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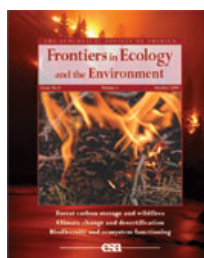
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Concepts and Questions

Why biodiversity is important to the functioning of real-world ecosystems

J Emmett Duffy

Controlled experiments have substantially advanced our understanding of the links between changing biodiversity and ecosystem functioning (BEF) in recent years. However, controversy continues regarding the relevance of BEF experiments to the complex ecosystems and large spatial and temporal scales of interest in conservation and management. Here, I address some of the persistent criticisms regarding experimental BEF research and argue that these have been overstated. Contrary to some suggestions, many putative artifacts attributed to experiments render their conclusions about BEF links stronger, rather than weaker. Like other broad ecological concepts, BEF focuses on general patterns, rather than looking at species-level, applied conservation problems. Nevertheless, insights from BEF experiments conducted to date are likely to underestimate, rather than overestimate, the importance of biodiversity to ecosystem functioning and the provision of ecosystem services in the real world. These experiments suggest that managing ecosystems to promote biodiversity can have important practical benefits.

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