

Study shows how nitrogen deposition affects community litter nutrient status

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Litter nutrient status plays an important role in driving litter decomposition and ecosystem nutrient cycling. Nitrogen (N) deposition could alter community-level litter nutrient status through both intra- and



inter-specific pathways, but their relative importance remains unknown.

Scientists from Institute of Applied Ecology of the Chinese Academy of Sciences examined the responses of species- and community-level litter nutrient concentrations and N:P ratio after seven-year N addition in a semi-arid grassland of northern China.

They found that <u>community composition</u> strengthened the positive impacts of N addition on litter phosphorus (P) concentration and N:P ratio. There were positive co-variations between intra- and inter-specific variation, indicating the consistency of community composition and intraspecific variation in their effects on litter P and N:P ratio.

Results from this study indicate that the imbalance of N and P following N enrichment would be much larger than the expectation based on the findings from species-level, and highlight that changes in community composition would be an unnegligible pathway in plant-mediated biogeochemical cycling.

This study, titled "Changes of community composition strengthen the positive effects of nitrogen deposition on <u>litter</u> N:P stoichiometry in a semi-arid grassland," has been published in *Plant and Soil*.

More information: Shuang-Li Hou et al. Changes of community composition strengthen the positive effects of nitrogen deposition on litter N:P stoichiometry in a semi-arid grassland, *Plant and Soil* (2020). DOI: 10.1007/s11104-020-04534-z

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