ESEB

XVI Congress

Groningen, The Netherlands

20-25 August 2017

Download the official ESEB2017 mobile application!

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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).

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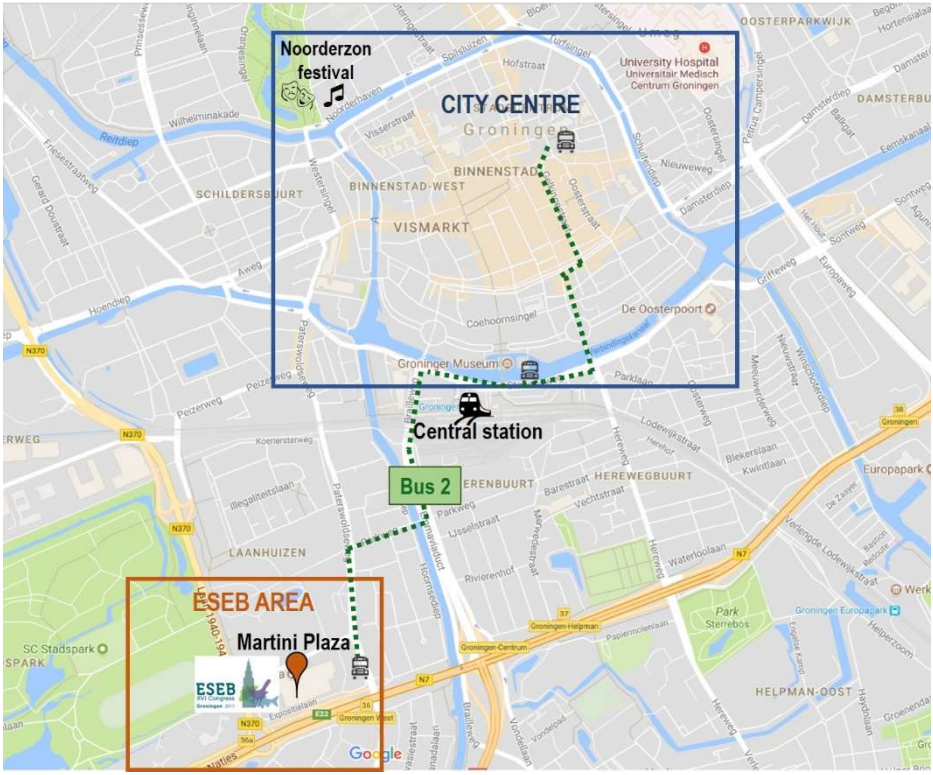
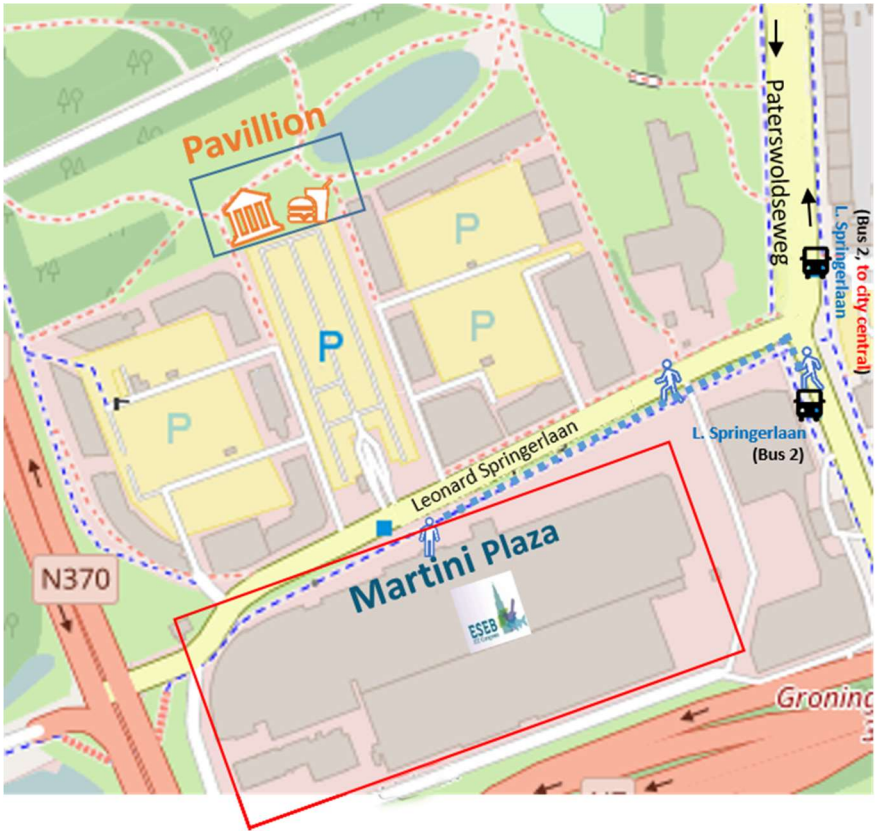
VENUE LOCATION

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


Pavillion
P
P
P
P
Paterswoldseweg
(Bus 2, to city central)
L. Springerlaan
L. Springerlaan
(Bus 2)
Leonard Springerlaan
Martini Plaza
ESEB
N370
Groning

MARTINIPLAZA PLAN


First floor
MartiniPlaza
H
Room 13
J
Room 12
K
Room
10 & 11
-1
Theatre
café:
speaker
ready room
G
Room 14
X
Top
sport
lounge
Ground floor
Catering & Exhibitors
Middenhal
L
Expo 3a
M
Expo 3b
Ground floor
Posters
EXPO1

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 openduring the entire conference (both the morning and the afternoon). Participants canalways 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 Partridge Sunday 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 Burkhart, 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 Martinez-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

Inivited 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 Vandenkoornhuyse

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 Eroukhmanoff, 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: Wieslaw 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!

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PROGRAMME SUMMARY

Sun 20	Mon 21	Tues 22	Wed 23	Thu 24	Fri 25
	Announcements				
	Keynote Lecture				
	Symposia S1 S4 S5 S11 S17 S22 S23 S30	Symposia S8 S12 S13 S15 S16 S19 S24 S34	Symposia S3 S7 S16 S24 S28 S33 S35	Symposia S9 S20 S24 S25 S26 S27 S29 S31	Symposia S6 S10 S16 S18 S25 S26 S32 S35
	ESEB meets ISEMPH	Satellite meetings	LUNCH	Satellite meetings	
Opening Opening address Opening Keynote	Symposia S2 S5 S11 S14 S17 S22 S23 S30	Symposia S8 S12 S13 S15 S16 S19 S21 S24	Excursions	Symposia S9 S20 S25 S26 S27 S29 S31 S35	Member meeting Presidential address MS prize Closing ceremony
Welcome Reception	POSTER SESSION 1	POSTER SESSION 2		POSTER SESSION 3	Conference dinner

PROGRAMME

Sunday, 20 August

17:30 17:40	Opening: **Leo Beukeboom** **Room A**
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

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

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
Combination therapy and the evolution of drug resistance **S. Bonhoeffer**	New insights in the evolution of sexual communication signals (final) **A.T. Groot**	Evolvability of recombination features **S. Rybnikov**	Little evidence for rapid evolution in wild populations? **L. Kruuk**
Why study drug resistance evolution in HIV and what have we learned? **P. Pennings**	Evolution and maintenance of variation in antipredator defences **J. Mappes**	Determinants of recombination activity—the alternative hotspot view **I. Tiemann-Boege**	Predictability of evolution in fish and flies **K. Hughes**

Monday, August 21TH

	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 Prdm9: Lessons from Madeiran Robertsonian house mice **C. Vara**	Robust inference of selection for plasticity **M. Morrissey**

Monday, 21 August

	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 (*Paridae*) **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 *Drosophila melanogaster* **E.L. Behrman**
Within-host competition and evolution of drug resistance in Plasmodium falciparum 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

	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**	Exploring evolutionary relationships across the genome using topology weighting **S. Martin**
15:30	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**
15:50	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 **H. Donoghue**	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. Sävilammi**
The scientific studies on ancient parasite infection of East Asia by microscopic and genetic researches **D.H. Shin**	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 *Tribolium castaneum* **J. Kurtz**
	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

	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 17:25	Keynote lecture and closure ISEMPH 2017: **Stephen Stearns** The relations between evolution and medicine, journals and societies **Room A**			
17:30 19:30	Poster Session 1 (EXPO 1) S1, S2,S4,S5, S11, S14, S17, S22, S23, S30, S35, ISEMPH			
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 *Nicrophorus vespilloides* **J. Richardson**	The influence of high recombination rate on genetic diversity in the invasive ant *Cardiocondyla obscurior* **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

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

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
Breeding social animals: the use of kin and group-selection to improve traits affected by IGE **P. Bijma**	Evolution of microbial interactions in complex environments **A. Brockhurst**	The importance of an environmental perspective: Integrating sexual selection with population biology, macroecology and biogeography **E.I. Svensson**	Testing for local adaptation in tits: from phenotypic to genetic approaches **A.C. Charmantier**
Domestication versus “taming” (manipulation) of crop plants and their symbionts **R.F. Denison**	Harbouring public good cheats within a pathogen population can increase both fitness and virulence **I. Gudelj**	Sexual selection in changing environments: effects on populations and communities **U.C. Candolin**	The distribution of genetic variance across phenotypic space **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 *Drosophila* **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 *Daphnia magna* **T.C. Czypionka**	Repeated rapid evolution dictates population dynamics in orchard populations of *Drosophila melanogaster* **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 *Bacillus thuringiensis* 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

	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. Pruisscher**	Connecting antibiotic resistance problem and eco-evolutionary community dynamics **T. Hiltunen**	Regulation of gene expression divergence in closely related *Drosophila* species **N.P. Posnien**	Hypermutation, death, and the division of labour in *Streptomyces* colonies **D.E. Rozen**
13:10	From genome to function: Timing adaptations in the intertidal insect *Clunio marinus* **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 *Arabidopsis* **J.M. Biernaskie**	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**	Selection on skewed characters and the paradox of stasis **S.B. Bonamour**
Creating strain-specific genetic markers for beneficial insects: a genomic approach **K.B. Ferguson**	Tripartite interactions between phage, bacteria and plasmid shapes the trajectory of evolution **E.H. Harrison**	Ecological divergence and reproductive isolation in a colour polymorphic Anolis lizard **J. Stapley**	Genetic variance for lifetime fitness explained by sex-specific genetic (co)variances among ontogenic fitness components **M.E.W. Wolak**

Tuesday, 22 August

	Room A	Room B	Room C	Room F
14:30	**Symposium 16** Genomics of adaptation	**Symposium 24** Eco-evolutionary dynamics	**Symposium 19** Evolution of gene expression regulation	**Symposium 8** Major transitions in evolution
14:50	Genetic architecture of a locally adapted life-history trait with strong sexual variation: age-at-maturity in salmon **T. Aykanat**	Experimental adaptation of *E. coli* to a complex and structured environment A.**P.M. Marques**	Cnidarian microRNAs shed new light on the evolution of post-transcriptional regulation of gene expression **Y.M. Moran**	What is intra-genomic conflict? **F. Ubeda de Torres**
15:00* – 15:10	The genomics of acquisition and allocation in *Drosophila melanogaster* experimentally evolved for late reproduction **J. van den Heuvel**	The most efficient microbial community dominates during community coalescence **P. Sierocinski**	Genomic analysis reveals major determinants of cis-regulatory variation in *Capsella grandiflora* **T. Slotte**	A germline-soma-analogy for understanding the remoulding of the fecundity/longevity trade-off in a highly social termite **D. Elsner**
15:30	The genetic architecture of thermal plasticity **E.P.L. Lacey**	Host-parasite eco-evolutionary dynamics in a tangled bank **A. Betts**	Evolution of new regulatory functions on biophysically realistic fitness landscapes **T.F. Friedlander**	Social exploitation selects against aggregative multicellularity **J.T. Pentz**
15:50	The genomics of local adaptation in Swedish *Arabidopsis*: Two complementary field approaches **D.L. Filiault**	Rapid parasitoid adaptation to a symbiont protected host **A.B.D. Dennis**	Between chaos and determinism: the evolution of stochastic gene expression **Y. Dutheil**	Coming together is a poor predictor of keeping together in the major evolutionary transitions **J.J. Boomsma**
16:20	BREAK	*15:00-17:00 Satellite meeting: DrosEU STN European Drosophila 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
Integrons: 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**
	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**
Evolution of plasmid-mediated carbapenem resistance in a hospital setting **A. San Millan**	Genomics of adaptation depends on the rate of environmental change in experimental *Saccharomyces cerevisiae* 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. Näpflin**	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 gene s 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 *Penicillium* 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 19:30	Poster Session 2 (EXPO 1) S8, S12, S13, S15, S16, S19, S21, S24, S34, S35			
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 *Drosophila melanogaster* 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 *Candida glabrata* 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

8:50 9:00	Announcements (Room A)			
9:00 9:50	Keynote Lecture: **Andreas Wagner** The power of recombination to create new adaptations and innovations **Room A**			
	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 **F.M. Massol**	**S. Bassett**	**C.L.N. Nunn**
10:40 11:00	Adaptive significance and genetic basis of the dorsal colour polymorphism of *Philaenus spumarius* **S. Paulo**	A cybernetic evolution theory: evolutionary duality of environmental stochasticity and natural selection **K. Heininger**	The effect of spatial population structure on evolutionary outcomes **L.H. Hindersin**	Social immune function and the management of a bacterial community: experiments with burying beetles **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 *Drosophila* **D.C.P. Presgraves**	Endosymbiont-induced asexual reproduction in parasitoid wasps **E. Geuverink**
	The effect of brain size in the assessment of attractiveness during mate choice **A. Corral-Lopez**		Can sexual and asexual grassthrips co-exist because they are characterized by different ecological niches? **K.G. Ghali**
A Tale of Two Rodents: evolution of deer mice and rats in New York City **J. Munshi-South**	Intrafamily and intragenomic conflicts in human warfare **A.J.C.M. Micheletti**	Mito-nuclear interactions underlie insipient speciation – the role of mtDNA transcription **D.M. Mishmar**	When to make males: the timing of sex and male production in *Daphnia* **I. Booksmythe**

Wednesday, 23 August

	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 *Drosophila melanogaster* **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 *Formica exsecta* **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 *Triops cancriformis* **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

	Room A	Room B	Room C	Room F
12:30	**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
12:50	Genetic variation in parasitoid resistance in natural populations of *Drosophila melanogaster* **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. Benhaiem**
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 Schistocephalus solidus **M. Hahn**	The interplay between *Wolbachia* and morph-associated reproductive barriers among populations of *Tetranychus urticae* **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 *Neurospora crassa* **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

8:50 9:00	Announcements (Room A)			
9:00 9:50	Keynote Lecture: **Renée Duckworth** Individual variation, ecological dynamics and evolutionary feedbacks **Room A**			
	Room A	Room B	Room C	Room F
10:00	**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
10:30	How biologists model ecological and evolutionary impacts of climate change **M.J. Angilletta**	Towards a general understanding of population-level, eco-evolutionary dynamics using an energy budget approach **I.M. Smallegange**	Inferring incipient speciation through changes in trait covariation. **T. Ezard**	Social evolution of fitness: quantitative genetic connections of theory and reality **P. Bijma**
11:00	Eco-evolutionary responses to changing climate variability **Y.V. Vindenes**	Selection on colony foraging aggressiveness favors social susceptibility in social spiders **N. Pruitt**	Phylogenomic and demographic inferences of Pieris butterflies **C.M. Bossu**	Fidelity of parent-offspring transmission and the evolution of social behaviour in structured populations **F. Débarre**
11:30	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
The nematode *C. elegans* as a powerful model for experimental analysis of symbiont adaptation **H. Schulenburg**	A sex-specific guide to using spatially varying resources **H.K. Kokko**	Hybridisation and genome duplication under global change: Rapid speciation in an invasive plant **M. Vallejo-Marin**	Non-genetic inheritance and evolution **T. Uller**
The role of the *Daphnia* microbiome along the parasitism–mutualist continuum **E. Decaestecker**	Current challenge in landscape genomics: what about the environmental counterpart of high-throughput genomic data? **S.J. Joost**	Genome-wide patterns of divergence and gene flow across a butterfly radiation **N.J. Nadeau**	Genome integrity maintenance through transgenerationally inherited piRNAs **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 **B. Longdon**	Role of spatial heterogeneity in evolutionary transitions between plant sexual systems **R. Pannell**	Genomic signatures of introgression at the late stage of stickleback speciation **J.K. Kitano**	The transgenerational fitness effects of maternal mating history **R.K. Zajitschek**
The penguin and the tick: evolutionary impacts of host's aquatic dispersal on its terrestrial parasite **K.L. Moon**	Co-evolution of sexual reproduction and ecological functions in facultative sexual organisms **N.G. Gerber**	Balancing selection facilitates introgression of newt immune genes **W. Babik**	Lamarckian inheritance of telomere length?! A longitudinal study in free-living jackdaws **C. Bauch**
Loose association and abiotic effects create complex coevolutionary patterns in burying beetles and their mites **V.N. Nehring**	Genetic variation in seasonal reaction norms along latitudinal and altitudinal clines in a butterfly **N.K.O.L. Lindestad**	Are incidental islands less likely to introgress? Insights from haplotype-resolved genomes in European sea bass. **M.D. Duranton**	Paternal effects as life-history traits: uncovering the costs of nongenetic inheritance **E.L. Macartney**

Thursday, 24 August

	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 *Daphnia* populations revealed by Integral Projection Modeling **M. Bruijning**	Comparative mitogenomics in *Termitomyces* 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. **M.Ruiz-Aravena**	Selection for increased condition-dependent dispersal leads to evolution of multiple dispersal components and kernel simultaneously **S.T. Tung**	Haplotype block dynamics in hybrid populations **T. Janzen**	Protein diet alters paternal epigenetic transmission in male Wild guinea pigs **A.W. Weyrich**
Privatization rescues pathogenic bacteria following loss of cooperative trait **S.B. Andersen**	The effect of habitat fragmentation on optimal body size distributions in food webs **J.H. Hillaert**	Genomic divergence and local adaptation within a hybrid species **A.C. Cuevas**	Determining the inheritance of paternal effects on offspring pathogen resistance in sticklebacks **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 *Ficedula* flycatchers **K.Nadachowska-Brzyska**	Evolution of eye size and head morphology between *Drosophila americana* and *D. novamexicana* **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 *Tribolium castaneum* **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 mealybugs **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 *Cottus*? **G. Le Pennec**	Effects of transposable element silencing on gene expression shape selection against transposable elements in *Capsella* **R.H. Horvath**
Dual RNAseq to understand costs of symbiont-conferred resistance to parasitoids **H.K. Kaech**	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 *Daphnia longispina-galeata-cucullata* complex **P. Spaak**	Invasion of experimental populations by a transposable element and interactions between copies **A. Hua-van**

	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 (*Pinus cembra*) 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**	*Mycalesina* 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 19:30	Poster Session 3 (EXPO 1) S3, S6, S7, S10, S16, S18, S20, S24, S25, S26. S27, S28, S29,S31, S32, S33			
19:30 23:00	PAVILLION			

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. **L.F. Florez**	Parasitism and spatial selection in experimental metapopulations of *Paramecium* **O. Kaltz**	Mechanisms behind rapid build-up of habitat and temporal isolation in a young avian hybrid zone **A. Qvarnström**	Impact of transposable elements on genetic diversity in the grass *Brachypodium distachyon* **A. Roulin**
Loss of the mutualistic phenotype at ecologically-relevant temperatures in a *Drosophila* protective symbiont **C.C. Corbin**	Spatial evolutionary ecology: short- and long-term theory **S. Lion**	Anthropogenic influences on hybridization in sympatric alpine charr assemblages **C.D. Doenz**	
Selection of suboptimal fungal strains by fungus-growing termites **M. Wisselink**	The strange behaviour of genotype frequencies in a hierarchically structured host-parasite metapopulation **R.D. Dünner**	The genomic structure of rapid adaptive radiation in Lake Victoria cichlid fishes **J.I.M. Meier**	The role of epigenetic mechanisms in the adaptive evolution **D.S. Stajic**

Friday, 25 August

8:50 9:00	Announcements (Room A)			
9:00 9:50	Keynote Lecture: **Chris Jiggins** From jungles to genomes: Insights into adaptation and speciation from brightly coloured *Heliconius* butterflies. **Room A**			
	Room A	Room B	Room C	Room F
10:00	**Symposium 26** Adaptation to global climate change	**Symposium 16** Genomics of adaptation	**Symposium 10** Cognitive evolution	**Symposium 6** 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 10:40	Forecasting species persistence to future global change by learning from past evolutionary dynamics **M. Cambronero**	Divergence at the *Heliconius erato* species boundaries **S.V.B. van Belleghem**	Evolutionary biology of social cognition: fruit flies as a model system **B. Dukas**	Molecular basis of vertebrate seasonal adaptation **T.Y. Yoshimura**
11:00	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 *Melitaea cinxia* butterfly **V. Ahola**		
11:30	BREAK			

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**
	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**
Evolution of salt-water tolerant species in the *Anopheles gambiae* complex from a comparative genomic perspective **M.C. Fontaine**	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**

	Room A	Room B	Room C	Room F
11:30	**Symposium 26** Adaptation to global climate change	**Symposium 16** Genomics of adaptation	**Symposium 10** Cognitive evolution	**Symposium 6** Evolutionary significance of biological clock
11:50	Fluctuating temperatures mediate the evolution of trans-generational effects on fitness and select for short lifespan **M.I. Lind**	The genomic basis of local adaptation of the rotifer *Brachionus plicatilis* **L.F. Franch-Gras**	Maternal dietary restriction impairs offspring's learning abilities less critical for survival **S.N. Nakagawa**	The genetics of diurnal/nocturnal preference in *Drosophila* **E. Tauber**
12:10	Adaptive transgenerational plasticity in Baltic Sea sticklebacks. **M.J.H. Heckwolf**	Targets of selection and the evolution of a butterfly mimicry supergene **M.A.R. de Cara**	Changes in brain anatomy, behavior and life history during artificial selection on schooling behavior **Kolm**	The development, diversity, and ecology of solar tracking in sunflowers **K. Blackman**
12:30	Plasticity, seasonality and population persistence in a changing climate **V. Oostra**	Recent environmental adaptation in an invasive species: house mice the Americas **M.V Phifer-Rixey**	Cognitive ability is affected by sperm competition cues in male *D. melanogaster* **J.L. Rouse**	Allochrony and genetic divergence in an Equatorial songbird with strong circannual rhythms **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 *Drosophila pseudoobscura* **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 *Rhagovelia* fan **M.E. Santos**
Natural history and genomics of an inversion cline in the seaweed fly (*Coelopa frigida*) **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 (*Apis mellifera*) 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
12:30	**Symposium 26** Adaptation to global climate change	**Symposium 16** Genomics of adaptation	**Symposium 10** Cognitive evolution	**Symposium 6** Evolutionary significance of biological clock
12:50	Adaptation to 30 years of warming in the Baltic Sea **A. Laurila**	Environmental factors driving local adaptation in the Alpine Brassicaceae *Arabis alpina* **A.R. Rogivue**	Genomic and regulatory basis of improved learning ability in parasitoid wasp selection lines **J. Ellers**	Genetic mechanisms underlying variation in seasonal reproduction in sticklebacks **A.I. Ishikawa**
13:10	Assessing condition dependent mutation rates and their fitness effects under climate warming **D.B. Berger**	Genomic signatures of adaptation and speciation during sympatric divergence in Neotropical crater lake cichlid fishes **A.F.K. Kautt**	Repetitive nature of genes underlying neurons in great tit **V.H.S. Da Silva**	Clock gene expression and timing differences between butterflies and moths **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)			

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
A sex-linked supergene controls sperm morphology and swimming speed in a songbird. **J. Slate**	African genomes shed light on the early history and transition to selfing in Arabidopsis thaliana **A.F. Fulgione**	Coevolutionary and non-coevolutionary mechanisms selecting for sex in a predator-prey system. **H.R.K. Koch**	Diploid male production and population decline in a hyperparasitoid from a fragmented landscape **A.N. Nair**
Inverted morphs: evolutionary genetics of alternative reproductive tactics in lekking ruffs **C. Kuepper**	Genomics of population divergence in an Australo-Papuan songbird, the blue-faced honeyeater (Entomyzon cyanotis) **T. Burley**	Multiple infections and the coevolution of parasites **S. Alizon**	Eco-evo blueprints of invasions **T.K. Ketola**

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Message from the Editor-in-Chief

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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 *Escherichia coli*	Allen R. et al.	1
When 1 + 1 is not 2: exploring the prevalence of epistasis during adaptation	Dench J. et al.	2
Drosophila 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 *Asecodes parviclava*	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 *Daphnia magna*	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 *Sepsis thoracica*	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

Poster session 2
Tuesday, 22 August 2017 17:30-19:30
EXPO 1 - poster area

Symposium 8. Major transitions in evolution

Poster session 3
Thursday, 24 August 2017 17:30-19:30
EXPO 1 - poster area

NOTES