

# Australasian Evolution Society

## AusEvo Conference 2023

### Schedule of Events

#### Wednesday 13 December

Time	Activity
12:00 - 14:00	Registration Desk Opens @Scott Theatre Foyer
12:30 - 14:00	Lunch @Pfitzner Court
14:00 - 14:30	Welcome address @Scott Theatre
14:30 - 15:30	Plenary 1: Dustin Rubenstein @Scott Theatre
15:30 - 16:00	Afternoon tea @Pfitzner Court
16:00 - 17:00	Concurrent sessions
17:30 onwards	Welcome event @Unibar Cloisters

#### Thursday 14 December

Time	Activity
09:00 - 09:45	ECR Plenary: Claudia Crowther @Scott Theatre
09:45 - 10:45	Concurrent sessions
10:45 - 11:15	Morning tea @Pfitzner Court
11:15 - 12:30	Concurrent sessions
12:30 - 14:00	Lunch @Pfitzner Court AES General Meeting from 13:00 onwards in Scott Theatre
14:00 - 15:00	Tag Team Talk 1 @Scott Theatre
15:00 - 15:30	Afternoon tea @Pfitzner Court
15:30 - 16:30	Concurrent sessions
16:30 - 17:30	ECR Breakout session @Barr Smith South 2032

#### Friday 15 December

Time	Activity
09:00 - 09:45	ECR Plenary: Samuel Lymbery
09:45 - 10:45	Concurrent sessions
10:45 - 11:15	Morning tea @Pfitzner Court
11:15 - 12:30	Concurrent sessions
12:30 - 13:30	Lunch @Pfitzner Court
13:30 - 14:30	Tag Team Talk 2
14:30 - 15:30	Concurrent sessions
15:30 - 16:00	Afternoon tea @Pfitzner Court
16:00 - 17:00	Flash talks (Scott Theatre)
17:00 - 17:30	Closing and Prizes (Scott Theatre)
17:30 - 19:00	Free time
19:00 - 23:00	Conference Dinner @Peter Rabbit

\*Lunch and Morning/Afternoon tea may be served in the Foyer of Scott Theatre if it is raining outside.

## Daily Program

### Wednesday 13 December

#### Wednesday

#### Opening Plenary

Afternoon	Scott Theatre
14:30 - 15:30	<b>Dustin Rubenstein</b> The Evolution of Cooperative Breeding: New Perspectives and Future Directions

#### Presentations

#### Wednesday

#### Standard talks (10mins + 3 mins questions)

Afternoon	Darling West G14 Lecture Theatre (Room 1) <b>Macroevolution 1</b> (Chair: Matt Symonds)	Scott Theatre (Room 2) <b>Evolution and climate change</b> (Chair: Julian Beaman)
16:00	<b>Zhuzhi Zhang</b> The phylogenetic and parallel origin of Australian soil burrowing cockroaches	<b>Pieter Arnold</b> Selection on phenotypic traits and their plasticity in response to warming of both parental and offspring environments
16:15	<b>Sally Potter</b> Cytonuclear discordance and introgression in the brachyotis group of rock-wallabies	<b>Matthew Hall</b> The sicker sex in a warming world
16:30	<b>Amy Slender</b> Genomic population structure of a widely distributed Southern Australian lizard ( <i>Tiliqua rugosa</i> )	<b>Belinda van Heerwaarden</b> Do endosymbionts influence thermal tolerance?
16:45	<b>Toby Kovacs</b> Historical population sizes and mutation rates in marsupials	<b>Damien Dowling</b> Experimental support for a mitochondrial genetic contribution to climatic adaptation
17:00	<b>Kyle Ewart</b> Pervasive relaxed selection in termite genomes	<b>John Whale</b> Optimus Prime-ing: Can thermal resilience of seagrass seedlings be enhanced by a priming event?

#### Social Event

#### Wednesday

#### Social Event

17:30	University Bar Cloisters
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## Thursday 14 December

Thursday		ECR Plenary 1
Morning	Scott Theatre	
09:00 - 09:45	<b>Claudia Crowther</b> Off the straight and narrow: Non-linear plasticity in a changing world	

Thursday		Standard talks (10mins + 3 mins questions)		
Morning	Darling West G14 Lecture Theatre (Room 1) <b>Reproduction</b> (Chair: Alistair Senior)	Scott Theatre (Room 2) <b>Morphological Evolution 1</b> (Chair: Amy Slender)	Kerr Goat Lecture Theatre (Room 3) <b>Evolution of resistance</b> (Chair: Ros Gloag)	
9:45	<b>Soleille Miller</b> Intergenerational Loss of Genetic Diversity in a Facultative Parthenogenetic Stick Insect Species	<b>Nuttakorn (Win) Taewcharoen</b> No holding back: vertebral column shape in fast-running prey converges on their speedy predators	<b>Thomas Schmidt</b> Global, asynchronous sweeps at multiple resistance genes in <i>Aedes</i> mosquitoes	
10:00	<b>Liang Liu</b> Evolutionary Adaptation of Reproduction: The Pleiotropic Role of TSH $\beta$ 2-Producing Cells in Sticklebacks	<b>Ellen Martin</b> Grasping hold of functional trade-offs using the diversity of foot forms in Australian birds	<b>Joshua Thia</b> Attack of the (resistant) clones: the rise and spread of insecticide resistance in an invasive aphid pest	
10:15	<b>Caitlin Creak</b> Accidentally murderous spiders: a true crime on where they live and how they work.	<b>Russell Bonduriansky</b> What can allometry and life history tell us about the evolution of brain size?	<b>Alicia Williams</b> Costs of antibiotic resistance through the lens of resource competition theory	
10:30	<b>Jinglin Wen</b> Evidence of Maternal-fatal Communication in Skink Pregnancy	<b>Rex Mitchell</b> Sizing up cranial allometry in mammals	<b>Ian Gooi</b> The predictability of antibiotic resistance evolution in <i>Acinetobacter baylyi</i>	

## Thursday

## Standard talks (10mins + 3 mins questions)

<b>Morning</b>	Darling West G14 Lecture Theatre (Room 1) <b>Quantitative/ population genetics</b> <b>(Chair: Rowan Lymbery)</b>	Scott Theatre (Room 2) <b>Invasive species</b> <b>(Chair: Jon Evans)</b>	Kerr Goat Lecture Theatre (Room 3) <b>Microbial Evolution 1</b> <b>(Chair: Masato Yamamichi)</b>
11:15	<b>Peta Hill</b> Episodic population fragmentation and gene flow reveal a trade-off between heterozygosity and allelic richness	<b>Felipe Floreste</b> Host-parasite immune dynamics along the invasion range of cane toads in Australia	<b>Elisha Freedman</b> The distribution of secondary symbionts across scale insects and its evolutionary and ecological implications
11:30	<b>Iva Popovic</b> High germline mutation rates, but not extreme population size outbreaks, influence genetic diversity in a keystone coral predator	<b>Lauren Common</b> The Avian Vampire Fly and Darwin's Finches	<b>Atharva Bhilde</b> Investigating the ecological and coevolutionary dynamics of a root associated microbiome
11:45	<b>Lachlan King</b> The effect of genetic background on quantitative mutational variation	<b>Kelton Cheung</b> Selection signatures of the invasive cane toad through whole genome analyses	<b>Chris Blake</b> Experimental Evolution of Ecosystem Topography in a Two-Species Community
12:00	<b>Katrina McGuigan</b> Effects of spontaneous mutations on fitness traits of <i>Drosophila serrata</i> infected with <i>Drosophila C</i> virus	<b>Ros Gloag</b> A population genetic timeline of a natural insect invasion	<b>James Richardson</b> Species coexistence via higher order consumer-resource interactions
12:15	<b>Simone Blomberg</b> Phylogenetic Comparative Methods for the Quantitative Genetic G-Matrix	<b>Paul Battlay</b> Chromosomal inversions underlie rapid adaptation on multiple continents in an invasive weed	<b>Andrew Letten</b> Not-so-simple assembly rules support multispecies coexistence on a single resource

## Thursday

## Tag Team Talks 1

<b>Afternoon</b>	Scott Theatre
14:00 - 15:00	Post-ejaculatory environments, paternal effects and more

Thursday		Standard talks (10mins + 3 mins questions)		
Afternoon	Darling West G14 Lecture Theatre (Room 1) <b>Sexual selection 1</b> (Chair: Bruno Buzatto)	Scott Theatre (Room 2) <b>Evolution and Conservation 1</b> (Chair: Amanda Petterson)	Kerr Goat Lecture Theatre (Room 3) <b>Microbial Evolution 2</b> (Chair: Matt Symonds)	
15:30	<b>Fatema Akhter</b> Teasing apart the cost of sexual harassment and mating in females	<b>Grace Marsh</b> Genomic vulnerability to climate change in a Critically Endangered possum from southwestern Australia	<b>Christopher Brown</b> rescomp: An R package for resource competition modelling	
15:45	<b>Daniela Wilner</b> Can sexual conflict explain geographic parthenogenesis?	<b>Emily Roycroft</b> Genetic load in island populations of Australian mammals	<b>Neetika Ahlawat</b> Nutrient packaging alters adaptation and genetic divergence in <i>E. coli</i>	
16:00	<b>Nirjana Dewan</b> Long-term fitness consequences of <i>D.melanogaster</i> populations evolved in the absence versus presence of male-male competition	<b>Oliver Stuart</b> Genetic rescue of reproductive fitness in a captive bred insect	<b>Jan Engelstaedter</b> The impact of natural transformation on adaptation to heterogeneous environments	
16:15	<b>Pietro Pollo</b> Synthesis of sexual selection: a systematic map of meta-analyses with bibliometric analysis	<b>Aysegul Birand</b> Cheating evolution for conservation	<b>Michael McDonald</b> Horizontal gene transfer: making things happen in the microbial world	

## ECR Event

Thursday		ECR Breakout Session
17:30	Barr Smith South 2032	

## Friday 15 December

Friday		ECR Plenary 2
Morning	Scott Theatre	
09:00 - 09:45	<b>Samuel Lymbery</b> Warfare in ants and video games	

Friday		Standard talks (10mins + 3 mins questions)		
Morning	Darling West G14 Lecture Theatre (Room 1) <b>Morphological Evolution 2</b> (Chair: Masato Yamamichi)	Scott Theatre (Room 2) <b>Evolution and Conservation 2</b> (Chair: Ros Gloag)	Kerr Goat Lecture Theatre (Room 3) <b>Development</b> (Chair: Jon Evans)	
9:45	<b>Yuxuan (George) Zhao</b> Hourglass-shaped adults and 'Pinocchio-listed' larvae: Morphological transition of Australian water beetles (Coleoptera: Dytiscidae) from aboveground to underground	<b>Maxim Adams</b> Evolution, phylogeography and conservation genetics of the Lord Howe Island cockroach <i>Panesthia lata</i>	<b>Ondi Crino</b> From eggs to adulthood: unveiling the sustained impacts of developmental conditions on skink physiology and size	
10:00	<b>Tory Botha</b> Shape note: Morphological investigation of Tribrachidium from Nilpena, South Australia	<b>Patra Petrohilos</b> Attack of the Clones: no evidence for distinct phenotypic subgroups of Devil Facial Tumour Disease (DFTD)	<b>Huifang Yuan</b> Pioneer and immediate early transcription factors orchestrate an environmentally-induced life cycle transition that is highly conserved across the animal kingdom	
10:15	<b>Natasha Lee Hiotis</b> Hip, hop, and a fossil drop: Identifying fossil frogs from Naracoorte Caves using their ilium bone	<b>Julian Beaman</b> Eco-evolutionary projections to guide genetic rescue for threatened Australian marsupials	<b>Ivan Vinogradov</b> How inbreeding and developmental stress impact cognition	
10:30	<b>Vera Weisbecker</b> The thylacine as an evolutionary curiosity	<b>Bob Wong</b> Toxicants in the wilderness: an evolutionary perspective	<b>Alistair Senior</b> Nutrition and life-history in <i>Drosophila melanogaster</i>	

Friday		Standard talks (10mins + 3 mins questions)	
Morning	Darling West G14 Lecture Theatre (Room 1) <b>Macroevolution 2 (Chair: Amy Slender)</b>	Scott Theatre (Room 2) <b>Evolution and temperature (Chair: Ondi Crino)</b>	Kerr Goat Lecture Theatre (Room 3) <b>Evolution: not classified elsewhere (Chair: Alistair Senior)</b>
11:15	<b>Patrice Pottier</b> Vulnerability of amphibians to global warming	<b>Amanda Pettersen</b> Intergenerational plasticity aligns with temperature-dependent selection on offspring metabolic rates	<b>Fabian C. Salgado-Roa</b> Drivers of colour polymorphism in a colourful widespread spider
11:30	<b>Carmen da Silva</b> Local climate change velocity and evolutionary history explains multidirectional range shifts in North American butterflies	<b>Jigmidmaa Boldbaatar</b> Effects of heat shock stress on egg hatching success in <i>Megacrania batesii</i> (Phasmatodea: Phasmatidae)	<b>Christopher Barker</b> Evolution of Ageing is driven adaptive gains
11:45	<b>Yun Li</b> Evolution across adaptvie landscape in a hyperdiverse beetle radiation	<b>Md Mahmud Al Hasan</b> Effects of inbreeding and stressful developmental temperatures on guppy fitness	<b>Daisuke Kyogoku</b> Evolution of realized niche breadth diversity driven by community dynamics
12:00	<b>Diego Garcia-Bellido</b> Australian Ediacaran & Cambrian contribution to Evolution	<b>Rebecca Raynal</b> Natural oviposition site temperatures of ectotherms - a review	<b>Masato Yamamichi</b> Prey rapid evolution promotes fluctuation-dependent species coexistence
12:15	<b>Doaa Doudin</b> Evolution of subtelomeres in birds and reptiles	<b>Diego de Moura Campos</b> Synergistic effects of diet restriction and temperature on guppy development	<b>Devi Stuart-Fox</b> From bioinspired to bioinformed: materials science meets evolutionary biology
Friday	Tag Team Talks 2		
Afternoon	Scott Theatre		
13:30 – 14:30	Recent Advances in Ancient DNA		

**Friday****Standard talks (10mins + 3 mins questions)**

<b>Afternoon</b>	Darling West G14 Lecture Theatre (Room 1) <b>Sexual selection 2 (Chair: Pietro Pollo)</b>	Scott Theatre (Room 2) <b>Morphological Evolution 3 (Chair: Vera Weisbecker)</b>	
14:30	<b>Megan Folwell</b> Co-evolution of genitalia in Northern Pacific rattlesnakes ( <i>Crotalus oreganus</i> )	<b>Sarin (Putter) Tiatragul</b> Spags and Snags: morphological evolution of Australian blindsnakes	
14:45	<b>Bruno Buzatto</b> Mating behaviour in the Sydney funnel-web spider and the evolution of clasping structures in mygalomorph spiders	<b>Tamika Nash-Hahn</b> Sequential scales: New perspectives on snake axial evolution	
15:00	<b>Tom Allison</b> Sexual selection shapes the evolution of mitochondrial efficiency	<b>Yasmin Asar</b> Testing the link between molecular and morphological rates of evolution	
15:15	<b>"Martin Whiting</b> Evolution of a conspicuous dynamic visual signal in an introduced chameleon"	<b>Estefany Karen Lopez Estrada</b> Testing the punctuated equilibria model using morphological and molecular data"	

**Friday****Flash talks (3 minutes, no questions)**

<b>Afternoon</b>	Scott Theatre
16:00 – 17:00	Jasmine Towle Aubrey Keirnan Meg Martin Austin Fitzpatrick Lorenzo Ricolfi Melissa Hernandez Poveda Lucy Ockert Adi Nugroho Veerabhadra (Raju) Dantuluri Lynea Witczak Oldfather Tariq Ezaz Marcus Michelangeli



Conference dinner

**Friday**

**Conference dinner**

19:00

Peter Rabbit  
234-244 Hindley St