BIG QUESTIONS WE ARE LEFT WITH ABOUT CHEATING … in no particular order

- How do we integrate theory & data to answer the big questions about mutualism?
  - e.g., things important in models but impossible to measure
  - measurements that qualitatively match predictions: how to get quantitative?
  - how do we get theory & empirical people together as partners?
  - conflicts between simplified models & model mutualisms vs "complex systems" – to what degree can we simplify reality?
  - different scales of modeling – physiological, evolutionary, networks, …
  - model selection is possible now in ways it was not until recently (advances in computation, sequencing, statistics).
  - combination of different types of models
  - ongoing feedback between empirical studies and model development

- How do members within a guild (multiple alternative mutualists of different quality, or mutualists+cheaters) interact? How do these interactions play out in their effects on the shared partner?

- In what kinds of mutualisms will we find evidence for strict partner control mechanisms (beyond legume-rhizobium)? In symbiotic ones? In all high-cost mutualisms? Specifically in obligate mutualisms … etc. [maybe high-commitment ones? like cooperative breeding]

- “What is the biggest question about mutualism and how would you answer it integrating theory and data?”
- Is there more cheating in intraspecific cooperation than in interspecific cooperation?
- Is a “thwarted [unsuccessful] cheater” still a cheater?
- What does the sensitivity of context-dependency mean for this field?
- How much breakdown do we expect to see in a macroevolutionary framework?
- How best to define “cheating”?
- How can we be more explicit about the different conflicts that take place within an interaction?
- Do we need to understand the mechanisms by which conflict occurs and is resolved, and why?
- Does cheating even happen? is it really important??
- Should we be using models whose variables can be easily empirically measured (in the field or lab)?