

Evolution of social foraging

insights from a bat species at the energetic edge



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Background

Social foraging: "Use of public information in foraging contexts". Potential **fitness benefits**.

Three main expectations for social foragers:

- 1- **Ephemeral food sources**
- 2- Influence of **group size** on foraging efficiency
- 3- Different costs/benefits for males and females

Project focus

Study species

- Name: *Molossus molossus*
- **Neotropical insectivore**
- Open air species with narrow wings
- Living in stable groups



Methods

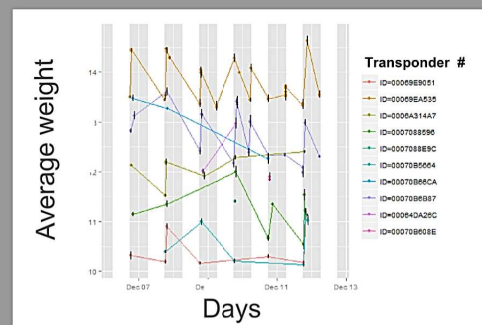
- **Capture & PIT-tagging** of colonies
- **Automated monitoring** of several roosts
- **DNA sampling** for genetic analysis



Map of the roosts surveyed

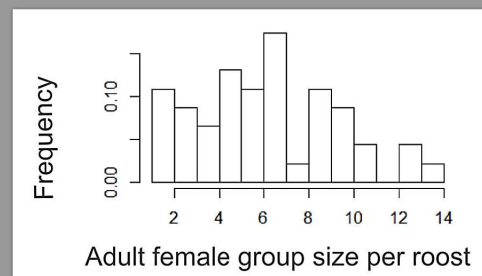
Preliminary results

1- Ephemeral food sources



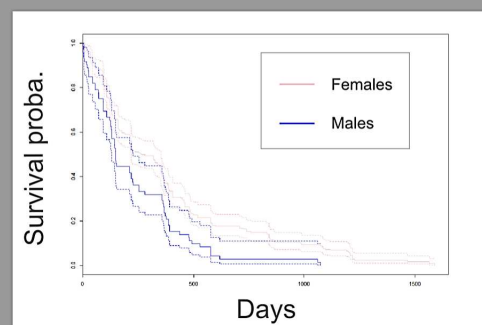
Short and efficient foraging sessions

2- Influence of group size on foraging efficiency



Optimal group size

3- Different costs/benefits for males and females



Females: "True survival" estimates

Males: "Roost tenure" estimates

Citations

- Dechmann, D. K. N., et al. (2010). *PLoS ONE*, 5(2).
Safi, K. (2008). *J Mammal*, 89(6).
Willis, C. K. R., & Brigham, R. M. (2007). *Behav Ecol and Sociobiol*, 62(1).

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