial organization of individuals on the nest of the primitively eusocial wasp <i>Ropalidia marginata</i>	Sharma N. et al.	66
Indication of a fixation bias for mutations extending G/C homopolymers in the human genome	Somel M. et al.	68
Two-current choice flumes for testing avoidance and preference in aquatic animals	Sundin J. et al.	70
Effect of body colour on stress tolerance and mating behaviour in <i>Drosophila montana</i> and <i>D. flavomontana</i>	Tyukmaeva V. et al.	72
Effects of sperm donor and sperm recipient genotypes along pre- and postcopulatory sexual selection episodes	Vellnow N. et al.	74
Y chromosome evolution in the <i>Drosophila virilis</i> group.	Vigoder F. et al.	76
The role of duplications in the evolutionary origin of wing scales in Lepidoptera	Visser S. et al.	78
Evolution and origin of genomic imprinting in therian mammals -lessons from marsupial-eutherian comparative genomic analyses	Wang X. et al.	80

The evolutionary ecology of family living in lizards	While G. et al.	82
Simultaneously estimating demography and intra-genomic variation in the effective population size and the mutation rate	Zeng K. et al.	84
Eco-evolutionary dynamics of mating strategies in spider mites	Alpedrinha J. et al.	85
Deep conservation of the Lepidoptera Z chromosome: evidence of a non-canonical origin of the W?	Fraïsse C. et al.	86

Poster session 3

Thursday, 24 August 2017 17:30-19:30

EXPO 1 - poster area

Symposium 3. Network-based approaches in evolutionary biology and medicine

Epigenetic heterogeneity and their effect on differential gene expression and DNA methylation in blood cancer	Grath S. et al.	1
The evolution and functional diversification of the deubiquitinating enzyme superfamily	Gray A. et al.	2
The structure of interaction networks coevolving bacteria-phage microcosms	Kaltz O. et al.	3
Modelisation of the evolutionary interactions between the complexity of genetic architecture and epigenetic heredity	Odorico A. et al.	4
Evolution of the polyglutamine (polyQ) wild-type (non-expanded form) protein networks, associated to human neurodegenerative diseases	Vieira C. et al.	5

Symposium 6. Evolutionary significance of biological clocks

Identifying genes associated with photoperiodism and the circadian clock of the wasp <i>Nasonia vitripennis</i>	Buricova M. et al.	1
Functional analysis of the circadian clock of <i>Nasonia vitripennis</i> in seasonal adaptation.	Dalla Benetta E. et al.	2
It's about time! The molecular basis of differentiation in daily mating rhythms in a moth	Haenniger S. et al.	3
Histone acetylation modifications in the circadian shedding rhythm of <i>Schistosoma mansoni</i> cercariae	Moné H. et al.	4
Circannual rhythm in photoperiodic timing of diapause induction of the parasitoid wasp <i>Nasonia vitripennis</i>	Prodic J. et al.	5
The role of allochrony in speciation	Taylor R. et al.	6
Mother hedges her bets: Female parasitoid competition induces summer diapause in part of their offspring	Tougeron K. et al.	7
Plasticity of genome-wide DNA methylation patterns in avian timing of breeding	Viitaniemi H. et al.	8
Experimental manipulation of day length causes large changes in immune gene expression and parasite resistance	Whiting J. et al.	9
The convergent biological clock of CAM photosynthesis in aquatic plants	Wood D. et al.	10

Symposium 7. Sociality and disease

The role of communal nurseries in the emergence of group-level immunity barriers in social animals	Benhaiem S. et al.	1
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Seasonal dynamics of smallpox prevalence and mortality in humans: decomposing pathogen and host sociality contributions	Briga M. et al.	2
Pathogen-induced changes in individual behaviour and social interaction networks of ants	Casillas Perez B. et al.	3
Individual and collective defence against viral infection in ants	das B. et al.	4
The influence of the behaviour of infected sticklebacks on group behaviour	Demandt N. et al.	5
Size and sensitivity: ecological interactions modulate social immunity in small, but not large, burying beetles	Duarte A. et al.	6
On mechanisms of trans-generational immune priming in honeybees	Freitag D. et al.	7
Defend and disinfect: a dual role for soldiers in a complex society	He S. et al.	8
Antimicrobial defences in fungus-farming termite societies	Hu H. et al.	9
Getting sick of your group? How socializing and body weight shape individual immunity	Körner M. et al.	10
Sanitary care of pathogen-exposed colony members provides broad protection of helpers	Metzler S. et al.	11
Ant defenses against orally-infecting bacteria	Milutinovic B. et al.	12
Detection and destruction of sick brood in ant colonies	Pull D. et al.	13
The more the merrier? Effects of conspecific density on a gregarious butterfly	Rosa E. et al.	14
Cooperative resistance in bacteria: the role of biofilm formation	Simonet C. et al.	15
Chemical cues of ant larvae in health and disease	Ugelvig L. et al.	16

Symposium 9. Fitness and evolution in a social environment: from theory to reality

Trans-generational immune priming in <i>Drosophila melanogaster</i>	Ahlawat N. et al.	1
Inbreeding avoidance and kin recognition in a highly social passerine	Dijk E. et al.	2
Siberian jays recognize genetic relatedness with unfamiliar individuals	Drobniak S. et al.	3
Private and public fitness consequences of beta-lactamase production	Farr A. et al.	4
Mating flight behavior in alternative social forms of <i>Formica selysi</i>	Fontcuberta A. et al.	5
Direct fitness for workers in a <i>Temnothorax</i> ant	Giehr J. et al.	6
R-package Sequoia: Pedigree reconstruction in natural populations using SNP data	Huisman J. et al.	7
Predictable parental behaviour promotes plasticity in offspring morphology	Jarrett B. et al.	8
Evolution and function of asymmetric genitalia in <i>Drosophila pachea</i>	Lang M. et al.	9
Fine-scale genetic structure and inbreeding avoidance in long-tailed tits	Leedale A. et al.	10
Sex-linked deception in costly antipredator defence in social pine sawfly	Lindstedt C. et al.	11
Sexual selection and evolution of phenotypic plasticity	Maggu K. et al.	12

The effects of inbreeding on inter- and intrasexual selection	Muller W. et al.	13
Inbreeding and its fitness effects in house sparrows	Niskanen A. et al.	14
Socio-ecological correlates of extra-pair paternity in Seychelles warblers (<i>Acrocephalus sechellensis</i>)	Raj Pant S. et al.	15
Effects of costs of care on parent-offspring interactions in the burying beetle, <i>Nicrophorus vespilloides</i> .	Ratz T. et al.	16
Costs of social living: reversal of the longevity/fecundity trade-off in a facultative social orchid bee	Séguret A. et al.	17

Symposium 10. Cognitive evolution

Language evolution through the lens of ASD: An oscillomic approach	Benítez-Burraco A. et al.	1
Uncertainty about social interactions leads to the evolution of cooperative heuristics	Berg P. et al.	2
Ontogeny restricts free-ranging dogs' ability to follow human pointing gestures	Bhattacharjee D. et al.	3
Ontogeny of spatial familiarity and foraging abilities in the primitively eusocial wasp <i>Ropalidia marginata</i>	Mandal M. et al.	4
Photoreceptor adaptations in fishes from extreme environments	Remisova K. et al.	5
Newborn chicks show inherited variability in early social predispositions	Vallortigara G. et al.	6
Conserved gene function in Autism-related social sensory processing deficits	Wams E. et al.	7

Symposium 16. Genomics of adaptation

Revisiting the invention of the antifreeze glycoproteins in bony fish distributed across the polar oceans	Baalsrud H. et al.	2
Differentiation and adaptation despite connectivity and gene flow: a case study from highly mobile fish	Barth J. et al.	4
Rapid repeatable adaptation of the global invader <i>Ambrosia artemisiifolia</i>	Boheemen A. et al.	6
Ecological and genetic basis underlying Timema walking sticks colour diversity	Carvalho C. et al.	8
Developing Chlamydomonas reinhardtii as a study species for population genetics	Craig R. et al.	10
Genetic architecture of host adaptation in obligate and highly specialized insect-pathogenic fungi	de Fine Licht H. et al.	12
Adaptation of epidermal differentiation facilitated the evolution of feathers	Eckhart L. et al.	14
Genetic architecture of social organisation in a Mediterranean <i>Pheidole</i> ant	Favreau E. et al.	16
Extensive genomic introgression in natural populations of coral reef fishes (genus <i>Centropyge</i>)	Fernandez-Silva I. et al.	18
Potential to adapt to emerging diseases in arctic seabirds: variability in toll-like receptor genes	Friesen V. et al.	20
Friends or Foes? The ecology of <i>Batrachochytrium dendrobatidis</i> lineages in disease stricken amphibians	Ghosh P. et al.	22
The genetic complexity of phenotypic evolution in birds: coding sequence change or regulatory change?	Gossmann T. et al.	24
The genomic basis of adaptation to replicated basic versus acidic habitats in stickleback	Haenel Q. et al.	26
Integrative comparative approaches to determine the genomic basis of niche specialisation in an invasive fungus	Hess J. et al.	28

Variation in the intensity of selection causes contrasting patterns of base composition evolution in <i>Drosophila</i>	Jackson B. et al.	30
Evidence of sex- and transcript- specific expression differences during cold acclimation in <i>Drosophila montana</i>	Kankare M. et al.	32
Using frequencies of ancestral versus derived alleles to infer adaptive evolution in the genome	Keightley P. et al.	34
Comparative proteomics reveals a high variability in the polarization network across the fungal tree.	Laan L. et al.	36
Genomics of Adaptation on Brown Trout (<i>Salmo trutta</i>) in Southern Iceland	Lagunas G. et al.	38
The power of regulatory changes: complete loss of lipogenesis due to specific transcriptomic modifications	Lammers M. et al.	40
Understanding evolution by genome duplication: don't throw the baby out with the bathwater	Limborg M. et al.	42
Short term isolation in varied environments leads to rapid divergence of mussels in marine lakes	Maas D. et al.	44
Convergent evolution of SWS2 opsin facilitates adaptive radiation of threespine stickleback into different light environments	Marques D. et al.	46
Clues on teosinte local adaptation through the association of phenotypic variation and candidate SNP variation.	Martinez N. et al.	48
Looking for the genetic basis of adaptation to high altitude habitats in the Eastern honeybee	Montero-Mendieta S. et al.	50
Measuring the genome-wide pattern of somatic mutation in an individual plant	Morales-Suarez A. et al.	52
Differential expression of hemoglobin genes in Cameroonian crater lake cichlid fishes: the effect of depth?	Omelchenko D. et al.	54
Genetics of diversification: a hotspot locus for wing pattern evolution	Peralta C. et al.	56
Adaptive evolution of sociobiological traits in invasive <i>Solenopsis</i> fire ants	Privman E. et al.	58
New approaches for understanding adaptation: Population genomics in worldwide natural samples of <i>Drosophila melanogaster</i>	Rech G. et al.	60
Convergent genome evolution in inquiline social parasites	Schrader L. et al.	62
The Genomic Landscape of Divergence across the Speciation Continuum in the Silverside (<i>Zosterops lateralis</i>)	Sendell-Price T. et al.	64
Divergent evolution and niche differentiation within the common peat moss <i>Sphagnum magellanicum</i>	Stenøien H. et al.	66
Genome-wide identification of genes associated with the repeated evolution of stripe patterns in cichlid fishes	Urban S. et al.	68
The genomic architecture of feralisation: Not just domestication in reverse?	Wright D. et al.	70
Genomics of <i>Microphallus</i> sp. parasite adaptation to its host, <i>Potamopyrgus antipodarum</i> .	Zajac N. et al.	72

Symposium 18. The Evolutionary significance of chromosomal inversions

Real-time evolution of the genomic content of inversions in initially differentiated populations of <i>Drosophila subobscura</i>	Antunes M. et al.	1
Effects of a clinal inversion on thermal life-history reaction norms in <i>Drosophila melanogaster</i>	Durmaz E. et al.	2
Altitudinal pattern of chromosomal inversion variability in <i>Drosophila subobscura</i> populations	Eric K. et al.	3
Detection of chromosomal rearrangements in <i>Littorina saxatilis</i> : implications for ecotype divergence	Faria M. et al.	4

New methods for detecting selection on structural variants and introgressions	Ferretti L. et al.	5
The effects of meiotic drive on male mating preference in the Malaysian stalk-eyed fly	Finnegan R. et al.	6
An inversion polymorphism with effects on behaviour: maintained by negative frequency-dependent selection?	Forstmeier W. et al.	7
The genomic characterization of a mouse meiotic driver, highlights its complex history and specialized biology	Kelemen R. et al.	8
Heterotic effects of a sex-chromosome inversion on sperm characteristics and siring success in zebra finches	Knief U. et al.	9
Adaptive dynamics of <i>Drosophila subobscura</i> inversion polymorphism under heavy metal conditions	Lecic S. et al.	10
Fitness costs of sex-ratio meiotic drive in a stalk-eyed fly (<i>Teleopsis dalmanni</i>)	Meade L. et al.	11
Chromosomal Thermal Index: a new index to integrate the thermal adaptation of the whole karyotype	Mestres F. et al.	12
Genomics of a "Schistosoma scandal": how these parasites got their sex chromosomes?	Picard A. et al.	13
Genotyping large microscopic inversions from recombination patterns in SNP data.	Ruiz-Arenas C. et al.	14
Experimental evolution of <i>Drosophila melanogaster</i> in the field	Schmidt P. et al.	15
Ectopic recombination between DAIBAM elements is the prevalent mode generating inversions in virilis phylad	Vieira J. et al.	16
Symposium 20. Evolutionary implications of transposable elements, epigenetics, and non-genetic inheritance		
Horizontal transfer of non-LTR transposable elements in <i>Drosophilids</i>	Carareto C. et al.	1
The evolutionary advantage of non-genetic inheritance	Carja O. et al.	2
Environmental temperature and its impact on the developmental process of programmed DNA elimination	Catania F. et al.	3
An unbiased study to revisit proof of horizontal transposable element transfer with sequence similarity searches	Dunemann S. et al.	4
Memory of mother plant's infection alters progeny's fitness and resistance	Höckerstedt L. et al.	5
Identifying imprinted genes in multiply mated social Hymenoptera from RNA-seq data	Howe J. et al.	6
Comprehensive analysis of RNA-editing in pigs suggest evolutionary conservation of RNA-editing in mammals.	Madsen O. et al.	7
Drought stress-specific DNA methylation differences found in tolerant and susceptible maize varieties.	Morrison R. et al.	8
Contribution of de-novo methylation to phenotypic plasticity in the wild snapdragon, <i>Antirrhinum majus</i>	Mousset M. et al.	9
Avian ecological epigenetics: the role of DNA methylation in the evolution of avian personality	Oers K. et al.	10
Egg development plasticity and the transmission of maternal effects in <i>Daphnia</i>	Plaistow J. et al.	11
Inheritance of DNA-methylation patterns in <i>Daphnia magna</i>	Radersma R. et al.	12
A simulation model of the evolution of transgenerational plasticity in fluctuating environments	Ratikainen I. et al.	13
Disentangling components of inclusive heritability in the endangered stitchbird (<i>Notiomystis cincta</i>)	Rutschmann A. et al.	14

Fathers matter: paternal early environment affects offspring fitness in the absence of paternal care	van Cann J. et al.	15
Maternal effects in embryos and hatchlings of annual killifish	Vrtílek M. et al.	16

Symposium 24. Eco-evolutionary dynamics

Towards the use of <i>Apis mellifera</i> natural adaptations to control the global parasite <i>Varroa destructor</i>	Beaurepaire A. et al.	2
Facilitation and the evolution of plant trait-syndromes in Mediterranean vegetation	Benateau S. et al.	4
Physiological maintenance costs of plasticity in amphibian larvae against pond drying and predation risk	Burraco P. et al.	6
Testing the association between behavioral and life-history adaptations to a seasonal habitat	Eckerström-Liedholm S. et al.	8
Mechanisms for genetic maintenance in the intertidal snail <i>Littorina fabalis</i> (Turton, 1825)	Estévez Barcia D. et al.	10
Local adaptation of three-spined stickleback ecotypes to habitat-specific parasites	Gahr C. et al.	12
Patterns of parasite infection in cichlid fish species at various ecological and genomic divergence stages	Gobbin T. et al.	14
Species delimitation in the crypsis-defended and polymorphic stick insects of the genus <i>Libethra</i> (Phasmatodea)	Gutiérrez J. et al.	16
Pleiotropy between flowering behaviour and seed traits in the perennial <i>Arabis alpina</i> (Brassicaceae)	Hughes W. et al.	18
Seasonal and spatial variability of Grauer's gorillas' social networks	Iyer N. et al.	20
The effects of a host plant infection on life-history traits of higher trophic levels	Karlsson Green K. et al.	22
Adaptation to a poor quality host broadens potential feeding niche in a herbivorous insect	Larose C. et al.	24
Common gardens and uncommon streams: environment-dependent life-history and body size evolution in the trinidadian guppy	Lopez-Sepulcre A. et al.	26
The interplay between fire season and germinable soil seed bank in typical eastern Mediterranean woodland	Manela N. et al.	28
Correlational selection acting on behaviour and morphology in a wild population of great tits	Moiron M. et al.	30
Reproductive isolation? New insights into the speciation process between <i>Jaculus jaculus</i> and <i>J. hirtipes</i> .	Moutinho A. et al.	32
Latitudinal variations in stress response and indel polymorphisms at the InR gene in <i>Drosophila melanogaster</i>	Orhan A. et al.	34
Chaos and the predictability of evolution in a changing environment	Rego-Costa A. et al.	36
A general framework for estimation and selection of species diversification models.	Richter Mendoza F. et al.	38
Coexistence of late-hawk strategy and hawk strategy for male competition in the two-spotted spider mite	Sato Y. et al.	40
Evolution of social insects castes is facilitated by the sex differentiation cascade	Schultner E. et al.	42
Understanding adaptation to new nutritional niches – performance and foraging of <i>Drosophila suzukii</i> larvae	Silva-Soares N. et al.	44
Non-linear approach to investigating relationships between compositional and phylogenetic dissimilarity of flea and host assemblages	van der Mescht L. et al.	46

Behavioural specialisation during the Neolithic - an evolutionary model	Vásárhelyi Z. et al.	48
Variable shell morphology as key for colonizing a wide spectrum of habitats?	Verhaegen G. et al.	50
Dauer alters bacteria preference in <i>Caenorhabditis elegans</i>	White P. et al.	52
Red Queen dynamics resulting from slow negative feedbacks	Wortel M. et al.	54
Genome-wide association mapping and factors associated with carbon sequestration in common peatmoss <i>Sphagnum magellanicum</i> Brid.	Yousefi N. et al.	56
Symposium 25. Spatial evolution		
Costs and benefits of being attractive: Combined effects of pollinators and predators on floral shape	Albertsen E. et al.	1
How do spatial gradients influence the evolution of mate choice during speciation?	Aubier T. et al.	2
How does landscape configuration shape information use during dispersal? A modelling approach	Bataille G. et al.	3
How does landscape configuration shape information use during dispersal? A modelling approach	Bataille G. et al.	4
The evolution of femur and wing morphology in two closely related Sepsid fly species	Baur J. et al.	5
Chloroplast DNA reveals latitudinal biogeographic structuring in the globally widespread moss <i>Ceratodon purpureus</i>	Biersma E. et al.	6
Phenotypic divergence despite low genetic differentiation in House Sparrow populations	Dor R. et al.	7
Polygamy slows down population divergence in shorebirds	d'Urban Jackson J. et al.	8
Speciation in Space & Time	Eweleit L. et al.	9
Spatial variation in genomic fitness coefficients in a house sparrow metapopulation	Gohli J. et al.	10
The flight of ants – are supercolonial Formica ants poor dispersers?	Hakala S. et al.	11
Microsnails at microscale – how populations evolve on a market square	Hendriks K. et al.	12
Local ecological limits determine phylogenetic structure, but not range size distributions.	Herrera-Alsina L. et al.	13
Spatial variation of reproductive lifestyles along an ecological gradient	Heubel K. et al.	14
Dispersion ability estimations of a leaf beetle using RAD-seq data.	Kastally C. et al.	15
Comparative population genomics of mimetic butterfly expansions in the Neotropics	Kozak M. et al.	16
Range shifts explain more than you think.	Lancaster L. et al.	17
Effect of land-use and environment on the population genetics of two native bees in Guatemala	Landaverde P. et al.	18
Variability of habitat choice at emigration and immigration is modulated by internal factors	Laurent E. et al.	19
Metapopulation dynamics and life history evolution in fragmented landscapes	Masier S. et al.	20
Killing by Type VI secretion drives genetic phase separation, favouring the evolution of cooperation	Mcnally L. et al.	21

Nutrient levels drive spatial organisation in cellular groups	Mitri S. et al.	22
Co-evolution of dispersal with social behaviour favours polymorphism	Mullon C. et al.	23
Eco-geographic distances are the major driver of reproductive isolation in the Royal irises (section <i>Oncocyclus</i>)	Osmolovsky I. et al.	24
Global macroecology of size, sexual size dimorphism, dispersal and range size in drosophilids (Diptera: Drosophilidae)	Rohner P. et al.	25
Genetic assignment of dispersers and patterns of dispersal in a house sparrow metapopulation	Saatoglu D. et al.	26
Wing shape clines relate to biogeographic history in American but not Eurasian dung fly populations	Schäfer A. et al.	27
Effect of fire season on perennial plant community composition in a typical eastern Mediterranean woodland	Tsafir M. et al.	28
Spatial patterns of neutral and adaptive genetic variation in a highly dispersive marine invertebrate	Xuereb A. et al.	29

Symposium 26. Adaptation to global climate change

Application of high resolution melting assay to study temperature-dependent intraspecific competition in a pathogenic bacterium	Ashrafi R. et al.	1
Evolutionary history of the porpoises (Phocoenidae)	Ben Chehida Y. et al.	2
Life history traits predict demographic responses to global warming in Arctic marine mammals	Cabrera Arreola A. et al.	4
Mechanisms of evolutionary adaptation of redband trout to desert climates	Chen Z. et al.	5
Change in the optimal laying date but no response in an endangered bird: the hihi	de Villemereuil P. et al.	6
Optimal resources allocation under raising temperature – how <i>Daphnia galeata</i> copes with climate change.	Dziuba M. et al.	7
Plastic and evolutionary responses to heat stress in a temperate dung fly	Esperk T. et al.	8
Temperature dependent between- and within-individual variation in behaviour in wild zebrafish (<i>Danio rerio</i>)	Finnøen M. et al.	9
On the concept of generalist-specialist tradeoffs for thermal reaction norms	Fossen I. et al.	10
Evolution of trade-offs under ocean acidification: A global perspective on local biogeography	Gaitan-Espitia J. et al.	11
Temporal variation of phenotypic optimum and selection on budburst dates with climate change for <i>F. sylvatica</i>	Gauzere J. et al.	12
Thermal adaptation in the American red squirrel and the response to recent global climate change	Johannesdottir F. et al.	13
Come rain or shine - variability in development under indirect drought-stress in the Glanville fritillary	Kahilainen A. et al.	14
Evolutionary rescue under different rates of temperature increase in <i>Paramecium</i> microcosms	Kaltz O. et al.	15
The evolution of plasticity for desiccation resistance in <i>Drosophila</i> species	Kellermann V. et al.	16
Range expanding populations of an annual plant rapidly evolve earlier phenology at novel latitudes	Lustenhouwer N. et al.	17
Predicting physiological response to fluctuation of temperature using thermal performance curve in ectotherms	Mahdjoub D. et al.	18

Population epigenomics – Insights into the importance of epigenetic variation for adaptation to global change	Meyer S. et al.	19
Repeatability of thermal tolerance in zebrafish at optimal and elevated temperatures: a foundation for evolution	Morgan R. et al.	20
Parallel evolution across contrasting thermal environments in Icelandic populations of three-spined sticklebacks	Pilakouta N. et al.	21
Environmentally plastic maternal effects only marginally alter rate of adaptation in a wild songbird	Ramakers J. et al.	22
Adaptation to stress in <i>Brachypodium</i> along the aridity gradient in Israel	Sapir Y. et al.	23
Context-dependent effects of chronic stress on physiological, behavioral, and life-history traits of flour beetles	Scharf I. et al.	24
Rising temperature causes fitness conflicts in a host-parasite system	Scharsack J. et al.	25
Alpine species in ice holes: natural experiment of long-term climate and environmental changes on plants	Tonin R. et al.	26
Adaptation to stressful thermal regimes in the model insect <i>Tribolium castaneum</i>	Vasudeva R. et al.	27
The physiological mechanism underlying timing of reproduction in the great tit (<i>Parus major</i>)	Verhagen I. et al.	28
SNP discovery in candidate adaptive genes using Next Generation Sequencing in <i>Eugenia uniflora</i> natural populations	Veto N. et al.	29
Incorporating climate change into spatial distribution of saffron	Zare H. et al.	30
Beyond a single population - demographic inference from a Caribbean green turtle mixed foraging assemblage	Zee J. et al.	31

Symposium 27. Evolutionary implications of hybridization

Testes RNAseq of hybrid flycatchers provide insights into reproductive dysfunction at an early speciation stage	Ålund M. et al.	1
Hybridization and taxonomic delimitation between yellow flowered <i>Aechmea</i> subgenus <i>Orgiesia</i> species (Bromeliaceae)	Bered F. et al.	2
Hybrids of Paradise: A genomic perspective on intergeneric gene flow among Birds-of-Paradise	Blom M. et al.	3
Copy number increases of transposable elements and genes in an invasive fish of hybrid origin	Dennenmoser S. et al.	4
Genomics of hybridization: rare and asymmetrical introgression between <i>Podarcis bocagei</i> and <i>P. carbonelli</i> wall lizards	Dias G. et al.	5
Footprints of genomic invasion in an endangered floodplain species	Dittberner H. et al.	6
Genetics of functional novelty in interspecific cichlid hybrids	Feller A. et al.	7
Deep branch gene flow in an hybridization rich speciation process	Freitas S. et al.	9
How Finnish wood ants compromise in conflict over hybrid status	Ghenu A. et al.	11
Impacts of introgression between wild and domestic individuals on parasitism in Brook charr (<i>Salvelinus fontinalis</i>)	Gossieaux P. et al.	12
Molecular evolutionary patterns of the rhodopsin gene in the goby <i>Gymnogobius</i>	Ito R. et al.	13

Thermal adaptation in an emerging hybrid species.	Iwaszkiewicz E. et al.	14
Social hybridogenesis in <i>Cataglyphis</i> desert ants	Kuhn A. et al.	15
Using introgressed haplotypes to understand the consequences of recent admixture between distinct brown trout lineages	Leitwein M. et al.	16
Genomic characterization of a hybrid zone between sex-role reversed jacanas	Lipshutz S. et al.	17
Speciation and interspecific gene flow in bryophytes	Meleshko O. et al.	18
Background selection biases ABBA-BABA test	Peter B. et al.	19
Reproductive barriers between <i>Drosophila montana</i> and <i>D. flavomontana</i> and signs of introgression at genomic level	Poikela N. et al.	20
Convergent evolution of social hybridogenesis in Messor harvester ants	Romiguier J. et al.	21
Comparative mating behavior and hybridization in two flatworm sister species, <i>Macrostomum lignano</i> and <i>Macrostomum</i> sp.8	Singh P. et al.	22
Limb co-variation and fluctuating asymmetry in the <i>Mus musculus</i> hybrid zone	Skrabar N. et al.	23
Hybridization in <i>Daphnia</i> - will climate change result in faster differentiation of the parental species?	Wolinska J. et al.	24
Unraveling the genomic basis of sexually selected introgression in common wall lizard (<i>Podarcis muralis</i>)	Yang W. et al.	25
Hidden histories of gene flow in highland birds revealed with genomic markers	Zarza E. et al.	26
Symposium 28. Intragenomic conflicts and cytonuclear incompatibilities as engines of speciation		
A battle of meiotic drivers: Evolutionary genomics of spore killing in <i>Podospora anserine</i>	Ament-Velasquez S. et al.	1
Patterns of speciation: differential gene expression underlying hybrid fitness in ants	Beresford J. et al.	2
When hybrid lethality does not make sense: Allele-specific transcriptome analysis of a pseudohaplodiploid male hybrid	de la Filia A. et al.	3
Matrotrophy and altriciality: two reproductive modes that lead to the emergence of parent-offspring conflicts	Dekker M. et al.	4
Investigating intragenomic conflicts in the Ampliconic genes in human populations	Lucotte E. et al.	5
Exploring patterns of genomic divergence among reproductively isolated populations of the Arctic plant <i>Draba nivalis</i>	Nowak M. et al.	6
Evolution of self-incompatibility in a cooperative non-self recognition system	Bodova K. et al.	7
Can meiotic drive drive speciation?	Vogan A. et al.	8
Asymmetric F1 hybrid seed fitness in the annual plant genus <i>Rhinanthus</i> (Orobanchaceae)	Wesselingh R. et al.	9
Symposium 29. Integration of micro- and macroevolution		
Genomic causes of large intraspecific genome size variation in a species of rotifer	Blommaert J. et al.	1
The variation of G-matrix at macro-evolutionary scale	Chantepie S. et al.	2

Character displacement between the sexes during adaptive radiation	de Lisle S. et al.	3
Cabinet of curiosities: The evolution of exaggerated forelegs in South African Rediviva bees	Kahnt B. et al.	4
Macro- and micro-evolutionary selection dynamics acting on immune genes across the Pieridae family (Lepidoptera)	Keehnen L. et al.	5
Artiodactyl brain-size evolution	Kopperud B. et al.	6
Evolution of cuttlefishes, family Sepiidae, and their radiation through the Indo-West Pacific	Lupše N. et al.	7
Tracing endospore evolution: the ancestral genes and lineage specific novelties	Ramos-Silva P. et al.	8
The macroevolutionary scaling of bill evolution in birds	Thomas G. et al.	9
Dynamics of ruminant adaptation and diversification	Toljagic T. et al.	10
Not just random change in time: genetic and morphological divergence in snails from Atacama saltpan	Valladares M. et al.	11
Ecosystem size predicts the probability of speciation in migratory freshwater fish	Yamasaki Y. et al.	12
Hierarchical structure of ecological and non-ecological processes of differentiation shaped Malawian freshwater gastropod radiation	van Bocxlaer J. et al.	13

Symposium 31. Evolution across the mutualist-parasite continuum

Parasite-microbiota interactions shape intestinal communities in wild mammals	Aivelo T. et al.	1
Diversity and evolution of sex determination systems in terrestrial isopods	Becking T. et al.	2
The genetic basis of resistance and matching-allele interactions of the <i>Daphnia magna</i> - <i>Pasteuria ramosa</i> host-parasite model	Bento G. et al.	3
<i>Anguillicola crassus</i> infections alter gene expression more strongly in its new compared to native host	Bracamonte S. et al.	4
Implications of phenotypic switching in the transmission of an insect pathogen, <i>Xenorhabdus nematophila</i>	Cambon M. et al.	5
Evolution of honeybee (<i>Apis mellifera</i>) resistance to the parasitic mite <i>Varroa destructor</i>	Conlon H. et al.	6
A new method to infer co-evolutionary processes from phylogenies	Cornuault J. et al.	7
The early life environment pre-determines individual plasticity in a life history strategy	de Gasperin O. et al.	8
The effects of host genetic diversity in a tripartite system	Ekroth A. et al.	9
Symbiosis between <i>Wolbachia</i> and the Neotropical termite <i>Cavitermes tuberosus</i>	Hellemans S. et al.	10
Cause and consequence of intraspecific parasite-parasite competition	Henrich T. et al.	11
Genomic adaptation to defensive symbiosis in the Beewolf, <i>Philanthus triangulum</i> .	Jongepier E. et al.	12
Phylogeny, species delimitation and <i>Wolbachia</i> infection across selected <i>Cyanapion weevils</i> (Coleoptera: Curculionidae: Apionidae)	Kajtoch L. et al.	13
A gut feeling for larval development?	Knott K. et al.	14
On the origin of mutualisms: where did fungus-farming in ants begin?	Kooij W. et al.	15

Variation in compensatory evolution due to diverse mobile genetic element dynamics across <i>Pseudomonas</i> host species	Kottara A. et al.	16
Insights into host immune responses against a highly specialized insect-pathogenic fungus	Natsopoulou M. et al.	17
Food, friend or foe – interactions between <i>C. elegans</i> and its naturally-associated bacteria	Obeng N. et al.	18
Mechanisms underlying adaptation to oral bacterial infection in <i>Drosophila melanogaster</i>	Paulo T. et al.	19
Are spider mites ready to fight in the battle against <i>Wolbachia</i> ?	Rodrigues R. et al.	20
How to evolve an aggressive herbivorous symbiosis with digestive and behavioural division of labour	Schiøtt M. et al.	21
Within-host parasite competition and loss of virulence - evidence from experimental evolution	Schulte R. et al.	22
Evolution of vertical transmission through self-restrained cell division of symbionts	Uchiumi Y. et al.	23
Coupling of sexual reproduction in obligate termite-fungus symbiosis	Vreeburg S. et al.	24

Symposium 32. Coevolution in antagonistic ecological interactions

Increased foraging costs in predator-prey interactions benefit the evolution of rescue behaviour in social animals	Frank E. et al.	1
Do plants use metal against herbivores that disarmed their organic defences?	Godinho P. et al.	2
Microbe-mediated host defence drives the rapid evolution of reduced pathogen virulence	King K. et al.	3
How gene duplication has facilitated the evolution of toxin resistance and sequestration in bugs	Lohr J. et al.	4
Evolutionary outcomes from a purely bacterial predator-prey experimental coevolution	Nair R. et al.	5
Reproduction of <i>Varroa</i> in the original host the Asian honey bee	Routtu J. et al.	6
Radioactive contamination select for birds with higher investment in antimicrobial defences	Ruiz-Rodríguez M. et al.	7
Associational effects and the maintenance of trichome dimorphism in a wild <i>Arabidopsis</i> population	Sato Y. et al.	8
Predation modifies parasite-mediated mate choice for immune genes	Schmid D. et al.	9

Symposium 33. Urban evolution

Urban animals and shifting phenotypes: evolution in action?	Batabyal A. et al.	1
Hot in the city: genetic adaptation to urbanization mediated by thermal tolerance and body size	Brans I. et al.	2
Quantifying the effect of human presence on tit reproductive trait variation	Corsini M. et al.	3
Adaptive and non-adaptive divergence in phenotypic traits between urban and non-urban gudgeon fish (<i>Gobio occitaniae</i>)	Côte J. et al.	4
Phenotypic variation along an urbanisation gradient: a multi-replicate sampling of great and blue tits	Da Silva A. et al.	5
Cities filter bird communities based on coloration	Ducatez S. et al.	6
Adaptation to urban habitats via biased dispersal	Edelaar W. et al.	7

British railways, herbicide and the case of whole genome hitchhiking on an organelle mutation	Flood P. et al.	8
Urbanization is associated with shorter telomeres in adult common blackbirds	Ibáñez-Álamo J. et al.	9
Fish in the city: urbanization and host-parasite interactions in freshwater fish from the Garonne watershed	Jacquin L. et al.	10
Effects of urban environment on health in the great tits	Massemin S. et al.	11
White stork nestlings fed in an urbanised area: could extra antioxidants affect their telomere dynamics?	Pineda-Pampliega J. et al.	12
Genetic signature of adaptation to metal polluted soils in <i>Arabidopsis arenosa</i> and <i>Arabidopsis halleri</i>	Preite V. et al.	13
The evolution of human-commensalism in Eurasian Passer sparrows	Ravinet M. et al.	14
Adaptation of snail shell colour to the urban heat island	Schilthuizen M. et al.	15
Genome-wide SNP scan reveals patterns of adaptation to urbanization in an important pollinator, <i>Bombus lapidarius</i>	Theodorou P. et al.	16
Impacts of urbanisation on orthopteran lifestyle	Waterschoot B. et al.	17

NOTES

