Climate change, biological impacts, and climate-smart conservation for tropical montane cloud forests

Wed., Oct. 28, 3 p.m.

Zoom link: https://asu.zoom.us/j/99112840824

Tropical montane cloud forests, celebrated for their high species richness and endemism, are under threat by large-scale warming which impacts local climate in surprising and impactful ways. Early studies conducted in the cloud forests of Monteverde, Costa Rica, revealed some of the first evidence of biological response to climate change, including shifts, decline, and loss of animal populations. Ongoing research points to a shift from once-consistent precipitation to increasing precipitation variability, characterized by expanding dry periods that alternate with intensification of input, on the scale of days and weeks. Preliminary evidence points to potential negative impacts for orchids, which reach record levels of species diversity at Monteverde. Overall patterns suggest that the nature of climate change at Monteverde presents particular challenges for conservation management that necessitate “climate-smart” strategies, formulated for biodiversity resilience at local and regional scales.

Questions? Contact Steven.Saul@asu.edu

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