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Grande salle de réunion

CAUSES AND CONSEQUENCES OF EXOTIC INVASIONS IN WISCONSIN FORESTS

par

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- 📍 We study the forces driving long-term change in plant communities. Habitat fragmentation, human disturbances, N-deposition and overabundant deer all acted to drive ecological change in Wisconsin forests between the 1950s and 2000s. Do these factors also contribute to invasions of exotic species – themselves potential drivers of ecological change?
- 📍 Patterns of weedy plant invasion among sites suggest that all these factors increase invasions. Although high diversity sites experienced fewer invasions, this may reflect variation in landscape conditions. Do invasive species, in turn, drive declines in native plant species or are invasive plant species just "passengers" responding to the other factors driving these changes?
- 📍 We used associations between species within sites and within 1 m² quadrats to infer possible impacts of *Alliaria petiolata*, *Lonicera x bella* and *Rhamnus cathartica* on 70 native plant species. At the site level, we found that sites with more *Alliaria* have fewer native species but that associations between invasive and native species are rarely significant. Association analyses based on C-scores at the 1 m² scale, however, reveal many significant associations. Invasives show mostly negative associations with rare, declining and specialized native species and some positive associations with common generalist species. Negative associations emerge more often in landscapes with more roads and houses. Analyzing interactions within many small quadrats gives us more statistical power and information about how particular invasive species may affect particular native species.



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