Plant Diversity in Grassland Ecosystems: An Overview. (C06-wedin091803-Oral)

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Abstract:

Historically, the central question in academic ecology has been what determines the species diversity of ecological communities. Hundreds of studies, old and new, have asked how grazing, soil fertility, disturbance and climate interact to determine plant diversity in managed and natural grasslands. In the last decade, a paradigm shift (or, to some, academic slight of hand) has changed the role of diversity from that of response variable to that of driver or predictor of key aspects of ecosystem functioning. Grasslands have become the model system in this development. Recent experiments have explicitly manipulated plant species diversity while controlling other factors to document the impacts of species diversity on productivity, nutrient cycling, etc. Debate over the interpretation and validity of these studies has spilled over into the news section of Science and letters to the editor of ecological journals. This talk will summarize these recent studies. Are the results idiosyncratic or are general principles emerging? Do they simply describe patterns or are they contributing to a process-level understanding of grassland functioning?

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