

How increased nitrogen availability has influenced biodiversity of terrestrial ecosystems

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Abstract

Nitrogen deposition has had widespread impacts on plant communities in Europe and North America, reducing species richness of many different habitats and changing plant species composition. These changes have been brought about by increased availability of nutrient nitrogen and soil acidification, and less commonly by direct impacts of ammonia. Changes in plant species composition have been primarily driven by a reduction in the richness and cover of sensitive forb species. Nitrogen also impacts upon phenology. These changes in plant species composition have important implications for the invertebrates that feed upon and live in the vegetation. In some parts of Europe levels of nitrogen deposition are beginning to fall, this talk will also explore the potential for recovery from N additions.

Keywords: plant species richness, plant community, soil pH, phenology, invertebrates, pollinators