

Acceptance speech

16 June of 2022

Lenore Fahrig, awardee in the Ecology and Conservation Biology category (14th Edition)

The BBVA Foundation Award in Ecology and Conservation Biology is a wonderful means of highlighting both the knowledge we have gained about the natural world and also the need to act on this knowledge.

I feel incredibly grateful every day for the beauty and mystery of the millions of other creatures with whom we share the earth, and who make it such a fabulous place to be - the oak trees, the bats, the octopuses, the lichens, the salamanders, and the spiders. I feel that every species on this planet is a masterpiece more valuable than the most valuable work of art. Learning about other species is an unending source of joy and wonder. Who wouldn't want to protect bees that dance, fish that walk, frogs that fly, and beetles that stand on their heads?

Research in ecology and conservation biology also teaches us how to live and let live. In my lab, we study the relative effects of various human impacts on wildlife. From the answers, we learn how we can best improve the plight of other species. In other words, we ask, which changes are more effective than which others for stopping and reversing species declines? We have looked at effects of habitat loss and fragmentation, of roads and traffic, of urbanization, and of agriculture.

If I had to choose our most important result, it would be that protecting many, small areas of natural habitat is crucial for biodiversity conservation in the very regions where species are most at risk. These are the regions that are dominated by people. In the places where people live and grow food, much natural habitat is gone, and most remaining habitat is in small patches. Although habitat protection is most needed in those places, the remaining small habitat patches are usually not protected.

I have to admit that for those of us in the thick of conservation research, it can be a bit demoralizing to spend a career studying species in danger from the growing pressures we humans place on the natural world. The main reason for the biodiversity crisis is our chipping away at the natural places that other species need - another hedgerow removed to make a bigger farm

field, another forest razed for a box store, another small wetland filled in to make a road. For nature, it's death by a thousand cuts.

For many years we have assumed that such small areas of habitat are not important for wildlife and so protecting them would not contribute much to biodiversity conservation. But, our research shows that this assumption is wrong. In fact, in most situations, a group of many small patches of habitat is more valuable for biodiversity conservation than a small number of large patches totalling the same amount of habitat. This means that preserving lots and lots of small bits of forest or wetland in a human-dominated region can add up to a huge benefit to biodiversity. And this creates major opportunities for conservation.

Our results empower local individual and community efforts to protect these small spaces, by showing how critically important they are for biodiversity. Many people value the small bits of nature near to where they live. But, actions of individuals and local communities will not be enough to turn the tide on species declines.

For this we also need the big, powerful actors in society to take positive action for biodiversity, and to do this publicly and vocally. So, I want to say again how important it is that the BBVA Foundation provides a powerful boost to conservation through its award in Ecology and Conservation Biology.

In fact, when I told my husband Bill about the award, the first thing he did was to look up the environmental policies of the BBVA. I'm happy to say he was pleasantly surprised.

So, to conclude, I am truly grateful to be receiving this award. I have an immense feeling of gratitude - to the BBVA Foundation of course, and also to my family, friends, mentors, students, and colleagues, whose support, humour, and wit over many decades are the main reason I have landed this huge honour. I hope that the attention that the BBVA Foundation award brings to the plight of biodiversity will contribute to the protection of the millions of living masterpieces on this planet.