On the vague and metaphorical definitions of "good ecosystem functioning"

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Abstract

Session: Functions in Ecology (Catherine Dieleman, Antoine Dusssult, Eric Desjardins) The maintenance of ecosystems has become a driving factor for conducting ecological studies, and with this came a multiplication of notions describing "good ecosystem functioning", such as integrity, stability, resilience and health. A critical and historical examination of these concepts and the assumptions associated with them reveal two particular concerns. First, many of them are used rather loosely as synonyms, despite the fact that their respective technical meaning often differ significantly. Although some terms, like "stability" and "resilience", have had similar interpretations for decades, they nevertheless grew apart sufficiently in ecology that merging them, as it is often the case, is hardly justified anymore. Second, it remains fairly common to make a mere metaphorical usage of these terms, despite the fact that they all have received at some point precise operational definitions. Although it is a normal process to revise concepts and try them in areas alien to their discipline of origin, such vague and metaphorical usage can be counterproductive. Ill-defined language and careless transfer of ideas by researchers and policymakers only amplifies the pervasive communication gap hurting the numerous disciplines involved in the maintenance of ecological systems.

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