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# Linking biodiversity and ecosystem functioning by functional traits – a case study on frugivorous birds and woody plants

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## Abstract

Ecosystem functioning has been shown to generally respond positively to different measures of biodiversity. However, ultimately, ecosystem functioning depends on the functional traits of the species forming the communities and their pattern in functional trait space rather than on biodiversity itself. Thus, for a mechanistic understanding and the projection of ecosystem functioning to scenarios of future environments, we need to translate information on the taxonomic community composition to the functional community composition. In this talk, I will exemplify the above idea with community and trait data of frugivorous birds and woody plants. I will show how relevant traits can be identified in this system and demonstrate the roles of the traits' identity and complementarity. Finally, I will discuss conceptual ideas on the role of redundancy in functional trait space and its potential to buffer ecosystem functioning against environmental change.

**Keywords:** biodiversity, ecosystem functioning, functional traits, redundancy, frugivorous birds, woody plants

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