Special Issue

Plant–Soil Feedbacks: Linking Ecosystem Ecology and Evolution

Message from the Guest Editor

Plant—soil feedback (PSF) may change in strength over the life of individual plants as they continually modify the soil microbial community. Plants elicit changes in the soil microbiome that either promote or suppress conspecifics, thereby regulating population density dependence and species co-existence. However, the factors regulating plant–soil feedback, which varies from positive to negative among plant species, remain unclear. A challenge in research is to determine how the strength and direction of plant–soil feedback depend on traits such as the nutrient acquisition strategy and how such feedback contributes to the maintenance of plant diversity. However, many mechanisms are investigated in isolation, and yet no single mechanism is likely to be completely responsible for PSF as these processes can interact. Further, the outcome depends on which resources are limiting and the other plants and soil biota in the surrounding environment. Thus, understanding the mechanisms of PSF and its role within plant communities requires quantification of the interactions among the processes influencing PSF and the associated abiotic and biotic contexts.

Guest Editor

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Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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