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Dear colleagues,

It is a pleasure to welcome you to the Logomo entertainment centre in Turku, Finland, for the 17th Congress of the European Society for Evolutionary Biology! More than 1300 people have registered for the conference, of which 543 researchers are presenting their research in one of the oral sessions, and an additional 570 will present posters.

The five-day programme follows the traditional ESEB format with 35 themed symposia proposed by members of the ESEB community. As a new innovation, we have classified abstracts submitted to the Open Symposium into five broad sub-themes (36a. Sexual selection and reproductive strategies; 36b. Phylogeography, biogeography, Speciation, systematics; 36c. Species interactions; 36d. Genome Evolution; 36e. Phenotypic Evolution) that we hope will make it easier for delegates to identify sessions and talks matching their interests.

In line with ESEB values, we have also placed emphasis on achieving gender balance amongst speakers and ensuring the environmental impact of the meeting is minimized. 53.7% of all speakers, and 57.7% of invited speakers who reported their gender at registration are female (compared to 52.9% of all abstract submitters). To reduce environmental impact, we have minimized the use of plastic throughout the conference (meals and coffee are served with reusable crockery and cutlery, no plastic cups are on offer for water, no plastic cover for badges etc.) and have focused on sourcing food with a low carbon footprint (e.g. 2 days with vegetarian only, 2 days with locally sourced fish). The conference t-shirt and bag are also made from recycled cotton.

We have also arranged active outreach and social programs. Outreach includes a school children mini-conference that will bring over 40 high school students to Logomo on Thursday morning, while on the social side, the conference pub (Koulu a.k.a “The Old School”) will be open until 2am each day (kitchen open until 23:30). There is a large area upstairs reserved for congress participants where you can taste two of their craft beers that have been re-branded for the congress (Beer Reviewed and Drinkage Disequilibrium).

Finally, we would like to thank the 39 volunteers and the exhibitors and sponsors for helping to make this event possible, and we wish you all a productive, supportive and enjoyable meeting!

On behalf of the organizing and scientific committees

Craig Primmer
(main organizer)
CONFERENCE INFORMATION

CONGRESS VENUE
The congress venue, Logomo, is a centre for culture, arts and creative economy operating from the de-funct locomotive workshop near the main railway station, the bus station and close to Turku city centre. A pedestrian bridge provides access from the main railway station to Logomo. Walking from the Market Square (which unfortunately is currently under construction) to Logomo takes about 20 minutes (1.5 km). All session rooms are located on the ground floor, except for GOTO rooms, which are located on the third floor, accessible by elevator and Logomo Hall stairs.

REGISTRATION AND INFORMATION
The registration & information desk will be open on Monday, August 19, from 15:00 until 20:00 on the entrance hall, and during the scientific programme on the following congress days, from 7:30 (Tue) and from 8:00 (Wed-Sat). Participant registration fees include attendance at the scientific sessions, coffee and lunch on the congress days as marked on the programme, congress bag, congress app, access to live stream of all sessions, as well as the Welcome reception on 19 August. Last minute registration is possible at the information desk.

LUNCHES AND COFFEE
A cooked lunch on each day is included as a part of the congress registration fee. Coffee and tea are available all day (starting 30 mins before the first session commences), while additional snacks are served during the morning and afternoon breaks (except Saturday afternoon). To reduce the environmental impact of the meals we will serve vegetarian only options on two days, and two days will have locally sourced abundant fish as the meat source. All meals and drinks are served with reusable crockery and cutlery. For the refill water stations, we recommend bringing your own bottle. There is also a restaurant and a bar located in Logomo. Restaurant Kitchen is open daily 9:00-16:00 and Teatro bar is open on Monday 16:00-21:00, and on following days from 12:30 onwards.

CONGRESS STAFF & VOLUNTEERS
Besides registration and info desk staff, there are congress volunteers who can be identified by their white congress T-shirts at the congress venue. Feel free to ask them for any assistance you may need.

QUIET/REFLECTION ROOM
There is a quiet/reflection room available on the second floor (indicated with signs).

SPEAKERS’ PRACTICE ROOM
There is a speakers’ room on the second floor (indicated with signs) where speakers can practice their talks. If you need to borrow a computer to practice in the room, please ask the info desk. There is a time reservation sheet on the room’s door.

CHILDCARE & NURSING ROOM
Childcare will be organized at the 3rd floor “back-stage” rooms (take an elevator at the far end of the long hallway on the right side of the Logomo hall). Opening hours are Tue 8:30-17:45, Wed 8:45-17:45, Thu 8:45-13:00, Fri 8:45-17:45 and Sat. 8:45-16:15.

There is also a room for nursing or bottle feeding your child available on the second floor (indicated with signs). The room includes a shower and washbasin, a kitchen sink, refrigerator and microwave. A sign for indicating that the room is in use will be available if you wish to feed in private.

PRESENTATIONS
Regular oral presentations will be 10 min long 3 additional minutes for discussions and then 2 minutes for changing rooms. Invited symposiums presentations will be 23 min long 5 minutes for discussion and 2 minutes for changing rooms. Presenters must follow the assigned times to ensure the eight concurrent sessions remain synchronised. Loud music will play during the 2 min transition to ensure speakers cannot speak overtime. The next speaker’s timeslot starts as soon as the music stops. To enable the staff to handle the technical aspects in an efficient way, all presentations must be prepared according to the guidelines listed on the congress website.
POSTER SESSIONS
There will be two poster sessions during ESEB2019 on two evenings (17:20-19:20), after the parallel symposia: Poster Session 1 on Tuesday, 20 August and Poster Session 2 on Friday, 23 August. Presenters can check their poster session in the programme on the congress website. Poster boards will be marked with poster codes. Poster presenters are required to be by their poster for at least one hour during the poster session designated to their poster. Poster presenters also have the opportunity to invite up to 3 attendees of their choice to visit their poster through the Postvites system. Poster presenters will serve wine to their poster visitors.

POSTER PRIZES
There will be prizes awarded for the best student poster in both poster session one and poster session two (by public vote), as well as a “jury’s choice” poster prize chosen by members of the scientific committee that recognizes a student poster (across both poster sessions) that honestly and clearly presents complicated/non-significant/counterintuitive results. The prizes will be announced at the closing ceremony.

EvoKE OUTREACH STAGE
The EvoKE team is arranging a series of events to get evolutionary biology researchers more involved in outreach. These events will mostly be held during lunch breaks on the EvoKE outreach stage in the Teatro café and bar.

The events are listed under “Satellite events”.

The EvoKE (Evolutionary Knowledge for Everyone) network is funded by ESEB. EvoKE seeks to contribute to a world where people understand evolution and can use scientific knowledge and skills to make informed decisions that address societal problems thereby contributing to an inclusive, sustainable and resilient future. See https://evokeproject.org/ for more details.

STREAMING
In order to encourage open science, and to allow people not able to attend ESEB2019 to have access to presentations, we are providing presenters the opportunity for their presentations to be live streamed and also available for viewing following the conference. All presenters are asked if they do not wish to give permission to allow the streaming and recording of their talk on the presentation upload form. Only those who have given the permission will be streamed/recorded.

WIFI
In Logomo, the wifi network is LogomoPublic and password loGOmo2012.

CONGRESS APP
Aboa Events Congress app is available for the ESEB2019 congress participants and it is free to download from Google Play and App Store. The Aboa Events app contains features such as abstracts, programme, information about the transportation service FÖLI, notifications about the possible updates in the programme, maps, venue information and other useful features.

BUS (FÖLI) PASS
Delegates will receive complimentary weekly bus passes (QR-codes in the name badges) with FÖLI public transportation from Saturday 17th until Sunday 25th of August. FÖLI Turku region traffic allows you to use local bus services in the city of Turku, without limitation (www.foli.fi).

NAME BADGE
Entrance to the congress venue and upstairs at the conference pub requires wearing your name badge. The conference dinner ticket, if you have purchased one, is also on your name badge, as well as FÖLI pass (QR code).

DELEGATE BAGS
Delegate bags are made in the Turku Work Centre as a part of rehabilitative services for the special needs unemployed. Bags are made of waste fabric and other recycled materials, they all come in different colours and patterns. This new project is inspired by ESEB 2019, which is the first congress to receive these bags. Take one if you like from the City of Turku stand in the lobby. Also city maps are available.

The Turku Work Centre will also have a pop-up shop in the lobby on Friday, 23 August at 12:00-16:30. They sell lovely handmade, local, Scandinavian style products, toys, wool socks, small purses and bags.

PRINTING
There is no printing possibility at the venue of the congress. Your hotel may have a business centre where you can print. Closest printing place Niini, address Laivurinkatu 1, 20810 Turku, open 8:00-17:00 on weekdays.

FIRST AID
If you need first aid, please contact any staff member or volunteer and you will be directed to first aid room.
ELECTRICITY
There are sockets in the “street area” (furnished with tables and chairs) by the entrance hall. The Voltage: 220-240 Volts. Electrical sockets (outlets) in Finland are one of the two European standard electrical socket types: “Type C” Europlug and “Type E/F” Schuko.

CITY OF TURKU
You can find useful information and get inspired about the city of Turku by visiting the congress website, www.visitturku.fi/en or the congress app Aboa Events.

ENVIRONMENTAL IMPACT
In line with ESEB values, we have placed emphasis on ensuring the environmental impact of the meeting is as low as possible. For example, we provided details of strategies for reaching Turku without flying, as well as options for compensating flight carbon footprints. The City of Turku has also provided all delegates with a weekly bus pass free of charge for moving around the city.

Further, we have minimized the use of plastic throughout the conference (e.g. meals and coffee are served with reusable crockery and cutlery, no plastic cups are on offer for water, no plastic cover for badges etc.) and have focused on sourcing food with a low carbon footprint. There will be two vegetarian lunches and two lunches with locally sourced fish. Berries and herbs in salads come direct from the Finnish nature. The conference t-shirt and optional conference bag are also made from recycled cotton, and are sourced from local companies.

Finland offers the best quality water straight from a tap, so there is no need for bottled water. You can fill your own mug or bottle making use of the water filling stations in Logomo. Finland uses a deposit-based efficient return system for beverage bottles and cans, so do not throw them into trash, but return them to a store and get money back. Logomo also provides recycling centers for other waste.

DIVERSITY OF PRESENTATIONS
In line with ESEB values, we have also placed emphasis on promoting diversity in gender, career stage and nationalities amongst speakers. 54% of all speakers, and 58% of invited speakers who reported their gender at registration are female (compared to 53% of all abstract submitters). ECR and mid-career scientists make up 84% of symposium organisers and 60% of invited speakers. 28 nationalities are represented amongst the symposium organisers and 19 amongst the 75 invited speakers.

SOCIAL MEDIA POLICY
ESEB supports open communication of science. Therefore, in addition to offering a live streaming opportunity for all oral presentations, the default assumption is that information presented at the congress (in oral or poster format) may be reported and discussed, and images of slides posted, by attendees in social media and blogs unless presenters specifically state otherwise. If a presenter does not want information from their presentation to be broadcast and/or photographed they should make this clear in their talk/poster, for example by including one or both of the following images.

We expect delegates to respect the rights of presenters. Any clear breaches of this policy should be reported to the congress desk.

CODE OF CONDUCT
The ESEB Congress is intended to foster the exchange of scientific ideas, providing participants with an opportunity to network with an international community of evolutionary biologists. ESEB is committed to creating an environment where everyone can participate without harassment, discrimination, or violence of any kind. All meeting participants must be treated with respect and consideration. Registration for the meeting is considered an agreement to abide by this Code of Conduct.

Harassment of any participant will not be tolerated. Unacceptable behaviour includes (but is not limited to) unwanted verbal attention, unwanted touching, intimidation, stalking, shaming, or bullying. Blatant discrimination on the basis of gender or gender identity, sexual orientation, age, disability, physical appearance, race, religion, national origin, or ethnicity will not be tolerated. Harassment presented in a joking manner constitutes unacceptable behaviour. Retaliation for reporting harassment is also unacceptable, as is reporting an incident in bad faith.

Please note that the use of certain language or images in oral or poster presentations may contravene the Code of Conduct if they represent disrespectful criticism of individuals or teams rather than valid criticism of their science, if they are seen to objectify or demean individuals or groups. It is important to recognise that sensitivity to such aspects of communication varies, and what might be acceptable or humorous to some people might not be to others.
The meeting organizers and society executive officers reserve the right to enforce this Code of Conduct in any manner deemed appropriate. Anyone violating the Code of Conduct may be: (a) asked to stop, (b) expelled from the meeting, and/or (c) prohibited from attending future meetings. Establishing this Code of Conduct is intended to maintain the high quality of scientific discourse that members have come to expect from our meetings.

If you experience any form of inappropriate behaviour, you may wish to contact and speak with an experienced external Human Relations counsellor that ESEB has contracted to help in such situations. You may also speak with the ESEB Office Manager, Dr Ute Moniatte, who can liaise with the external counsellor on your behalf. Either way, all communication will be held in strict confidence.

If you contact our counsellor, you will be asked the following:
• to give your name
• to describe the events or behaviour that took place, and any other relevant circumstances surrounding the incident
• if relevant or appropriate, to identify the perpetrator
• if relevant or appropriate, to identify any witnesses.

Important
Nothing will be undertaken without your consent, nor will your name be communicated to anyone without your consent.

Our external HR Adviser is Joanne Harding, at Workforce Window Ltd, a Human Resources company based in the UK with many years’ experience in dealing with individual complaints and breaches of codes of conduct. Joanne will handle your issues both sensitively and confidentially.

The Workforce Window website is: www.workforce-windowltd.co.uk

To contact Joanne Harding, either send her an email (joanne@workforcewindow.co.uk) or phone/text her (+44 792 009 46 63).
To contact Ute Moniatte, either send her an email (office@eseb.org) or phone/text her (+49 160 524 3050).

Workforce Window Ltd follow the General Data Protection Regulations and are registered with the Information Commissioners Office. The company has no other links with ESEB.

EXHIBITION
Exhibition is open throughout the congress in the entrance hall. List of exhibitors:

1. Peer Community In
2. Guarant International
3. Frontiers
4. Wiley
5. Oxford University Press
6. Royal Society Publishing
7. Cambridge University Press
8. Current Zoology
9. The New Phytologist Trust
10. Nordic Society Oikos
11. University of Helsinki / HiLIFE
12. EvoKE - Outreach activities
13. ESEB organisation
CITY MAP

The proposed walking route from the City Centre to LOGOMO is as follows:

1. **Kupittaa Railway Station**
2. **University of Turku**
3. **Kauppatori Marketplace**
4. **Turku Cathedral**
5. **River Aura**
6. **Logomo**
7. **Dinner bus departure point**
8. **Turku Airport**

Distances:
- Logomo - Marketplace: 1.5 km
- Marketplace - Turku Cathedral: 600 m
- Radisson Blu Marina Palace hotel - Logomo: 1.5 km

**Hotels**
- 1 Radisson Blu Marina Palace Hotel
- 2 Hotel Scandic Atrium
- 3 Solo Sokos Hotel Seurahuone
- 4 Hotel Scandic Plaza
- 5 Centro Hotel
- 6 Original Sokos Hotel Wiklund
- 7 Kupittaa Adventure Park

**Boat to dinner**
- Dinner bus departure point

**Proposed walking route from the City Centre to LOGOMO**
Sinead Collins is a Reader at the Institute of Evolutionary Biology at the University of Edinburgh. Her research focuses on building the theory needed to predict trait evolution in large populations of photosynthetic microbes, particularly those in the ocean. To do this, she and her group use microbial experimental evolution, make models, and collaborate closely with marine microbiologists and oceanographers. Experimental evolution is a field that rarely considers marine systems, and Sinead has spent much of the past decade working with others to create a field of “marine microbial experimental evolution” that pulls together the strengths of marine and evolutionary biologists.
Dr. Nielsen’s work is on statistical and population genetic analyses of genomic data, in particular methods for detecting natural selection, describing population genetic variation, inferring demography, and methods for association mapping. Much of his current research concerns statistical analysis of next-generation sequencing data, both in the context of medical genetics and population genetics. Many of the methods he has developed are heavily used by other researchers, including the phylogeny based methods for detecting positive selection implemented in PAML, the methods for inferring demographic histories implemented in the IM and IMa programs, the method for detecting selective sweeps implemented in the SweepFinder programs, and the methods for analysing Next Generation Sequencing (NGS) data implemented in ANGSD.

David Queller is a professor at Washington University in St. Louis. His dissertation investigated sexual selection and kin selection in plants. He subsequently worked for many years, together with Joan Strassmann, on social insects, showing the importance of relatedness in both cooperation and conflict. They later switched to studying social amoebas, especially the evolution of cheating in and its control by high relatedness, kin discrimination, pleiotropy, and resistance. His theoretical work includes methods for estimating relatedness, models of kin selection and other social forces, the evolution of eusociality via demographic advantages, evolutionary conflict, and fundamental theorems of natural selection.

Anna-Liisa Laine is an evolutionary ecologist who is broadly interested in the eco-evolutionary feedback loops that drive species interactions. She is a professor of ecology at the University of Zurich, and a visiting professor at the University of Helsinki. She received her PhD at the University of Helsinki in 2005 and continued to do post doctoral research at the University of California, Santa Cruz, and CSIRO Canberra. Much of her work is focused on uncovering the mechanism that enable coexistence of host and their parasites in natural populations, and the mechanism which maintain diversity in host-parasite interaction traits. Currently, her work is addressing these questions within a community ecology framework.

Rasmus Nielsen
(UC Berkley/Copenhagen)

Title: Human adaptation in time and space
Saturday, August 24
09.05-09.50 Room: LOGOMO HALL

Anna-Liisa Laine
(University of Zurich, Helsinki University)

Title: What keeps pathogens in check in the wild?
Friday, August 23
09.05-09.50 Room: LOGOMO HALL

David Queller
(Washington)

Title: Evolutionary conflict and molecular arms races in cooperative systems
Thursday, August 22
09.05-09.50 Room: LOGOMO HALL
SOCIAL EVENTS

WELCOME RECEPTION
Monday, 19 August, 18:00-21:00

Join your colleagues for a welcome reception at the congress venue Logomo on Monday evening, at 18:00.

Finger is food served until 19:30. The event includes 2 complimentary drinks, one offered by the City of Turku. Additional drinks available for purchase until 21 after which we will move to the conference pub (Koulu).

CONGRESS DINNER AT MOOMIN WORLD
Saturday, 24 August, 18:30-02:00

The congress will be concluded with the conference dinner held in Moomin World. This children’s culture classic operates in Naantali, where the Archipelago Sea and Naantali’s Old Town with its wooden houses meet.

Tove Jansson was a Finnish writer and a visual artist, whose Moomin characters are known all over the world. Moomin World is an ode to fairy tales and a tribute to Tove Jansson’s imagination, located in south-west coast of Finland, in the island of Kailo, in Naantali. Moomin World can be reached within 20 minutes from the downtown of Turku.

Who knows, maybe we will get to meet the Moomins during the dinner, come along to spend a memorable evening!

Bus transportation to dinner
Buses to dinner leave from two locations (see below) in short intervals between 17:15 and 17:40. Families with children are recommended to take the first bus in order to give them time to explore the island before larger crowds arrive:
   1. Turku Cathedral, address Tuomiokirkonkatu 1
   2. Hotel Radisson Blu Marina Palace, address Linnankatu 32

In Naantali, there is about 10 minute walk from the bus to Moominworld island. Congress volunteers will show the way.

Return buses will leave starting from 20.00 in about 30 minute intervals. All return buses will stop at Hotel Radisson Blu Marina Palace and near Turku Cathedral.

Boat transportation (one way, return by bus)
If you have booked a ticket for the boat:
The boat leaves at 17:15 sharp from the River Aura, address: Läntinen Rantakatu 37

RUNNING SOCIAL
Thursday, 22 August, at 07:00

A running social will be organized early Thursday morning, meeting in the front of the Cathedral (Tuomiokirkonkatu 1, 20500 Turku). The routes will follow the river Aura. We aim to have two groups (different paces and distances).
**FAMILY SOCIAL**

Thursday, 22 August, at 15:00

A family social will be organized on Thursday afternoon at the Seikkailupuisto adventure park (Kupittaankatu 2, 20520 Turku; meeting point at the big moose statue), and in case of rain, in a child-friendly museum of history Aboa vetus (Itäinen Rantakatu 4–6, 20700, Turku) at 15:00.

**LGBTQ SOCIAL**

Friday, 23 August, at 19:30

The ESEB 2019 LGBTQ social will feature a collaboration with Turku Pride! Following the poster session on Friday August 23, we will meet near the main door in Logomo at 19:30 and head over to Saaristobaari (Aurakatu 14, Turku) together to grab a bite to eat and get to know each other. At 10pm, there will be a drag show (5€ cover) featuring Finland’s fiercest underground drag and burlesque artists and DJ Slaya Bit. The show is the official Turku Pride pre-party, so let’s get there early! For more information, please check @ESEB2019LGBTQ on Twitter or email evolcongen1@gmail.com - the first 100 ESEB members attending the congress who RSVP by 22 August will get in free to the show.

**CONGRESS PUB**

Panimo ravintola Koulu

Address: Eerikinkatu 18 (the second floor of the restaurant is reserved for ESEB participants) Open every day 11:00-02:00, kitchen open until 21:30 (Mon-Thu), until 23:30 (Fri-Sat).

Look out for two evolutionary themed congress beers on tap in the upstairs bar of Panimoravintola Koulu; ‘Beer Reviewed’ and ‘Drinkage Disequilibrium’. Our beer names were chosen following a twitter poll on a shortlist of names, whittled down from an extensive list of submissions of varying creativity (it turns out evolutionary biologists love both procrastinating and puns). Credit goes to Martin Seltmann who came up with ‘Beer Reviewed’ and Will Buswell for ‘Drinkage Disequilibrium’, as well as to Océane Liehrmann for the great logo adaptation and designs!

Panimoravintola Koulu (Brewery restaurant School in English) is a former elementary school, now Finland’s largest brewery restaurant serving large selection of beers, wine and delicious food too!
PEER COMMUNITY IN (PCI) - THE BEGINNING OF A REVOLUTION IN OPEN ACCESS?
Where: MOVE 1
When: Tuesday 20 August, 13:00-13:50 (lunch time)
Who: Researchers

Interested by discovering/joining/using the next generation publishing experiment with the “Peer Community In” (PCI, https://peercommunityin.org) project? In a few words: PCI is a non-profit scientific organization that aims to create specific communities of researchers reviewing and recommending, for free, unpublished preprints in their field (i.e. unpublished articles deposited on open online archives like arXiv.org and bioRxiv.org). Evaluations and recommendations by a PCI are free of charge for authors and readers. The first PCI, Peer Community in Evolutionary Biology (PCI Evol Biol), has been launched in 2017 and now counts >400 Editors. Other PCIs (e.g. PCI Ecology, PCI Paleontology, PCI Entomology…) have been created and several PCIs will probably open soon. Come along and meet Thomas Guillemaud & Denis Bourguet – co-founders of PCI – and many reasearchers already involved as editors @PCI Evol Biol. See also https://youtu.be/4PZhpnc8wwo, @PCIEvolBiol & @PeerCommunityIn.

THE EUROPEAN RESEARCH COUNCIL - FUNDING OPPORTUNITIES FOR BRIGHT MINDS
Where: MOVE 1
When: Wednesday 21 August, 13:15-14:05 (lunch time)
Who: Researchers

Is an ERC grant for you? You will be explained what the European Research Council is, who can benefit from its funding opportunities and what to expect in the application and selection process. The ERC supports researchers performing interesting and ambitious fundamental research. This could be you!

The mission of the European Research Council is to encourage the highest quality research in Europe. The concept is simple: competitive individual funding for researchers with a great idea, across all fields. ERC grants are awarded through open competition to projects headed by starting and established researchers of any nationality and age, who are working or moving to work in Europe or an associated country. The sole criterion of choice is scientific excellence.

NETHERLANDS EVOLUTIONARY BIOLOGY GET-TOGETHER
Where: Congress pub Panimoravintola Koulu, address: Eerikinkatu 18
When: Wednesday 21 August, 18:00-19:30
Who: All scientists working in the Netherlands or of Dutch origin

The Netherlands society for evolutionary biology (NLSEB) aims to build a community of all evolutionary biologists in the Netherlands. NLSEB therefore welcomes all scientists working in the Netherlands or from Dutch origin for drinks. Come and (re-)connect to Dutch evolutionary biology!
MEET THE EDITORS - A ROYAL SOCIETY PUBLISHING WORKSHOP
Where: MOVE 1
When: Friday 23 August, 13:00-13:50 (lunch time)
Who: Everybody interested

Presenters: Editors from the Royal Society journals Proceedings B, Philosophical Transactions B and Biology Letters, including ESEB President Professor Nina Wedell.

Have you ever wondered what happens to a paper submitted to a Royal Society journal? This is your chance to find out. This one-off event offers an excellent opportunity to gain valuable insight into the peer review and processes behind the scenes at Royal Society Publishing. Come along and meet some of the highly experienced and reputable editors working for the Royal Society journals, and hear more about their expectations and top tips for compiling high quality articles. There will also be plenty of time to discuss topical publishing issues, and questions and feedback from the audience will be encouraged.

OUTREACH EVENTS
- OPEN TO EVERYBODY INTERESTED IN OUTREACH

HOW TO FOSTER PUBLIC ENGAGEMENT AT CONFERENCES
Where: Outreach Stage
When: Tuesday 20 August, 12:45-13:55 (lunch time)

In this session, you will be presented with a few examples of how outreach and public engagement were fostered at scientific conferences and participate to a brainstorming session on how to do in the future, to be able to go back home with plenty of concrete ideas! (Héloïse Dufour)

A CITIZEN-SCIENCE WORKSHOP
Where: GOTO 31 (3rd floor)
When: Tuesday 20 August, 12:45-13:55 (lunch time)

A citizen-science workshop showcasing an amazing and successful Droseu citizen-science initiative (Roberto Torres)

HOW TO PITCH YOUR SCIENCE TO NON-SPECIALIST AUDIENCES
Where: GOTO 31 (3rd floor)
When: Wednesday 21 August, 12:55-13:55 (lunch time)

In this workshop, you will get tips on how to discuss your science with non-specialist audiences and actually build and practice on YOUR pitch(es). (Héloïse Dufour)

SCISPARKS, HOW TO ORGANISE SPEED MEETINGS IN HIGH-SCHOOLS
Where: Outreach Stage
When: Friday 23 August, 12:45-13:55 (lunch time)

In this session, you will learn how to easily organise effective encounters between researchers and highschool students using speed-meetings, and how to get support to start your own. They are fun ways to create engaging links between students, teachers, and researchers! This session is also for you if you want to become part of a European coordinated activity dedicated to evolution! (Héloïse Dufour)
**ART-UP YOUR EVOLUTION**
Where: Outreach Stage  
When: lunchtime + coffee-breaks + continued moderation throughout the conference on a flexible basis, lasts until the end of the last coffee break

Unleash your artistic side! Take the paint, crayons, paper, brushes and whatever else you need - and show us your artistic vision of your research, results - or yourself as a scientist! All materials will be provided - just come and express yourself. (Szymek Drobnia)

**COME AND MEET EvOKE!**
Where: Exhibition area  
When: Throughout whole conference

Come share with us what outreach activities you are involved in and why! You will also learn about examples of activities you can get involved in or use. Last but not least, you will hear about EvoKE, the network aiming at Evolutionary Knowledge for Everyone, to get in touch with a diversity of people with the same goal.
LIST OF SYMPOSIA

S1. Trans generational plasticity in animals (Trans gen plast)
Organisers: Dalial Freitak, Olivia Roth
Invited: Marjo Saastamoinen, Seth Barribeau

S2. Evolution in real time: experimental evolution approaches (Exp evol)
Organisers: Biljana Stojković, Uroš Savković, Mirko Đorđević
Invited: Göran Arnqvist, Tadeusz Kawecki

S3. Exploring the role of nongenetic inheritance in evolution (Non-gen inherit)
Organisers: Pim Edelaar, Russell Bonduriansky, Troy Day
Invited: Itamar Lev, Sonia Sultan

S4. Cognitive evolution and environment (Cognition)
Organisers: Antonin Crumiere, Manuel Nagel
Invited: Reuven Dukas, Gabrielle Davidson

S5. Aging & Cancer through the lens of evolution (Aging & cancer)
Organisers: E. Yagmur Erten, Matthias Galipaud, Robert Noble
Invited: Vera Gorbunova, Joao Pedro de Magalhaes

S6. Eco-evolutionary approach to the antimicrobial resistance problem (Anti-micro resist)
Organisers: Teppo Hiltunen, Lutz Becks
Invited: Danna R Gifford, Dan Andersson

S7. Human-induced evolution (Human-induced)
Organisers: Miguel Baltazar-Soares, Kristien Brans, Christophe Eizaguirre
Invited: Fanie Pelletier, Mikko Heino

S8. Genetics of small populations (Small pop gen)
Organisers: Alina Niskanen, Lumi Viljakainen, Henrik Jensen
Invited: Richard Frankham, Nancy Chen & Jane Reid (Externally sponsored)

S9. Microbial genome and community evolution in food environments (Microbes & food)
Organisers: Jeanne Ropars, Ricardo Rodriguez de la Vega
Invited: Delphine Sicard, John Gibbons

S10. Rapid evolutionary adaption: potential and constraints (Rapid adapt)
Organisers: Carolin Wendling, Jürgen Gadau
Invited: Alison Feder, Lutz Becks

The symposium is sponsored by the DFG priority program SPP1819

S11. Quantitative trait effect size distributions and their impact on evolutionary processes (Quant traits)
Organisers: Arild Husby, Anna Santure
Invited: John Kelly, Mirte Bosse

S12. Quantifying selection and evolvability in wild plant populations: methods and measurements (Wild plant sel)
Organisers: Øystein H. Opdal, Rocío Pérez-Barralas
Invited: Benoit Pujol, Maria Clara Castellanos

S13. Genetics and genomics of adaption (Adapt gen)
Organisers: Carmelo Fruciano, Paolo Franchini, Julia C. Jones
Invited: Kathryn Elmer, Henrique Teotônio

S14. The mechanisms of evolutionary change: moving from genomic signatures to functional validation (Genome funct)
Organisers: Darren J. Parker, Nicola Cook
Invited: Alistair P. McGregor, Megan Neville

S15. Tracing evolution through time using ancient DNA (Ancient DNA)
Organisers: Päivi Onkamo, Verena Schünemann, Elina Salmela
Invited: David Wegmann, Johannes Krause

S16. Mito-nuclear interactions across levels of biological organisation (Mito-nuclear)
Organisers: Florencia Camus, Hernan Morales
Invited: Ronald S. Burton, Kristi Montooth

S17. Selfish genetic elements (Selfish GE)
Organisers: Robert Kofler, Kirsten A. Senti
Invited: Catherine Montchamp-Moreau, Arturo Mari-Ordónez

S18. The genetic architecture of polygenic adaption: sweeps, small shifts and everything in between (Polygen arch)
Organisers: Christian Schlötterer, Neda Barghi
Invited: Catherine Peichel, Joachim Hermisson

The symposium is supported by Molecular Ecology

S19. Gene-phenotype associations across evolutionary scales (Gene-phen)
Organisers: Jo Baker, Stephen Montgomery, Francesco Cicconardi
Invited: Nicola Nadeau, Itay Mayrose
S20. The evolutionary consequences of social transmission and animal culture (Social trans)
Organisers: Rose Thorogood, Neeltje Boogert
Invited: Lucy Aplin, Sasha Dall

S21. Colour across the evolutionary spectrum: from production to perception (Colour)
Organisers: Hugo Gruson, Amélie Fargevieille, Nicola Nadeau
Invited: Edwige Moyroud, Martine Maan

S22. Evolution of host-plant use in arthropods (Host-plant)
Organisers: Ernesto Villacis-Perez, Nicky Wybouw
Invited: Silke Allmann, Noah Whitman

S23. Parasite community dynamics and their role in the evolution of host immunity (Parasite comm dyn)
Organisers: Tobias Lenz, Sébastien Calvignac-Spencer
Invited: Anssi Karvonen, Elin Videvall

S24. Microbial evolution under biotic stress (Microbial stress)
Organisers: Marie Vasae, Antoine Frenoy
Invited: Olaya Rendueles, Ville-Petri Friman

S25. Assortative mating for quantitative traits: mechanisms, estimation and evolutionary consequences (Assort mating)
Organisers: Niels Dingemanse, Barbara Class
Invited: Wolfgang Forstmeier, Roger Butlin

S26. Sexual conflict: linking behavior, genetics and ecology (Sex conflicts)
Organisers: Kenyon Mobley, Jessica Abbott, Stephen De Lisle
Invited: Jen Perry, Howard Rundle

S27. Design of social traits: genes, individuals and social groups (Social traits)
Organisers: Gonçalo S. Faria, Thomas Hitchcock, Jasmeen Kanwal
Invited: Susanne Shultz, Alan Grafen

S28. Evolutionary game theory: modern development and interdisciplinary applications (Game theory)
Organisers: Xiang-Yi Li, Vlastimil Křivan, Christian Hilbe
Invited: Katerina Stankova, Redouan Bshary

S29. Moving beyond a quantification of eco-evolutionary dynamics (Eco-evo)
Organisers: Lynn Govaert, Marjolein Bruijning
Invited: Jelena Pantel, Tim Coulson

S30. Eco-evolutionary feedback between pollinator behaviour and floral evolution (Pollinator)
Organisers: Mario Vallesio-Marín, Avery Russell
Invited: Aimée Dunlap, Allan Ellis

S31. Life history evolution: bridging theory and data (Life history)
Organisers: Piret Avila, Mauricio González-Forero
Invited: Alexei Maklakov, Irja Ida Ratiainen

S32. Niche width evolution and its (mal)adaptive significance (Niche width)
Organisers: Maud Charlerie de la Masselière, Virginie Ravigné, Vincent Calcagno
Invited: Claus Rueffler, Michael Singer

S33. Evolutionary ecology of ageing: from mechanisms to life-history consequences (Aging)
Organisers: Sophie Reichert, Hannah Froy, Antoine Stier
Invited: Sandra Bouwhuis, Tonia Schwartz

S34. Mathematical models in evolutionary biology (Math models)
Organisers: Guy Cooper, Matishalin Patel, Tom Scott, Asher Leeks
Invited: Hanna Kokko, Florence Débarre

S35. Evolution outreach projects: keep SCREAMing (Science Communication Research Empowers AMazing outreach) (Evol outreach)
Organisers: Dragana Cvetković, Szymon M. Drobniai
Invited: Pedro Russo, Hélène Dufour

36a. Sexual selection and reproductive strategies (Sex select & mating)
Organizers: Natalie Pilakouta, Murielle Àlund, Colin Olito

36b. Phylogeography, biogeography, speciation, systematics (Phylogeo & syst)
Organizers: Bjarki Eldon, Niklas Wahlberg

36c. Species interactions (Spp interact)
Organizers: Alexandre Figueiredo, Jos Kramer, Elisa Granato

36d. Genome evolution (Genome evol)
Organizers: Alexander Nater, Wen-Juan Ma

36e. Phenotypic evolution (Phenotypic evol)
Organizer: Dany Garant
PROGRAMME AT A GLANCE

MONDAY AUGUST 19

15.00  Registration
18.00  Welcome reception

TUESDAY AUGUST 20

7.30   Registration
8.30   Opening of conference and practical information
9.00   Keynote I Pat Monaghan, Bad beginnings and untimely ends: environments, telomeres and life history variation
11.30  Lunch & Exhibition & Satellite events/outreach
15.30  Coffee & Exhibition & Outreach
17.20  POSTER SESSION I
19.20  

WEDNESDAY AUGUST 21

08.55  ESEB initiatives and practical information
09.05  Keynote II Sinead Collins, Understanding evolution in life-giving slime
10.00  Coffee & Exhibition & Outreach
11.30  Lunch & Exhibition & Satellite events/outreach
14.15  Coffee & Exhibition & Outreach
17.30  POSTER SESSION I

THURSDAY AUGUST 22

08.55  ESEB initiatives and practical information
09.05  Keynote III David Queller, Evolutionary conflict and molecular arms races in cooperative systems
11.00  Coffee & Exhibition & Outreach
12.45  Lunch & Exhibition & Satellite events/outreach
13.45  "Leg stretching break"
18.00  Excursions

FRIDAY AUGUST 23

8.55  ESEB initiatives and practical information
09.05  Keynote IV Anna-Lisa Laine, What keeps pathogens in check in the wild?
11.00  Coffee & Exhibition & Outreach
12.45  Lunch & Exhibition & Satellite events/outreach
15.30  Coffee & Exhibition & Outreach
17.20  POSTER SESSION II
19.20  

SATURDAY AUGUST 24

8.55  ESEB initiatives and practical information
09.05  Keynote V Rasmus Nielsen, Human adaptation in time and space
11.00  Coffee & Exhibition & Outreach
12.45  Lunch & Exhibition & Outreach
13.30  ESEB members meeting
14.30  "Incoming president's address, Ophelia Ronca. Integrating niche evolution with life history theory can help us better understand the consequences of climate change"
15.10  "Leg stretching break"
15.20  JMS award winner 2019, Karl Gricehop, Sexual conflict and the maintenance of genetic variance in fitness
16.00  Closing ceremony
18.30  Congress dinner at Muuminworld
### TUESDAY, AUGUST 20

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<th>Time</th>
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<td>10.00</td>
<td>$10.01 Slowing the rapid evolution of HIV drug resistance&lt;br&gt;A. Feder</td>
<td>$31.01 Why do organisms age: Beyond energy trade-offs&lt;br&gt;A. Maklakov</td>
<td>$34.01 Why you might want to care about population regulation, no matter what your question is&lt;br&gt;H. Kokko</td>
<td>$8.01 What sizes are required for populations to be genetically viable? Re-evaluation of the 50/500 rules&lt;br&gt;R. Frankham</td>
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<td>10.30</td>
<td>$10.02 Host virus coevolution – demography versus selection in the face of multiple stressors&lt;br&gt;L. Becks</td>
<td>$31.02 Co-evolution of life history traits in variable environments&lt;br&gt;I. I. Ratikainen</td>
<td>$34.02 Reconciling different modelling approaches in evolutionary theory&lt;br&gt;F. Débarre</td>
<td>$8.02 Genetic and fitness consequences of dispersal in a small pedigreed population&lt;br&gt;N. Chen</td>
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<td>11.00</td>
<td><strong>COFFEE &amp; EXHIBITION &amp; OUTREACH</strong>&lt;br&gt;(Art up your evolution, Outreach stage, Teatro lobby)</td>
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<td>11.30</td>
<td>$10.03 Tracking viral life history during experimental coevolution with their hosts&lt;br&gt;E. J. P. Lieveens</td>
<td>$31.03 Ageing and the fecundity/longevity trade-off in social insects: a comparative approach&lt;br&gt;J. Korb</td>
<td>$34.03 Does ecology matter in evolutionary models?&lt;br&gt;B. Ashby</td>
<td>$8.03 Complexities of inbreeding, outbreeding and inbreeding depression in a song sparrow meta-population&lt;br&gt;J. Reid</td>
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<td>11.45</td>
<td>$10.04 Rapid resource use specialisation leads to increased virulence in plant pathogenic Ralstonia solanacearum-bacterium&lt;br&gt;L. Mikonranta</td>
<td>$31.04 The effect of environmental stress on ageing in social insects&lt;br&gt;V. Rau</td>
<td>$34.04 Individual-based models improve understanding of evolutionary dynamics: examples from female multiple mating and dispersal&lt;br&gt;G. Bocedi</td>
<td>$8.04 Genetic load accumulation from the perspective of post-bottleneck populations of Galapagos Mockingbirds.&lt;br&gt;J. Viček</td>
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<td>12.00</td>
<td>$10.05 Changes in allelic frequencies of Brassica rapa under experimental evolution with selection by bumblebees&lt;br&gt;L. Frachon</td>
<td>$31.05 The cost of longevity: Transgenerational effects of parental lifespan extension under dietary restriction&lt;br&gt;E. Ivimey-Cook</td>
<td>$34.05 Dynamic invariance of evolutionary models&lt;br&gt;J. Otsuka</td>
<td>$8.05 Patterns of genetic variation across the genome in bottlenecked populations of Eurasian and Iberian lynx&lt;br&gt;J. A. Godoy</td>
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<td>$10.06 The genomics of rapid adaptation to climate change: host preference evolution increases short-term ecological resilience&lt;br&gt;J. Bridle</td>
<td>$31.06 Social context does not modulate age fitness effects in Drosophila melanogaster&lt;br&gt;Z. Sultanova</td>
<td>$34.06 Predicting evolution: combining developmental biology and quantitative genetics&lt;br&gt;L. Milocco</td>
<td>$8.06 Founder-specific inbreeding depression in an island bird population&lt;br&gt;P. Nietlisbach</td>
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<td>Fisheries-induced evolution in the wild and in the lab  M. Heino</td>
<td>Dual transcriptomics of avian malaria  E. Videvall</td>
<td>Polygenic adaptation: The adaptive architecture of a quantitative trait  J. Hermisson</td>
<td>Colonizations and host shifts cause diversification of preference and expansion of diet breadth  M. Singer</td>
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<td>Anthropogenic hybridiza- tion between red deer and sika in Kintyre results in many backcrossed individuals  S. E. McFarlane</td>
<td>Virulence-transmission relationships under competition in the spider mite Tetranychus urticae  A. Duncan</td>
<td>Proper Treatment of Haplotype Structure and LD Reduces Error in Sequence Data Analysis  S. Belohlavy</td>
<td>Habitat choice meets thermal niche specializa- tion: competition with specialists may drive suboptimal preferences in generalists  S. Jacob</td>
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<td>Evolutionary rescue through hybridization triggered by predator introduction in a Daphnia population  K. Enberg</td>
<td>Wolbachia incidence and host shift in scale insects  E. Sanaei</td>
<td>Genetic redundancy fuels polygenic adaptation in Drosophila  R. Kofler</td>
<td>Expression of phenotypic plasticity in multi-dimen- sional environments  N. Schtickzelle</td>
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<td>Contrasting body-size shifts in urban communities  T. Merckx</td>
<td>How decreased parasite diversity affects host immunity: Approaching “Old Friends” with the cavefish, Astyanax mexicanus  R. Peuß</td>
<td>Detecting the signature of epistatic selection in subdivided populations  K. Csilléry</td>
<td>Are differences in incubation behavior and niche use linked in two sympatric flycatcher species?  P.M. Sirkiä</td>
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<td>Regulatory networks link phenotypic plasticity to evolvability</td>
<td>Limits to post-reproductive fitness benefits in humans</td>
<td>Free-riding, exclusion, and congestion in a sequential teamwork dilemma</td>
<td>Genetic diversity and connectivity in wetland plant meta-populations depend on the degree of clonality</td>
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<td>Assessing genetic constraints on the evolution of plasticity in multiple stressor environments</td>
<td>Child volunteers in World War II have accelerated reproduction and higher lifetime reproductive success</td>
<td>Selection and Polymorphism at Two Loci</td>
<td>Effects of non-random mating and Haldane’s Sieve on floral polymorphisms in plant metapopulations</td>
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<td>Evolution of physiological plasticity and selection from balanced polymorphisms during rapid habitat invasions</td>
<td>The antagonistic pleiotropy riddle for populations along the slow-fast continuum</td>
<td>Modeling antimicrobial cycling, mixing, and combination therapy: Why is it so difficult to draw conclusions?</td>
<td>Fitness, life-histories, and ageing in small populations of Daphnia</td>
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<td>Plasticity in evolutionary potential under environmental variation in a population of pied flycatchers, Ficedula hypoleuca</td>
<td>Live fast, die old: Oxidative stress as a potential mediator of an unexpected life-history evolution</td>
<td>The evolution of self-incompatible mating types</td>
<td>Understanding contemporary levels of genetic diversity in populations of silver fir (Abies Alba Mill.)</td>
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<td>Impact of maternal genetic effects on the evolutionary potential of a red deer population</td>
<td>Does the life history response to dietary restriction persist with infection or injury?</td>
<td>Kin selection of function-valued traits</td>
<td>On the generality of the diploid male vortex in parasitoids with single-locus complementary sex determination</td>
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<td>Somatic mutation and cell lineage selection during vegetative growth promotes rapid adaptation in plants</td>
<td>Diet-based developmental plasticity and fitness in a detritivorous isopod (Asellus aquaticus)</td>
<td>Emergence of diverse life cycles and life histories at the origin of multicellularity</td>
<td>Genomic signatures of critically-endangered bird Chinese Crested Tern (Thalasseus bernsteini)</td>
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<td>J. Schwoch</td>
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COFFEE & EXHIBITION & OUTREACH
(Art up your evolution, Outreach stage, Teatro lobby)
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<td>14.00</td>
<td>S7.07 Anthropogenic Pb driving selection in urban adapted population of Drosophila subobscura A. Patenković</td>
<td>S23.07 The determinants of pathogen communities in wild plant populations H. Susi</td>
<td>S18.07 Selective sweep at at QTL in a randomly fluctuating environment L.-M. Chevin</td>
<td>S20.01 Animal Culture in Changing Environments L. Aplin</td>
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<td>14.15</td>
<td>S7.08 Going to the dogs? – Human-induced evolution in the grey wolf M. Pilot</td>
<td>S23.08 Population genomics of Gyrodactylus bullatarudis reveals molecular basis of adaptation to the host M. Konczal</td>
<td>S18.08 Wild wild test: Release-re-capture genomic experiment reveals within-generation polygenic adaptation in stickleback fish T. Laurentino</td>
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<td>14.30</td>
<td>S7.09 Genomics of adaptation of Penicillium fungi used for blue cheese and dry-cured meat production A. Branca</td>
<td>S23.09 Within-host pathogen diversity: how it forms and what are the fitness consequences for the host S. Sallinen</td>
<td>S18.09 The genomic basis of parallel adaptation A. M. Westram</td>
<td>S20.02 Does cultural transmission evolve because it is Lamarckian? S. Dall</td>
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<td>14.45</td>
<td>S7.10 House sparrows evolved human commensalism with the development of agriculture M. Ravinet</td>
<td>S23.10 Disease-induced diversity of a crustacean iridescent virus V. G. Faria</td>
<td>S18.10 Contemporary Atlantic salmon domestications reveal the architecture of polygenic adaptation N. J. Barson</td>
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<td>15.00</td>
<td>S7.11 Can angling-induced evolution be counteracted by releasing hatchery-reared fish? A. Vainikka</td>
<td>S23.11 Manipulated geographic mosaics: disentangling prevalence of infection and strength of selection F. Feijen</td>
<td>S18.11 Efficiency of outlier methods for detecting loci involved in a polygenic trait under divergent selection L. Bouteille</td>
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<td>15.15</td>
<td>S10.012 Rapid niche expansion in European whitefish following a eutrophication-induced species collapse A. Jacobs</td>
<td>S23.012 Fitness effects of wild Drosophila viruses M. Wallace</td>
<td>S18.012 Genomic prediction from pool-seq to understand ash dieback susceptibility in fraxinus excelsior C. Metheringham</td>
<td>S20.04 Payoff- and sex-biased social learning interact in a wild primate population E. van de Waal</td>
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| 16.00 | **S10.O13**  
Environmental integrons, drivers of microbial adaptation in an acidic extreme environment  
E. Sandoval-Quintana | **S31.O13**  
The evolution of variance control  
M. Bruijning | **S36d.01**  
Extreme differences in recombination rate between the genomes of a solitary and a social bee  
J. Jones | **S8.O13**  
Eco-Evolutionary feedbacks between genetic diversity and varying population sizes can lead to an extinction vortex  
P. Nabutanyi |
| 16.15 | **S10.O14**  
Predicting adaptive evolution in heterogeneous environments from standing genetic variation  
J. Engelstädt | **S31.O14**  
Life history evolution under cancer risk: linking cell-level strategies to organismal traits  
E. Y. Erten | **S36d.02**  
Shared ancient sex chromosomes in varanids, beaded lizards, and alligator lizards  
M. Rovatsos | **S8.O14**  
Demography affects the likelihood of genetic convergence and our ability to detect it in nature  
J. Whiting |
| 16.30 | **S10.O15**  
Beneficial mutations have greater fitness effects at higher temperatures, supporting the temperature-selection speed hypothesis  
X.-L. Chu | **S31.O15**  
Insulin-like growth factor 1 and the evolution of vertebrate life histories  
J. Lodjak | **S36d.03**  
Germline-restricted chromosomes are widespread in songbirds and contain dozens of developmental genes  
A. Suh | **S8.O15**  
High population divergence at small spatial scales – the joint role of population size and migration  
A. Nair |
| 16.45 | **S10.O16**  
Mechanisms of rapid adaptive responses to arid environments in long-lived organisms  
O. Razgour | **S31.O16**  
Maturation probability and condition correlate genetically for a major-effect locus (vgll3) in Atlantic salmon  
P. V. Debes | **S36d.04**  
Rearranged and relocated: chromosome-level assemblies and comparative genomics of two pelagic freshwater herring species  
L. Milec | **S8.O16**  
Mechanisms and consequences of balancing selection in a model cyclic parthenogen living in ephemeral habitats  
A. Bergland |
| 17.00 | **S10.O17**  
Predicting adaptive dynamics in different habitats using ancestral trait values and demographic events  
V. Ravi Kumar | **S31.O17**  
Adult male size in a sexually dimorphic spider depends on genetic factors and food availability  
S. Quiñones-Lebrón | **S36d.05**  
Epigenetic modification associated with ZEB2 provides a key evidence for the human evolution  
J.-E. Lee | **S8.O17**  
Bypassing summary statistics: a deep learning approach to infer population size history  
T. Sanchez |
| 17.20 |  |  |  |  |
| 19.20 |  |  |  |  |

**POSTER SESSION I**
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<td>16.00</td>
<td>S7.013 Evolution in salmon life-history induced by direct and indirect effects of fishing Y. Czorlich</td>
<td>S36e.01 Exploring patterns of additive genetic, mutation- and environmental (co)variance across traits J. G. King</td>
<td>S36b.01 Global diversification patterns of crangonid shrimps (Decapoda, Caridea, Crangonidae) K. H. Chu</td>
<td>S20.05 Cultural Transmission of Mating Preferences in Fruit Flies S. Nöbel</td>
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<td>16.15</td>
<td>S7.014 Harvest-associated selection and population density effects in fisheries-induced evolution A. Crespel</td>
<td>S36e.02 Dissecting phenotypic integration and connecting micro- and macro-evolutionary time scales C. Fruciano</td>
<td>S36b.02 Evo-devo approach to study asexual development and whole body regeneration: insights from tunicates S. Tiozzo</td>
<td>S20.06 A new perspective of social population networks in a reproductive context M. Plaza</td>
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<td>16.30</td>
<td>S7.015 Understanding the effect of multiple anthropogenic stressors on freshwater organisms from an evolutionary perspective M. Cuenca Cambronero</td>
<td>S36e.03 An integrated approach to understanding the evolution of flight and wing shape in heliconius butterflies L. Queste</td>
<td>S36b.03 Phylogeography of a widespread spider: admixture across geographical barriers shapes the diversification of Gasteracantha cancriformis F. C. Salgado-Roa</td>
<td>S20.07 On social transmission, individual agency, and a generalised theory of adaptive evolution P. Edelaar</td>
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<td>16.45</td>
<td>S7.016 Selection for small size affects the pace-of-life syndrome in medaka impacting the invertebrate community B. Diaz Pauli</td>
<td>S36e.04 Intraspecific variation in floral scent in the perennial herb Arabis alpina H. Petrén</td>
<td>S36b.04 Incipient hybrid speciation in young and rapidly speciating neotropical cichlid fish? M. Olave</td>
<td>S20.08 Social network structure and infectious disease transmission in group-living animals M. Silk</td>
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<td>17.00</td>
<td>S7.017 Applying the Anna Karenina principle to the bank vole gut microbiota in a disturbed environment A. Lavrinienko</td>
<td>S36e.05 Evolution of fork tails in aerial insectivorous birds M. Hasegawa</td>
<td>S36b.05 Patterns consistent with Darwin's corollary in a Ficedulaflavicycera hybrid zone C. Segami Marzal</td>
<td>S20.09 Social transmission in avian brood parasitism systems D. Campobello</td>
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The 2019 Congress of the European Society for Evolutionary Biology 19 - 24 August 2019

ESEB initiatives and practical information

KEYNOTE II Sinead Collins, Understanding evolution in life-giving slime

WEDNESDAY, AUGUST 21

LOGOMO HALL  TEATRO  GALLERIA  LOGI1

8.55

9.05

S10: RAPID ADAPT  S31: LIFE HISTORY  S34: MATH MODELS  S14: GENOME FUNCT

10.00  S10.018 Disparate signatures of rapid adaptation and genomic divergence in Nicaraguan Midas cichlid fishes A. Nater

10.15  S10.019 Using whole genome sequences of newly introduced populations reveals rapid genetic adaptation in Trinidadian guppies M. van der Zee

10.30  S10.020 Genetics and genomics of parallel evolution without gene flow Y. Yamasaki

10.45  S10.021 A tale of many flounders: the genomics of rapid adaptation in Platichthys spp. P. Momigliano

11.00  COFFEE & EXHIBITION & OUTREACH (Art up your evolution, Outreach stage, Teatro lobby)

S14.01 Differences in tartan underlie the evolution of male genital morphology between Drosophila species A. P. McGregor

S31.019 Disparity in diapause and its effects on insect movement V. Bhaumik

S31.020 Locally adapted plasticity maintains geographic variation in life history strategies in a butterfly O. Lindestad

S34.013 Extended haplodiploidy hypothesis P. Rautiala

S34.014 Evolution of the irreversible somatic differentiation Y. Gao

S34.015 Flows of information in evolution A. Pocheville

S34.016 Abstraction for dealing with the multiple realizability of evolution: the ultimate constraint of computation A. Kaznatcheev

S14: GENOME FUNCT

WEDNESDAY, AUGUST 21
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<td><strong>S33: AGING</strong></td>
<td><strong>S4: COGNITION</strong></td>
<td><strong>S35: EVOL OUTREACH</strong></td>
<td><strong>S11: QUANT TRAITS</strong></td>
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<td>10.00</td>
<td><strong>S33.01</strong> Understanding senescence and trans-generational parental age effects in a long-lived seabird S. Bouwhuis</td>
<td><strong>S4.01</strong> Evolutionary biology of expertise R. Dukas</td>
<td><strong>S35.01</strong> The public and researchers: It’s complicated P. Russo</td>
<td><strong>S11.01</strong> Inversions as large effect loci in quantitative genetics J. Kelly</td>
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<tr>
<td>10.30</td>
<td><strong>S33.02</strong> Senescence in reptiles: from mechanisms to life-history consequences T. Schwartz</td>
<td><strong>S4.02</strong> The interplay between environment, gut microbiome and host cognition G. Davidson</td>
<td><strong>S35.02</strong> Willing to promote evolutionary knowledge for everyone? Join communities! H. Dufour</td>
<td><strong>S11.02</strong> The clawprint of selection in wildlife and livestock genomes M. Bosse</td>
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<td>11.00</td>
<td><strong>COFFEE &amp; EXHIBITION &amp; OUTREACH</strong> (Art up your evolution, Outreach stage, Teatro lobby)</td>
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<td>11.30</td>
<td>S10.022 Genomic divergence of rapidly evolving populations of Italian wall lizards A. Štambuk</td>
<td>S31.022 Sex-specific effects of maturation timing on reproductive fitness in wild Atlantic salmon K. Mobley</td>
<td>S34.017 Transcriptional cross-talk varies between regulatory networks designs T. Friedlander</td>
<td>S14.03 Functional significance and evolutionary mechanisms of VMAT1:genetic variants underlie psychological diversity in humans D. Sato</td>
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<td>12.00</td>
<td>S10.024 Why does male-biased gene expression evolve so rapidly? R. Griffin</td>
<td>S31.024 Individual differences in carry-over effects on fitness: the role of personality S. M. Harris</td>
<td>S34.019 Flexible, realistic, fast evolutionary simulations with SLiM B. Haller</td>
<td>S14.05 The evolution of lifespan: from whole genomes to SNPs K. Hoedjes</td>
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<td>12.15</td>
<td>S10.025 Testing the factors promoting recurrent, convergent, and rapid adaptation in a wild insect J. Rayner</td>
<td>S31.025 Environmental drivers of phenotypic selection in a small passerine species M. Gamelon</td>
<td>S34.020 What can machine learning teach us about evolutionary ecology data? J. Morimoto</td>
<td>S14.06 Molecular diversity and developmental expression of the master regulator doublesex in the sexually dimorphic Papilio polytes R. Deshmukh</td>
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<td>12.30</td>
<td>S10.026 Identifying the evolutionary dynamics and genetics of rapid evolutionary rescue in Callosobruchus maculatus A. Rêgo</td>
<td>S31.026 Evolutionary consequences of cryptobiosis on male reproduction M. Vecchi</td>
<td>S34.021 Speciation, extinction and environmental change: from fossil data to mathematical modelling J. Toivonen</td>
<td>S14.07 Key physiological genes important for freshwater adaptation and life history evolution in sticklebacks A. Ishikawa</td>
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</table>

**LUNCH & EXHIBITION & SATELLITE EVENTS / OUTREACH**

**Satellite events**

- The European Research Council – funding opportunities for bright minds, MOVE 1 at 13:15-14:05
- How to pitch your science to non-specialist audiences, GOTO31 at 12:55-13:55
- Art-up your evolution, Outreach Stage in Teatro lobby
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</table>
| 11.30 | **S33.03** Sex-biased ageing in the invertebrate Tigriopus californicus and the role of mito-nuclear interactions  
*S. Edmands* | **S4.03** A social perspective on the microbiota-gut-brain axis: ants as a model organism  
*S. Tesio* | **S35.03** Melanogaster Catch The Fly: a citizen science project on adaptation genomics  
*J. Gonzalez* | **S11.03** The response of a population to a change in optimum  
*N. Barton* |
| 11.45 | **S33.04** Sex differences in functional and reproductive senescence in African annual killifish  
*M. Reichard* | **S4.04** Benefits of working memory depend upon forage availability for bumblebees (Bombus terrestris)  
*E. Leadbeater* | **S35.04** evALLution: can we make fundamental evolution concepts accessible to the blind community?  
*T. G. Laurentino* | **S11.04** Disentangling the roles of mutation, selection, and genetic drift, on cis- and trans- regulatory evolution  
*M. Hill* |
| 12.00 | **S33.05** How the queen manages to stay young: orchid bee queens maintain young transcriptomes throughout life  
*A. Séguret* | **S4.05** Selective social information use in the nest choice of solitary bees  
*O. Loukola* | **S35.05** Science and Community: evolutionary facts for an inclusive society  
*J. R. Torres Miranda* | **S11.05** Dissecting evolution of adaptive traits in Arabidopsis after island colonization  
*C. Neto* |
| 12.15 | **S33.06** Long live the queen: eusociality and the evolutionary theory of ageing  
*B. H. Kramer* | **S4.06** Environmental complexity and the correlated evolution of (social) behaviour and (social) cognition  
*S. A. M. Varela* | **S35.06** Evolution in action – project: How to impact society through science and art education?  
*C. Lindstedt* | **S11.06** Genomic Prediction in a wild mammal population  
*J. Slate* |
| 12.30 | **S33.07** Extreme lifespan extension in tapeworm-infected ants facilitated by increased care and upregulation of longevity genes  
*S. Foitzik* | **S4.07** Heritability and co-variation among cognitive abilities in pheasants; an animal model approach  
*E. Langley* | **S35.07** The “WOW effect” of Evolution  
*T. Adnađević* | **S11.07** Beyond large-effect loci: large-scale GWAS reveals mixed large-effect and polygenic architecture of Atlantic salmon age-at-maturity  
*M. Sinclair-Waters* |
| 12.45 | **LUNCH & EXHIBITION & SATELLITE EVENTS / OUTREACH** | **Satellite events** | **Satellite events** | **Satellite events** |

The European Research Council – funding opportunities for bright minds, MOVE 1 at 13:15-14:05  
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Art-up your evolution, Outreach Stage in Teatro lobby
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<td>Adaptation and evolution of alternative reproductive modes</td>
<td>Painting by numbers: understanding the eco-evo-devo mechanisms of petal patterning</td>
<td>Mutators drive evolution of resistance to multiple antibiotics during single-drug and combination treatment</td>
<td>Effects of random coding sequences on Escherichia coli</td>
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<td>Natural selection explains parallel evolution of locomotion bias, genetic drift variable interdependence of component traits</td>
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<td>Parallel clines in iridescence in butterfly co-mimics despite different levels of genomic divergence and selection</td>
<td>Colour vision and the origin of species: what you see is who you are?</td>
<td>Unstable antibiotic resistance</td>
<td>Colour encoded in innate immune gene? Accumulating evidence for Hamilton-Zuk ‘Good genes’ in great tits</td>
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<td>Population genomics in a case of rapid, parallel adaptation: Cape Verde Islands Arabidopsis thaliana</td>
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<td>Mutators drive evolution of resistance to multiple antibiotics during single-drug and combination treatment</td>
<td>To establish, or not to establish – testing the probability of antibiotic resistance emergence</td>
<td>Molecular and phenotypic characterization of roo elements inserted in a unique insertional cluster</td>
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<td>Effects of random coding sequences on Escherichia coli</td>
<td>Repeatable ecological dynamics govern antibiotic response of experimental microbial community</td>
<td>The contribution of novel genes to the development of novel traits</td>
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<td>Applying gene manipulation approaches for characterizing the evolution, dynamics and complexity of venom production</td>
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<td>Molecular mechanisms and evolution of a novel floral volatile biosynthesis in wild tobacco</td>
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<td>S4.O9 Widespread learned predator recognition and amphibian resilience to alien predators N. Polo-Cavia</td>
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<td>S4.O11 Cognitive ontogeny: environmental effects on brain size divergence in developing sunfish ecotypes C. Axelrod</td>
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<td><strong>S21.05</strong></td>
<td>On the evolutionary ecology of multidrug resistance in bacteria</td>
<td>Evolution of male pregnancy reveals remodelling of vertebrate adaptive immunity</td>
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<td>E. Petrou</td>
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<td>O. Roth</td>
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<td>16.30</td>
<td><strong>S13.06</strong></td>
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<td><strong>S14.015</strong></td>
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<td></td>
<td>Geographic heterogeneity in parallel evolution – three spined sticklebacks revisited</td>
<td><strong>S21.06</strong></td>
<td>Associations between sensitivity to antibiotics and non-antibiotic antibacterials in natural and clinical Escherichia coli isolates</td>
<td>Wide pleiotropic effects of melanin pathway genes on mating behaviour and life-history traits</td>
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<td>B. Fang</td>
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<td>V. Tyukmaeva</td>
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<td><strong>S13.07</strong></td>
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<td><strong>S14.016</strong></td>
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<td></td>
<td>Searching for signatures of genetic adaptation to climate in bank voles</td>
<td><strong>S21.07</strong></td>
<td>Microbiome suppresses growth and resistance evolution of Escherichia coli in a human gut microcosm</td>
<td>Evolution and function of the key digestive enzymes sucrase and maltase in vertebrates</td>
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<td>R. Folkertsma</td>
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<td>D. Mendez-Aranda</td>
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<td>17.00</td>
<td><strong>S13.08</strong></td>
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<td><strong>S14.017</strong></td>
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<td>Assessing genomic vulnerability to climate change in Canada’s northernmost freshwater fish, Arctic charr</td>
<td><strong>S21.08</strong></td>
<td>Quantifying the impact of treatment history on plasmid-mediated resistance evolution in human gut microbiota</td>
<td>Developmental mechanisms of Arctic charr (Salvelinus Alpinus) adaptive divergence</td>
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<td>K. K.S. Layton</td>
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<td>K. H. Kapralova</td>
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<td>17.15</td>
<td><strong>S13.09</strong></td>
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<td><strong>S14.018</strong></td>
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<td>Adapting to a warming world; the molecular basis of seasonal timing in a song bird</td>
<td><strong>S21.09</strong></td>
<td>Variation in collateral sensitivity phenotypes of Escherichia coli across genotypes and growth environments</td>
<td>ENHANCing the limb: from micro to macroevolution</td>
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<td>16.15</td>
<td><strong>S17.05</strong> Kirc, a new superfamily of massive DNA transposons</td>
<td><strong>S33.08</strong> Ageing in free-living great tits: multimarker evidence for age-related increase in oxidative and physiological stress</td>
<td><strong>S25.05</strong> A theoretical study of the effects of assortative mating on adaptive potential under climate change</td>
<td><strong>S22.05</strong> Interactions between metal-based and organic defences: Alternative weapons against spider mites attacking tomato plants</td>
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<td>A. A. Vogan</td>
<td>M. Těšický</td>
<td>C. Godineau</td>
<td>D. Prino Godinho</td>
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<td>16.30</td>
<td><strong>S17.06</strong> T-lex3: an accurate tool to genotype and estimate population frequencies of transposable elements</td>
<td><strong>S33.09</strong> Linking early-life environment to ageing rate: the role of prenatal thyroid hormones?</td>
<td><strong>S25.06</strong> The timing of attraction as a driver of species diversification in the fall armyworm</td>
<td><strong>S22.06</strong> Urban environments select for higher growth potential but lower herbivore resistance in Arabidopsis thaliana</td>
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<td>M. Bogaerts Márquez</td>
<td>S. Ruuskanen</td>
<td>S. Hänniger</td>
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<td>16.45</td>
<td><strong>S17.07</strong> The selfish endosymbiont Wolbachia exploits the sex determination of its host to achieve maximal transmission</td>
<td><strong>S33.010</strong> Early-life environmental quality and variability reflected in telomere lengths and lifespan in a wild mammal</td>
<td><strong>S25.07</strong> The genetics of visual preferences in a hybrid species</td>
<td><strong>S22.07</strong> Opposite Responses to Drought Induced Changes in Host Plant Quality within a Butterfly Metapopulation</td>
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<td>F. Chen</td>
<td>S.H.J. van Lieshout</td>
<td>A. E. Hausmann</td>
<td>A. Kahilainen</td>
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<td>17.00</td>
<td><strong>S17.08</strong> Dynamics of prokaryotic cell differentiation during horizontal gene transfer</td>
<td><strong>S33.011</strong> Fitness consequences of germine mutation accumulation: the hidden cost of lifespan extension?</td>
<td><strong>S25.08</strong> Factors mediating reproductive isolation between related species at contact zones</td>
<td><strong>S22.08</strong> Chemical defences in a Heliconius butterfly and its Passiflora host</td>
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<td>R. Miyazaki</td>
<td>E. Duxbury</td>
<td>A. Kirschel</td>
<td>A. Mattila</td>
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<td>17.15</td>
<td><strong>S17.09</strong> Molecular evolution of the Greenbeard Social b supergene in the fire ant Solenopsis invicta</td>
<td><strong>S33.012</strong> Using Wild Crickets to test key predictions of life-history theories of senescence</td>
<td><strong>S25.09</strong> Reinforcement and assortative mating between incipient outcrossing and selfing Clarkia species</td>
<td><strong>S22.09</strong> From monophagy to oligophagy, ecological and genetic variation affect host-associated diversification of butterfly species</td>
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<td>Q. Helleu</td>
<td>T. Tregenza</td>
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### THURSDAY, AUGUST 22

#### LOGOMO HALL

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<tr>
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<tr>
<td>8.55</td>
<td>ESEB initiatives and practical information</td>
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<td><strong>KEYNOTE III</strong> David Queller, Evolutionary conflict and molecular arms races in cooperative systems</td>
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<tr>
<td>10.00</td>
<td><strong>S13: ADAPT GEN</strong></td>
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<tr>
<td></td>
<td>S13.O10 Altitude shapes local adaptation in Heliconius butterflies</td>
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<td>G. Montejo-Kovacevich</td>
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<td>10.15</td>
<td><strong>S13: ADAPT GEN</strong></td>
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<td>S13.O11 An integrative perspective of adaptation to different altitudes in an alpine plant</td>
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<td><strong>S21: COLOUR</strong></td>
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<td>S21.O10 Evolutionary decoupling of larval and adult colour in shield bugs: comparative and experimental evidence</td>
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<td>10.30</td>
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<td>S21.O12 Bacterial adaptations – NOT what you thought</td>
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<td><strong>S21: COLOUR</strong></td>
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<td>S21.O13 Back to the future of bacterial population genomics</td>
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<td>J. Cury</td>
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<td>11.00</td>
<td><strong>COFFEE &amp; EXHIBITION &amp; OUTREACH</strong></td>
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<tr>
<td>10.00</td>
<td><strong>S26: SEX CONFLICTS</strong></td>
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<tr>
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<td>S26.O1 Sexual conflict in ecological context in a semiaquatic bug</td>
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<td>J. Perry</td>
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<td><strong>S26: SEX CONFLICTS</strong></td>
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<td>S26.O11 Red or dead: Imperfect Müllerman mimicry between burnet and red, not yellow, wood tiger moths</td>
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<td>B. Rojas</td>
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<td><strong>S26: SEX CONFLICTS</strong></td>
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<td>S26.O12 Beyond the ‘red edge’: does visual sensitivity to long wavelengths facilitate resource location in beetles?</td>
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<td>S26.O13 Iridescence as camouflage</td>
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<td>K. Kjernsmo</td>
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<td>11.00</td>
<td><strong>S3: NON-GEN INHERIT</strong></td>
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<td>S3.O1 Transgenerational inheritance of small RNAs in C. elegans</td>
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<td>I. Lev</td>
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<td><strong>S3: NON-GEN INHERIT</strong></td>
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<td>S3.O2 Inherited effects of parental environment: Multi-generation G×E and the unscripted phenotype</td>
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<td>S. Sultan</td>
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### Program Thursday, August 22

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<tr>
<th>Time</th>
<th>MOVE1</th>
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<tr>
<td>8.55</td>
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<tr>
<td>10.15</td>
<td>S6.011 Prophages increase bacterial fitness in the presence of high antibiotic concentrations C. Wendling</td>
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<td>11.00</td>
<td>COFFEE &amp; EXHIBITION &amp; OUTREACH (Art up your evolution, Outreach stage, Teatro lobby)</td>
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## Schedule

### Thursday, August 22

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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
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<tr>
<td></td>
<td>S21.O14</td>
<td>Variation in thin film structure produces diverse visual appearances in Christmas beetles (Scarabaeidae - Rutelinae)</td>
<td>L. Ospina</td>
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<td>S26.03</td>
<td>Ecology and sexual conflict drive the macroevolutionary dynamics of female-limited colour polymorphisms</td>
<td>B. Willink</td>
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<td>S3.03</td>
<td>The ecological consequences and evolutionary potential of transgenerational temperature plasticity in Mimulus</td>
<td>J. Colicchio</td>
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<td>11.45</td>
<td>S13.O15</td>
<td>Linking a mutation to survival in wild mice</td>
<td>S. Laurent</td>
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<td></td>
<td>S21.O15</td>
<td>The hidden side of wing transparency in Lepidoptera</td>
<td>C. Pinna</td>
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<td>S26.04</td>
<td>The role of alternative splicing in the evolution of sexual dimorphism</td>
<td>T. Rogers</td>
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<td>S3.04</td>
<td>The role of epigenetic mechanisms in within and between generation phenotypic plasticity in Neurospora crassa</td>
<td>I. Kronholm</td>
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<tr>
<td>12.00</td>
<td>S13.O16</td>
<td>The speciation supergene in wild Petunia: structure and evolution</td>
<td>T. Tenreira</td>
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<td>S21.O16</td>
<td>Different ways to make red flowers: Colour evolution in the New World Gesneriaceae</td>
<td>E. Ogutcen</td>
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<td>S26.05</td>
<td>Inter-population variation in morphology reflects different trajectories of sexually antagonistic coevolution in a beetle</td>
<td>C. Koshio</td>
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<td>S3.05</td>
<td>Genotype-specific integration of genetic, nongenetic and environmental cues shapes water flea development and life history</td>
<td>E. Harney</td>
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<td>12.15</td>
<td>S13.O17</td>
<td>Adaptation in the wild - a systems genetics approach using Daphnia</td>
<td>D. Becker</td>
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<td>S21.O17</td>
<td>Evolving rainbows: deriving a spectrum of phylogenetic signals in avian colour evolution</td>
<td>S. M. Drobnia</td>
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<td>S26.06</td>
<td>Dynamics of sex biased gene expression during development in a hemimetabolous insect</td>
<td>J. Djordjevic</td>
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<td>S3.06</td>
<td>DNA methylation facilitates adaptation to ocean salinity change</td>
<td>M. J. Heckwolf</td>
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<td>12.30</td>
<td>S13.O18</td>
<td>Contemporary natural selection on transcript abundance in wild brown trout</td>
<td>F. Ahmad</td>
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<td>S21.O18</td>
<td>Climate shapes near-infrared reflectance properties in birds and butterflies</td>
<td>D. Stuart-Fox</td>
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<td>S26.07</td>
<td>Toxic males to gentle courters: evolutionary reduction in sexual antagonism due to shift in life-history</td>
<td>B. Nandy</td>
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<td>S3.07</td>
<td>The role of DNA methylation in adaptation – social spiders as a case study</td>
<td>T. Bilde</td>
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**LUNCH & EXHIBITION & SATELLITE EVENTS / OUTREACH**

**Satellite events**

Art-up your evolution, Outreach Stage in Teatro lobby
<table>
<thead>
<tr>
<th>Time</th>
<th>Session 29 (ECO-EVO)</th>
<th>Session 7 (HUMAN-INDUCED)</th>
<th>Session 12 (WILD PLANT SEL)</th>
<th>Session 16 (MITO-NUCLEAR)</th>
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</table>
| 11.30 | S29.03 Rapid Change in Mammalian Eye Shape Is Explained by Activity Pattern  
J. Baker | S7.018 Fluctuating selection and enhancing diversity to overcome insecticide resistance evolution  
R. Mangan | S12.03 Benefits of using non-linear path analysis for estimating natural selection  
G. H. Bolstad | S16.03 Do mito-lineages and sex-linked mitonuclear genotypes impact respiration, metabolic performance and hybrid fitness?  
A. Pavlova |
| 11.45 | S29.04 Extinction and the temporal distribution of macroevolutionary bursts  
S. De Lisle | S7.019 The consequences of domestication to the wheat microbiome biodiversity  
E. Özkurt | S12.04 Does selection on plants defense strategies vary along a successional gradient?  
A. Kalske | S16.04 Divergent mitochondrial and nuclear OXPHOS genes are candidates for genetic incompatibilities in Ficedula Flycatchers  
A. Qvarnström |
| 12.00 | S29.05 Intraspecific variation alters ecological properties and fosters transgenerational carry-over effects as much as temperature variation  
A. Raffard | S7.020 Climate change and Green Sea Turtle sex ratio: preventing possible extinction  
J. Blechschmidt | S12.05 Measuring viability selection from prospective cohort mortality studies in wild plant populations  
J. J. Robledo-Arnuncio | S16.05 The genetics of sex-biased hybrid incompatibility in Tigriopus californicus  
E. Watson |
| 12.15 | S29.06 Density-dependent selection on exploration behaviour across multiple great tit populations  
A. Mouchet | S7.021 Expanding thermal breadth facilitates adaptation of Daphnia to raising temperature  
M. Dziuba | S12.06 Fitness consequences of hybridization between fully inbred lines from natural predominantly selfing populations  
J. Clo | S16.06 SmithRNAs, a new arena for mito-nuclear interaction and coevolution  
M. Passamonti |
| 12.30 | S29.07 Dynamic of introgression during density-dependent range expansion: European wildcats as a case study  
C. S. Quilodrán | S7.022 Invasion success of the Asian tiger mosquito in Europe: pre-adaptation, post-introduction evolution, or both?  
S. Sherpa | S12.07 Herbivory drives evolution of genetic architecture for plant defense and competition traits  
A. Uesugi | S16.07 Mito-nuclear interactions in an emerging hybrid species - Insights form a time series transcriptomic study  
E. Iwaszkiewicz |
| 12.45 | LUNCH & EXHIBITION & SATELLITE EVENTS / OUTREACH |
| 13.45 | EXCURSIONS |
| 18.00 | |
### S13: ADAPT GEN

**S13.O19** The genetic and physiological basis of local adaptation across latitudinal range in 360 Arabidopsis accessions

Y. Yarkhunova

**S13.O20** Repeated Genomic Signatures of Local Selection in Atlantic Salmon

V. Pritchard

**S13.O21** Dissecting the transcriptomic basis of phenotypic evolution in an aquatic keystone grazer

D. Frisch

**S13.O22** Genetic and morphological bases of a complex innovation – pelvic brooding in Sulawesi ricefishes

J. Schwarzer

### S2: EXP EVOL

**S2.O1** Replaying the tape of life: the experimental study of adaptive evolution in seed beetles

G. Arnqvist

**S2.O2** Experimental adaptation to juvenile malnutrition: insights from and challenges of omics

T. Kawecki

### S26: SEX CONFLICT

**S26.O8** The genetic architecture of sexually dimorphic traits: gene knock-outs and sex-specific genetic variance

W. van der Bijl

**S26.O9** Sex-specific transcriptomic responses to changes in the nutritional environment

F. Camus

**S26.O10** Male sexual trait interacts with environment in determining female fitness

A. Plesnar-Bielak

**S26.O11** Substantial sex differences in recombination in a threatened passerine with high levels of sexual conflict

A. Santure

### S15: ANCIENT DNA

**S15.O1** Modern tools for ancient Data: Quantifying evolution from paleogenomes

D. Wegmann

**S15.O2** The genetic history of the Plague: From the Stone Age to the 18th century

J. Krause

### ESEB initiatives and practical information

**KEYNOTE IV** Anna-Liisa Laine, What keeps pathogens in check in the wild?

**8.55**

**9.05**

**10.00**

**10.15**

**10.30**

**10.45**

**11.00**

**10.00**

**10.15**

**10.30**

**10.45**

**11.00**

COFFEE & EXHIBITION & OUTREACH

(Art up your evolution, Outreach stage, Teatro lobby)
### PROGRAM FRIDAY, AUGUST 23

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<tr>
<td>10.00</td>
<td>S27: SOCIAL TRAITS</td>
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<td>S27.O1 The evolutionary implications of sociality: Population structuring associated with shifts in life history and behavior S. Shultz</td>
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<td>S1: TRANS GEN PLAST</td>
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<td>S1.O1 Stress responses within and across generations: From epigenetic regulation to selection in the wild M. Saastamoinen</td>
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<td>S19: GENO-PHENO</td>
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<td>S19.O1 Colour evolution in birds and butterflies: From macro to micro and back again N. Nadeau</td>
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<td>S24: MICROBIAL STRESS</td>
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<td>S24.O1 Bacterial capsules as key referees in adaptation O. Rendueles</td>
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<td>10.30</td>
<td>S27.O2 Epistemology and non-discrimination: Inclusive fitness still on top A. Grafen</td>
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<td>S1.O2 Insect immune memory, how does it work and why should we care? S. Barribeau</td>
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<td>S19.O2 A phylogenetic framework for the detection of trait-dependent shifts in patterns of sequence evolution I. Mayrose</td>
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<td>S24.O2 Phage-bacteria coevolution in the rhizosphere: Consequences for microbiome functioning and plant disease outbreaks V.-P. Friman</td>
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<td><strong>S13: ADAPT GEN</strong></td>
<td><strong>S2: EXP EVOL</strong></td>
<td><strong>S26: SEX CONFLICT</strong></td>
<td><strong>S15: ANCIENT DNA</strong></td>
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<td>Extreme morphological and genomic divergence underlies deep-water adaptation in Arctic char (Salvelinus alpinus) morphs T. Kess</td>
<td>Larval resource competition alters capability of adult reproductive interference W. Mukaimine</td>
<td>Sexual conflict in the light of Caenorhabditis nematodes J. Palka</td>
<td>6,500-year-old Salmonella enterica genomes link human-host adaptation to animal domestication A. Herbig</td>
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<td>Exploring the joint effects of global and local selection on the emergence of reproductive barriers G. Bisschop</td>
<td>Microevolutionary genomic signatures of sexual selection R. R. Snook</td>
<td>Sex-specific adaptation to a high temperature in Drosophila S.-K. Hsu</td>
<td>2,000-year-old pathogen genomes reconstructed from mummies provide insights into the health status of ancient Egyptians J. Neukamm</td>
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<td>On (small) step at a time: Measuring adaptive potential of yeast populations under different stresses I. Fragata</td>
<td>Consequences of adaptation to juvenile malnutrition on adult metabolism C. Dupuis</td>
<td>Uncovering the role of sexually antagonistic selection on sex differences in immunity in Drosophila melanogaster S. Sharda</td>
<td>Von Linné to today: -omics-based investigations of fungal adaptations to extreme environments with herbarium specimens B. H. Conlon</td>
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<td>Satellite events</td>
<td>Meet the editors – a Royal Society Publishing workshop, MOVE 1 at 13:00-13:50</td>
<td>SciSparks, how to organise speed meetings in high-schools, Outreach stage in Teatro lobby at 12:45-13:55</td>
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### PROGRAM FRIDAY, AUGUST 23

#### MOVE1

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<td>11.30</td>
<td>S27.03</td>
<td>The evolution of mechanisms to divide labour</td>
<td>G. Cooper</td>
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<tr>
<td></td>
<td>S1.03</td>
<td>Does maternal behavioural plasticity facilitate the evolution of viviparity?</td>
<td>A. Pettersen</td>
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<tr>
<td></td>
<td>S19.03</td>
<td>Gene expression evolution in Lake Tanganyika cichlid fishes: Novel insights through data integration</td>
<td>A. El Taher</td>
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<td>S24.03</td>
<td>Antibiotic stresses modify the evolution of Pseudomonas aeruginosa phage resistance</td>
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<td>Molecular signatures of kin selection: Are caste-associated genes nearly neutral?</td>
<td>G. Thompson</td>
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<td></td>
<td>S1.04</td>
<td>Paternal contribution to transgenerational plasticity of the freshwater snail Physa acuta in response to predation</td>
<td>J. Tariel</td>
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<tr>
<td></td>
<td>S19.04</td>
<td>Differential gene expression underlying caste- and sex-specific gonad development in the honey bee (Apis mellifera)</td>
<td>D. Cavalcante Lago</td>
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<td>C. Lindstedt</td>
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<td>Adaptive significance of Anticipatory Maternal Effects in Drosophila melanogaster</td>
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#### MOVE2

#### LOGI2

#### GOTO33

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#### LUNCH & EXHIBITION & SATELLITE EVENTS / OUTREACH

**Satellite events**

Meet the editors – a Royal Society Publishing workshop, MOVE 1 at 13:00-13:50

SciSparks, how to organise speed meetings in high-schools, Outreach stage in Teatro lobby at 12:45-13:55
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<td>Interplay of microbiome and transcriptome shapes fitness in response to environmental change</td>
<td>Experimentally altered sex ratios and the evolution of sex-specific life histories</td>
<td>Sex-limited experimental evolution on a simultaneous hermaphroditic flatworm leads to differential responses of sex allocation</td>
<td>The demographic history of woolly rhinoceroses</td>
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<td>Identification of chromosome subpopulations by recombination differences</td>
<td>Evolution of reproductive efficiency in Caenorhabditis elegans under introduced obligatory outcrossing</td>
<td>Intersexual conflict over seed size is stronger in more outcrossed populations of a mixed-mating plant</td>
<td>Discovering the Legacy of Atlantic cod exploitation using ancient DNA</td>
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<td>Understanding sex differences in crossing-over patterns</td>
<td>Parental care relaxes selection and increases genetic variation</td>
<td>Coevolution of female fidelity and male help under interactions between intra- and inter-locus sexual conflict</td>
<td>The aboriginal heritage project and the modern human colonization of Australia</td>
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<td>Structural variants in a haplotype-resolved hybrid rabbit genome</td>
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<td>Sexual conflict and the diversity of warning patterns in Heliconius butterflies</td>
<td>The population dynamics of eastern Siberia revealed by Lake Baikal region</td>
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<td>Positive selection on sociobiological traits in invasive fire ants</td>
<td>The Genomics of Selfing in Maize (Zea mays ssp. mays): Catching Purgation in the Act</td>
<td>Sexually antagonistic coevolution between the sex chromosomes of Drosophila melanogaster</td>
<td>Genome-wide ancient-DNA investigation characterizes a genetic contact point in the Eneolithic southwestern Russia</td>
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<td>Genomic architecture underlying the evolution of a novel form of social organisation</td>
<td>Optimizing the power to identify the genetic basis of complex traits with E&amp;R studies</td>
<td>Sexually-antagonistic selection on dispersal in a cooperatively-breeding bird</td>
<td>Genes and language in the prehistory of Uralic-speaking peoples</td>
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**COFFEE & EXHIBITION & OUTREACH**
(Art up your evolution, Outreach stage, Teatro lobby)
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<td>Helping Results in Indirect Fitness Gains in Cooperative Birds</td>
<td>Evolutionary insights into transgenerational effects of pesticides</td>
<td>The evolutionary history of Alba, a trans-specific Alternative life history strategy</td>
<td>Long lasting infections select for poorly transmitted bacterial variants</td>
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<td>MOVE2</td>
<td>The design of the social hierarchy in spotted hyenas</td>
<td>Longer life span is associated with elevated immune activity in a seasonally polyphenic butterfly</td>
<td>Evolution of photoperiodic flowering and the VRN2/-CO9 genes in temperate Pooidae grasses</td>
<td>Lysed bacterial cells inhibit population growth in multiple bacterial species</td>
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<td>LOGI2</td>
<td>Social organization in ungulates: revisiting Jarman’s hypotheses</td>
<td>Trans-generational effects of prenatal thyroid hormones in a wild bird species</td>
<td>The genetic underpinnings of bird beak shape morphological evolution on a macroevolutionary scale</td>
<td>Artificial selection for cooperative degradation of toxins in small bacterial communities</td>
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<td>GOTO33</td>
<td>The fitness benefits of living with kin in a long-lived, social mammal</td>
<td>The effect of early-life stress on DNA methylation and exploratory behaviour in wild great tits</td>
<td>Many options, few solutions: over 60 million years snakes converged on few optimal venom formulations</td>
<td>The evolution of mass suicide in bacterial warfare</td>
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<td>Towards richer game-theoretical models: How does uncertainty about the social environment influence reproductive skew?</td>
<td>Symbiont-mediated maternal effects on pathogen resistance in the pea aphid, Acyrthosiphon pisum</td>
<td>A codon model for associating phenotypic traits with altered selective patterns of sequence evolution</td>
<td>Positive linkage between public goods suggests that generalist producers prevail in natural Pseudomonas communities</td>
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<td>Human behaviour in economic games/social-dilemmas: designed to benefit the group, or the actor?</td>
<td>Role of epigenetic mechanisms during evolutionary adaptation to chronic malnutrition</td>
<td>Phylogenetic comparative approaches to uncover the genomic basis of species’ phenotypic differences</td>
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<th>S36d: GENOME EVOL</th>
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<tr>
<td>16.00</td>
<td>S27.013 A trait-based approach to map behaviour across species M. E. Herberstein</td>
<td>S36b.06 Admixture among North American Canids: coyotes, wolves and the beasts between A. Carmagnini</td>
<td>S36d.06 Polyploidy and floral evolution in a highly variable, coevolving plant species K. Gross</td>
<td>S36c.01 Herbivores and plant defences affect selection on plant reproductive traits more strongly than pollinators J. Santangelo</td>
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<tr>
<td>16.15</td>
<td>S27.014 Bellicose bias: how sex differences in dispersal influence intrasexual aggression E. Bath</td>
<td>S36b.07 Enriching conserved genomic elements to resolve relationships among sawflies W. Saskia</td>
<td>S36d.07 Mutation-rate plasticity and the germline of unicellular organisms D. Aanen</td>
<td>S36c.02 Evidence for a chemical arms race: Lessons from a chemical mimicry system of cuckoo wasps T. Schmitt</td>
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<td>16.30</td>
<td>S27.015 The Strategic Reference Gene: an organismal theory of inclusive fitness L. Fromhage</td>
<td>S36b.08 ddRAD sequencing reveals the evolutionary history of the snail Charpentieria itala in the Southern Alps J. Xu</td>
<td>S36d.08 Genomic introgression through newt hybrid zones – evidence from replicated transects P. Zieliński</td>
<td>S36c.03 Mutualism mediates infection risk by an antagonist in experimental populations J. Eck</td>
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<td>16.45</td>
<td>S27.016 Genotype-by-environment interactions on sociability in three-spined sticklebacks N. Pilakouta</td>
<td>S36b.09 Environmental variables shaping the distribution and hybridization in Heliconius butterflies N. Rueda</td>
<td>S36d.09 The role of chromosomal inversions in the speciation history of two Drosophila virilis group species N. Poikela</td>
<td>S36c.04 Fitness trade-offs associated with host resistance in a natural insect host-ectoparasite symbiosis M. Polak</td>
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<td>17.00</td>
<td>S27.017 Ecological and social constraints promote social evolution in the clown anemonefish R. Branconi</td>
<td>S36b.010 Phylogenomics of the Hyalella (Amphipoda: Crustacea) species-flock in Lake Titicaca, High Andes F. Zapelloni</td>
<td>S36d.010 Exposure to environmental radionuclides associates with altered metabolic and immunity pathways in a wild rodent J. Kesäniemi</td>
<td>S36c.05 High conspecific density reduces hoarding success and affects sex-specific spatial distribution among wintering pygmy owls E. Koivisto</td>
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**POSTER SESSION II**
### ESEB initiatives and practical information

**KEYNOTE V** Rasmus Nielsen, Human adaptation in time and space

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<td>10.15</td>
<td>S27.O19 Siderophore investment strategies in Pseudomonas aeruginosa</td>
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<td>10.30</td>
<td>S27.O20 The social control of virulence and the mystery of defective viruses</td>
<td>S30.O2 Eco-evolutionary feedbacks between floral traits and pollinator behaviour in deceptive pollination interactions</td>
<td>S9.O2 The fungal genus Aspergillus as a model to study microbial domestication</td>
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<td>10.45</td>
<td>S27.O21 Evolutionary Forces Behind the Diversification of Public Goods in Bacteria</td>
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### SATURDAY, AUGUST 24

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<tr>
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<td>M. Rendón-Anaya</td>
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<td>Hitch-hiking laterally-acquired genes contribute to delayed adaptation</td>
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<td>Evidence that viruses, particularly SIV, drove genetic adaptation in natural populations of eastern chimpanzees</td>
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<td>The role of sRNA dominance modifiers in transitions to selfing in Capsella</td>
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<td>Environmentally dependent rewiring of epistatic networks and their contributions to quantitative trait plasticity</td>
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<td>Reinforcement learning leads to bounded rationality in a public goods game</td>
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**LUNCH & EXHIBITION**

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**ESEB members meeting**

**Incoming president’s address** Ophelie Ronce, Integrating niche evolution with life history theory can help us better understand the consequences of climate change

**Leg stretching break**

**JMS award winner 2019** Karl Grieshop, Sexual conflict and the maintenance of genetic variance in fitness

**Closing ceremony**

**Congress dinner at Muuminworld**
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4. Cognitive evolution and environment

S4.P1
Do developmental changes in fitness trade-offs predict mechanosensory cues for escape-hatching decisions?
Chloé Fouilloux

S4.P3
Predator identification from salivary DNA left on artificial prey
Daniela Rößler

S4.P4
Ecology of cognitive evolution in Heliconini butterflies
Fletcher Young

S4.P5
The sensory basis of distance estimation in a coral reef fish
Cecilia Karlsson

S4.P6
Visual specialisation and expansion of Heliconius mushroom bodies
Stephen Montgomery

S4.P7
Brain size affects responsiveness in mating behavior to variation in predation pressure and sex-ratio
Alberto Corral-Lopez

S4.P8
Proteomic profiling of cerebrospinal fluid in cognitively advanced birds: comparative approach
Eleni Voukali

S4.P9
Evolution of emotions and learning – a neural network model
Magdalena Kozielska

S4.P10
Artificial selection for schooling behaviour decreases individual learning ability in fish
Regina Vega-Trejo

S4.P11
The evolution of foraging innovation following colonisation of a less variable environment
Gábor Herczeg

S4.P12
Non-nestmate templates improve nestmate recognition
Volker Nehring

S4.P14
Effects of mating on female immune defence in a fruit fly
Keiko Oku

S4.P15
Head measures as promising indices of sensory capacity: a study on geometrid moths
Juhan Javoš

S4.P16
Causes and consequences of individual variation in cognitive ability
Krista van den Heuvel

S4.P17
Decision-making in wild great tits, with real world consequences
Shana Caro

S4.P18
Norm followers, cheaters and costly signallers in a sport charity campaign
Judit Mokos

6. Eco-evolutionary approach to the antimicrobial resistance problem

S6.P1
Exploring the role of bacteria and phage genetic diversity for CRISPR-phage coevolution
Jack Common

S6.P2
Evolution of antibiotic resistance investigated by single cell genomics
Manu Tamminen

S6.P3
Ecology and evolution of plasmid-mediated antimicrobial resistance (pAMR) transfer in the chicken microbiome
Sarah Duxbury

S6.P4
Biotic stress response in Fagaceae: Focus on antimicrobial peptides
Tetyana Nosenko

S6.P5
Fight AMR evolution: predictive phage cocktails, plasmid-dependent plasmids and plasmids that re-sensitize bacteria to antibiotics
Matti Jalasvuori

S6.P6
Antibiotic resistance plasmids spread at diverse rates through recipient populations, in the absence of selection
Fabienne Benz

S6.P7
Evolutionary instability of collateral susceptibility networks in clinical Escherichia coli strains
Vidar Sørum

S6.P8
Fungal antimicrobial resistance towards termite mound defences
Nils Peereboom

S6.P9
Resistance management in a hospital setting: limited impact of a single drug intervention
Clare Kinnear

7. Human-induced evolution

S7.P1
Breeding in an agricultural land: effects on evolutionary potential of a wild bird population
Dany Garant
S7.P2  Toads respond to anthropogenic change by adjusting their chemical defence  
Bálint Üveges

S7.P3  Cat behavior: an evolutionary perspective  
Milla Salonen

S7.P4  Behavior and personality differences between cat breeds  
Salla Mikkola

S7.P5  Is temperature-induced sterility important for predicting species’ responses to climate change?  
Steven Parratt

S7.P6  Intra-species diversification using “elite plants” reduces herbivory and increases resilience  
Tuuli-Marjaana Koski

S7.P7  Genomic consequences of eutrophication induced speciation reversal in Alpine whitefish  
Philine Feulner

S7.P8  Mining herbaria and roaming the forests: Land-use and climate change affect plant phenology  
Franziska Merle Willems

S7.P9  Roles of acetylcholinesterase genes in organophosphate and carbamate resistance in Leptinotarsa decemlineata  
Aigi Margus

S7.P10  Population genomic differentiation of the Asian long-horned beetle (Anoplophora glabripennis)  
Iris Häußermann

S7.P11  Population genomics of the invasive Argentine ant  
Ida Holmberg

S7.P12  Evolution of phenotypic variation of an invasive lizard following experimental introduction on small islands  
Amelie Fargevieille

S7.P13  The ecological and genetic impact of interactions between domesticated and wild Atlantic salmon  
Joshka Kaufmann

S7.P14  For better or for worse: How city life can alter the gut microbiome of species  
Bethan Littleford-Colquhoun

S7.P15  Coping with change – how can chemical communication systems overcome disruptions?  
Emily Burdfield-Steel

S7.P16  Winners and losers of the Anthropocene: evolutionary and ecological factors predict species invasion and extinction  
Jacintha Ellers

S7.P17  Size-dependent harvesting modified the trophic niche of medaka Oryzias latipes in a mesocosm experiment  
Charlotte Evangelista

S7.P18  Impact of host plant range on the evolution of insecticide resistance, and vice-versa, in insects  
Kristina Karlsson Green

8. Genetics of small populations

S8.P1  Whole-genome sequencing helps unravel the evolutionary and demographic history of an endangered primate  
Catalina Gonda

S8.P2  Clonal architecture in the endangered populations of the shrub birch Betula humilis Schrk  
Agnieszka Bona

S8.P3  Assessing the genomic diversity and signatures of selection in Arabian Peninsula and African dromedary camels  
Hussain Bahbahani

S8.P4  Is there a goose on the loose? investigating introgression into the Swedish Lesser White-fronted Goose  
David Diez-del-Molino

S8.P5  Genetic Structure of Aedes albopictus from Asia  
Jiyeong Shin

S8.P6  Capturing genetic variation in natural and planted stands of Picea abies using probes and WGS  
Helena Eklöf

S8.P7  Identification of the homogametic sex chromosome  
Charles Christian Riis Hansen

S8.P8  Non-parallel evolution of pelvic reduction in nine-spine sticklebacks  
Petri Kemppainen

S8.P9  Genetic analyses of archaeological and historical barley grains  
Mia Lempiäinen-Avci

S8.P10  Genetic consequences of geographical isolation: a case study of Betula nana in Poland  
Katarzyna Jadwiszczak

S8.P11  Habitat change leads to shifting allopatric boundaries in coastal and pelagic island seabirds  
Robin Cristofari

S8.P12  Selection efficiency in social and solitary Hymenoptera  
Arthur Weyna

S8.P13  Genetic drift during a biological invasion  
Eric J. Petit
S8.P14 Causes and consequences of TLR variation in a bottle-necked population
Charli Davies

S8.P15 Revisiting the role of inversions in maintaining genomic differentiation after secondary contact
Marina Rafajlović

S8.P16 Fitness consequences of dispersal in a house sparrow metapopulation
Dilan Saatoglu

S8.P17 Investigating adaptation in Swedish sand lizards
Mette Lillie

10. Rapid Evolutionary Adaptation: Potential and Constraints

S10.P1 Recipe for a rapid radiation: population divergence and repeated behavioral isolation through parallel genetic mechanisms
Thomas Blankers

S10.P2 Rapid adaptation of stress related traits in Drosophila melanogaster to seasonal changing environment
Banu Sebnem Onder

S10.P3 Understanding rapid evolution of insecticide resistance using genomic data from 100-year old pest moths
Angela McGaughran

S10.P4 Interspecific competition as a driver of ecological divergence in a songbirds secondary contact zone
Camille Sottas

S10.P5 Interaction between sex and gene flow modulates speed of adaptation during range expansions
Felix Moerman

S10.P6 Ecological opportunity promotes diversifying selection and facilitates rapid phenotypic divergence in Icelandic Arctic charr
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Lucie Bergeron

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Iva Sabolić

S35.P2 A competition in evolution
Barbora Trubenova

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Bojan Kenig

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Christine Dillmann

S35.P6 Power of hands-on experience – DIY Biology and Bio-hacklabs in science outreach
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Kinya Nishimura

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S36e.P9 The chewing machine - evolution of mouth morphology in Drosophila larvae
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S36e.P10 The evolutionary trajectory of consistency in behaviour- al traits across ontogeny in fast-slow life histories
Will Sowersby

S36e.P11 Fast Adaptive Plastic Responses to Diurnal Temperature Variation in an Arctic Specialist Arthropod
Natasja Krog Noer

S36e.P12 Predicting ecological responses to global warming in Iris pumila: an open-topped chamber experiment
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S36e.P13 Assessing consequences of environmental stress on wild rodent gut health by transcriptomics, microbiomics and histology
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Coline Marciau

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Chiara De Pasquale

S36e.P16 Decomposing phenotypic skew into genetic and environmental components reduces the predicted response to strong selection
Jarrod Hadfield

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Marian Schubert

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Dragana Cvetković

S36e.P19 The scent of divergence: chemical communication mediates reproductive isolation of two wood tiger moth populations
Cristina Ottocento

S36e.P21 Colour distribution in hummingbird communities results from the interplay between selection for camouflage and communication
Hugo Gruson

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Emi Hasegawa
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Ramakrishnan Vasudeva

S1.P2
Trans-generational plasticity and bet-hedging: A framework and a meta-analysis on insect diapause reaction norms
Jens Joschinski

S1.P3
Trans-generational effects of commensal microbiota on pupal production and body weight of a polyphagous fly
Binh Nguyen

S1.P4
Influence of environmental heterogeneity on the evolution of phenotypic plasticity and bet-hedging
Zuzana Sekajova

S1.P5
Epigenetic reprogramming during gametogenesis and embryogenesis of threespine stickleback: windows for adaptation to climate change?
Lisa Shama

S1.P6
Effects of immune priming on honeybee pollination
Matti Leponiemi

S1.P7
Prenatal programming of mitochondrial function: a potential mediator of transgenerational plasticity in animals?
Antoine Stier

S1.P8
Parental age effects on offspring telomere length in a natural avian population
Hannah Dugdale

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Trans-generational effects of early developmental stress on morphology and reproductive performance in captive zebra finches
Yifan Pei

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Maternal effects are the predominant source of intraspecific variation in spider foraging traits
Jorge Henriques

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Adaptation to climatic differences and the role of avian yolk thyroid hormones
Martje Birker

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Thermal sensitivity and heat hardening capacity of Drosophila melanogaster vary during ontogeny
Neda Nasiri Moghadam

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Phenotypic plasticity within and across generations in a polyphagous moth
Axel Rösvik

2. Evolution in real time: experimental evolution approaches

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Thomas Richards

S2.P2
Evolvability of orthologous genes (effect of global suppressors)
Hind Abdalaal

S2.P3
The Evolution of Aggression in Response to Sexual Selection in male and female Drosophila melanogaster
Danielle Edmunds

S2.P4
Does sex-specific selection change mating behaviour in a hermaphrodite?
Aivars Cirulis

S2.P5
Rapid evolution of reproductive morphology and fitness in a model pest insect
Rebecca Lewis

S2.P6
Female-limited X chromosome evolution and its effect on sperm competitiveness
Yesbol Manat

S2.P7
Non-consumptive effects drive rapid evolution in a prey population
Chao Zhang

S2.P9
Experimental evolution of biological control agents
Sara Magalhães

S2.P10
Sexual selection favoured higher offspring production via evolution of both male and female traits
Daisuke Kyogoku

S2.P11
Role of phenotypic plasticity for evolutionary adaptation: Experimental approaches using Tribolium castaneum and Bacillus thuringiensis
Ana Sofia Lindeza

S2.P12
Experimental adaptation to malnutrition reveals trade-off in extraction of protein versus sugar from diet
Fanny Cavigliasso

S2.P13
Sexually-selected male weapon causes gender load and increases the risk of extinction
Jacek Radwan

S2.P14
Experimental evolution for collagen invasion in cancer cell lines
Louise Johnson
S2.P15 Combined effects of toxins on non-target dung breeding flies (Diptera: Sepsidae)  
Natalia Gourgoulianni

S2.P16 No evidence found for sexual conflict over cuticular hydrocarbons in female-limited X chromosome evolution experiment  
Katrine K. Lund-Hansen

S2.P17 Evolutionary ecology of multiple-interaction networks in bacterial communities  
Marie Vasse

S2.P19 Examining the selective potential of artificial light at night in Drosophila melanogaster  
Lucy McClay

S2.P20 Can we delimit individuals in species with blur concept of individuality?  
Sundy Maurice

3. Exploring the role of nongenetic inheritance in evolution

S3.P1 More than methylation: does pleiotropy drive the complex pattern of evolution of dnmt1?  
Patricia Moore

S3.P2 Sex-specific social learning in juvenile zebra finches  
Boglárka Morvai

S3.P4 Eco-cultural range expansion of modern humans in Paleolithic  
Joe Wakano

S3.P5 Indirect genetic effects genetic correlation contribute to the total heritable variance in parental care  
Julia Schroeder

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