Notes from conversation with Julian:

1. Low-hanging fruit: Effect of connectivity on (a) species and functional group diversity and abundance
2. Next level: Movement & Dispersal. There are large areas of forest where it is possible to capture beetles for Mark-Release-Recapture (MRR) experiments.
3. Higher-risk, Higher reward (even if they don't go in MS, can be set-up for potential PHD projects): Experiments on Ecosystem Services

- dung burial, decomposition, soil properties based on results of 1 & 2 (buckets with dung and beetle assemblages)
- gas (e.g., methane) emissions
- seed dispersal/burial/germination

Example studies

1. Diversity and Abundance

- Estrada and Coates-Estrada (2002): "56% of individuals were capturedin the continuous forest, 29% in the mosaic habitat and 15% in the forest fragments"

2. Movement & Dispersal
3. Ecosystem Services

Other stuff to work on:

1. Species List & Keys for Dung Beetles of the Southeastern US
2. Any previous work done on dung beetles in Southeastern US
3. List of Equipment and Tools needed

- Dung beetle traps
- alcohol
- bait

Species

THE QUESTIONS

1. Question 1: Is dung beetle abundance greater in patches connected by corridors?

I predict that____ (the nuance based on type, flighht ability, etc)

1. Question 2: Is dung beetle diversity greater in patches connected by corridors?
2. (movement): are dung beetles using corridors

3.

References

Estrada, A, and R Coates-Estrada. 2002. “Dung Beetles in Continuous Forest, Forest Fragments and in an Agricultural Mosaic Habitat Island at Los Tuxtlas, Mexico.” *BIODIVERSITY AND CONSERVATION* 11 (11): 1903–18. https://doi.org/10.1023/A:1020896928578.