

The Impact of Extreme Events

Thursday 25 April, 09:30 – 17:00

Arts Two Lecture Theatre, Queen Mary University of London & Online

09:30 – 10:00 Registration with tea and coffee

10:00 – 10:15 Welcome and introductions

Session 1

10:15 – 10:45 **David Renault, University of Rennes (online)**
The effects of climate change on native and non-native insects.

10:45 – 11:00 **Hester Weaving, University of Bristol**
How do disease vectors respond to extreme heat? The use of thermal limits to predict climate change responses in the viviparous tsetse fly.

11:00 – 11:15 **Mirjam Schilling, Animal and Plant Health Agency (APHA)**
Establishing a laboratory model to understand overwintering of flaviviruses in temperate European mosquitoes.

11:15 – 11:45 **Roger Morris**
Detecting the effects of extreme events in opportunistic data.

11:45 – 12:00 **Aaron Bhambra, University of Birmingham**
The Range Expansion of the Noble Jewel Wasp, *Hedychrum nobile*: A new colonist to Britain.

12:00 – 12:15 **Sean Rands, University of Bristol**
The behavioural responses of bumblebees to simulated rain.

12:15 – 13:15 Lunch with poster session

Session 2

13:15 – 13:45 **Sinead English, University of Bristol**
Plasticity to the rescue: Can plasticity help insects cope with environmental extremes?

13:45 – 14:00 **Freya Spencer, Arctech Innovation**
The impact of adverse weather events associated with climate change on hygiene and pest-borne diseases transmitted by flies and cockroaches.

- 14:00 – 14:15 **Liam Crowley, University of Oxford (online)**
Effects of experimental drought and elevated rainfall on grassland arthropods and plant-pollinator interactions.
- 14:15 – 14:30 **Dipsikha Bora, Dibrugarh University (online)**
Climate change and its possible effect on dengue incidence.
- 14:30 – 14:45 **Fiona Plenderleith, Forest Research (online)**
Modelling the population dynamics and potential for dispersal of *Ips typographus* under variable climatic conditions.
- 14:45 – 15:15 Refreshment break
- Session 3**
- 15:15 – 15:45 **Deborah Hemming, Met Office Hadley Centre & Birmingham University**
Use of climate science to support UK biosecurity.
- 15:45 – 16:00 **Nick Johnson, Animal and Plant Health Agency (APHA)**
Climate drivers for mosquito-borne virus emergence in northern Europe.
- 16:00 – 16:15 **Matthew Hayes, Cambridge University**
Heatwave predicts shady future for insects: impacts of an extreme weather event on a chalk grassland in Bedfordshire, UK.
- 16:15 – 16:30 **Andrew Jones, Oxford Brookes University**
Monitoring insecticide resistance to inform optimal control of invasive species.
- 16:30 – 16:50 Discussion on key future challenges, opportunities for collaboration and funding.
- 16:50 – 17:00 Closing remarks

Poster Presentations

P1: Colin Johnston, UKHSA

First detection of *Aedes aegypti* eggs in the UK; a summary of UKHSA mosquito surveillance 2020 to 2023.

P2: Charlotte Linthout, Wageningen University and Research

USUV vertical transmission and overwintering in *Culex pipiens* mosquitoes contributes to annual re-emergence.

P3: Emily Wenban-Smith, University of Cambridge

Quantifying historical impacts of extreme temperature events on British butterflies.

P4: Sofia Samoylova, University of Bristol

Live-bearing cockroaches as a model system to understand heat impacts on pregnancy.

P5: Denise Wawman, University of Oxford

Mapping the UK's flat flies (*Diptera: Hippoboscidae*).

Convenors

- Scott Hayward, University of Birmingham (Climate Change SIG Convener)
- Marion England, Pirbright Institute (Medical and Veterinary Entomology SIG Convener)
- Arran Folly, Animal and Plant Health Agency (Medical and Veterinary Entomology SIG deputy-Convener)