



Guest Lecture

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Tales from Africa: Sunbird-plant pollination interactions on Mount Cameroon

While much of our understanding of bird pollination biology stems from research on New World hummingbirds (Trochilidae), sunbirds (Nectariniidae), an African and East Asian bird family, have been comparatively understudied. Here, I present our findings on sunbird-plant interactions on Mount Cameroon. Situated along the Cameroon line, an active volcanic range extending from the island of Bioko to the Bamenda highlands and reaching Lake Chad, Mount Cameroon represents a biodiversity hotspot. Despite its tropical location, the mountain experiences distinct seasonality, with periods of water scarcity contrasting with heavy rainfalls. It also presents an almost pristine forest elevational gradient that ranges from 450 to 2200 m a.s.l., enabling researchers to test hypotheses regarding the level of specialization or generalization of the bird-plant interaction networks and how elevation and seasonality affect these network features. In addition, we have demonstrated how neutral and niche-based processes shape the observed interactions. We show how trait-matching becomes more critical during the rainy season, coinciding with the blossoming of ornithophilous flowers. Moreover, we demonstrate the validity of the bird-pollination syndrome as a predictive framework of plant visitation. Nonetheless, sunbird-plant interactions are highly asymmetrical. While sunbirds more frequently visit ornithophilous plants, they also visit a wide range of non-specialized plants. Nectar rewards are a better predictor of bird visitation on Mount Cameroon. Finally, we extended our research to the mountain grasslands (2200-3600 m a.s.l.), finding how the distribution of different pollinator morphotypes depends on elevation, with sunbirds being more prominent at middle elevations.

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NLW-Faculty, Room 414, 1st floor

