# The pollination trade-off

*Fernando Cagua, Hugo Marrero, Jason Tylianakis, Daniel Stouffer*

200-250 words

In the context of animal pollination, sharing pollinators between plant species is a balancing act between two ecological opposites, mutualism and competition. Sharing pollinators is beneficial because plant species can harness the positive feedback loops that it creates. It can also be detrimental to co-flowering plants because sharing pollinators can lead to pollen being lost on foreign flowers and stigma surface being lost to foreign pollen. Although both mutualism and competition play an important role in shaping species interactions, competition is much poorly understood at the community level. Specifically, here we quantify the presumed negative impact that the number of interacting species plays on the pollination service. To tease apart the multiple factors that operate at the community scale we use data that describes both the structure of the interactions and the pollen flows that occur within it, all while accounting for the traits of the species that integrate the community. We found that indeed there is a trade-off between the number of interacting partners and both the quantity and quality of pollination. However, its role on pollination service is relatively small when compared to other ecological factors. Competition for pollinators are more strongly shaped by density effects caused by the species abundance and amount of pollen it produces, as well as the plant’s functional originality.