Connecting fragmented pieces of habitat can help endangered species recover

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Loss of habitat drives most extinctions. When farms or roads carve forests or fields into fragments, the isolated survivors are more likely to be wiped out. Now, a new study suggests [**connecting these patches with corridors of suitable habitat can help save populations and species**](https://science.sciencemag.org/lookup/doi/10.1126/science.aax8992)—far more than scientists ever thought.

Researchers focused on longleaf pine savanna, an ecosystem that used to exist across the southeastern United States. This grassland habitat hosts many unique plants, such as blazing stars, and also the more common butterfly milkweed (above), as well as the endangered red-cockaded woodpecker. But just 3% of the original ecosystem is left, and what remains exists only as small fragments.

To study the effect of habitat corridors, the scientists created new fragments of savanna inside a large pine plantation in South Carolina and connected some of them with habitat corridors. Every year, the team tallied the number of native plant species.

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And every year, they found, new species arrived in the patches. But many more turned up in the connected patches; the annual rate of colonization was 5% higher than in unconnected patches—[**a surprisingly large boost**](https://science.sciencemag.org/lookup/doi/10.1126/science.aax8992), they report today in *Science*. Many species likely arrived after their seeds were transported into the patches by wind or animals. Bluebirds, for example, prefer to forage in the grassland patches and corridors than the dense pine forest, so they transport more seeds between connected patches of savanna.

After 18 years—a long time for an ecological experiment—the connected patches had, on average, 200 plant species, 14% more than the unconnected patches. The duration of the study also shows that the benefits of linking habitat fragments continues to grow.