

## Variable plastic responses in thermal tolerance driven by habitat and microhabitat associations in African *Bicyclus* butterfly species

**Date** 9<sup>th</sup> Apr (Fri.)

**Time** 16:00 (UTC+8)

**Venue** Zoom



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Thermal tolerance is an important physiological trait driving species distribution on earth. Many studies have shown that it varies with latitude and altitude. However, few studies have investigated the potential role of habitat and microhabitat in structuring thermal stress responses of insects, especially in the context of global warming. In tropical Africa, there is an important diversity of habitat that might be a key factor driving thermal tolerance and therefore also species persistence. I used two well-known thermal tolerance traits, critical thermal minimum (CT<sub>min</sub>) and maximum (CT<sub>max</sub>), to assess tolerance of the fifth instar larvae and adults of four *Bicyclus* species from two distinct habitats in Cameroon: forest versus ecotone. I also evaluated micro-habitat association preferences of *Bicyclus* species in these habitats with respect to seasonality. In this talk, I will discuss the link between the thermal tolerance of these butterflies and their microhabitat preference. Understanding the linkages between plasticity, habitat associations, and thermal tolerance in ectotherms is essential for biodiversity projections under anthropogenic change.



**Dr. Michel DONGMO** earned his BSc from the University of Dschang, Cameroon, and his MSc and PhD both from the University of Yaoundé I, Cameroon. He recently joined the Division of Ecology and Biodiversity of the School of Biological Sciences as a Postdoctoral fellow with Dr Tim Bonebrake. Michel is a Lepidopterist and uses butterflies from the genus *Bicyclus* as model species to assess the consequences of global warming on insect physiology and ecology with respect to their habitat or microhabitats.