

The socio-ecology of keeping Britain tidy: biodiversity conservation and the aesthetics of unruly landscapes

Many species of conservation value depend on particular ecological niches, which can be narrow, and the flourishing of these species depends on having sufficient quality and quantity of such habitats. This is particularly true of many endangered invertebrates and other taxa which are often overlooked in conservation. Yet many of these niches, such as long grass, dead standing wood, and boggy marshland are seen as hazardous, unruly, untidy or contrary to dominant landscape aesthetics (Qiu *et al.*, 2013, Bixler and Floyd, 1997), and as such are routinely removed through policies such as verge mowing, deadwood removal, and urban drainage. These have important negative impacts on biodiversity. There is a conflict between which landscape forms are desired by endangered, native biodiversity and which forms are desired by humans (Hoyle *et al.*, 2017). The ideas underlying these human preferences, and the potential for coexistence with these niches, are poorly understood, but this area of research has important promise for successful conservation.

This project would apply a socio-ecological approach to understand conflicts and coexistence between humans, unruly landscapes, and the species which depend on these. It would combine insights from ecology and entomology with those from the human-wildlife conflict science, political ecology and environmental humanities. It would explore the dynamics of why certain ecological niches are seen as untidy, how this has emerged and how such ideas vary demographically, how this influences policy, and what impacts this has on biodiversity. It would identify opportunities and barriers to policies that work for humans and non-human biodiversity.

The project would explore this through at least one case study of an 'untidy' landscape which is an important ecological niche. It would ask:

- Why are such landscapes considered as untidy, unruly, aesthetically displeasing, or dangerous? How does this vary demographically? What are the origins of such views?
- What are the policy implications of such views, and how does this impact on biodiversity?
- Where is the potential for conflict and coexistence between these niches and human preferences?

The exact case study or studies would be determined by the student, but might include unmown verges, meadows in public parks, standing deadwood in forests, parks and tree plantations, unlined urban waterbodies. Methods could include visual q-methodology surveys, habitat and species monitoring, virtual reality simulation, choice experiments and others drawn from ecology and conservation social science.

It is anticipated that the project would develop new socio-ecological approaches to understanding conflict and coexistence within conservation. Whilst much of this work has focused on 'problem' species, typically large mammalian predators (Pooley *et al.* 2016), this would look at particular niches and the small species which depend on them, and which have a different relationship with humans. It would push this area of science to consider neglected species and spaces. In doing so, it would

likely take a strongly transdisciplinary approach, combining techniques from ecology as well as conservation social science and potentially insights from the conservation humanities.

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