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Recommended
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Confirmation, New Finding

This is a well-designed experimental study that investigated the relationship between biodiversity and ecosystem function (BEF) for pollinators and the pollination of multiple plant species. An acknowledged limitation of the BEF literature is its dominance by studies of grassland plants and microbial systems {1}; thus, the extension here to other trophic levels is welcome. The results confirm that a diversity of pollinators are required for maximizing plant pollination at the community scale, as suggested by network analyses of natural systems {2}, and recently confirmed even for crop monocultures (see {3}, on which we are listed as authors). A strength of this experiment is that pollinator species richness is manipulated, while aggregate abundance is controlled, which allows the researchers to better identify the mechanisms behind the BEF relationship {4}. The authors propose that complementarity in temperature-dependent bee activity periods, and in the floral preferences of the different bee species, contribute to the observed positive BEF relationship. The authors report several other interesting findings; for example, their design included open-pollinated plots, for which natural richness levels are higher than for the experimental manipulations. The higher function reported for this plot confirmed the prediction that the asymptoting function within richness in experiments can be an artifact of experimental design {5}. Lastly, they show that floral preferences of some bee species in monocultures change when other bee species are present, thus nicely documenting niche shifts.

References

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