



Dresden planner's forum

Small spaces pack a big punch for biodiversity

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Globally, thousands of species go extinct every year due to human activities. The primary cause is habitat loss, as natural areas are converted to human uses, especially agriculture. How can we accommodate both nature and people? Are there "better" ways to lose habitat? I present two research lines on this topic. The first one finds that more species occur in a given amount of habitat when that habitat is in several small patches than few large ones. The second research line finds higher biodiversity in farmlands with smaller crop fields, for a given area under crop production. Overall, our research suggests that habitat preservation and restoration should be top priority for biodiversity conservation. Habitat preservation should apply to all habitat areas, not just large ones; we should especially encourage local, small-scale conservation efforts. In addition, we need policies and incentives to reverse the ongoing trend towards enlargement of crop fields.

Lenore Fahrig is Chancellor's Professor of Biology and co-director of the Geomatics and Landscape Ecology Research Laboratory (GLEL) at Carleton University. Lenore is a highly cited researcher with over 43,000 citations (Google Scholar). She is a Fellow of the Royal Society of Canada (RSC), recipient of the RSC Miroslaw Romanowski medal for Environmental Science, and recipient of the Distinguished Landscape Ecologist Award from the US Association for Landscape Ecology. Lenore and her students research the effects of landscape structure on biodiversity and the abundance, distribution and persistence of wildlife populations. Study species include frogs and toads, turtles, birds, mammals, insects, other arthropods, plants and lichens. Landscape structure includes the amounts of various kinds of land cover in a landscape (e.g., forest, wetland, roads, crop fields), and the spatial arrangement of these cover types.

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