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Surrounding landscape influences functional diversity of plant species in urban parks

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Highlights

- River density promotes the functional richness, xerophytes and alien species
- Settlements decrease the functional dispersion and the percentage of forest species
- Functional richness promotes alien species and decreases the percentage of forest species
- Functional dispersion decreases the share of non-invasive ruderals and xerophytes

Abstract

Urban parks constitute one of the most important elements of the urban green infrastructure. However, knowledge on how the surrounding landscape influences the functional diversity of plant species is still insufficient. The aim of this study was to assess the impacts of different landscape features in proximity of urban parks on their functional diversity and to recognise the community-level coexistence patterns of the plant species. We demonstrated that an increasing river net density had a positive impact on the functional richness and promoted the occurrence of native xerophytes, non-invasive archaeophytes and