

Internal Webinar

Mechanisms of thermal resilience in urban ectotherms: insights from agamid lizards

Joshi Mihir Makarand

IISc, Bangalore

Animals can adjust to changes in their environments through plasticity, local adaptation, or allocation trade-offs. Through my doctoral research, I have shown that desert adapted agamid lizards can change their behaviour and physiology in response to seasonal changes in resources and predation risk. I also found that such plastic changes in behaviour and physiology can have significant fitness costs on these animals. Many other agamids face rapid changes to their environments as humans transform their natural habitats into urban landscapes. My postdoctoral project will examine the mechanistic underpinnings of thermal resilience in urban agamid lizards. Urban heat islands expose ectotherms to chronically high temperatures. By integrating whole-organism performance, molecular physiology, and eco-evolutionary responses, this work will identify the physiological mechanisms that enable or constrain persistence of ectotherms in rapidly warming urban landscapes.

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