

Abundance decline in the avifauna of the European Union conceals complex patterns of biodiversity change

Fiona Burns¹, Mark Eaton¹, Ian Burfield², Alena Klvaňová³, Eva Šilarová³, Anna Staneva², and Richard Gregory¹

¹Royal Society for the Protection of Birds

²Birdlife International

³Czech Society for Ornithology

March 07, 2024

Abstract

While global assessments provide evidence of biodiversity decline, some have questioned the strength of the evidence, with local assemblage studies often showing a more balanced picture of biodiversity change. The multifaceted nature of biodiversity and imperfect monitoring datasets may partially explain these findings. Here, using an extensive high-quality dataset, we find significant biodiversity loss in the native avifauna of the European Union (EU). We estimate a decline of 17-19% in overall breeding bird abundance since 1980: a loss of 560-620 million individual birds. Both total and proportional declines in bird numbers are high amongst species associated with agricultural land. The distribution of species' population growth rates (\ln) is centred close to zero with numerical decline driven by substantial losses in abundant species. Our work supports previous assessments indicating recent biodiversity loss and calls to reduce the threat of extinctions and restore species' abundances, for the sake of nature and people.

Hosted file

EU birds decline overall but pattern complex.docx available at <https://authorea.com/users/424083/articles/710716-abundance-decline-in-the-avifauna-of-the-european-union-conceals-complex-patterns-of-biodiversity-change>





