

Workshop

Integrating Physiology and Behaviour in Assessment of Ectotherm Heat Tolerance



7 – 10 March 2027
Buxted Park,
East Sussex, UK



Funded places for early-career researchers

Understanding thermal performance and upper thermal limits of ectothermic organisms is crucial for predicting species responses to climate change. Traditionally, growth and fitness are described by thermal performance curves (TPC), showing sensitivity of life across permissive temperatures. Above a critical limit (T_c), injury accumulates until death, modelled by the thermal death time (TDT) approach. However, in nature, fluctuating temperatures expose animals to cycles of stress and repair, highlighting the need to integrate life and death models for better climate predictions.

Although many studies have discussed how thermal limits should be measured, interpreted, and applied, there are still many unknowns of how to integrate the physiological causes of heat stress in this understanding across permissive and stressful exposures. Further the roles of exposure time, acclimation, behaviour, and microhabitat selection remains challenging to integrate in models of thermal sensitivity.

This Workshop will unite leading thermal-ecologists, physiologists, and modelers to advance knowledge of thermal stress biology in ectotherms and establish a unified framework for analysing consequences of high-temperature stress.

Topics include:

- Utility of CT_{max} , TPC, and TDT in assessing climate sensitivity and linking these measures to heat stress physiology
- How models could consider fluctuating exposure to sublethal stress and how to include adaptation, acclimation, and hardening
- Tools for aligning operative temperature of field exposure to heat stress assessment based on lab-based sensitivity estimates

Organisers

Michael Ørsted
Johannes Overgaard

Speakers

Lauren Buckley
Joey Bernhardt
Susana Clusella-Trullas
Hervé Colinet
Fredrik Jutfelt
Michael Kearney

Joel Kingsolver
Vladimir Kostal
Neil Metcalfe
Simon Morley
Daniel Noble
Sylvain Pincebourde

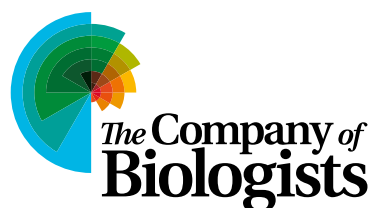
Arnaud Sentis
Patricia Schulte
Rhonda R. Snook
Jennifer Sunday
David Vasseur
Wilco C.E.P. Verberk

Secure your place* alongside leading experts and other early-career researchers from a diverse range of scientific backgrounds.

Deadline: 11 September 2026

To find out more or apply online visit workshops.biologists.com

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