

University of Groningen

Winter moth adaptation to climate change

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ESEB²⁰¹⁹ Turku • Finland

PROGRAMME

The 2019 Congress of the European
Society for Evolutionary Biology
19 - 24 August 2019



#ESEB2019





3rd Floor Childcare/nursing, 2nd floor quiet/speaker rooms

Logomo-Hall

Cloakroom

Poster session and the exhibition

Logi1 Logi2

Goto33

Goto32

Goto31

Goto30

Teatro

Galleria

Outreach-stage

Entrance

Railwaytracks

Move1

Move2

LOGOMO MAP

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WELCOME

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 defunct 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 "backstage" 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/counter-intuitive 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 it 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).

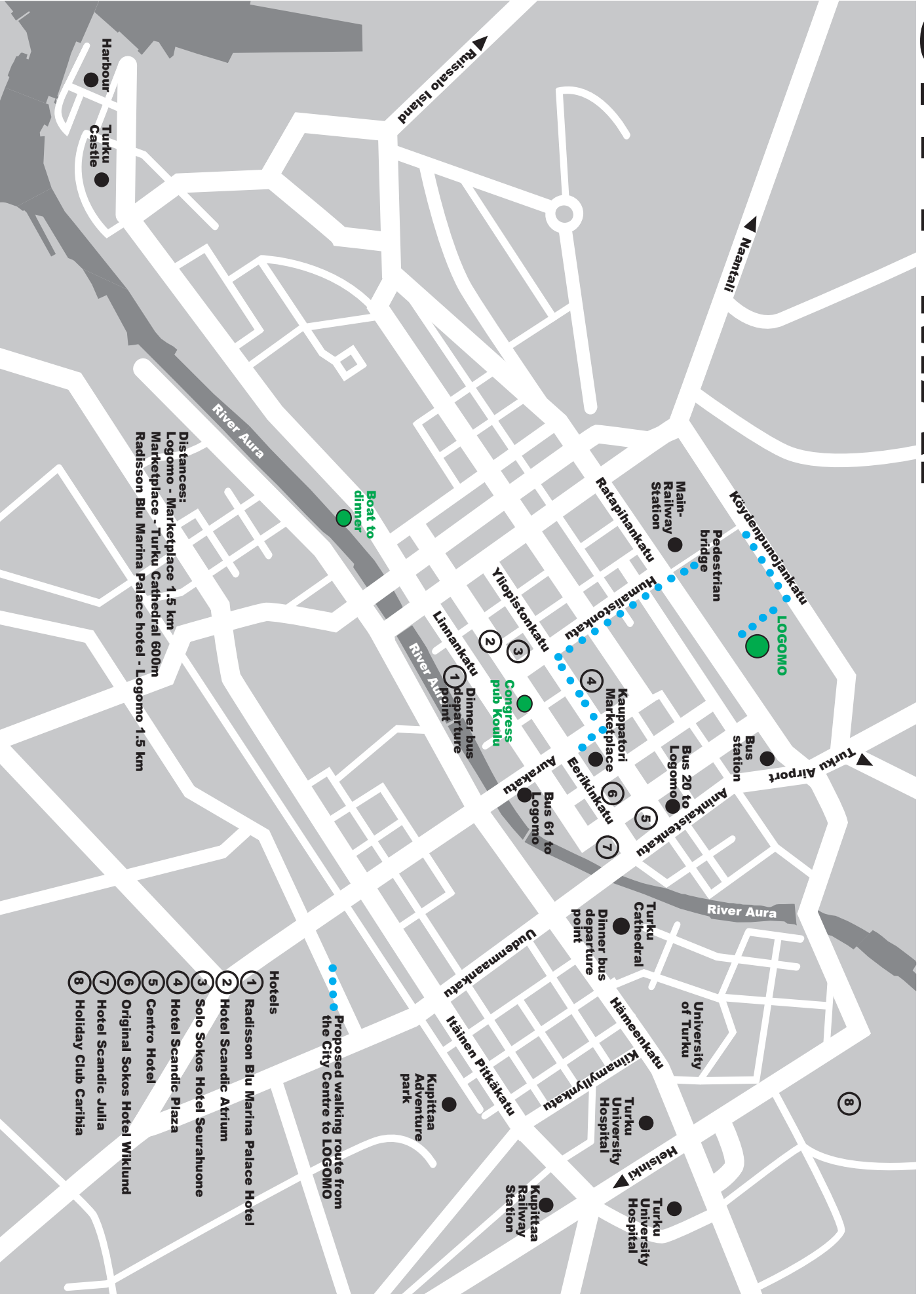
Workforce Window Ltd follow the General Data Protection Regulations and are registered with the Information Commissioners Office. The company has no other links with ESEB.

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



PLENARY SPEAKERS



PAT MONAGHAN

(Glasgow)

Title: Bad beginnings and untimely ends: environments, telomeres and life history variation

Tuesday, August 20

09.00-09.45 Room: LOGOMO HALL

Pat Monaghan is an evolutionary ecologist, based at the University of Glasgow, where she holds the Regius Chair in Zoology. She did her PhD at Durham University on seabird ecology, followed by work on the interactions between seabirds and fisheries management. She then began research on the effect of early life conditions in shaping individual life histories, involving studies at many different biological levels from physiology and molecular biology to ecology and behavioural biology. Her work is mainly on birds, with related work in other taxa. A current major focus is on telomere dynamics, and the extent to which this system of genome protection influences life history evolution and ageing patterns.



SINEAD COLLINS

(Edinburgh)

Title: Understanding evolution in life-giving slime

Wednesday, August 21

09.05-09.50 Room: LOGOMO HALL

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.



DAVID QUELLER

(Washington)

Title: Evolutionary conflict and molecular arms races in cooperative systems

Thursday, August 22

09.05-09.50 Room: LOGOMO HALL

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

(University of Zurich, Helsinki University)

Title: What keeps pathogens in check in the wild?

Friday, August 23

09.05-09.50 Room: LOGOMO HALL

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



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.

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 food is 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!



SATELLITE EVENTS

PEER COMMUNITY IN (PCI) - PEER COMMUNITY IN...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 (eg 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-funders of PCI – and many researchers already involved as editors @PCI Evol Biol. See also <https://youtu.be/4PZhpnc8ww0>, @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 Droseau 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 Drobnik)

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: Dalia 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 anti-microbial 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

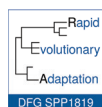
Invited: Delphine Sicard, John Gibbons

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. Opedal, Rocío Pérez-Barrales

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 Teotónio

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 GEs)

Organisers: Robert Kofler, Kirsten A. Senti

Invited: Catherine Montchamp-Moreau, Arturo Mari-Ordóñez

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

MOLECULAR ECOLOGY

S19. Gene-phenotype associations across evolutionary scales (Geno-pheno)

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 Whiteman

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 Vasse, Antoine Frenoy
Invited: Olaya Rendueles, Ville-Petri Friman

S25. Assortative mating for quantitative traits: mechanisms, estimation and evolutionary consequences (Assort mating)

Organisers: Niels Dingemans, 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 Vallejo-Marin, Avery Russell
Invited: Aimee Dunlap, Allan Ellis

S31. Life history evolution: bridging theory and data (Life history)

Organisers: Piret Avila, Mauricio González-Forero
Invited: Alexei Maklakov, Irja Ida Ratikainen

S32. Niche width evolution and its (mal)adaptive significance (Niche width)

Organisers: Maud Charlery 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. Drobniak
Invited: Pedro Russo, Héloïse Dufour

36a. Sexual selection and reproductive strategies (Sex select & mating)

Organisers: Natalie Pilakouta, Murielle Ålund, Colin Olito

36b. Phylogeography, biogeography, speciation, systematics (Phylogeog & syst)

Organisers: Bjarki Eldon, Niklas Wahlberg

S36c. Species interactions (Spp interact)

Organisers: Alexandre Figueiredo, Jos Kramer, Elisa Granato

36d. Genome evolution (Genome evol)

Organisers: Alexander Nater, Wen-Juan Ma

36e. Phenotypic evolution (Phenotypic evol)

Organizer: Dany Garant

AT A GLANCE

PROGRAMME

MONDAY AUGUST 19

15.00 18.00	Registration
18.00 21.00	Welcome reception

TUESDAY AUGUST 20

7.30	Registration
8.30	Opening of conference and practical information
9.00 9.45	Keynote I Pat Monaghan , Bad beginnings and untimely ends: environments, telomeres and life history variation
10.00	SYMPOSIUM S10: Rapid Adapt, S31: Life History, S34: Math Models, S8: Small pop gen, S7: Human-induced, S23: Parasite com dyn, S18: Polygen arch, S32: Niche width
11.00	Coffee & Exhibition & Outreach
11.30	SYMPOSIUM S10: Rapid Adapt, S31: Life History, S34: Math Models, S8: Small pop gen, S7: Human-induced, S23: Parasite com dyn, S18: Polygen arch, S32: Niche width
12.30	Lunch & Exhibition & Satellite events/outreach
14.00	SYMPOSIUM S10: Rapid Adapt, S31: Life History, S34: Math Models, S8: Small pop gen, S7: Human-induced, S23: Parasite com dyn, S18: Polygen arch, S20: Social trans
15.30	Coffee & Exhibition & Outreach
16.00 17.15	SYMPOSIUM S10: Rapid Adapt, S31: Life History, S36d: Genome evol, S8: Small pop gen, S7: Human-induced, S36e: Phenotypic evol, S36b: Phylogeog & syst, S20: Social trans
17.20 19.20	POSTER SESSION I

WEDNESDAY AUGUST 21

08.55	ESEB initiatives and practical information
9.05 9.50	Keynote II Sinead Collins , Understanding evolution in life-giving slime
10.00	SYMPOSIUM S10: Rapid Adapt, S31: Life History, S34: Math Models, S14: Genome funct, S33: Aging, S4: Cognition, S35: Evol outreach, S11: Quant traits
11.00	Coffee & Exhibition & Outreach
11.30	SYMPOSIUM S10: Rapid Adapt, S31: Life History, S34: Math Models, S14: Genome funct, S33: Aging, S4: Cognition, S35: Evol outreach, S11: Quant traits
12.45	Lunch & Exhibition & Satellite events/outreach
14.15	SYMPOSIUM S13: Adapt gen, S21: Colour, S6: Anti-micro resist, S14: Genome funct, S17: Selfish GEs, S4: Cognition, S25: Assort mating, S22: Host-plant
15.45	Coffee & Exhibition & Outreach
16.15 17.30	SYMPOSIUM S13: Adapt gen, S21: Colour, S6: Anti-micro resist, S14: Genome funct, S17: Selfish GEs, S33: Aging, S25: Assort mating, S22: Host-plant

THURSDAY AUGUST 22

08.55	ESEB initiatives and practical information
9.05 9.50	Keynote III David Queller , Evolutionary conflict and molecular arms races in cooperative systems
10.00	SYMPOSIUM S13: Adapt gen, S21: Colour, S26: Sex conflict, S3: Non-gen inherit, S29: Eco-evo, S6: Anti-micro resist, S12: Wild plant sel, S16: Mito-nuclear
11.00	Coffee & Exhibition & Outreach
11.30	SYMPOSIUM S13: Adapt gen, S21: Colour, S26: Sex conflict, S3: Non-gen inherit, S29: Eco-evo, S7: Human induced, S12: Wild plant sel, S16: Mito-nuclear
12.45	Lunch & Exhibition & Satellite events/outreach
13.45 18.00	Excursions

FRIDAY AUGUST 23

8.55	ESEB initiatives and practical information
9.05 9.50	Keynote IV Anna-Liisa Laine , What keeps pathogens in check in the wild?
10.00	SYMPOSIUM S13: Adapt gen, S2: Exp evol, S26: Sex conflict, S15: Ancient DNA, S27: Social traits, S1: Trans gen plast, S19: Geno-pheno, S24: Microbial stress
11.00	Coffee & Exhibition & Outreach
11.30	SYMPOSIUM S13: Adapt gen, S2: Exp evol, S26: Sex conflict, S15: Ancient DNA, S27: Social traits, S1: Trans gen plast, S19: Geno-pheno, S24: Microbial stress
12.30	Lunch & Exhibition & Satellite events/outreach
14.00	SYMPOSIUM S13: Adapt gen, S2: Exp evol, S26: Sex conflict, S15: Ancient DNA, S27: Social traits, S1: Trans gen plast, S19: Geno-pheno, S24: Microbial stress
15.30	Coffee & Exhibition & Outreach
16.00 17.15	SYMPOSIUM S13: Adapt gen, S2: Exp evol, S26: Sex conflict, S3: Non-gen inherit, S27: Social traits, S36b: Phylogeog & syst, S36c: Genome evol, S36c: Spp interact
17.20 19.20	POSTER SESSION II

SATURDAY AUGUST 24

8.55	ESEB initiatives and practical information
9.05 9.50	Keynote V Rasmus Nielsen , Human adaptation in time and space
10.00	SYMPOSIUM S13: Adapt gen, S2: Exp evol, S36a: Sex select & mating, S28: Game theory, S27: Social traits, S30: Pollinator, S9: Microbes & food, S5: Aging & cancer
11.00	Coffee & Exhibition & Outreach
11.30	SYMPOSIUM S13: Adapt gen, S2: Exp evol, S36a: Sex select & mating, S28: Game theory, S27: Social traits, S30: Pollinator, S9: Microbes & food, S5: Aging & cancer
12.45	Lunch & Exhibition
13.30	ESEB members meeting
14.30	Incoming president's address, Ophelie Ronce , 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 Grieshop , Sexual conflict and the maintenance of genetic variance in fitness
15.50 16.20	Closing ceremony
18.30 02.00	Congress dinner at Muuminworld

LOGOMO HALL

TEATRO

GALLERIA

LOGI1

7.45

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

S10: RAPID ADAPT

S31: LIFE HISTORY

S34: MATH MODELS

S8: SMALL POP GEN

10.00

S10.01

Slowing the rapid evolution of HIV drug resistance
A. Feder

S31.01

Why do organisms age: Beyond energy trade-offs
A. Maklakov

S34.01

Why you might want to care about population regulation, no matter what your question is
H. Kokko

S8.01

What sizes are required for populations to be genetically viable? Re-evaluation of the 50/500 rules
R. Frankham

10.30

S10.02

Host virus coevolution – demography versus selection in the face of multiple stressors
L. Becks

S31.02

Co-evolution of life history traits in variable environments
I. I. Ratikainen

S34.02

Reconciling different modelling approaches in evolutionary theory
F. Débarre

S8.02

Genetic and fitness consequences of dispersal in a small pedigreed population
N. Chen

11.00

COFFEE & EXHIBITION & OUTREACH

(Art up your evolution, Outreach stage, Teatro lobby)

11.30

S10.03

Tracking viral life history during experimental coevolution with their hosts
E. J. P. Lievens

S31.03

Ageing and the fecundity/longevity trade-off in social insects: a comparative approach
J. Korb

S34.03

Does ecology matter in evolutionary models?
B. Ashby

S8.03

Complexities of inbreeding, outbreeding and inbreeding depression in a song sparrow meta-population
J. Reid

11.45

S10.04

Rapid resource use specialisation leads to increased virulence in plant pathogenic *Ralstonia solanacearum*-bacterium
L. Mikonranta

S31.04

The effect of environmental stress on ageing in social insects
V. Rau

S34.04

Individual-based models improve understanding of evolutionary dynamics: examples from female multiple mating and dispersal
G. Bocedi

S8.04

Genetic load accumulation from the perspective of post-bottleneck populations of Galapagos Mockingbirds.
J. Vlček

12.00

S10.05

Changes in allelic frequencies of *Brassica rapa* under experimental evolution with selection by bumblebees
L. Frachon

S31.05

The cost of longevity: Transgenerational effects of parental lifespan extension under dietary restriction
E. Ivimey-Cook

S34.05

Dynamic invariance of evolutionary models
J. Otsuka

S8.05

Patterns of genetic variation across the genome in bottlenecked populations of Eurasian and Iberian lynx
J. A. Godoy

12.15

S10.06

The genomics of rapid adaptation to climate change: host preference evolution increases short-term ecological resilience
J. Bridle

S31.06

Social context does not modulate age fitness effects in *Drosophila melanogaster*
Z. Sultanova

S34.06

Predicting evolution: combining developmental biology and quantitative genetics
L. Milocco

S8.06

Founder-specific inbreeding depression in an island bird population
P. Nietlisbach

12.30

LUNCH & EXHIBITION & SATELLITE EVENTS / OUTREACH

Satellite events

Peer Community in (PCI) – Peer Community In ... the beginning of a revolution in Open Access?, MOVE 1 at 13:00-13:50
How to foster public engagement at conferences, Outreach Stage in Teatro lobby at 12:45-13:55
A citizen-science workshop, GOTO 31 at 12:45-13:55
Art-up your evolution, Outreach Stage, Teatro lobby

	MOVE1	MOVE2	LOGI2	GOTO33
7.45	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			
	S7: HUMAN-INDUCED	S23: PARASITE COM DYN	S18: POLYGE ARCH	S32: NICHE WIDTH
10.00	S7.01 Hunting regulation and the dynamic of selection in large mammals F. Pelletier	S23.01 Dynamics of parasite co-infections – why do they matter? A. Karvonen	S18.01 Genetic and genomic architecture of polygenic adaptation in lake-stream sticklebacks C. Peichel	S32.01 Evolutionary diversification driven by competition for resources - does organismal complexity matter? C. Rueffler
10.30	S7.02 Fisheries-induced evolution in the wild and in the lab M. Heino	S23.02 Dual transcriptomics of avian malaria E. Videvall	S18.02 Polygenic adaptation: The adaptive architecture of a quantitative trait J. Hermisson	S32.02 Colonizations and host shifts cause diversification of preference and expansion of diet breadth M. Singer
11.00	COFFEE & EXHIBITION & OUTREACH (Art up your evolution, Outreach stage, Teatro lobby)			
11.30	S7.03 Anthropogenic hybridization between red deer and sika in Kintyre results in many backcrossed individuals S. E. McFarlane	S23.03 Virulence-transmission relationships under competition in the spider mite <i>Tetranychus urticae</i> A. Duncan	S18.03 Proper Treatment of Haplotype Structure and LD Reduces Error in Sequence Data Analysis S. Belohlavy	S32.03 Habitat choice meets thermal niche specialization: competition with specialists may drive suboptimal preferences in generalists S. Jacob
11.45	S7.04 Evolutionary rescue through hybridization triggered by predator introduction in a <i>Daphnia</i> population K. Enberg	S23.04 Wolbachia incidence and host shift in scale insects E. Sanaei	S18.04 Genetic redundancy fuels polygenic adaptation in <i>Drosophila</i> R. Kofler	S32.04 Expression of phenotypic plasticity in multi-dimensional environments N. Schtickzelle
12.00	S7.05 The Global Urban Evolution Project: Parallel Adaptation To The World's Urban Jungles M. Johnson	S23.05 Characterization of the human pathogen peptidome and specialization in peptide binding among MHC class-I alleles O. Özer	S18.05 Response from standing variation at linked loci in the highly polygenic/ infinitesimal limit. H. Sachdeva	S32.05 Not a generalist after all? Life history genomic regions explain differences in Atlantic salmon diet. T. Aykanat
12.15	S7.06 Contrasting body-size shifts in urban communities T. Merckx	S23.06 How decreased parasite diversity affects host immunity: Approaching "Old Friends" with the cavefish, <i>Astyanax mexicanus</i> R. Peuß	S18.06 Detecting the signature of epistatic selection in subdivided populations K. Csilléry	S32.06 Are differences in incubation behavior and niche use linked in two sympatric flycatcher species? P.M. Sirkkä
12.30	LUNCH & EXHIBITION & SATELLITE EVENTS / OUTREACH			
	Satellite events			
	Peer Community in (PCI) – Peer Community In ... the beginning of a revolution in Open Access?, MOVE 1 at 13:00-13:50			
	How to foster public engagement at conferences, Outreach Stage in Teatro lobby at 12:45-13:55			
	A citizen-science workshop, GOTO 31 at 12:45-13:55			
	Art-up your evolution, Outreach Stage, Teatro lobby			

TUESDAY, AUGUST 20

LOGOMO HALL

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S10: RAPID ADAPT

S31: LIFE HISTORY

S34: MATH MODELS

S8: SMALL POP GEN

14.00	<p>S10.07 Regulatory networks link phenotypic plasticity to evolvability F. Weissing</p>	<p>S31.07 Limits to post-reproductive fitness benefits in humans S. Chapman</p>	<p>S34.07 Free-riding, exclusion, and congestion in a sequential teamwork dilemma J. Peña</p>	<p>S8.07 Genetic diversity and connectivity in wetland plant meta-populations depend on the degree of clonality S. Donna Lozada-Gobilard</p>
14.15	<p>S10.08 Assessing genetic constraints on the evolution of plasticity in multiple stressor environments A. Hudak</p>	<p>S31.08 Child volunteers in World War II have accelerated reproduction and higher lifetime reproductive success R. Lynch</p>	<p>S34.08 Selection and Polymorphism at Two Loci H. Spencer</p>	<p>S8.08 Effects of non-random mating and Haldane's Sieve on floral polymorphisms in plant metapopulations J. Pannell</p>
14.30	<p>S10.09 Evolution of physiological plasticity and selection from balanced polymorphisms during rapid habitat invasions C.E. Lee</p>	<p>S31.09 The antagonistic pleiotropy riddle for populations along the slow-fast continuum C. Coste</p>	<p>S34.09 Modeling antimicrobial cycling, mixing, and combination therapy: Why is it so difficult to draw conclusions? H. Uecker</p>	<p>S8.09 Fitness, life-histories, and ageing in small populations of Daphnia C. Haag</p>
14.45	<p>S10.010 Plasticity in evolutionary potential under environmental variation in a population of pied flycatchers, <i>Ficedula hypoleuca</i> J. Le Vaillant</p>	<p>S31.010 Live fast, die old: Oxidative stress as a potential mediator of an unexpected life-history evolution N. Tüzün</p>	<p>S34.010 The evolution of self-incompatible mating types J. Christie</p>	<p>S8.010 Understanding contemporary levels of genetic diversity in populations of silver fir (<i>Abies Alba Mill.</i>) B. Trubenová</p>
15.00	<p>S10.011 Impact of maternal genetic effects on the evolutionary potential of a red deer population J. Gauzere</p>	<p>S31.011 Does the life history response to dietary restriction persist with infection or injury? E. Savola</p>	<p>S34.011 Kin selection of function-valued traits P. Avila</p>	<p>S8.011 On the generality of the diploid male vortex in parasitoids with single-locus complementary sex determination E. Nonaka</p>
15.15	<p>S10.012 Somatic mutation and cell lineage selection during vegetative growth promotes rapid adaptation in plants J. Schwach</p>	<p>S31.012 Diet-based developmental plasticity and fitness in a detritivorous isopod (<i>Asellus aquaticus</i>) M. Lürig</p>	<p>S34.012 Emergence of diverse life cycles and life histories at the origin of multicellularity M. Staps</p>	<p>S8.012 Genomic signatures of critically-endangered bird Chinese Crested Tern (<i>Thalasseus bernsteini</i>) G. Chen</p>
15.30	<p>COFFEE & EXHIBITION & OUTREACH (Art up your evolution, Outreach stage, Teatro lobby)</p>			

	MOVE1	MOVE2	LOGI2	GOTO33
	S7: HUMAN-INDUCED	S23: PARASITE COM DYN	S18: POLYGE ARCH	S20: SOCIAL TRANS
14.00	<p>S7.07 Anthropogenic Pb driving selection in urban adapted population of <i>Drosophila subobscura</i> A. Patenković</p>	<p>S23.07 The determinants of pathogen communities in wild plant populations H. Susi</p>	<p>S18.07 Selective sweep at at QTL in a randomly fluctuating environment L.-M. Chevin</p>	<p>S20.01 Animal Culture in Changing Environments L. Aplin</p>
14.15	<p>S7.08 Going to the dogs? – Human-induced evolution in the grey wolf M. Pilot</p>	<p>S23.08 Population genomics of <i>Gyrodactylus bullatarudis</i> reveals molecular basis of adaptation to the host M. Konczal</p>	<p>S18.08 Wild wild test: Release-recapture genomic experiment reveals within-generation polygenic adaptation in stickleback fish T. Laurentino</p>	
14.30	<p>S7.09 Genomics of adaptation of <i>Penicillium</i> fungi used for blue cheese and dry-cured meat production A. Branca</p>	<p>S23.09 Within-host pathogen diversity: how it forms and what are the fitness consequences for the host S. Sallinen</p>	<p>S18.09 The genomic basis of parallel adaptation A. M. Westram</p>	<p>S20.02 Does cultural transmission evolve because it is Lamarckian? S. Dall</p>
14.45	<p>S7.010 House sparrows evolved human commensalism with the development of agriculture M. Ravinet</p>	<p>S23.010 Disease-induced diversity of a crustacean iridescent virus V. G. Faria</p>	<p>S18.010 Contemporary Atlantic salmon domestications reveal the architecture of polygenic adaptation N. J. Barson</p>	
15.00	<p>S7.011 Can angling-induced evolution be counteracted by releasing hatchery-reared fish? A. Vainikka</p>	<p>S23.011 Manipulated geographic mosaics: disentangling prevalence of infection and strength of selection F. Feijen</p>	<p>S18.011 Efficiency of outlier methods for detecting loci involved in a polygenic trait under divergent selection L. Bouteille</p>	<p>S20.03 How do predators use social information about defended prey in the wild? L. Hämäläinen</p>
15.15	<p>S10.012 Rapid niche expansion in European whitefish following a eutrophication-induced species collapse A. Jacobs</p>	<p>S23.012 Fitness effects of wild <i>Drosophila</i> viruses M. Wallace</p>	<p>S18.012 Genomic prediction from pool-seq to understand ash dieback susceptibility in <i>fraxinus excelsior</i> C. Metheringham</p>	<p>S20.04 Payoff- and sex-biased social learning interact in a wild primate population E. van de Waal</p>
15.30	<p>COFFEE & EXHIBITION & OUTREACH (Art up your evolution, Outreach stage, Teatro lobby)</p>			

LOGOMO HALL

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GALLERIA

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S10: RAPID ADAPT

S31: LIFE HISTORY

S36d: GENOME EVOL

S8: SMALL POP GEN

16.00	<p>S10.013 Environmental integrons, drivers of microbial adaptation in an acidic extreme environment E. Sandoval-Quintana</p>	<p>S31.013 The evolution of variance control M. Bruijning</p>	<p>S36d.01 Extreme differences in recombination rate between the genomes of a solitary and a social bee J. Jones</p>	<p>S8.013 Eco-Evolutionary feedbacks between genetic diversity and varying population sizes can lead to an extinction vortex P. Nabutanyi</p>
16.15	<p>S10.014 Predicting adaptive evolution in heterogeneous environments from standing genetic variation J. Engelstädter</p>	<p>S31.014 Life history evolution under cancer risk: linking cell-level strategies to organismal traits E. Y. Erten</p>	<p>S36d.02 Shared ancient sex chromosomes in varanids, beaded lizards, and alligator lizards M. Rovatsos</p>	<p>S8.014 Demography affects the likelihood of genetic convergence and our ability to detect it in nature J. Whiting</p>
16.30	<p>S10.015 Beneficial mutations have greater fitness effects at higher temperatures, supporting the temperature-selection speed hypothesis X.-L. Chu</p>	<p>S31.015 Insulin-like growth factor 1 and the evolution of vertebrate life histories J. Lodjak</p>	<p>S36d.03 Germline-restricted chromosomes are widespread in songbirds and contain dozens of developmental genes A. Suh</p>	<p>S8.015 High population divergence at small spatial scales – the joint role of population size and migration A. Nair</p>
16.45	<p>S10.016 Mechanisms of rapid adaptive responses to arid environments in long-lived organisms O. Razgour</p>	<p>S31.016 Maturation probability and condition correlate genetically for a major-effect locus (vgll3) in Atlantic salmon P. V. Debes</p>	<p>S36d.04 Rearranged and relocated: chromosome-level assemblies and comparative genomics of two pelagic freshwater herring species L. Milec</p>	<p>S8.016 Mechanisms and consequences of balancing selection in a model cyclic parthenogen living in ephemeral habitats A. Bergland</p>
17.00	<p>S10.017 Predicting adaptive dynamics in different habitats using ancestral trait values and demographic events V. Ravi Kumar</p>	<p>S31.017 Adult male size in a sexually dimorphic spider depends on genetic factors and food availability S. Quiñones-Lebrón</p>	<p>S36d.05 Epigenetic modification associated with ZEB2 provides a key evidence for the human evolution J.-E. Lee</p>	<p>S8.017 Bypassing summary statistics: a deep learning approach to infer population size history T. Sanchez</p>
17.20 19.20	POSTER SESSION I			

	MOVE1	MOVE2	LOGI2	GOTO33
	S7: HUMAN-INDUCED	S36e: PHENOTYPIC EVOL	S36b: PHYLOGEO & SYST	S20: SOCIAL TRANS
16.00	<p>S7.013 Evolution in salmon life-history induced by direct and indirect effects of fishing Y. Czorlich</p>	<p>S36e.01 Exploring patterns of additive genetic, mutational and environmental (co)variance across traits J. G. King</p>	<p>S36b.01 Global diversification patterns of crangonid shrimps (Decapoda, Caridea, Crangonidae) K. H. Chu</p>	<p>S20.05 Cultural Transmission of Mating Preferences in Fruit Flies S. Nöbel</p>
16.15	<p>S7.014 Harvest-associated selection and population density effects in fisheries-induced evolution A. Crespel</p>	<p>S36e.02 Dissecting phenotypic integration and connecting micro- and macro-evolutionary time scales C. Fruciano</p>	<p>S36b.02 Evo-devo approach to study asexual development and whole body regeneration: insights from tunicates S. Tiozzo</p>	<p>S20.06 A new perspective of social population networks in a reproductive context M. Plaza</p>
16.30	<p>S7.015 Understanding the effect of multiple anthropogenic stressors on freshwater organisms from an evolutionary perspective M. Cuenca Cambroner</p>	<p>S36e.03 An integrated approach to understanding the evolution of flight and wing shape in heliconius butterflies L. Queste</p>	<p>S36b.03 Phylogeography of a widespread spider: admixture across geographical barriers shapes the diversification of <i>Gasteracantha cancriformis</i> F. C. Salgado-Roa</p>	<p>S20.07 On social transmission, individual agency, and a generalised theory of adaptive evolution P. Edelaar</p>
16.45	<p>S7.016 Selection for small size affects the pace-of-life syndrome in medaka impacting the invertebrate community B. Diaz Pauli</p>	<p>S36e.04 Intraspecific variation in floral scent in the perennial herb <i>Arabis alpina</i> H. Petrán</p>	<p>S36b.04 Incipient hybrid speciation in young and rapidly speciating neotropical cichlid fish? M. Olave</p>	<p>S20.08 Social network structure and infectious disease transmission in group-living animals M. Silk</p>
17.00	<p>S7.017 Applying the Anna Karenina principle to the bank vole gut microbiota in a disturbed environment A. Lavrinienko</p>	<p>S36e.05 Evolution of fork tails in aerial insectivorous birds M. Hasegawa</p>	<p>S36b.05 Patterns consistent with Darwin's corollary in a <i>Ficedula</i> flycatcher hybrid zone C. Segami Marzal</p>	<p>S20.09 Social transmission in avian brood parasitism systems D. Campobello</p>
17.20 19.20	POSTER SESSION I			

LOGOMO HALL

TEATRO

GALLERIA

LOGI1

8.55

ESEB initiatives and practical information

9.05

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

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

S31.018

Evolutionary constraints persist through a major life history event: metamorphosis
J. Collet

S34.013

Extended haplodiploidy hypothesis
P. Rautiala

S14.01

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

10.15

S10.019

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

S31.019

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

S34.014

Evolution of the irreversible somatic differentiation
Y. Gao

10.30

S10.020

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

S31.020

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

S34.015

Flows of information in evolution
A. Pocheville

S14.02

Understanding the neural circuits that encode sex-specific behaviours in *Drosophila melanogaster*
M. Neville

10.45

S10.021

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

S31.021

Constrained evolution of instar-level characteristics of larval growth in Lepidoptera
S. Kivelä

S34.016

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

11.00

COFFEE & EXHIBITION & OUTREACH

(Art up your evolution, Outreach stage, Teatro lobby)

	MOVE1	MOVE2	LOGI2	GOTO33
8.55	ESEB initiatives and practical information			
9.05	KEYNOTE II Sinead Collins, Understanding evolution in life-giving slime			
	S33: AGING	S4: COGNITION	S35: EVOL OUTREACH	S11: QUANT TRAITS
10.00	<p>S33.01 Understanding senescence and trans-generational parental age effects in a long-lived seabird S. Bouwhuis</p>	<p>S4.01 Evolutionary biology of expertise R. Dukas</p>	<p>S35.01 The public and researchers: It's complicated P. Russo</p>	<p>S11.01 Inversions as large effect loci in quantitative genetics J. Kelly</p>
10.30	<p>S33.02 Senescence in reptiles: from mechanisms to life-history consequences T. Schwartz</p>	<p>S4.02 The interplay between environment, gut microbiome and host cognition G. Davidson</p>	<p>S35.02 Willing to promote evolutionary knowledge for everyone? Join communities! H. Dufour</p>	<p>S11.02 The clawprint of selection in wildlife and livestock genomes M. Bosse</p>
11.00	COFFEE & EXHIBITION & OUTREACH (Art up your evolution, Outreach stage, Teatro lobby)			

LOGOMO HALL

TEATRO

GALLERIA

LOGI1

S10: RAPID ADAPT

S31: LIFE HISTORY

S34: MATH MODELS

S14: GENOME FUNCT

11.30	<p>S10.022 Genomic divergence of rapidly evolving populations of Italian wall lizards A. Štambuk</p>	<p>S31.022 Sex-specific effects of maturation timing on reproductive fitness in wild Atlantic salmon K. Mobley</p>	<p>S34.017 Transcriptional cross-talk varies between regulatory networks designs T. Friedlander</p>	<p>S14.03 Functional significance and evolutionary mechanisms of VMAT1 genetic variants underlie psychological diversity in humans D. Sato</p>
11.45	<p>S10.023 Characterising genetic diversity and differentiation in multiple phenotypes of a marine invasive species M. Prentice</p>	<p>S31.023 Predation risk drives the evolution of placentas in live-bearing fish populations (family Poeciliidae) A. Hagemayer</p>	<p>S34.018 Evolutionary dynamics of plasticity in a mechanistic gene-network model A. Odorico</p>	<p>S14.04 The genomic and transcriptomic basis of carotenoid-based sexual dichromatism in Finches M. Gazda</p>
12.00	<p>S10.024 Why does male-biased gene expression evolve so rapidly? R. Griffin</p>	<p>S31.024 Individual differences in carry-over effects on fitness: the role of personality S. M. Harris</p>	<p>S34.019 Flexible, realistic, fast evolutionary simulations with SLiM B. Haller</p>	<p>S14.05 The evolution of lifespan: from whole genomes to SNPs K. Hoedjes</p>
12.15	<p>S10.025 Testing the factors promoting recurrent, convergent, and rapid adaptation in a wild insect J. Rayner</p>	<p>S31.025 Environmental drivers of phenotypic selection in a small passerine species M. Gamelon</p>	<p>S34.020 What can machine learning teach us about evolutionary ecology data? J. Morimoto</p>	<p>S14.06 Molecular diversity and developmental expression of the master regulator doublesex in the sexually dimorphic <i>Papilio polytes</i> R. Deshmukh</p>
12.30	<p>S10.026 Identifying the evolutionary dynamics and genetics of rapid evolutionary rescue in <i>Callosobruchus maculatus</i> A. Rêgo</p>	<p>S31.026 Evolutionary consequences of cryptobiosis on male reproduction M. Vecchi</p>	<p>S34.021 Speciation, extinction and environmental change: from fossil data to mathematical modelling J. Toivonen</p>	<p>S14.07 Key physiological genes important for freshwater adaptation and life history evolution in sticklebacks A. Ishikawa</p>
12.45	LUNCH & EXHIBITION & SATELLITE EVENTS / OUTREACH			
	<p>Satellite events</p> <p>The European Research Council – funding opportunities for bright minds, MOVE 1 at 13:15-14:05</p> <p>How to pitch your science to non-specialist audiences, GOTO31 at 12:55-13:55</p> <p>Art-up your evolution, Outreach Stage in Teatro lobby</p>			

	MOVE1	MOVE2	LOGI2	GOTO33
	S33: AGING	S4: COGNITION	S35: EVOL OUTREACH	S11: QUANT TRAITS
11.30	<p>S33.03</p> <p>Sex-biased ageing in the invertebrate <i>Tigriopus californicus</i> and the role of mito-nuclear interactions S. Edmands</p>	<p>S4.03</p> <p>A social perspective on the microbiota-gut-brain axis: ants as a model organism S. Teseo</p>	<p>S35.03</p> <p>Melanogaster Catch The Fly: a citizen science project on adaptation genomics J. Gonzalez</p>	<p>S11.03</p> <p>The response of a population to a change in optimum N. Barton</p>
11.45	<p>S33.04</p> <p>Sex differences in functional and reproductive senescence in African annual killifish M. Reichard</p>	<p>S4.04</p> <p>Benefits of working memory depend upon forage availability for bumblebees (<i>Bombus terrestris</i>) E. Leadbeater</p>	<p>S35.04</p> <p>evALLution: can we make fundamental evolution concepts accessible to the blind community? T. G. Laurentino</p>	<p>S11.04</p> <p>Disentangling the roles of mutation, selection, and genetic drift, on cis- and trans- regulatory evolution M. Hill</p>
12.00	<p>S33.05</p> <p>How the queen manages to stay young: orchid bee queens maintain young transcriptomes throughout life A. Séguret</p>	<p>S4.05</p> <p>Selective social information use in the nest choice of solitary bees O. Loukola</p>	<p>S35.05</p> <p>Science and Community: evolutionary facts for an inclusive society J. R. Torres Miranda</p>	<p>S11.05</p> <p>Dissecting evolution of adaptive traits in Arabidopsis after island colonization C. Neto</p>
12.15	<p>S33.06</p> <p>Long live the queen: eusociality and the evolutionary theory of ageing B. H. Kramer</p>	<p>S4.06</p> <p>Environmental complexity and the correlated evolution of (social) behaviour and (social) cognition S. A. M. Varela</p>	<p>S35.06</p> <p>Evolution in action – project: How to impact society through science and art education? C. Lindstedt</p>	<p>S11.06</p> <p>Genomic Prediction in a wild mammal population J. Slate</p>
12.30	<p>S33.07</p> <p>Extreme lifespan extension in tapeworm-infected ants facilitated by increased care and upregulation of longevity genes S. Foitzik</p>	<p>S4.07</p> <p>Heritability and co-variation among cognitive abilities in pheasants; an animal model approach E. Langley</p>	<p>S35.07</p> <p>The “WOW effect” of Evolution T. Adnađević</p>	<p>S11.07</p> <p>Beyond large-effect loci: large-scale GWAS reveals mixed large-effect and polygenic architecture of Atlantic salmon age-at-maturity M. Sinclair-Waters</p>
12.45	LUNCH & EXHIBITION & SATELLITE EVENTS / OUTREACH			
	<p>Satellite events</p> <p>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</p>			

WEDNESDAY, AUGUST 21

LOGOMO HALL

TEATRO

GALLERIA

LOGI1

S13: ADAPT GEN

S21: COLOUR

S6: ANTI-MICRO RESIST

S14: GENOME FUNCT

14.15	<p>S13.01 Adaptation and evolution of alternative reproductive modes K. Elmer</p>	<p>S21.01 Painting by numbers: understanding the eco-evo-devo mechanisms of petal patterning E. Moyroud</p>	<p>S6.01 Mutators drive evolution of resistance to multiple antibiotics during single-drug and combination treatment D. R. Gifford</p>	<p>S14.08 Effects of random coding sequences on Escherichia coli D. Bhawe</p>
14.30				<p>S14.09 Colour encoded in innate immune gene? Accumulating evidence for Hamilton-Zuk 'Good genes' in great tits M. Vinkler</p>
14.45	<p>S13.02 Natural selection explains parallel evolution of locomotion bias, genetic drift variable interdependence of component traits H. Teotónio</p>	<p>S21.02 Colour vision and the origin of species: what you see is who you are? M. Maan</p>	<p>S6.02 Unstable antibiotic resistance D. Andersson</p>	<p>S14.010 Applying gene manipulation approaches for characterizing the evolution, dynamics and complexity of venom production Y. Moran</p>
15.00				<p>S14.011 Molecular mechanisms and evolution of a novel floral volatile biosynthesis in wild tobacco S. Xu</p>
15.15	<p>S13.03 Parallel clines in iridescence in butterfly co-mimics despite different levels of genomic divergence and selection E. Curran</p>	<p>S21.03 Inter-chromosomal coupling between vision and pigmentation genes during genomic divergence O. Puebla</p>	<p>S6.03 To establish, or not to establish – testing the probability of antibiotic resistance emergence M. Saebelfeld</p>	<p>S14.012 Molecular and phenotypic characterization of roo elements inserted in a unique insertional cluster M. Merenciano</p>
15.30	<p>S13.04 Population genomics in a case of rapid, parallel adaptation: Cape Verde Islands <i>Arabidopsis thaliana</i> A. Fulgione</p>	<p>S21.04 Fine-mapping of color variation in a butterfly shed light on the evolution of supergenes P. Jay</p>	<p>S6.04 Repeatable ecological dynamics govern antibiotic response of experimental microbial community J. Cairns</p>	<p>S14.013 The contribution of novel genes to the development of novel traits R. Arbore</p>
15.45	<p>COFFEE & EXHIBITION & OUTREACH (Art up your evolution, Outreach stage, Teatro lobby)</p>			

	MOVE1	MOVE2	LOGI2	GOTO33
	S17: SELFISH GEs	S4: COGNITION	S25: ASSORT MATING	S22: HOST PLANT
14.15	<p>S17.01 X chromosome drive and intragenomic conflict: a textbook case in <i>Drosophila simulans</i> C. Montchamp-Moreau</p>	<p>S4.08 Community diversity affects categorization by foragers: implications for signal evolution D. Kikuchi</p>	<p>S25.01 Assortative mating from humans to birds – the role of mate choice W. Forstmeier</p>	<p>S22.01 Getting tuned: Understanding specificity in plant volatile signaling S. Allmann</p>
14.30		<p>S4.09 Widespread learned predator recognition and amphibian resilience to alien predators N. Polo-Cavia</p>		
14.45	<p>S17.02 Recognition and silencing of active retrotransposons in arabidopsis A. Mari-Ordonez</p>	<p>S4.010 Anti-predatory behaviour, sensory systems and brain transcriptomics in Icelandic threespine stickleback adapting to turbid environments M. Ålund</p>	<p>S25.02 Assortative mating, sexual selection and their consequences for gene flow in <i>Littorina</i> R. Butlin</p>	<p>S22.02 Genome engineering as a tool for studying host plant specialisation N. Whiteman</p>
15.00		<p>S4.011 Cognitive ontogeny: environmental effects on brain size divergence in developing sunfish ecotypes C. Axelrod</p>		
15.15	<p>S17.03 Evolutionary dynamics of transposable elements in asexual bdelloid rotifers R. Nowell</p>	<p>S4.012 Experimental support for the mosaic brain evolution hypothesis S. Fong</p>	<p>S25.03 Decomposing social genetic effects on phenology and assortative mating in a long-lived seabird M. Moiron</p>	<p>S22.03 Effect of plant inhibitory proteins on pectinases in herbivorous beetles W. Häger</p>
15.30	<p>S17.04 Molecular dissection of a natural transposable element invasion C. Schlötterer</p>	<p>S4.013 Annual predation risk relates to the direction of selection for brain size in the wild M. Öst</p>	<p>S25.04 Reproductive isolation driven by ecological adaptation in <i>Gambusia hubbsi</i> V. Pärssinen</p>	<p>S22.04 Beyond target-site insensitivity - the role of ABCB transporters in adaptations to cardiac glycosides S. Dobler</p>
15.45	<p>COFFEE & EXHIBITION & OUTREACH (Art up your evolution, Outreach stage, Teatro lobby)</p>			

LOGOMO HALL

TEATRO

GALLERIA

LOGI1

S13: ADAPT GEN

S21: COLOUR

S6: ANTI-MICRO RESIST

S14: GENOME FUNCT

16.15	<p>S13.05 Parallel evolution of reproductive timing in Atlantic and Pacific herring E. Petrou</p>	<p>S21.05 To change or not to change: evolution of seasonal colour polymorphism in the least weasel I. Miranda</p>	<p>S6.05 On the evolutionary ecology of multidrug resistance in bacteria S. Lehtinen</p>	<p>S14.014 Evolution of male pregnancy reveals remodelling of vertebrate adaptive immunity O. Roth</p>
16.30	<p>S13.06 Geographic heterogeneity in parallel evolution – three spined sticklebacks revisited B. Fang</p>	<p>S21.06 Paint it red: co-option of MYB transcription factors shift color hue in a hummingbird-pollinated species A. Berardi</p>	<p>S6.06 Associations between sensitivity to antibiotics and non-antibiotic antibacterials in natural and clinical escherichia coli isolates A. Bischofberger</p>	<p>S14.015 Wide pleiotropic effects of melanin pathway genes on mating behaviour and life-history traits V. Tyukmaeva</p>
16.45	<p>S13.07 Searching for signatures of genetic adaptation to climate in bank voles R. Folkertsma</p>	<p>S21.07 More than meets the eye? Protective functions of red pigments in endemic Hawaiian damselflies I. Cooper</p>	<p>S6.07 Microbiome suppresses growth and resistance evolution of Escherichia coli in a human gut microcosm M. Baumgartner</p>	<p>S14.016 Evolution and function of the key digestive enzymes sucrose and maltase in vertebrates D. Mendez-Aranda</p>
17.00	<p>S13.08 Assessing genomic vulnerability to climate change in Canada's northernmost freshwater fish, Arctic charr K. K.S. Layton</p>	<p>S21.08 Mitochondria-targeted molecules determine the redness of the zebra finch bill A. Cantarero</p>	<p>S6.08 Quantifying the impact of treatment history on plasmid-mediated resistance evolution in human gut microbiota B. Tepekule</p>	<p>S14.017 Developmental mechanisms of Arctic charr (<i>Salvelinus Alpinus</i>) adaptive divergence K. H. Kapralova</p>
17.15	<p>S13.09 Adapting to a warming world; the molecular basis of seasonal timing in a song bird M. Visser</p>	<p>S21.09 Breaking the back of the parasite: reducing early-life burden affects nestling and adult feather colouration E. Perez-Badas</p>	<p>S6.09 Variation in collateral sensitivity phenotypes of Escherichia coli across genotypes and growth environments R. Allen</p>	<p>S14.018 ENHANCing the limb: from micro to macroevolution J. P. L. Castro</p>

	MOVE1	MOVE2	LOGI2	GOTO33
	S17: SELFISH GE_s	S33: AGING	S25: ASSORT MATING	S22: HOST PLANT
16.15	<p>S17.05 Kirc, a new superfamily of massive DNA transposons A. A. Vogan</p>	<p>S33.08 Ageing in free-living great tits: multimarker evidence for age-related increase in oxidative and physiological stress M. Těšický</p>	<p>S25.05 A theoretical study of the effects of assortative mating on adaptive potential under climate change C. Godineau</p>	<p>S22.05 Interactions between metal-based and organic defences: Alternative weapons against spider mites attacking tomato plants D. Prino Godinho</p>
16.30	<p>S17.06 T-lex3: an accurate tool to genotype and estimate population frequencies of transposable elements M. Bogaerts Márquez</p>	<p>S33.09 Linking early-life environment to ageing rate: the role of prenatal thyroid hormones? S. Ruuskanen</p>	<p>S25.06 The timing of attraction as a driver of species diversification in the fall armyworm S. Hänniger</p>	<p>S22.06 Urban environments select for higher growth potential but lower herbivore resistance in <i>Arabidopsis thaliana</i> J. Qu</p>
16.45	<p>S17.07 The selfish endosymbiont <i>Wolbachia</i> exploits the sex determination of its host to achieve maximal transmission F. Chen</p>	<p>S33.010 Early-life environmental quality and variability reflected in telomere lengths and lifespan in a wild mammal S.H.J. van Lieshout</p>	<p>S25.07 The genetics of visual preferences in a hybrid species A. E. Hausmann</p>	<p>S22.07 Opposite Responses to Drought Induced Changes in Host Plant Quality within a Butterfly Metapopulation A. Kahilainen</p>
17.00	<p>S17.08 Dynamics of prokaryotic cell differentiation during horizontal gene transfer R. Miyazaki</p>	<p>S33.011 Fitness consequences of germline mutation accumulation: the hidden cost of lifespan extension? E. Duxbury</p>	<p>S25.08 Factors mediating reproductive isolation between related species at contact zones A. Kirschel</p>	<p>S22.08 Chemical defences in a <i>Heliconius</i> butterfly and its <i>Passiflora</i> host A. Mattila</p>
17.15	<p>S17.09 Molecular evolution of the Greenbeard Social b supergene in the fire ant <i>Solenopsis invicta</i> Q. Helleu</p>	<p>S33.012 Using Wild Crickets to test key predictions of life-history theories of senescence T. Regenza</p>	<p>S25.09 Reinforcement and assortative mating between incipient outcrossing and selfing <i>Clarkia</i> species D. Moeller</p>	<p>S22.09 From monophagy to oligophagy, ecological and genetic variation affect host-associated diversification of butterfly species R. Mattos</p>

THURSDAY, AUGUST 22

LOGOMO HALL

TEATRO

GALLERIA

LOGI1

8.55

ESEB initiatives and practical information

9.05

KEYNOTE III David Queller, Evolutionary conflict and molecular arms races in cooperative systems

S13: ADAPT GEN

S21: COLOUR

S26: SEX CONFLICTS

S3: NON-GEN INHERIT

10.00

S13.010

Altitude shapes local adaptation in *Heliconius* butterflies
G. Montejo-Kovacevich

S21.010

Evolutionary decoupling of larval and adult colour in shield bugs: comparative and experimental evidence
I. Medina

S26.01

Sexual conflict in ecological context in a semiaquatic bug
J. Perry

S3.01

Transgenerational inheritance of small RNAs in *C.elegans*
I. Lev

10.15

S13.011

An integrative perspective of adaptation to different altitudes in an alpine plant
A. Szukala

S21.011

Red or dead: imperfect Müllerian mimicry between burnet and red, not yellow, wood tiger moths
B. Rojas

10.30

S13.012

Bacterial adaptations – NOT what you thought
O. Avram

S21.012

Beyond the 'red edge': does visual sensitivity to long wavelengths facilitate resource location in beetles?
L.-Y. Wang

S26.02

The ecology of sexual conflict and the population genetic consequences of mate choice
H. Rundle

S3.02

Inherited effects of parental environment: Multi-generation GxE and the unscripted phenotype
S. Sultan

10.45

S13.013

Back to the future of bacterial population genomics
J. Cury

S21.013

Iridescence as camouflage
K. Kjærnsmo

11.00

COFFEE & EXHIBITION & OUTREACH

(Art up your evolution, Outreach stage, Teatro lobby)

	MOVE1	MOVE2	LOGI2	GOTO33
8.55	ESEB initiatives and practical information			
9.05	KEYNOTE III David Queller, Evolutionary conflict and molecular arms races in cooperative systems			
	S29: ECO-EVO	S6: ANTI-MICRO RESIST	S12: WILD PLANT SEL	S16: MITO-NUCLEAR
10.00	S29.01 Quantitative eco-evolutionary dynamics: Numerical signatures of varying sources of phenotypic novelty J. Pantel	S6.010 Microbiota inoculum composition affects holobiont assembly and host growth in <i>Daphnia</i> E. Decaestecker	S12.01 Evolvability, selection, and disrupting mechanisms in the wild: A roadmap for evaluating adaptive evolution B. Pujol	S16.01 Effects of mitonuclear genomic interactions on ATP synthesis and developmental time R. S. Burton
10.15		S6.011 Prophages increase bacterial fitness in the presence of high antibiotic concentrations C. Wendling		
10.30	S29.02 When do eco-evolutionary feedbacks aid adaptation, and when do they hinder them? T. Coulson	S6.012 Evolutionary rescue in the face of an arbitrarily moving optimum in asexuals G. Martin	S12.02 Flower evolution in the wild under stable and changing pollination environments M. C. Castellanos	S16.02 The impact of mito-nuclear interactions from OXPHOS to genome evolution K. Montooth
10.45		S6.013 Do antibiotic treatments accelerate evolution? Population dynamics matter! A. Frenoy		
11.00	COFFEE & EXHIBITION & OUTREACH (Art up your evolution, Outreach stage, Teatro lobby)			

THURSDAY, AUGUST 22

LOGOMO HALL

TEATRO

GALLERIA

LOGI1

S13: ADAPT GEN

S21: COLOUR

S26: SEX CONFLICTS

S3: NON-GEN INHERIT

11.30	<p>S13.014 Linking allele-specific expression and natural selection in wild populations R. Laso-Jadart</p>	<p>S21.014 Variation in thin film structure produces diverse visual appearances in Christmas beetles (Scarabeidae - Rutelinae) L. Ospina</p>	<p>S26.03 Ecology and sexual conflict drive the macroevolutionary dynamics of female-limited colour polymorphisms B. Willink</p>	<p>S3.03 The ecological consequences and evolutionary potential of transgenerational temperature plasticity in <i>Mimulus</i> J. Colicchio</p>
11.45	<p>S13.015 Linking a mutation to survival in wild mice S. Laurent</p>	<p>S21.015 The hidden side of wing transparency in Lepidoptera C. Pinna</p>	<p>S26.04 The role of alternative splicing in the evolution of sexual dimorphism T. Rogers</p>	<p>S3.04 The role of epigenetic mechanisms in within and between generation phenotypic plasticity in <i>Neurospora crassa</i> I. Kronholm</p>
12.00	<p>S13.016 The speciation supergene in wild <i>Petunia</i>: structure and evolution T. Tenreira</p>	<p>S21.016 Different ways to make red flowers: Colour evolution in the New World Gesneriaceae E. Ogutcen</p>	<p>S26.05 Inter-population variation in morphology reflects different trajectories of sexually antagonistic coevolution in a beetle C. Koshio</p>	<p>S3.05 Genotype-specific integration of genetic, nongenetic and environmental cues shapes water flea development and life history E. Harney</p>
12.15	<p>S13.017 Adaptation in the wild - a systems genetics approach using <i>Daphnia</i> D. Becker</p>	<p>S21.017 Evolving rainbows: deriving a spectrum of phylogenetic signals in avian colour evolution S. M. Drobniak</p>	<p>S26.06 Dynamics of sex biased gene expression during development in a hemimetabolous insect J. Djordjevic</p>	<p>S3.06 DNA methylation facilitates adaptation to ocean salinity change M. J. Heckwolf</p>
12.30	<p>S13.018 Contemporary natural selection on transcript abundance in wild brown trout F. Ahmad</p>	<p>S21.018 Climate shapes near-infrared reflectance properties in birds and butterflies D. Stuart-Fox</p>	<p>S26.07 Toxic males to gentle courtiers: evolutionary reduction in sexual antagonism due to shift in life-history B. Nandy</p>	<p>S3.07 The role of DNA methylation in adaptation – social spiders as a case study T. Bilde</p>
12.45	LUNCH & EXHIBITION & SATELLITE EVENTS / OUTREACH			
	<p>Satellite events Art-up your evolution, Outreach Stage in Teatro lobby</p>			
13.45 18.00	EXCURSIONS			

	MOVE1	MOVE2	LOGI2	GOTO33
	S29: ECO-EVO	S7: HUMAN-INDUCED	S12: WILD PLANT SEL	S16: MITO-NUCLEAR
11.30	<p>S29.03 Rapid Change in Mammalian Eye Shape Is Explained by Activity Pattern J. Baker</p>	<p>S7.018 Fluctuating selection and enhancing diversity to overcome insecticide resistance evolution R. Mangan</p>	<p>S12.03 Benefits of using non-linear path analysis for estimating natural selection G. H. Bolstad</p>	<p>S16.03 Do mitolineages and sex-linked mitonuclear genotypes impact respiration, metabolic performance and hybrid fitness? A. Pavlova</p>
11.45	<p>S29.04 Extinction and the temporal distribution of macroevolutionary bursts S. De Lisle</p>	<p>S7.019 The consequences of domestication to the wheat microbiome biodiversity E. Özkurt</p>	<p>S12.04 Does selection on plants defense strategies vary along a successional gradient? A. Kalske</p>	<p>S16.04 Divergent mitochondrial and nuclear OXPHOS genes are candidates for genetic incompatibilities in Ficedula Flycatchers A. Qvarnström</p>
12.00	<p>S29.05 Intraspecific variation alters ecological properties and fosters transgenerational carry-over effects as much as temperature variation A. Raffard</p>	<p>S7.020 Climate change and Green Sea Turtle sex ratio: preventing possible extinction J. Blechschmidt</p>	<p>S12.05 Measuring viability selection from prospective cohort mortality studies in wild plant populations J. J. Robledo-Arnuncio</p>	<p>S16.05 The genetics of sex-biased hybrid incompatibility in Tigriopus californicus E. Watson</p>
12.15	<p>S29.06 Density-dependent selection on exploration behaviour across multiple great tit populations A. Mouchet</p>	<p>S7.021 Expanding thermal breadth facilitates adaptation of Daphnia to raising temperature M. Dziuba</p>	<p>S12.06 Fitness consequences of hybridization between fully inbred lines from natural predominantly selfing populations J. Clo</p>	<p>S16.06 SmithRNAs, a new arena for mito-nuclear interaction and coevolution M. Passamonti</p>
12.30	<p>S29.07 Dynamic of introgression during density-dependent range expansion: European wildcats as a case study C. S. Quilodrán</p>	<p>S7.022 Invasion success of the Asian tiger mosquito in Europe: pre-adaptation, post-introduction evolution, or both? S. Sherpa</p>	<p>S12.07 Herbivory drives evolution of genetic architecture for plant defense and competition traits A. Uesugi</p>	<p>S16.07 Mito-nuclear interactions in an emerging hybrid species - Insights from a time series transcriptomic study E. Iwazskiewicz</p>
12.45	LUNCH & EXHIBITION & SATELLITE EVENTS / OUTREACH			
	<p>Satellite events Art-up your evolution, Outreach Stage in Teatro lobby</p>			
13.45 18.00	EXCURSIONS			

LOGOMO HALL

TEATRO

GALLERIA

LOGI1

8.55

ESEB initiatives and practical information

9.05

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

S13: ADAPT GEN

S2: EXP EVOL

S26: SEX CONFLICT

S15: ANCIENT DNA

10.00

S13.019

The genetic and physiological basis of local adaptation across latitudinal range in 360 Arabidopsis accessions
Y. Yarkhunova

S2.01

Replaying the tape of life: the experimental study of adaptive evolution in seed beetles
G. Arnqvist

S26.08

The genetic architecture of sexually dimorphic traits: gene knock-outs and sex-specific genetic variance
W. van der Bijl

S15.01

Modern tools for ancient Data: Quantifying evolution from paleogenomes
D. Wegmann

10.15

S13.020

Repeated Genomic Signatures of Local Selection in Atlantic Salmon
V. Pritchard

S26.09

Sex-specific transcriptomic responses to changes in the nutritional environment
F. Camus

10.30

S13.021

Dissecting the transcriptomic basis of phenotypic evolution in an aquatic keystone grazer
D. Frisch

S2.02

Experimental adaptation to juvenile malnutrition: insights from and challenges of omics
T. Kawecki

S26.010

Male sexual trait interacts with environment in determining female fitness
A. Plesnar-Bielak

S15.02

The genetic history of the Plague: From the Stone Age to the 18th century
J. Krause

10.45

S13.022

Genetic and morphological bases of a complex innovation – pelvic brooding in Sulawesi ricefishes
J. Schwarzer

S26.011

Substantial sex differences in recombination in a threatened passerine with high levels of sexual conflict
A. Santure

11.00

COFFEE & EXHIBITION & OUTREACH

(Art up your evolution, Outreach stage, Teatro lobby)

	MOVE1	MOVE2	LOGI2	GOTO33
8.55	ESEB initiatives and practical information			
9.05	KEYNOTE IV Anna-Liisa Laine, What keeps pathogens in check in the wild?			
	S27: SOCIAL TRAITS	S1: TRANS GEN PLAST	S19: GENO-PHENO	S24: MICROBIAL STRESS
10.00	<p>S27.01 The evolutionary implications of sociality: Population structuring associated with shifts in life history and behavior S. Shultz</p>	<p>S1.01 Stress responses within and across generations: From epigenetic regulation to selection in the wild M. Saastamoinen</p>	<p>S19.01 Colour evolution in birds and butterflies: From macro to micro and back again N. Nadeau</p>	<p>S24.01 Bacterial capsules as key referees in adaptation O. Rendueles</p>
10.15				
10.30	<p>S27.02 Epistemology and non-discrimination: Inclusive fitness still on top A. Grafen</p>	<p>S1.02 Insect immune memory, how does it work and why should we care? S. Barribeau</p>	<p>S19.02 A phylogenetic framework for the detection of trait-dependent shifts in patterns of sequence evolution I. Mayrose</p>	<p>S24.02 Phage-bacteria coevolution in the rhizosphere: Consequences for microbiome functioning and plant disease outbreaks V.-P. Friman</p>
10.45				
11.00	COFFEE & EXHIBITION & OUTREACH (Art up your evolution, Outreach stage, Teatro lobby)			

	LOGOMO HALL	TEATRO	GALLERIA	LOGI1
	S13: ADAPT GEN	S2: EXP EVOL	S26: SEX CONFLICT	S15: ANCIENT DNA
11.30	<p>S13.023 Extreme morphological and genomic divergence underlies deep-water adaptation in Arctic charr (<i>Salvelinus alpinus</i>)morphs T. Kess</p>	<p>S2.03 Larval resource competition alters capability of adult reproductive interference W. Mukaimine</p>	<p>S26.012 Sexual conflict in the light of <i>Caenorhabditis</i> nematodes J. Palka</p>	<p>S15.03 6,500-year-old <i>Salmonella enterica</i> genomes link human-host adaptation to animal domestication A. Herbig</p>
11.45	<p>S13.024 Exploring the joint effects of global and local selection on the emergence of reproductive barriers G. Bisschop</p>	<p>S2.04 Microevolutionary genomic signatures of sexual selection R. R. Snook</p>	<p>S26.013 Sex-specific adaptation to a high temperature in <i>Drosophila</i> S.-K. Hsu</p>	<p>S15.04 2,000-year-old pathogen genomes reconstructed from mummies provide insights into the health status of ancient Egyptians J. Neukamm</p>
12.00	<p>S13.025 Genetic effects on phenotypic 'predictability' of guppy stress-response behaviour P. M Prentice</p>	<p>S2.05 Experimental evolution study on <i>Drosophila melanogaster</i>: manifold consequences of adaptation to unfavourable diets E. Iakovleva</p>	<p>S26.014 Sexual conflict over genes related to immunity: Evidence from a species with strong sexual selection J. Roved</p>	<p>S15.05 Studying the evolution of host-associated microbiome through time using ancient dental calculus K. Guschanski</p>
12.15	<p>S13.026 On (small) step at a time: Measuring adaptive potential of yeast populations under different stresses I. Fragata</p>	<p>S2.06 Consequences of adaptation to juvenile malnutrition on adult metabolism C. Dupuis</p>	<p>S26.015 Uncovering the role of sexually antagonistic selection on sex differences in immunity in <i>Drosophila melanogaster</i> S. Sharda</p>	<p>S15.06 Von Linné to today: -omics-based investigations of fungal adaptations to extreme environments with herbarium specimens B. H. Conlon</p>
12.30	LUNCH & EXHIBITION & SATELLITE EVENTS / OUTREACH			
	<p>Satellite events</p> <p>Meet the editors – a Royal Society Publishing workshop, MOVE 1 at 13:00-13:50</p> <p>SciSparks, how to organise speed meetings in high-schools, Outreach stage in Teatro lobby at 12:45-13:55</p>			

	MOVE1	MOVE2	LOGI2	GOTO33
	S27: SOCIAL TRAITS	S1: TRANS GEN PLAST	S19: GENO-PHENO	S24: MICROBIAL STRESS
11.30	<p>S27.03</p> <p>The evolution of mechanisms to divide labour G. Cooper</p>	<p>S1.03</p> <p>Does maternal behavioural plasticity facilitate the evolution of viviparity? A. Pettersen</p>	<p>S19.03</p> <p>Gene expression evolution in Lake Tanganyika cichlid fishes: Novel insights through data integration A. El Taher</p>	<p>S24.03</p> <p>Antibiotic stresses modify the evolution of <i>Pseudomonas aeruginosa</i> phage resistance T. Dimitriu</p>
11.45	<p>S27.04</p> <p>Molecular signatures of kin selection: Are caste-associated genes nearly neutral? G. Thompson</p>	<p>S1.04</p> <p>Paternal contribution to transgenerational plasticity of the freshwater snail <i>Physa acuta</i> in response to predation J. Tariel</p>	<p>S19.04</p> <p>Differential gene expression underlying caste- and sex-specific gonad development in the honey bee (<i>Apis mellifera</i>) D. Cavalcante Lago</p>	<p>S24.04</p> <p>Bacterial biodiversity drives the evolution of CRISPR-based resistance against phage E. Alseth</p>
12.00	<p>S27.05</p> <p>Benefits of cooperation and its life-history costs in complex environments in a social pine sawfly C. Lindstedt</p>	<p>S1.05</p> <p>Adaptive significance of Anticipatory Maternal Effects in <i>Drosophila melanogaster</i> P. Kohlmeier</p>	<p>S19.05</p> <p>A genetic and evolutionary perspective on foot feathering in a domestic avian species C. Bortoluzzi</p>	<p>S24.05</p> <p>Eco-evolutionary dynamics in a simple Cystic Fibrosis-like bacterial community treated with a low antibiotic concentration J. Law</p>
12.15	<p>S27.06</p> <p>Dispersal strategies of sessile superorganisms: the evolution of dispersal in ants S. Hakala</p>	<p>S1.06</p> <p>The role of genetic adaptation and phenotypic plasticity in response to changing salinity conditions H. Goehlich</p>	<p>S19.06</p> <p>The molecular basis of phenotypic evolution across a genus: cold acclimation in <i>Drosophila</i> N. Cook</p>	<p>S24.06</p> <p>The Evolutionary Design of the Type-6 Secretion System W. Smith</p>
12.30	LUNCH & EXHIBITION & SATELLITE EVENTS / OUTREACH			
	<p>Satellite events</p> <p>Meet the editors – a Royal Society Publishing workshop, MOVE 1 at 13:00-13:50</p> <p>SciSparks, how to organise speed meetings in high-schools, Outreach stage in Teatro lobby at 12:45-13:55</p>			

LOGOMO HALL

TEATRO

GALLERIA

LOGI1

S13: ADAPT GEN

S2: EXP EVOL

S26: SEX CONFLICT

S15: ANCIENT DNA

14.00	<p>S13.027 Interplay of microbiome and transcriptome shapes fitness in response to environmental change J. Beninde</p>	<p>S2.07 Experimentally altered sex ratios and the evolution of sex-specific life histories J. Stångberg</p>	<p>S26.016 Sex-limited experimental evolution on a simultaneous hermaphroditic flatworm leads to differential responses of sex allocation Q. Li</p>	<p>S15.07 The demographic history of woolly rhinoceros E. Lord</p>
14.15	<p>S13.028 Identification of chromosome subpopulations by recombination differences C. Ruiz-Arenas</p>	<p>S2.08 Evolution of reproductive efficiency in <i>Caenorhabditis elegans</i> under introduced obligatory outcrossing W. Antof</p>	<p>S26.017 Intersexual conflict over seed size is stronger in more outcrossed populations of a mixed-mating plant A. Raunsgard</p>	<p>S15.08 Discovering the Legacy of Atlantic cod exploitation using ancient DNA G. Ferrari</p>
14.30	<p>S13.029 Understanding sex differences in crossing-over patterns M. Kivikoski</p>	<p>S2.09 Parental care relaxes selection and increases genetic variation S. Pascoal</p>	<p>S26.018 Coevolution of female fidelity and male help under interactions between intra- and inter-locus sexual conflict Xiang-Yi Li</p>	<p>S15.09 The aboriginal heritage project and the modern human colonization of Australia J. Teixeira</p>
14.45	<p>S13.030 Structural variants in a haplotype-resolved hybrid rabbit genome E. Enbody</p>	<p>S2.010 Dynamic phenotypic plasticity evolves in response to experimental environmental predictability C. Leung</p>	<p>S26.019 Sexual conflict and the diversity of warning patterns in <i>Heliconius</i> butterflies M. Freire</p>	<p>S15.010 The population dynamics of eastern Siberia revealed by Lake Baikal region H. Yu</p>
15.00	<p>S13.031 Positive selection on sociobiological traits in invasive fire ants E. Privman</p>	<p>S2.011 The Genomics of Selfing in Maize (<i>Zea mays</i> ssp. <i>mays</i>): Catching Purging in the Act A. Muyle</p>	<p>S26.020 Sexually antagonistic coevolution between the sex chromosomes of <i>Drosophila melanogaster</i> C. Olito</p>	<p>S15.011 Genome-wide ancient-DNA investigation characterizes a genetic contact point in the Eneolithic southwestern Russia K. Majander</p>
15.15	<p>S13.032 Genomic architecture underlying the evolution of a novel form of social organisation R. Pracana</p>	<p>S2.012 Optimizing the power to identify the genetic basis of complex traits with E&R studies C. Vlachos</p>	<p>S26.021 Sexually-antagonistic selection on dispersal in a cooperatively-breeding bird J. Green</p>	<p>S15.012 Genes and language in the prehistory of Uralic-speaking peoples O. Vesakoski</p>
15.30	<p>COFFEE & EXHIBITION & OUTREACH (Art up your evolution, Outreach stage, Teatro lobby)</p>			

	MOVE1	MOVE2	LOGI2	GOTO33
	S27: SOCIAL TRAITS	S1: TRANS GEN PLAST	S19: GENO-PHENO	S24: MICROBIAL STRESS
14.00	S27.07 Helping Results in Indirect Fitness Gains in Cooperative Birds P. Downing	S1.07 Evolutionary insights into transgenerational effects of pesticides V. Castaño-Sanz	S19.07 The evolutionary history of Alba, a trans-specific Alternative life history strategy K. Tunström	S24.07 Long lasting infections select for poorly transmitted bacterial variants M. Cambon
14.15	S27.08 The design of the social hierarchy in spotted hyenas A. Courtiol	S1.08 Longer life span is associated with elevated immune activity in a seasonally polyphenic butterfly T. Esperk	S19.08 Evolution of photoperiodic flowering and the VRN2/-CO9 genes in temperate Pooideae grasses S. Fjellheim	S24.08 Lysed bacterial cells inhibit population growth in multiple bacterial species F. Smakman
14.30	S27.09 Social organization in ungulates: revisiting Jarman's hypotheses K. Szemán	S1.09 Trans-generational effects of prenatal thyroid hormones in a wild bird species T. Sarraude	S19.09 The genetic underpinnings of bird beak shape morphological evolution on a macroevolutionary scale T. Gossmann	S24.09 Artificial selection for cooperative degradation of toxins in small bacterial communities B. Vessman
14.45	S27.010 The fitness benefits of living with kin in a long-lived, social mammal E. Lynch	S1.010 The effect of early-life stress on DNA methylation and exploratory behaviour in wild great tits B. Sepers	S19.010 Many options, few solutions: over 60 million years snakes converged on few optimal venom formulations A. Barua	S24.010 The evolution of mass suicide in bacterial warfare E. Granato
15.00	S27.011 Towards richer game-theoretical models: How does uncertainty about the social environment influence reproductive skew? L. Olivier	S1.011 Symbiont-mediated maternal effects on pathogen resistance in the pea aphid, <i>Acyrtosiphon pisum</i> M. Hasoon	S19.011 A codon model for associating phenotypic traits with altered selective patterns of sequence evolution K. Halabi	S24.011 Positive linkage between public goods suggests that generalist producers prevail in natural <i>Pseudomonas</i> communities J. Kramer
15.15	S27.012 Human behaviour in economic games/social-dilemmas: designed to benefit the group, or the actor? M. Burton-Chellew	S1.012 Role of epigenetic mechanisms during evolutionary adaptation to chronic malnutrition B. Erkosar	S19.012 Phylogenetic comparative approaches to uncover the genomic basis of species' phenotypic differences M. Hiller	S24.012 Eco-evolutionary approach to species coexistence T. Hiltunen
15.30	COFFEE & EXHIBITION & OUTREACH (Art up your evolution, Outreach stage, Teatro lobby)			

LOGOMO HALL

TEATRO

GALLERIA

LOGI1

S13: ADAPT GEN

S2: EXP EVOL

S26: SEX CONFLICT

S3: NON-GEN INHERIT

16.00	<p>S13.033 Predation effects on fitness: genotype-phenotype mapping in <i>Daphnia</i> M. Cordellier</p>	<p>S2.013 Identifying the mechanisms that underlie adaptation against oral bacterial infection in <i>D. melanogaster</i> T. Paulo</p>	<p>S26.022 The genetic architecture of intra-locus sexual conflict in a pedigreed wild population L. Peters</p>	<p>S3.08 What is 'non-genetic' inheritance? Insights from Molecular-Evolutionary Crosstalk I. Adrian-Kalchhauser</p>
16.15	<p>S13.034 The contribution of pleiotropy to repeatable patterns of genomic divergence in threespine stickleback D. Rennison</p>	<p>S2.014 Environmental heterogeneity disrupts the symmetry of host-parasite reciprocal selection, driving predictable variation in coevolutionary outcomes S. Auld</p>	<p>S26.023 Sex differences in genetic underlying of personality traits S. Kralj-Fišer</p>	<p>S3.09 Horizontal transmission and evolution of microbe-induced cooperation O. Lewin-Epstein</p>
16.30	<p>S13.035 Independent evolutionary trajectories underlie winter coat colour polymorphism in mountain hares I. Giska</p>	<p>S2.015 The feedback between selection and demography shapes coevolutionary genetic change C. Retel</p>	<p>S26.024 Temperature as a modulator of sexual selection and sexual conflict P. Carazo</p>	<p>S3.010 (In)exhaustible suppliers for evolution? Epistatic selection tunes the adaptive potential of non-genetic inheritance S. Charlat</p>
16.45	<p>S13.036 Characterizing the genetic basis of adaptation to arid environments in <i>Drosophila melanogaster</i> European populations V. Horvath</p>	<p>S2.016 The home advantage: Ancestral microbes aid host adaptation to novel environments A. Agarwal</p>	<p>S26.025 Sex-biased gene expression is repeatedly masculinized in asexual females D. Parker</p>	<p>S3.011 The impacts of epigenetic variation on the rate of speciation with gene flow P. Greenspoon</p>
17.00	<p>S13.037 Combining drug metabolism phenotypes and genomic diversity to understand evolution in metabolism of exogenous substances M. Mouterde</p>	<p>S2.017 Can parasite evolution reinforce the effects of climate warming? J. Wolinska</p>	<p>S26.026 Contrasting rates of molecular evolution in reproduction-related genes in <i>Macrostomum</i> flatworms with different reproductive strategies R. A. W. Wiberg</p>	<p>S3.012 Early-exposure to new sex pheromone blend alters mate preference in butterflies and in their offspring E. Dion</p>
17.20 19.20	POSTER SESSION II			

	MOVE1	MOVE2	LOGI2	GOTO33
	S27: SOCIAL TRAITS	S36b: PHYLOGEO & SYST	S36d: GENOME EVOL	S36c: SPP INTERACT
16.00	<p>S27.013</p> <p>A trait-based approach to map behaviour across species</p> <p>M. E. Herberstein</p>	<p>S36b.06</p> <p>Admixture among North American Canids: coyotes, wolves and the beasts between</p> <p>A. Carmagnini</p>	<p>S36d.06</p> <p>Polyploidy and floral evolution in a highly variable, coevolving plant species</p> <p>K. Gross</p>	<p>S36c.01</p> <p>Herbivores and plant defences affect selection on plant reproductive traits more strongly than pollinators</p> <p>J. Santangelo</p>
16.15	<p>S27.014</p> <p>Bellicose bias: how sex differences in dispersal influence intrasexual aggression</p> <p>E. Bath</p>	<p>S36b.07</p> <p>Enriching conserved genomic elements to resolve relationships among sawflies</p> <p>W. Saskia</p>	<p>S36d.07</p> <p>Mutation-rate plasticity and the germline of unicellular organisms</p> <p>D. Aanen</p>	<p>S36c.02</p> <p>Evidence for a chemical arms race: Lessons from a chemical mimicry system of cuckoo wasps</p> <p>T. Schmitt</p>
16.30	<p>S27.015</p> <p>The Strategic Reference Gene: an organismal theory of inclusive fitness</p> <p>L. Fromhage</p>	<p>S36b.08</p> <p>ddRAD sequencing reveals the evolutionary history of the snail <i>Charpentieria itala</i> in the Southern Alps</p> <p>J. Xu</p>	<p>S36d.08</p> <p>Genomic introgression through newt hybrid zones – evidence from replicated transects</p> <p>P. Zieliński</p>	<p>S36c.03</p> <p>Mutualism mediates infection risk by an antagonist in experimental populations</p> <p>J. Eck</p>
16.45	<p>S27.016</p> <p>Genotype-by-environment interactions on sociability in threespine sticklebacks</p> <p>N. Pilakouta</p>	<p>S36b.09</p> <p>Environmental variables shaping the distribution and hybridization in <i>Heliconius</i> butterflies</p> <p>N. Rueda</p>	<p>S36d.09</p> <p>The role of chromosomal inversions in the speciation history of two <i>Drosophila virilis</i> group species</p> <p>N. Poikela</p>	<p>S36c.04</p> <p>Fitness trade-offs associated with host resistance in a natural insect host-ecto-parasite symbiosis</p> <p>M. Polak</p>
17.00	<p>S27.017</p> <p>Ecological and social constraints promote social evolution in the clown anemonefish</p> <p>R. Branconi</p>	<p>S36b.010</p> <p>Phylogenomics of the <i>Hyalella</i> (Amphipoda: Crustacea) species-flock in Lake Titicaca, High Andes</p> <p>F. Zapelloni</p>	<p>S36d.010</p> <p>Exposure to environmental radionuclides associates with altered metabolic and immunity pathways in a wild rodent</p> <p>J. Kesäniemi</p>	<p>S36c.05</p> <p>High conspecific density reduces hoarding success and affects sex-specific spatial distribution among wintering pygmy owls</p> <p>E. Koivisto</p>
17.20 19.20	POSTER SESSION II			

LOGOMO HALL

TEATRO

GALLERIA

LOGI1

8.55

ESEB initiatives and practical information

9.05

KEYNOTE V Rasmus Nielsen, Human adaptation in time and space

S13: ADAPT GEN

S2: EXP EVOL

S36a: SEX & SELECT MATING

S28: GAME THEORY

10.00

S13.038

The impact of protein architecture on adaptive evolution
A. F. Moutinho

S2.018

The genetic and molecular bases of real-time bacterial tRNA evolution
J. Gallie

S36a.01

How diversity in parental care evolves: a phylogenetic comparative study in amphibians
A. Furness

S28.01

Improving treatment of metastatic cancers through evolutionary game theory
K. Stankova

10.15

S13.039

Adaptation to high soil trace metal element concentrations in *Arabidopsis arenosa*
C. Sailer

S2.019

Bacterial predator-prey coevolution selects on virulence-associated prey defences
R. Nair

S36a.02

Cobreeding females adjust their reproductive decisions by investing more in eggs and less in care
J. Richardson

10.30

S13.040

Regulatory evolution of metabolic adaptations in cavefish
N. Rohner

S2.020

Forecasting experimental evolution in *Pseudomonas*
P. Lind

S36a.03

Cannibalism rescues fitness impacts of skewed sex-ratios in red flour beetle *Tribolium castaneum*
I. Khan

S28.02

N-player collaborative hunting in yellow yellow saddle goatfish (*Parupeneus cyclostomus*)
R. Bshary

10.45

S13.041

True survivors: response to bat fungal pathogen varies according to exposure history
T. Lilley

S2.021

Evolution of Multicellularity: Cheating Done Right
W. Veit

S36a.04

Parental investment and sexual dimorphism in immunity
V. Revathi Venkateswaran

11.00

COFFEE & EXHIBITION & OUTREACH

(Art up your evolution, Outreach stage, Teatro lobby)

	MOVE1	MOVE2	LOGI2	GOTO33
8.55	ESEB initiatives and practical information			
9.05	KEYNOTE V Rasmus Nielsen, Human adaptation in time and space			
	S27: SOCIAL TRAITS	S30: POLLINATOR	S9: MICROBES & FOOD	S5: AGING & CANCER
10.00	S27.018 Cooperative adaptations and exploitation resistance in social amoebae J. Strassmann	S30.01 Preparedness and contra-preparedness in pollinator learning A. Dunlap	S9.01 Domestication of microbial communities for bread making : insights from a participatory research project D. Sicard	S5.01 Cancer resistance mechanisms in long-lived mammals V. Gorbunova
10.15	S27.019 Siderophore investment strategies in <i>Pseudomonas aeruginosa</i> S. Mridha			
10.30	S27.020 The social control of virulence and the mystery of defective viruses A. Leeks	S30.02 Eco-evolutionary feedbacks between floral traits and pollinator behaviour in deceptive pollination interactions A. Ellis	S9.02 The fungal genus <i>Aspergillus</i> as a model to study microbial domestication J. Gibbons	S5.02 Evolutionary genomics, aging and cancer J. P. de Magalhaes
10.45	S27.021 Evolutionary Forces Behind the Diversification of Public Goods in Bacteria A. Figueiredo			
11.00	COFFEE & EXHIBITION & OUTREACH (Art up your evolution, Outreach stage, Teatro lobby)			

LOGOMO HALL

TEATRO

GALLERIA

LOGI1

S13: ADAPT GEN

S2: EXP EVOL

S36a: SEX & SELECT MATING

S28: GAME THEORY

11.30	<p>S13.042 Genomic introgression facilitated adaptation of European aspen to short growing seasons in northern Scandinavia M. Rendón-Anaya</p>	<p>S2.022 Spatial selection and experimental evolution of parasite dispersal strategies G. Zilio</p>	<p>S36a.05 How does the environment influence the expression of animal mate choice and sexual signalling? L. Dougherty</p>	<p>S28.03 Microbial public goods games in a toxic environment: to degrade or to resist? S. Shibasaki</p>
11.45	<p>S13.043 Hitch-hiking laterally-acquired genes contribute to delayed adaptation J. Olofsson</p>	<p>S2.023 The effects of predation on body and fin morphology in replicated mesocosms N. Alioravainen</p>	<p>S36a.06 Genetic architecture of reproductive performance in response to thermal stress M. Zwoinska</p>	<p>S28.04 Adaptive dynamics in spatially structured populations T. Priklopil</p>
12.00	<p>S13.044 Evidence that viruses, particularly SIV, drove genetic adaptation in natural populations of eastern chimpanzees A. Andrés</p>	<p>S2.024 Reproductive interference as a driver of species exclusion and evolution in spider mites M. Cruz</p>	<p>S36a.07 Experimental evidence for genetic and phenotypic effects of sexual selection on germline mutation rate J. Baur</p>	<p>S28.05 Evolutionary Dynamics of Coordinated Cooperation H. Ohtsuki</p>
12.15	<p>S13.045 The role of sRNA dominance modifiers in transitions to selfing in <i>Capsella</i> J. Bachmann</p>	<p>S2.025 Multi dimensional niche evolution of a crop pest (<i>Callosobruchus maculatus</i>) under climate change A. Leonard</p>	<p>S36a.08 Evolution of sexual signals in closely related frog species occurring in sympatry S. Goutte</p>	<p>S28.06 Effects of uncertainty and learning on the behaviour predicted by evolutionary game theory A. Higginson</p>
12.30	<p>S13.046 Environmentally dependent rewiring of epistatic networks and their contributions to quantitative trait plasticity Y. Zan</p>	<p>S2.026 Eco-Evolutionary feedbacks in range expanding food webs: experimental evidence from small worlds E. Fronhofer</p>	<p>S36a.09 Evolution of female promiscuity in songbirds J. T. Lifjeld</p>	<p>S28.07 Reinforcement learning leads to bounded rationality in a public goods game O. Leimar</p>
12.45	LUNCH & EXHIBITION			
13.30	ESEB members meeting			
14.30	<p>Incoming president's address <i>Ophelie Ronce</i>, Integrating niche evolution with life history theory can help us better understand the consequences of climate change</p>			
15.10	Leg stretching break			
15.20	JMS award winner 2019			
	<i>Karl Grieshop</i> , Sexual conflict and the maintenance of genetic variance in fitness			
15.50	Closing ceremony			
16.20	Closing ceremony			
18.30	Congress dinner at Muuminworld			
02.00	Congress dinner at Muuminworld			

	MOVE1	MOVE2	LOGI2	GOTO33
	S27: SOCIAL TRAITS	S30: POLLINATOR	S9: MICROBES & FOOD	S5: AGING & CANCER
11.30	S27.022 Farming plant cooperation for more sustainable agriculture G. Montazeaud	S30.03 Nectar chemistry changes pollinator behavior with implications for plant fitness P. Jones	S9.03 Rapid pathogen resistance evolution can shape the biocontrol efficiency of plant growth promoting Pseudomonas bacteria S. Clough	S5.03 Competition and cancer invasiveness in ageing landscapes S. P. Castillo
11.45	S27.023 Cooperation and cheating among germinating spores S. Pande	S30.04 Pollinator preference and flowering phenology: how to solve reproductive conflicts between species that share pollinators R. Pérez-Barrales	S9.04 Study of the domestication in the blue cheese fungus Penicillium roqueforti T. Caron	S5.04 Cancer evolution in hierarchal organised tissues P. Ashcroft
12.00	S27.024 Social plasticity in the wild K. Strickland	S30.05 Mimicry and competition drive flower colour polymorphisms in sunbird-pollinated Erica A. Coetzee	S9.05 New model to assess genomic and functional effects of microbial domestication in food environments K. Chacon-Vargas	S5.05 Choose your death: adaptive cell senescence predicts a late-life decrease of cancer prevalence T. Tissot
12.15	S27.025 The evolution of social bet-hedging strategies T. Aubier	S30.06 Foraging preferences of bees and birds – assessing the adaptive value of heteranthy in Merianieae flowers A. Dellinger	S9.06 Water kefir: metagenomic analysis of a drinkable symbiotic communities of bacteria and yeast J.-B. Boulé	S5.06 Lifelong telomere dynamics in wild Soay sheep H. Froy
12.30	S27.026 Greenbeard genes: theory and reality P. Madgwick	S30.07 Should I stay or should I go? Diascia plants frequently shift their Rediviva pollinators B. Kahnt	S9.07 Characterisation of microbial communities on different apple varieties and orchard management practices E. Britt	S5.07 Limited longevity in a finite world J. Lehtonen
12.45	LUNCH & EXHIBITION			
13.30	ESEB members meeting			
14.30	Incoming president's address Ophelie Ronce, 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 Grieshop, Sexual conflict and the maintenance of genetic variance in fitness			
15.50	Closing ceremony			
16.20	Closing ceremony			
18.30	Congress dinner at Muuminworld			
02.00	Congress dinner at Muuminworld			

POSTER LIST

POSTER SESSION TUESDAY 17.20-19.20

4. Cognitive evolution and environment

S4.P1

Do developmental changes in fitness trade-offs predict mechanosensory cues for escape-hatching decisions?

Chloe Fouilloux

S4.P3

Predator identification from salivary DNA left on artificial prey

Daniela Rößler

S4.P4

Ecology of cognitive evolution in Heliconiini 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 Javoiš

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 phages 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 longhorned 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

S6.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 Kempainen

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 McLaughran

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

Matthew Brachmann

S10.P7

Digging up rapidly evolved traits in Italian Wall lizard (*Podarcis siculus*)

Óscar Mira

S10.P8

Real-time evolution under climate warming: an experimental approach in populations of contrasting biogeographical history

Pedro Simões

S10.P9

Investigating the adaptive role of noise in gene expression

Pierre Laye

S10.P10

Is timing of spring arrival genetically controlled in a long-distant migrant?

Miloš Krist

S10.P11

Rapid phenotypic diversification among new stickleback populations created by a huge earthquake and subsequent tsunamis

Takuya Hosoki

S10.P12

Raccoon MHC diversity in native and introduced ranges: reduced allele diversity but not allele divergence

Aleksandra Biedrzycka

S10.P13

The evolution of the genetic architecture of traits under artificial selection

Yvonne Wientjes

S10.P14

Perceived risk affects the genetic integration of behaviour and morphology in two stickleback populations

Niels J. Dingemans

S10.P15

How to deal with environmental changes: Molecular characterisation of (non) genetic mechanisms on invasive species

Pierre Marin

S10.P16

Visual habitat choice in East African cichlids

Elodie Wilwert

S10.P17

Adaptive evolution and functional differentiation of testis expression genes in *Theria*

Yukako Katsura

S10.P18

Rapid evolution in highly fecund populations

Bjarki Eldon

S10.P20

The ghosts of evolutionary past: Phytoplankton's adaptive potential in a crowded changing world

Maria Elisabetta Santelia

S10.P21

Sympatric stickleback in space: the role of selection and gene flow

Thijs M.P. Bal

S10.P22

The role of inversions in driving local and sex-specific adaptation

Filip Ruzicka

S10.P23

Effects of fungicide on a nontarget species, Colorado Potato Beetle (*Leptinotarsa decemlineata*)

Shahed Saifullah

S10.P24

Investigation of immune response in a seasonal *Drosophila melanogaster* population

Ekin Demir

S10.P25

Genetic perspective of seasonal adaptation in *Drosophila phalerata*

Chedly Kastally

S10.P26

Adaptation to seasonal fluctuations in desiccation tolerance in a natural population of *Drosophila melanogaster*

Nur Seda Coşkun

S10.P27

Plasticity and epigenetic inheritance in the aphid parasitoid *Aphidius ervi*

Mark Lammers

S10.P28

Unexpected evolutionary dynamics of phenotypically important tandem repeats: a model of flocculin evolution in brewing

Colette St. Mary

11. Quantitative trait effect size distributions and their impact on evolutionary processes

S11.P1

Investigating genetic bases of hybrid sterility using wild-derived inbred strains from mouse hybrid zone populations

Paigan Aspinall

S11.P2

Genomic region including major seed dormancy QTL strongly contributes to local adaptation in *Arabidopsis thaliana*

Giulia Zacchello

S11.P3

Estimation of proportions of additive and non-additive genetic variance components

Anna-Margarete Staehler

S11.P4

Unravelling the mechanisms of population phenotypic changes: does individual differences matter for colonisation?

Marion Nicolaus

S11.P5

A polygenic network for pupation site choice behavior in *Drosophila melanogaster*

Wenyu Zhang

S11.P6

Genetic architecture of sexual dimorphism in the seed beetle *Callosobruchus maculatus*

Philipp Kaufmann

S11.P7

Reconstructing the evolutionary dynamics of a functional variant in a spatially distributed natural population

Ahmed Elfarargi

12. Quantifying selection and evolvability in wild plant populations: methods and measurements

S12.P1

Genomic quantification of selection on regions of open chromatin in *Capsella grandiflora*

Robert Horvath

S12.P2

Evolution of plant phenotypic plasticity to grassland management

Anna Kirschbaum

S12.P3

Linking dendroecology and association genetics in forest trees

Katrin Heer

S12.P4

Quantum speciation and genetic swamping in a range-limited Species

Mitch Cruzan

S12.P5

Assessing differences on evolutionary rates between haploid and diploid tissues in *Pinus sylvestris*

Sandra Cervantes

S12.P6

The effects of natural and artificial selection on seedling traits in Scots pine

Outi Savolainen

S12.P7

Using seed banks to investigate shifts in drought resistance in four Mediterranean herbs

Robert Rauschkolb

S12.P8

Evolutionary-based resilience of wild populations

Ivan Scotti

14. The mechanisms of evolutionary change: moving from genomic signatures to functional validation

S14.P1

Seasonal and allele-specific expression dynamics of a major age-at-maturity gene in Atlantic salmon

Jukka-Pekka Verta

S14.P2

Six6 expression in Atlantic salmon suggests a role in the development of body shape

Jacqueline Moustakas-Verho

S14.P3

Dissecting the genetic architecture underlying mouth dimorphism in *Pristionchus pacificus* identifies a super-gene locus

Mohannad Dardiry

S14.P4

Association study reveals genes underlying flower size plasticity in *Arabidopsis thaliana*

Roosa Laitinen

S14.P5

From GWAS to function: expression patterns of age-at-maturity-associated genes in Atlantic salmon

Johanna Kurko

S14.P6

Genetic and nutrition effects on lipid amount and composition in juvenile Atlantic salmon

Andrew House

S14.P7

miRNA expression during the development of different Arctic charr morphologies

Dagny A. Runarsdottir

S14.P8

Understanding functional changes of cold acclimation using ribosomal footprint profiling

Jenni Prokkola

S14.P9

Functional validation of genes involved in fat storage in Atlantic salmon adipocytes using CRISPR

Erica H Leder

S14.P10

Bacteria-derived tail anchors target to discrete organelles when expressed in eukaryotic cells

Cory Dunn

S14.P11

Investigating germ cell specific gene expression across panarthropods

Matthias Janeschik

S14.P12

Functional investigation of plasticity in wing morph determination in a water strider

Erik Gudmunds

S14.P13

Unexpected fructan motifs in *Nardus stricta*: cloning, purification, and functional analysis of an invertase enzyme

Camilla Lorange Lindberg

S14.P14

Narrowing in on the Red Queen: QTL and fine mapping parasite resistance in *Daphnia magna*

Maridel Fredericksen

S14.P15

Genotype-phenotype mapping of skull development and adaptation in squamate reptiles

Joni Ollonen

S14.P16

The genetic underpinnings of bill length variation in great tits (*Parus major*)

Judith Risse

17. Selfish genetic elements**S17.P1**

Sex chromosomes suppress vertical transmission of feminizing *Wolbachia* symbionts in an isopod

Richard Cordaux

S17.P2

The genetic basis of meiotic drive in *Podospira*

S. Lorena Ament Velasquez

S17.P3

Burst of transposable elements is associated with vertebrate differentiation

Feng Shao

S17.P4

Population genetics of a segregation distorter in fungal systems

Ivain Martinossi-Allibert

S17.P5

Do spider mites evolve antagonistic traits against cytoplasmic incompatibility induced by *Wolbachia*?

Flore Zélé

S17.P6

Contribution of TEs mobilization to tomato improvement

Marisol Dominguez

S17.P7

The extent of DNA transfer between plasmids and chromosomes in prokaryotes

Ahmad Samer Kadib Alban

S17.P8

Tracing the onset of the 'green beard' signal in fire ant *Solenopsis invicta*

Qiaowei Pan

S17.P9

Allorecognition genes in Basidiomycetes - a genetic stalemate?

Benjamin Auxier

18. The genetic architecture of polygenic adaptation: sweeps, small shifts and everything in between**S18.P1**

Tracking allele trajectories over 20 generations of selection for long limbs in mice

Layla Hiramatsu

S18.P2

Genomic footprints of polygenic adaptation in *Theobroma cacao*

Tuomas Hämmälä

S18.P3

Natural selection and the lengths of fixed chromosomal inversions

Tim Connallon

S18.P4

Origin and dynamics of adaptive alleles in physiological adaptation in sticklebacks

Jun Kitano

S18.P5

A chromosomal rearrangement explains variation in age of seaward migration in Atlantic salmon

Sarah Lehnert

S18.P6

The resolution of genomic conflicts following admixture in a polygenic hybrid incompatibility model

Flávia Schlichta

S18.P7

Polygenic adaptation of a quantitative trait

Benjamin Wölfl

20. The evolutionary consequences of social transmission and animal culture**S20.P1**

To be or not to be...when individual performance interacts with group composition

Frederic Mery

S20.P2

Role of different types of social information in learning to avoid aposematic prey

Alice Exnerova

S20.P3

Host group relatedness and social transmission of the gut microbiome: an experimental study on ostriches

Hanna Bensch

S20.P4

Informed movement: how information shapes the co-evolutionary outcomes of range-expansion

Katja Rönkä

S20.P5

Social information transfer during dispersal in *Zootoca vivipara*: mechanisms and implications for population dynamics

Mathieu Brevet

S20.P6

The Neolithic transition to large-scale societies is favoured by the co-evolution of cooperation and institutions

Claire Guérin

S20.P7

Evolution of personal and social immunity in the context of family life

Michelle Ziadie

21. Colour across the evolutionary spectrum: from production to perception

S21.P1

Patterns of sex-specific selection and inheritance of a colour pattern polymorphism in an Australian lizard

Genevieve Matthews

S21.P2

Examining the link between relaxed predation and bird colouration on islands

Louis Bliard

S21.P3

Sparring stomatopods: Do coloured patches signal weapon performance?

Amanda Franklin

S21.P4

The molecular basis of continuous flower colour in *Onocyclus* irises

Esther Senden

S21.P5

The repeated evolution of wasp colour-pattern mimicry in hoverflies

Tom Reader

S21.P7

Uncovering the genomic basis of an aposematic colour polymorphism in the wood tiger moth

Eugenie Charley Yen

S21.P8

Potential and realized costs associated with ultraviolet signals in a lizard

Arnaud Badiane

S21.P9

Changing colour in a polluted environment

Asma Althomali

S21.P10

Sexual selection, predation, and the maintenance of polymorphic Y-linked colour genes in the Trinidadian guppy

Josephine Paris

S21.P11

Color evolution in European butterflies evolved via Darwin's, not Wallace's, model of evolution

Christopher W. Wheat

S21.P12

The genetics and condition-dependence of structural colour in mimetic *Heliconius* butterflies

Melanie Brien

S21.P13

Sexual selection predicts the rate and direction of colour evolution in a large avian radiation

Christopher Cooney

S21.P14

Micro-scale architecture of the blue tit feathers

Katarzyna Janas

S21.P15

Phenotypic variation in poison frogs: From predator perception to the molecular basis of color variation

Heike Pröhl

S21.P16

Carotenoid coloration signals a males' tendency to invest in parental care in passerines

Alejandro Gonzalez-Voyer

S21.P17

Genetics and selection of ventral colouration in oviparous and viviparous common lizards

Hans Recknagel

S21.P18

Evaluation of phenotypic resemblance across multiple mimicry rings in *Heliconius*

Maria González-Rojas

S21.P19

Revisiting male colour and opsin polymorphism along the predation regime continuum in the Trinidadian guppy

Lengxob 'Lenny' Yong

S21.P20

Stabilizing selection on individual, conspicuous colour pattern elements of an aposematic nudibranch

Anne Winters

S21.P21

Red and green plumage colouration in a wild x domestic intercross

Jesper Fogelholm

S21.P22

Continuous variation in scale ultrastructure in two *Heliconius* mimics

Juan Enciso-Romero

S21.P23

The effects of genetic and environmental factors on *Drosophila* body color components

Lafuente Elvira

S21.P24

"Fretted with golden fire": structural colouration based on micron and sub-micron structures in selected insects

Dragana Cvetković

S21.P25

Gene expression profiling of aposematism in *Anisomorpha* stick insects

Victor Soria-Carrasco

S21.P26

The evolutionary maintenance of ontogenetic colour polymorphism in wood frogs (*Rana sylvatica*)

Debora Goedert

S21.P27

Effect of natural and sexual selection on wing colour variation of butterflies

Bhavya Dharmaraj

23. Parasite community dynamics and their role in the evolution of host immunity

S23.P1

Parasite-mediated sexual selection in moths
Ke Gao

S23.P3

Social antimicrobial wound care in a predatory ant
Erik Thomas Frank

S23.P4

Pathogens, species distribution and migration: molecular evolution of genes of immunity in cetaceans
Maria Luiza Andreani

S23.P5

Apparent manipulation: How parasites may modify their host's behaviour without using any tricks
Camilla Håkonsrud Jensen

S23.P6

Towards the understanding of zoonotic events in infectious diseases: Tracing animal reservoirs in Switzerland
Christian Urban

S23.P7

Humic-acid-driven escape from eye parasites
Kristina Noreikiene

S23.P9

Seasonal variation in endoparasite biodiversity with age and sex of semi-captive Asian elephant hosts
Carly Lynsdale

S23.P10

Invasions create competitors: How novel interactions among native and invasive parasites modify host parasite coevolution
K. Mathias Wegner

S23.P12

Thermal plasticity in immunity in association with different seasonal strategies for reproduction
Yara Rodrigues

S23.P13

Does gut passage help keep fungus-growing termite gardens disease free?
Leandro Guimaraes

S23.P14

Selection on MHC class II haplotypes in a free-living ruminant
Wei Huang

S23.P18

Less or more? Protective microbe density and defence against parasites
Georgia C Drew

S23.P19

Seasonal patterns of parasite infection and larval developmental mode variation in the polychaete *Pygospio elegans*
Anna-Lotta Hiillos

25. Assortative mating for quantitative traits: mechanisms, estimation, and evolutionary consequences

S25.P1

Hybridization reduces the variation of male sexual phenotype in F1 hybrids: A Meta-analysis
Keisuke Atsumi

S25.P2

Is assortative fertilisation after sperm competition driven by male environment or genetics in common bedbugs?
Jana Křemenová

S25.P3

Assortative mating based on circalunar and circadian timing of adult emergence in *Clunio marinus*
Sina Schirmer

S25.P4

Sperm fertilization capability is shaped by the gamete-level immunological incompatibility in humans
Annalaura Jokiniemi

S25.P5

Characterising genomic patterns of divergence underpinning reproductive isolation in the *Drosophila virilis* group
Leeban Yusuf

31. Life history evolution: bridging theory and data

S31.P1

Body size variation in European common lizards: a range-wide study of a wide-ranging species
Evgeny S. Roitberg

S31.P2

Reproductive costs in eastern grey kangaroo females, the bigger picture
Pauline Toni

S31.P3

Key to kangaroo siring success: be in the right place at the right time
Luca Montana

S31.P4

Optimal germination times in unpredictable environments: the importance of dormancy for among- and within-year variation
Hanna ten Brink

S31.P5

The evolution of reproductive diapause facilitates insect radiation into African savannahs during the late-Miocene
Sridhar Halali

S31.P6

Small eggs, large clutches and parental care: unexpected life-history evolution patterns in shield bugs
Shin-ichi Kudo

S31.P7

Individual variation and evolutionary potential of parasite traits in a songbird-tick system
Gerardo Fracasso

S31.P8

Variation in lifetime reproductive strategies in a self-compatible hermaphrodite: combining field data with laboratory experiments

Anja Felmy

S31.P9

Life history evolution: the constraints of sexual plasticity

Chiara Benvenuto

S31.P10

Experimental removal of sexual selection turns males in to couch potatoes

Martin Garlovsky

S31.P11

Co-evolution of maternal thyroid hormones and life history strategies: comparative and experimental tests

Bin-Yan Hsu

S31.P12

Family dynamics and age-related patterns in marriage probability in historical human population

Jenni Pettay

S31.P13

Seasonality as a predominant control factor of the moult dynamics in birds – a meta-analysis

Agnieszka Gudowska

S31.P14

Natural and laboratory competition experiments between sexual and parthenogenetic polyclonal species of brine shrimp (*Artemia*)

Robert Browne

S31.P15

Within individual variance in foraging behaviour mediates the fitness consequences of broad scale climate phenomena

Samantha Patrick

S31.P16

Alternative reproductive strategies are associated with distinct queen and worker size in *Temnothorax rugatulus* ants

Marina Choppin

S31.P17

Thermal environment at the juvenile stage affects morph-specific offspring survival in a polymorphic damselfly

Maarit Mäenpää

S31.P18

The evolution of adult sex ratios in dragon- and damselflies

Martin Alejandro Serrano-Meneses

S31.P19

Waiting for love – Reproductive delay and assurance under fluctuating population density

Chantal Stock

S31.P20

Maternal resources, early-life care and life-history outcomes: why some mongooses are more equal than others

Emma Vitikainen

S31.P21

Lifespan in wild butterfly populations: genomic determinants and maintenance of standing variation

Vicencio Oostra

S31.P22

Aiming for the moon: Maintenance of local adaptation to tidal regime

Runa Kvamme Ekrem

S31.P23

Survival costs of sons and daughters in Asian elephants

Vérane Berger

S31.P24

Evolutionary trade-offs in antigen-presentation mediate risk for infection and autoimmunity

Jatin Arora

S31.P25

Dietary restriction, sexual selection, and the life history trade-off between reproduction and somatic maintenance

Elisabeth Bolund

S31.P26

A model for the evolution of interspecific obligate brood parasitism in fish

Pierick Mouginot

32. Niche width evolution and its (mal) adaptive significance**S32.P1**

The evolution of habitat choice facilitates niche expansion

Eva Kisdi

S32.P2

Cumulative stress or acclimation? Thermal performance in all life stages of a thermal generalist butterfly

Loke von Schmalensee

33. Evolutionary Ecology of Ageing: from mechanisms to life-history consequences**S33.P1**

Deleterious mutations show increasing negative effects with age in *Drosophila melanogaster*

Martin Brengdahl

S33.P2

RNAi screening of lifespan and fecundity genes in *Drosophila melanogaster* TOR and IIS pathways

Daniel Pritchard

S33.P3

Reversal of the fecundity-longevity trade-off across the spectrum of sociality in the bees

Andreia Teixeira

S33.P4

The effect of food restriction on ageing and fecundity in termite

Silu LIN

S33.P5

Pedigree-based estimation of germline mutation rate of Rhesus macaque (*Macaca mulatta*) linked to parental age

Lucie Bergeron

S33.P6

The evolutionary and developmental dynamics of life history

Mauricio González-Forero

S33.P7

The role of laying and hatching order in early-life telomere dynamics in a wild passerine

Tiia Kärkkäinen

S33.P8

The harsh life of annual killifish – new insights from natural demography and life history

Milan Vrtilek

S33.P9

Diversity of ageing patterns in a highly promiscuous songbird

Eve Cooper

S33.P10

Ant workers' susceptibility to paraquat induced oxidative stress in relation to age and reproductive status

Megha Majoe

S33.P11

Nutrient balance as a mechanism to understand the longevity/fecundity trade-off in ants

Abel Bernadou

S33.P12

Why do dietary restricted animals live longer? Testing the evolutionary theories

Laura Travers

S33.P13

Trade-off between reproductive effort and oxidative status as a response to warming in marine environment

Ella von Weissenberg

S33.P14

A theoretical investigation of the effect of early-life somatic damage levels on senescence rates

Matthias Galipaud

S33.P15

An evolutionary explanation for longevity in naked mole rats

Robert Noble

S33.P16

Is age just a number? The role of senescence in the fish populations' eco-evolutionary dynamics

Silva Uusi-Heikkilä

S33.P17

Contributions of sperm and seminal fluid to ejaculate senescence, and its amelioration via insulin signalling

Irem Sepil

34. Mathematical models in evolutionary biology

S34.P1

Evolutionary rescue and dispersal: the effect of habitat choice on successful adaptation

Peter Czuppon

S34.P2

Microbes can explain the evolution of paternal care

Yael Gurevich

S34.P3

Systemic consequences of reproductive strategies

Laura Hildesheim

S34.P4

Joint evolution of dispersal and connectivity

Petteri Karisto

S34.P5

Evolutionary and demographic consequences of temperature-induced masculinization: the role of sexual selection

Edina Nemesházi

S34.P6

Mutational bias in empirical genotype-phenotype landscapes

Alejandro V Cano

S34.P7

What phylodynamic skyline models can and cannot do

Veronika Boskova

S34.P8

Bet-hedging across generations can affect the evolution of variance-sensitive strategies within generations

Thomas Ray Haaland

S34.P9

Evolution of enzyme concentrations in metabolic pathways

Charlotte Coton

S34.P10

Horizontal transfer and phylogenetic calibration in linguistics: a Bayesian approach

Luke Maurits

S34.P11

Fitness versus risk: calculating a fitness-risk ratio that describes optimal seed heteromorphism

P. William Hughes

S34.P12

Life is not a long quiet river: modelling population genetic divergence when migration is fluctuating

Vincent Calcagno

S34.P13

Gene flow can also lead to a U-shaped site frequency spectrum

Nina Marchi

S34.P14

How does the occasional absence of resources for cooperation affect the evolution of direct reciprocity?

Shun Kurokawa

S34.P15

Coevolution in a hierarchically structured host-parasite metapopulation

Robert Pascal Dünner

S34.P16

Contrasting the impact of cytotoxic and cytostatic drug therapies on tumour progression

Jani Anttila

S34.P17

Sexual selection in space: The effect of spatial structure on sexual selection

Maximilian Tschol

S34.P18

Investigating the role of dispersal in African monarch butterflies and their male-killing endosymbiont

Franziska Brenninger

S34.P19

Modelling the killer T-cell and cancer cell sub-population dynamics under immuno- and chemotherapies

Anni S. Halkola

35. Evolution outreach projects: Keep SCREAMing (Science Communication Research Empowers AMazing outreach)

S35.P1

Connecting Mediterranean fishery stakeholders and scientists to resolve connectivity of fishery populations
Iva Sabolić

S35.P2

A competition in evolution
Barbora Trubenova

S35.P4

Evolution on the way - migrations with EvoCorner
Bojan Kenig

S35.P5

Experimental evolution of *E. coli* resistance to starvation: a practical course for undergraduate students
Christine Dillmann

S35.P6

Power of hands-on experience – DIY Biology and Bio-hacklabs in science outreach
Elzbieta Iwaszkiewicz

S35.P7

Hidden in soil: DNA barcoding and teaching microscopic diversity of soil mites (Acari:Oribatida)
Riikka Elo

36e. Phenotypic Evolution

S36e.P2

A time series model for estimating temporal variation in phenotypic selection
Yihan Cao

S36e.P4

Morphological integration in a cannibalism reaction norm
Kinya Nishimura

S36e.P5

Quantifying evolutionary bias from comparative datasets: a parametric bootstrapping approach for evolutionary covariance matrices
Junya Watanabe

S36e.P6

Capture from the wild and its consequences for Asian elephant reproduction
Mirkka Lahdenperä

S36e.P7

Local adaptation to photoperiod and the endogenous clock in *Daphnia*
Anke Schwarzenberger

S36e.P8

Physiological responses to seasonal environmental variation in a long-lived mammal
Sophie Reichert

S36e.P9

The chewing machine - evolution of mouth morphology in *Drosophila* larvae
Nuno Silva-Soares

S36e.P10

The evolutionary trajectory of consistency in behavioural 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
Katarina Hočevar

S36e.P13

Assessing consequences of environmental stress on wild rodent gut health by transcriptomics, microbiomics and histology
Toni Jernfors

S36e.P14

Age and environment (but not genetics) affect mitochondrial function in a wild bird species
Coline Marciau

S36e.P15

Can female pheromone contribute to the co-existence of color morphs in a moth species?
Chiara De Pasqual

S36e.P16

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

S36e.P17

Evolution to temperate climates in the grass subfamily Poideae
Marian Schubert

S36e.P18

Gender-specific variation in leaf shape under environmental stress in an understory forest perennial
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

S36e.P22

Pheomelanin pigmentation and oxidative balance in Asian barn swallows
Emi Hasegawa

POSTER SESSION FRIDAY 17.20-19.20

1. Trans generational plasticity in animals

S1.P1

Gametic plastic responses in thermally evolving lines of *Tribolium castaneum*
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

S1.P9

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

S1.P10

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

S1.P11

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

S1.P12

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

S1.P14

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

2. Evolution in real time: experimental evolution approaches

S2.P1

Natural selection drives leaf shape divergence in experimental populations of *Senecio latus* under natural conditions
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 McLay

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

S3.P6

Genetic and linguistic histories in Central Asia inferred using Approximate Bayesian Computations
Frédéric Austerlitz

S3.P7

Offspring phenotype is shaped by the non-sperm fraction of semen
Jukka Kekäläinen

S3.P8

Comparative epigenomics unravels the evolutionary landscape of insect DNA methylation
Panagiotis Provataris

S3.P9

Differential maternal and paternal effects on offspring fitness traits
Valérian Zeender

S3.P10

Plasticity, inheritance and epigenetics in plants: Can these be linked?
Morgane Van Antro

S3.P11

Epigenetic contribution to phenotypic plasticity and biotic stress-induced memory in *Populus nigra*
Cristian Peña-Ponton

S3.P12

Evolutionary and plastic cytosine methylation responses to embryonic rearing temperature in European grayling
Tiina Sävilamm

5. Aging & cancer through the lens of evolution**S5.P1**

Predicting tumor evolution and estimating its evolutionary unpredictability using cancer progression models
Ramon Diaz-Uriarte

S5.P2

Extreme-downregulation of chromosome Y and male disease
Alejandro Caceres

9. Microbial genome and community evolution in food environments**S9.P1**

Microbial community dynamics in Gwell, a fermented milk specialty from Brittany. A participatory study
Lucas von Gastrow

S9.P2

Triphosphate nucleotide transport by bacteria is constrained by the oxidative environment
Enrique Gonzalez-Tortuero

S9.P3

Contributions of plasticity and evolution to trait change in a community context
Lynn Govaert

S9.P4

Cheese shapes its *Penicillium* fungi
Jeanne Ropars

13. Genetics and genomics of adaptation**S13.P1**

Rapid divergence of a 'great speciator' following a human-mediated introduction
Ashley Sendell-Price

S13.P2

Local continuous genetic Isolation-by-Environment in the threespine stickleback in the Baltic Sea following predator collapse
Casey Yanos

S13.P3

Detecting deleterious variants in the pig
Martin Johnsson

S13.P4

Inter- and intra-population gene expression variation in the fat body during *Drosophila melanogaster* development
Amanda Glaser-Schmitt

S13.P7

Genomics of adaptation in the Alpine whitefish radiation
Rishi De-Kayne

S13.P8

Genomics of Microphallus parasite adaptation to its host, *Potamopyrgus antipodarum*

Natalia Zajac

S13.P9

Metabolic Efficiency Variation Across Bird Families Measured with Relative Mitochondrial Abundance

Sergio Andreu-Sánchez

S13.P10

Convergent expansion in gene-families and their role on the blood-feeding diet in Insecta lineages

Lucas Freitas

S13.P11

Genomics of clinal adaptation with gene flow in parapatric lake-stream stickleback

Quiterie Haenel

S13.P12

Susceptibility to gapeworm parasite has both additive and dominant genetic components in house sparrows

Sarah Lundregan

S13.P13

The genomes of *Poeciliopsis retropinna* and *Poeciliopsis turrubarensis* reflect differences in reproductive strategy

Henri van Kruistum

S13.P14

Comparative transcriptome profiling of *Triplophysa bleekeri* and *Triplophysa rosa*, reveals potential mechanisms of eye degeneration

Qingyuan Zhao

S13.P15

Winter moth adaptation to climate change: genetic changes in thermal plasticity of embryonic development rate

Natalie E. van Dis

S13.P16

Discovering genetic diversity and structural variation underlying local adaptation in Scots pine

Tanja Pyhäjärvi

S13.P17

Investigating genetic basis of geographic variation in innate immunity of a butterfly

Naomi L.P. Keehnen

S13.P18

A Flutter of Genomes: New and revised high quality genomic resources for 50 Heliconiini species

Francesco Cicconardi

S13.P19

Gene *Trf2* and the microbiome underpin the expression of dormancy in *Drosophila*

Manolis Lirakis

S13.P20

Disperse, acclimatise or adapt: seascape genomics along a thermal gradient

Anna Muir

S13.P21

The genetic basis of convergent adaptation to altitude in *Arabidopsis thaliana*

Pádraic Flood

S13.P22

Genomics of expanded avian sex chromosomes shows predisposition of certain chromosomes towards sex-linkage in vertebrates

Hanna Sigeman

S13.P23

Genome-wide effects of selection in two outcrossing plant species

Tiina Mattila

S13.P25

Nordic conquest: Post-glacial radiation and evolutionary history of lunar-rhythmic and lunar-arrhythmic reproduction in marine midges

Nico Fuhrmann

S13.P26

Natural Variation of defense response genes in *Arabidopsis thaliana* reveals evidence for balancing selection

Mehmet Göktay

S13.P27

The role of gene interactions and gene interaction networks in speciation

Ina Satokangas

S13.P28

Sex-specific alternative splicing in *Drosophila melanogaster*

Julia Raices

S13.P29

Linking genotype, phenotype, and environment to understand climate adaptation in the Glanville fritillary butterfly

Michelle DiLeo

S13.P30

Non-neutral impact of synonymous mutations: example of an antibiotic resistance gene expressed in human cells

Marion AL Picard

S13.P31

White to brown and back: circannual genic regulation of coat colour change in snowshoe hares

João Pimenta

S13.P32

Integration of proteomic data into constraint-based models reveals the molecular bases of yeast life-history trade-offs

Marianyela Petrizelli

S13.P33

Muller's Ratchet and the Long-Term Fate of Chromosomal Inversions

Alexandre Blanckaert

S13.P34

Cross-temperature comparisons of gene expression between heat tolerant and heat sensitive *Brachionus* species

Sofia Paraskevopoulou

S13.P35

Genomic basis of rapid parallel ecological adaptation to heterogeneous environments

Hernan Morales

S13.P37

Chance and predictability: the genomic basis of convergent dietary specializations in an adaptive radiation

Joel Vizueta

S13.P38

Co-speciation in bed bug *Wolbachia*
Ondřej Balvín

S13.P39

The genomic basis of humic substance-driven adaptation in Eurasian perch
Mikhail Ozerov

S13.P40

Mito-jay-nomics: Signatures of environmental adaptation in the first assembled mitogenomes from New World Jays (*Corvidae*)
Katia Bougiouri

S13.P41

Effects of selection on haplotypes and genealogy trees of subdivided populations
Yichen Zheng

S13.P42

Genomics of feralization processes on Hawaiian and Bermudan chickens
Maria Luisa Martin Cerezo

S13.P43

Keeping pace with fast environmental changes, a science-based approach for sustainable Cork Oak forests
Octávio Paulo

S13.P44

Detection of phylogenetically-informative SNPs in human Y-chromosome from next-generation sequencing data
Koji Ishiya

S13.P45

Identifying the genomic and sex-specific characters underlying recombination rate variation
Suvi Ponnikas

S13.P46

Transposable Elements as agents of adaptation in the invasive species *Drosophila suzukii*?
Vincent Merel

S13.P47

Local adaptation of phenotypic plasticity: pupal diapause in the butterfly *Pieris napi*
Peter Pruißscher

S13.P48

Repetitive DNA: a force shaping karyotype evolution in blue butterflies (*Lycaenidae*, *Lepidoptera*)
Martina Dalikova

S13.P49

Transcriptomes from four Iberian *Squalius* fish species indicate stronger positive selection in Mediterranean climate type
Carlos Ramirez

S13.P50

Evolution of AT/GC content in vertebrates
Radka Symonova

S13.P51

The role of host plant in symbiosis stability of Arbuscular mycorrhizal fungi
Shadi Eshghi Sahraei

S13.P52

Heritability of intra-individual variation in body temperature in the wild yellow-necked mouse, *Apodemus flavicollis*
Rohan Raval

S13.P53

Landscape genomics of the wood decay fungus *Phellogilus nigrolimitatus*
Jørn Henrik Sønstebo

S13.P54

Comparative genomics and lineage specific adaptations in *Lepidoptera*
Karin Näsval

S13.P55

Genomic architecture of divergence between parasitic and non-parasitic lamprey ecotypes
Ahmed Souissi

S13.P56

New Insights into the Genetic Basis and Evolutionary History of Lactase Persistence in Africa
Alessia Ranciaro

S13.P57

Complete plastid genome sequence of African nightshade (*Solanum scabrum*) and its comparative plastomics across Solanales
Gaurav Sablok

S13.P58

Antagonistic coevolutionary selection patterns in the *Galerucella-Asecodes* host-parasitoid system
Xuyue Yang

S13.P59

Icefish genome reveals key role of mitochondria for a life without hemoglobin at sub-zero temperature
Chiara Papetti

15. Tracing evolution through time using ancient DNA**S15.P1**

Distinguishing among complex evolutionary models using unphased whole-genome data through Approximate Bayesian Computation
Maria Teresa Vizzari

S15.P2

Ancient DNA screening from Finnish Stone Age sediments
Sanni Peltola

S15.P3

Archaeological sediments from Finland as a source for ancient microbiomes
Enrique Rayo

S15.P4

Mitochondrial DNA from Iron Age to present in Eastern Fennoscandia
Sanni Översti

S15.P5

Inferring population dynamics of the genera *Oryx* and *Addax* using modern and historical DNA
Elisabeth Hempel

S15.P6

The first historic *Treponema pallidum* genomes from Colonial Mexico
Aditya Kumar Lankapalli

S15.P7

Temporal and spatial insights into the genomic evolution of *Yersinia pestis* through comparative analysis

Aida Andrades Valtueña

S15.P8

Optimization of double-stranded library preparation methods for ancient and degraded DNA

Marianne Dehasque

S15.P9

Ancient DNA provides insights into the population history of the reindeer

Matti Heino

16. Mito-nuclear interactions across levels of biological organisation**S16.P1**

The role of selection in maintaining sympatric mito-nuclear variation in *Drosophila subobscura*

Pavle Erić

S16.P2

Mitochondrial Haplotypes and Gene Expression in Laying Hens

Elisabeth Hempel/Clara Heumann-Kiesler

S16.P3

A new layer of genetic regulation in the mitochondrial genome: small mitochondrial RNAs

Andrea Pozzi

S16.P4

The mtDNA-encoded COX2 protein: bivalves have the longest

Eric Pante

S16.P5

Sex-specific effects of candidate Trojan Female Technique haplotype on fertility in pest species *Acanthoscelides obtectus*

Lea Vlajnić

S16.P6

How mitochondrial genetic variation affects longevity in *Drosophila melanogaster*

Ekta

S16.P7

Mito-nuclear interactions in innate immunity and life-history traits

Tiina Salminen

S16.P8

Mitochondrial Diseases and Compensated Pathogenic Deviations

Abhilesh Dhawanjewar

S16.P9

Ancestry Package - Merging uniparental and autosomal genetic histories into one picture

Vladimir Bajić

19. Gene-phenotype associations across evolutionary scales**S19.P1**

Identifying host genomic regions influencing microbial traits in mice

Shauni Doms

S19.P2

Convergence, common ancestry and novelty: Genomics of sex chromosome diversity in cichlid fishes

Astrid Böhne

S19.P3

Evolution of vernalization response in the PACMAD clade of the grass family (Poaceae)

Martin Paliocha

S19.P4

Natural selection on immune defence: a genome-wide gene expression analysis

Teo Cereghetti

S19.P5

Phenotypic associations of arbuscular mycorrhizal fungi to their taxonomy

Merce Montoliu-Nerin

S19.P6

The relationship between the genotypic and phenotypic variation in ringed seals

Mia Valtonen

22. Evolution of host-plant use in arthropods**S22.P1**

Host plant phytochemicals influence life history of butterfly *Papilio polytes* apparently effecting recent host shift

Sarika Baidya

S22.P2

Nutritional dimension underlying symbiosis stability in the leafcutter ant system

Antonin Crumière

S22.P3

Effects of gossypol, a toxic cotton secondary metabolite, on two generalist herbivores

Corinna Krempf

S22.P4

Escalating evolutionary responses to pollen predation

Mario Vallejo-Marin

S22.P5

Host-herbivore dynamics in a changing climate

Erik van Bergen

S22.P6

Summer drought changes the host plant quality and impacts its insect herbivore

Ana Salgado

S22.P7

Eavesdropping trees: phylogeny affects to the reaction of VOCs emitted by the neighbouring tree

Elina Mäntylä

S22.P8

A model of how defense trait interactions shape the evolution of defense following enemy loss

Martijn L. Vandegehuchte

S22.P9

Maize resistance to herbivores: life-cycles synchronisation matters

Christine Dillmann

S22.P10

Species traits limit changes in voltinism to climate warming in moths and butterflies

Tiit Teder

S22.P11

Do host availability and interspecific competition affect habitat selection?

Maud Charlery de la Masselière

24. Microbial evolution under biotic stress**S24.P1**

Rapid loss of CRISPR-mediated herd immunity from bacterial populations

Sean Meaden

S24.P2

Local adaptation of the gut microbiome of *Daphnia magna* under cyanobacterial stress

Shira Houwenhuysse

S24.P3

Ecology, death (by lysis) and evolutionary history – the trinity disentangled

Luisa Listmann

S24.P4

Tracing mobile adaptive traits within complex microbial communities at single-cell resolution

Reetta Penttinen

S24.P6

Microbiome localization and dynamics in blood feeding insects

Giampiero Batani

S24.P7

Effects of long-term exposure to ionizing radiation on Chernobyl's treefrogs and its microbiome

Javier Edo Varg

26. Sexual conflict: linking behavior, genetics and ecology**S26.P1**

Molecular evolution in the “double-clonal” longhorn crazy ant

Hugo Darras

S26.P2

The evolution of sperm gigantism in *Caenorhabditis* nematodes – causes and consequences

Rebecca Schalkowski

S26.P3

Differential gene expression is associated with mating-type chromosomes degeneration in the absence of sexual antagonism

Wen-Juan Ma

S26.P4

Finding thresholds to separate sexual conflict and sex-specific selection in sex-biased genes

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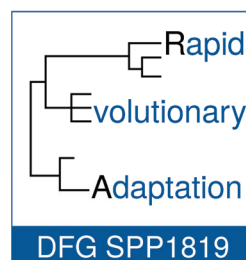
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