Eating Cactus Takes Guts

Exploring the contributions of host evolutionary history and diet in shaping the gut microbiota of cactophilic flies

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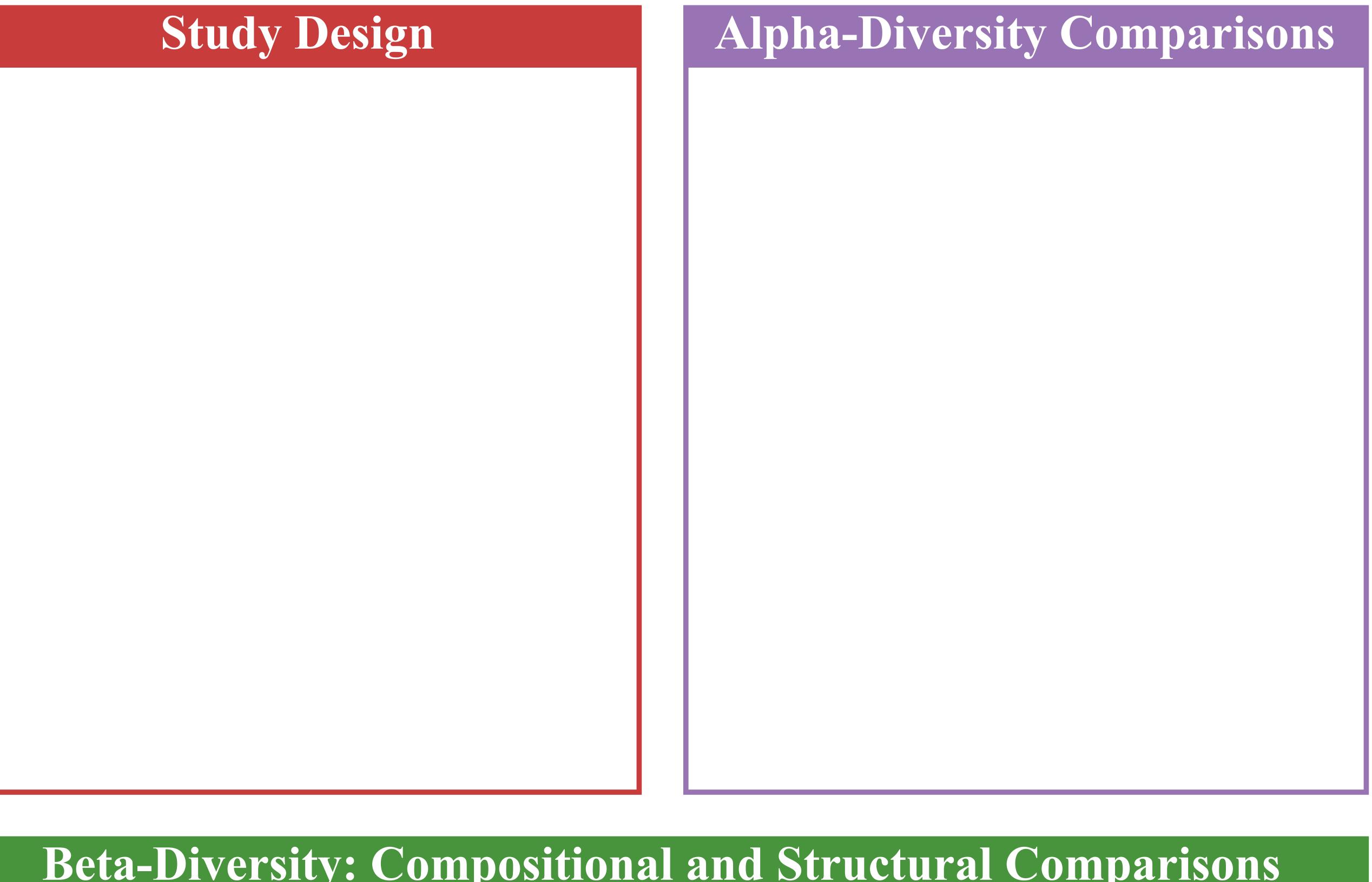
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Background

Gut microbial communities often provide functions that have significant implications for their host's fitness. However, understanding how a host's gut microbiome has been shaped by its evolutionary history can be difficult because the influence of diet can be lesser than, equal to, or greater than host genetic background.

Flies in the genus *Drosophila* have been previously used as model systems for understanding various factors pretaining to gut microbial community shape and function. We propose that the various species of cactophilic Drosophila native to North America could be a powerful comparative model system for discerning the contributions of host evolutionary and diet in shaping host gut microbial communities. In this study, we characterize the bacterial gut microbiome from five cactophilic Drosophila species and compare their diversity and composition to D. melanogaster.

Questions



Beta-Diversity: Compositional and Structural Compariso	UIIS
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