**Name: Justin Van Goor**

1. General Info
   1. Proposed Title: “*Parasitodiplogaster* (Nematoda: Diplogastridae) infection of pollinating and nonpollinating fig wasps: consequences for mutualism and coexistence”.
   2. Likely coauthors: Piatscheck, F, Houston, DD, and Nason, JD.
   3. Proposed journal (1st choice): *Functional Ecology*
   4. Proposed journal (backup): *Evolution* or *Acta Oecologica*
2. The overarching question of this paper is: How does nematode parasitism of pollinating and nonpollinating fig wasps influence community structure and dynamics? Does nematode infection of nonpollinators function to benefit the mutualism between pollinating fig wasps and their specific fig species? Can nematode associates of pollinating fig wasp act as both parasites and mutualists in this system?
3. Which is important/interesting/unresolved because (1-4 reasons)
   1. *Parasitodiplogaster* nematodes have only ever been observed infecting pollinating fig wasps.
   2. Infection of nonpollinators does not make ecological sense in that nematodes that infect nonpollinators will not be able to reproduce. Infection of nonpollinators should be strongly selected against, but is common.
   3. Infection of nonpollinating and pollinating males skews species-level sex ratios and may influence community dynamics.
   4. Nematodes may be able to function as a fig-fig wasp mutualist, and this finding may be extrapolated to other fig systems (850 species worldwide) and to other mutualisms in general (ubiquitous in nature).
4. To answer this question/explore this topic, I addressed the following objectives: (NB you can have more or less than 3 objectives, but I recommend 2-4)
   1. Assess how frequently nematodes choose nonpollinating wasp hosts.
   2. Evaluate the effect of nematode infection on pollinating and nonpollinating wasp lonevity
   3. Determine how far nematodes can identify/locate hosts
5. I addressed these objectives: (use list/bullet points below)
   1. In *Ficus petiolaris* populations of Baja California Sur, Mexico
   2. With the following focal/model species/model system: *Parasitodiplogaster* nematode associates of *Pegoscapus* pollinating wasps and nonpollinating wasps of the genera *Idarnes, Heterandrium, Aepocerus,* and *Physothorax*.
   3. And the following approaches:Host choice experiments, longevity experiments, survival analysis, microdissection techniques, count data
6. For my analysis, I want to test: Number of nematodes inside host over time, survival curve of infected versus uninfected hosts, nematode host choice (both pairwise and multiple hosts ‘cafeteria style’).
7. My response (y-axis) variable is: Number of nematodes, percentage living, frequency of choice
8. My predictors (x-axis/colors/shapes on the graph) are: Time, time, host species
9. I replicated this across multiple Wasps, wasps, host choice experiments
10. I think I will need to analyze these data using a Linear regression, survival analysis, contingency table analysis
11. I anticipate I will get a final figure(s) that will look like this *[sketch one or more figures below that you could imagine being part of the final paper]*