



Workshop HETEROCLIM

The response of organisms to climate change in heterogeneous environments

10-14 June 2014, Loches, France

► Aim & scope

Past and ongoing global warming has dramatic impacts on ecological systems, including changes in species distributions and erosion of biodiversity. Very recently, scientists working on climate change biology realized that the environmental heterogeneity could be an important driver because, theoretically, organisms may move within local/regional spatial scales to find suitable micro-habitats as climate is changing, buffering thereby the amplitude of global warming. Thermal environments are not only quite heterogeneous in the natural habitat for most species, but they are also extremely variable through time. The inclusion of organismal responses to spatio-temporal heterogeneity into models predicting climate change effects has been little explored. Nevertheless, very recent findings offer promising advancements that will be covered by this workshop.

Our general aim is to bring together leading scientists from various key disciplines to promote interconnections between their different expertise and skills, with the ambition to stimulate the emergence of new developments related to scale issues in thermal ecology and global change biology. Such advances are necessary to anticipate and attenuate the impacts of global warming on ecological systems and societies. The workshop involves 3 sessions:

- *Connecting global and local climate change*: this session will focus on the downscaling methods used to link macro- and micro-climates to global climatic models, including weather generators that are needed in forecasting studies.
- *Thermal performance of organisms in fluctuating environments*: the latest advancements on the ecological and physiological responses of organisms to fluctuating conditions will be covered, with particular emphasis on the importance of temporal scales of fluctuations.
- *Modeling distribution of organisms in space and time*: statistical and mechanistic modeling approaches will be covered to stimulate the development of mixed models that could provide innovative predictive framework of species' response to climate variability.

► Invited speakers

The workshop will bring together 21 key speakers on the topic:

Dennis ALLARD	Michael ANGILLETTA	Lisandro BENEDETTI-CECCHI	
Miguel ARAUJO	Lauren BUCKLEY	Olivier DANGLES	Solomon DOBROWSKI
Mark DENNY	David GREMILLET	Brian HELMUTH	Michael KEARNEY
Joel KINGSOLVER	Christian KORNER	Jonathan LENOIR	Volker LOESCHCKE
Carlos NAVAS	Sylvain PINCEBOURDE	Colin PRENTICE	Wilfried THULLER
Mathieu VRAC	Arthur WOODS		

► Application and registration

The workshop will involve up to 33 participants (in addition to the 21 invited speakers) who must present a poster during the dedicated session. The registration fee is 490€, which includes accommodation (4 nights), restaurant (breakfasts, lunches and dinners), transportation between the TGV train station (Saint Pierre des Corps) and the Luccotel, and finally the access to the workshop.

Applications are mandatory before registration because the number of participants is strictly limited. If we receive more than 33 applications, a selection will be made based on the following criteria: (i) the coherence of your research field with the thematic of the workshop, (ii) if your research involves spatial or temporal scaling concepts.

→ How to apply: send an email (heteroclim@univ-tours.fr) including a brief CV and a short description of your current research. A tentative title of your poster should also be provided. The deadline for applications is **March 3rd, 2014**. Registration process will follow after participants have been selected.

► General organization

The workshop will be held at the Luccotel, in the medieval city of Loches, France (<http://www.luccotel.com/index.php>). Arrivals are expected on June 10, and the workshop will start in the morning of June 11. The workshop will finish late in June 13. Departures are expected in the morning of June 14. Transportation will be organized during arrivals and departures to travel between the train station of Saint Pierre des Corps (TGV) and the Luccotel. The whole workshop, including accommodation and meals, will happen at the Luccotel. The Luccotel is located close to the center of the medieval city (10 min walk).

► Contact information

For any inquiry, please contact us at: heteroclim@univ-tours.fr

The scientific committee :

Dr. Sylvain Pincebourde (IRBI),
Dr. Olivier Dangles (LEGS),
Prof. Jérôme Casas (IRBI),
Prof. Brian Helmuth (Northeastern University).

The organizing committee :

Dr. Sylvain PINCEBOURDE,
Dr. Olivier DANGLES,
Robin CAILLON (IRBI),
Emile FAYE (LEGS).



This meeting is supported by the ANR projects MicroCliMite (PI: Sylvain Pincebourde) and MAN-PEST (PI: Olivier Dangles). This workshop is sponsored by the Institut de Recherche sur la Biologie de l'Insecte (IRBI), the Region Centre, the Conseil Général d'Indre et Loire, the CNRS, the IRD and the French Ecological Society (SFE).