

# STICKLEBACK 2025: 11<sup>th</sup> International Conference on Stickleback Behaviour and Evolution

## Sunday, July 27

- 08:00 – 11:30      **The Lady Rose sailing from Port Alberni to Bamfield**  
*Please arrive at the dock by 7:30am to purchase your ticket*
- 13:30 – 17:00      **Check-in and activities**
- 17:00 – 19:00      **Welcome Reception**  
*Welcome address from Sean Rogers, Director, Bamfield Marine Sciences Center*  
*Welcome address from Huu-ay-aht First Nations*
- 19:00 – 20:00      **Dinner Break** (dinner service 19:00-19:30)
- 20:15 – 21:15      **Histories of Stickleback Research: Tom Reimchen**

## Monday, July 28

- 08:00 – 09:00      **Breakfast Break** (breakfast service 8:00-8:30)

### Session 1: Adaptation and Speciation (Moderator: Katie Peichel)

- 09:00 – 09:45      **Keynote speaker: Jun Kitano**  
*Ecological genetics of adaptation and speciation in the Japanese sticklebacks*
- 09:45 – 10:00      **Megan Barnes**  
*Adaptive differences between mitochondrial lineages in Atlantic stickleback*
- 10:00 – 10:15      **Sann Delaive**  
*Population genetic structure of three spined sticklebacks in the St. Lawrence: a gradient of change*
- 10:15 – 10:30      **Lucia Combrink**  
*Genomic mosaicism in a young adaptive radiation*
- 10:30 – 11:00      **Coffee Break**
- 11:00 – 11:15      **Philine Feulner**  
*Demographic histories vary across Southern Greenland stickleback populations*
- 11:15 – 11:30      **Jan Laine**  
*Ancient stickleback genomes provide a window into the temporal dynamics of freshwater adaptation in threespine stickleback*
- 11:30 – 11:45      **Andrew Foote**  
*Investigating mutation load associated with adaptation in threespine stickleback*
- 11:45 – 12:00      **Kungpin Lin**  
*On the maintenance of standing genetic variation by migration-selection balance*
- 12:00 – 12:15      **Takuya Hosoki**  
*Genetic architectures preventing species fusion in a tsunami-created hybrid stickleback population*
- 12:15 – 12:30      **Dolph Schluter**  
*Sympatric coexistence with gene flow before speciation is finished*
- 12:30 – 13:30      **Lunch Break** (lunch service 12:30-13:15)
- 13:30 – 14:15      **Free time for discussion**

- 14:15 – 14:30 **Matthew Wund**  
*Phenotypic plasticity, assortative mating and ecological speciation in threespine stickleback fish*
- 14:30 – 14:45 **Kevin Parsons**  
*Transgenerational thermal plasticity in adaptively divergent populations of stickleback*
- 14:45 – 15:00 **Corin Stansfield**  
*The genetic and epigenetic architecture of thermal plasticity in the threespine stickleback*
- 15:00 – 15:15 **Dmitry Lajus**  
*Stochastic phenotypic variation: potential applications in stickleback population studies*
- 15:15 – 15:30 **Tom Reimchen**  
*Asymmetric phenotypes and fitness in stickleback: Did we get it all wrong?*
- 15:30 – 15:45 **Lucas Eckert**  
*Do patterns of local adaptation predict success in new environments? A test with introduced populations of stickleback*
- 15:45 – 16:15 **Coffee Break**

**Session 2: Tools and Resources (Moderator: Sarah Rozanski)**

- 16:15 – 16:30 **Richard (Ben) Sulser**  
*Sped up shape: measuring phenotypic evolution of threespine stickleback from an evolutionary experiment in nature*
- 16:30 – 16:45 **Matthew Travis**  
*Real biology with virtual sticklebacks*
- 16:45 – 17:00 **Anne Everly**  
*The Foster/Baker Lab Alaska field collections at Harvard University: preserving the past, enriching the future*
- 17:00 – 19:00 **Poster Session**
- 19:00 – 20:00 **Dinner Break** (dinner service 19:00-19:30)
- 20:15 – 21:15 **Histories of Stickleback Research: Mike Bell**

**Tuesday, July 29**

- 08:00 – 09:00 **Breakfast Break** (breakfast service 8:00-8:30)

**Session 3: Behavior and Neurobiology (Moderator: Andrew Hendry)**

- 09:00 – 09:45 **Keynote speaker: Swanne Gordon**  
*New perspectives on eco-evolutionary dynamics in our changing world*
- 09:45 – 10:00 **Henry Lewis**  
*The evolution of emancipation from parental care*
- 10:00 – 10:15 **Alison Bell**  
*Changes in female reproductive physiology and behavior accompany the evolutionary loss of paternal care in white sticklebacks*
- 10:15 – 10:30 **Usan Dan**  
*Spatial transcriptomic insights into neural co-activity patterns in the transition to and evolutionary loss of parental care*

10:30 – 10:45 **Tina Barbasch**  
*Dynamic gene expression changes in the brain and gut of stickleback parents faced with a tradeoff between feeding and parental care*

10:45 – 11:15 **Coffee Break**

**Session 4: Physiology (Moderator: Juliana Rodriguez Fuentes)**

11:15 – 11:30 **Bertil Borg**  
*Prolactin in the three-spined stickleback*

11:30 – 11:45 **Anne Dalziel**  
*Does salinity tolerance limit freshwater colonization success in Blackspotted Stickleback?*

11:45 – 12:00 **Helen Spence-Jones**  
*Use it or lose it: do freshwater populations of threespine stickleback lose saltwater tolerance over evolutionary time?*

12:00 – 12:15 **Hiyu Kanbe**  
*Adaptation to iodine-deficient freshwater in the stickleback*

12:15 – 12:30 **Ludovic Toisoul**  
*Resilience in a hypoxic world: Behavioral and metabolic responses of stickleback populations exposed to hypoxia across multiple generations*

12:30 – 13:30 **Lunch Break** (lunch service 12:30-13:15)

13:30 – 14:15 **Free time for discussion**

14:15 – 14:30 **Blanche Goddyn**  
*Effects of Bisphenol S (BPS) on the three-spined stickleback in mesocosms: from biomarkers to population-level responses*

14:30 – 14:45 **Marion Sebire**  
*Stickleback responses to proposed Thyroid Hormone System Disruption (THSD) endpoints in fish*

14:45 – 15:00 **Maria Sancho Santos**  
*Reproductive abnormalities in female laboratory threespine stickleback*

**Session 5: Repeated Evolution (Moderator: Dan Bolnick)**

15:00 – 15:15 **Adam Emmanuel Tremblay**  
*Examining parallel and non-parallel components of lake-stream stickleback divergence on Haida Gwaii*

15:15 – 15:30 **MK Hickox**  
*Repeatability over space and time: Dynamics of selection of threespine stickleback populations*

15:30 – 15:45 **Matthew Brachmann**  
*Parallel adaptation to geothermally-warmed habitats due to common structural variation and functional developmental pathways*

15:45 – 16:15 **Coffee Break**

16:15 – 16:30 **Daniel Jeffries**  
*Assessing the repeatability of adaptation using large scale genomics in natural experimental introductions of threespine stickleback*

- 16:30 – 16:45 **Frederic Chain**  
*Genomic differentiation between marine and freshwater populations varies across three sympatric stickleback species*
- 16:45 – 17:00 **Austin Katzer**  
*Repeated patterns, distinct paths: Comparing the genomic basis of morphological evolution in *Gasterosteus aculeatus*, *Apeltes quadracus*, and *Culaea inconstans**
- 17:00 – 17:15 **Jonathan Mee**  
*The inconstant *Culaea inconstans*: non-parallel ecological and genetic basis of pelvic and dorsal spine variation within and between species*
- 17:15 – 17:30 **Hiren Banerjee**  
*Convergent morphological evolution through independent mutations of the same major gene in sticklebacks, humans, and polar bears*
- 17:30 – 19:00 **Free time for discussion**
- 19:00 – 20:00 **Dinner Break** (dinner service 19:00-19:30)
- 20:15 – 21:15 **Histories of Stickleback Research: Dolph Schluter**

### Wednesday, July 30

- 08:00 – 09:00 **Breakfast Break** (breakfast service 8:00-8:30)

### Session 6: Host-parasite and eco-evolutionary dynamics (Moderator: Sean Rogers)

- 09:00 – 09:45 **Keynote speaker: Dan Bolnick**  
*Parasites lost (and gained)*
- 09:45 – 10:00 **Natalie Steinel**  
*Divergence in threespine stickleback adaptive immunity: spleen composition, organization, and response to helminth infection*
- 10:00 – 10:15 **Jesse Weber**  
*Surprising variation in growth and longevity is unconnected to immune tradeoffs in threespine stickleback*
- 10:15 – 10:30 **Emma Offenberg**  
*Sequencing, biogeography, and temporal evolution of two large DNA viruses in stickleback*
- 10:30 – 11:00 **Coffee Break**
- 11:00 – 11:15 **Francis Gyapong**  
*The influence of environmental variation on the stickleback skin microbiome*
- 11:15 – 11:30 **Jaime Ananya-Rojas**  
*Parasite as niche constructors: The impact of *Schistocephalus solidus* on trophic cascades and ecological dynamics in aquatic communities*
- 11:30 – 11:45 **Maja Drakula**  
*Parasites as agents of ecological inheritance: multi-generational effects of *Schistocephalus solidus* and three-spined sticklebacks*
- 11:45 – 12:00 **Andrew Hendry**  
*The ecological consequences of stickleback trophic ecotypes*
- 12:00 – 12:15 **Bjarni Kristjánsson**  
*Threespine stickleback: a key player in the Lake Mývatn ecosystem*

- 12:30 – 13:30      **Lunch Break** (lunch service 12:30-13:15)
- 13:30 – 19:00      **Free Time and Activities**
- 19:00 – 20:00      **Dinner Break** (dinner service 19:00-19:30)
- 20:15 – 21:15      **Histories of Stickleback Research: David Kingsley and Katie Peichel**

**Thursday, July 31**

- 08:00 – 09:00      **Breakfast Break** (breakfast service 8:00-8:30)

**Session 7: Contemporary evolution (Moderator: Rana El Sabaawi)**

- 09:00 – 09:45      **Keynote speaker: Blake Matthews**  
*Some ecosystem effects of stickleback*
- 09:45 – 10:00      **Mike Bell**  
*The dog that didn't bark in the night: lack of adaptation in a freshwater threespine stickleback population*
- 10:00 – 10:15      **Alexander Kwakye**  
*Rare jackpot individuals drive a rapid adaptation in threespine stickleback*
- 10:15 – 10:30      **Marie Claire McPolin**  
*Sex-specific evolution in trophic morphology*
- 10:30 – 11:00      **Coffee Break**
- 11:00 – 11:15      **Grant Haines**  
*Rapid evolution of defensive morphology following brook trout stocking in an isolated watershed*
- 11:15 – 11:30      **Rana El-Sabaawi**  
*How stickleback morphological and elemental traits respond to landuse change and landscape factors on Vancouver Island*
- 11:30 – 11:45      **Dina Navon**  
*The nature of nurture: documenting changes in a unique population of threespine stickleback in response to logging*
- 11:45 – 12:00      **Sarah Sanderson**  
*Rapid evolution of at-risk threespine stickleback populations in response to human disturbances*
- 12:30 – 13:30      **Lunch Break** (lunch service 12:30-13:15)

**Session 8: Genome evolution (Moderator: Lucas Eckert)**

- 13:30 – 13:45      **Jack Hsu**  
*Balancing fragility and function in stickleback evolution*
- 13:45 – 14:00      **Liang Liu**  
*Genetic architecture underlying pituitary epigenome divergence between stickleback ecotypes*
- 14:00 – 14:15      **Matthew Treaster**  
*Sex and sex chromosomes unlinked: genetic manipulation of primary sex determination in threespine stickleback fish*

- 14:15 – 14:30 **Michael Olufemi**  
*Unraveling the DNA methylation landscape of new gene duplications*
- 14:30 – 14:45 **Kiran Samuk**  
*Strong but diffuse genetic differentiation underlies reproductive isolation in the white stickleback*
- 14:45 – 15:00 **Yo Yamasaki**  
*3D genome constrains breakpoints of inversions that can act as barriers to gene flow in the stickleback*
- 15:00 – 15:15 **Marius Roesti**  
*Ecological drivers of chromosomal inversion frequencies in global stickleback populations*
- 15:15 – 15:30 **Juliana Rodriguez Fuentes**  
*From associations to loci: Dissecting the phenotypic effects of chromosomal inversions in threespine sticklebacks*
- 15:30 – 15:45 **David Kingsley**  
*Formation of a novel polymorphic stickleback locus by inter-kingdom lateral gene transfer*
- 15:45 – 16:15 **Coffee Break**
- 16:15 – 18:30 **Knowledge sharing workshop: measuring traits on local stickleback**  
*Tom Reimchen, Mike Bell, Katie Peichel, Dan Bolnick, Lucas Eckert*
- 19:00 – **Banquet**  
*Presentation of best talk and poster awards  
Discussion about next meeting venue and special issue*
- Friday, August 1**
- 08:00 – 09:00 **Breakfast Break** (breakfast service 8:00-8:30)
- 09:00 – 11:00 **Check out, pick up bag lunch, and farewells**
- 11:00 – 15:00 **The Lady Rose sailing from Bamfield to Port Alberni**  
*Please arrive at the dock by 11am for the 11:30 sailing*