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Moving as one: exploring the mechanisms that sustain group cohesion in disc-winged bats

Group cohesion is the tendency for individuals to interact with the same set of conspecifics over extended periods of time. Several mechanisms are known to facilitate group cohesion, including a consistent use of signals that allow a set of individuals to remain in close contact, group coordination during various tasks, and affiliative interactions that strengthen social bonds, among others. In my talk I will explore how some of these mechanisms may explain the high levels of group cohesion observed in Spix's disc-winged bats, *Thyroptera tricolor*. This species provides an ideal example to understand how conspecifics actively sustain group cohesion. In other species of bats that use more permanent roosting resources, individuals may predictably associate with a given set of conspecifics by returning to the same roost, or set of roosts, day after day. Disc-winged bats roost in highly ephemeral developing leaves that quickly unfurl, forcing bats to find a new roost-site almost daily; no other bat species is known to engage in such a ceaseless search for new roosts. Despite frequent changes in roosting locations, individuals consistently exhibit remarkable group cohesion, often remaining together for the duration of their lives. I will present results of how the consistent use of small roosting home ranges, coupled with the emission of contact calls with strong individual signatures, may explain group cohesion in this small Neotropical bat. Additionally, I will demonstrate the remarkable synchronized flights of disc-winged bats, which appear to play a crucial role in their successful identification of new roosts, along with the vocal interactions that occur while in flight. Finally, I will investigate cooperative and aggressive behaviors that may contribute to the reinforcement of social bonds among group members, while effectively warding off potential intruders.