EFFECTS OF FOREST FRAGMENTATION AND FUNCTIONAL LOSS ON BIRDS IN THE BRAZILIAN ATLANTIC FOREST

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Abstract

Abstract: Aim: Severe anthropic actions in the landscape are, currently, the main cause of threat to species conservation. The Brazilian Atlantic Forest is priority focus for conservation, due to the high degree of endemism and the pressures suffered since colonization. Despite the effort employed in studies on the impact of forest fragmentation on the fauna, understanding its effects on functional diversity is still limited. Considering that forest fragmentation it affects each organism in a different way, the relationships between species and with the environment are affected also, including human communities. So, this work aimed to identify emerging fragilities of the transformations on the biological systems through the modifications of the landscapes, on the avifauna of the Brazilian Atlantic Forest. Location: Brazilian Atlantic Forest. Methods: The purpose of the research was achieved through the analysis of the species data available on the database GBIF, with the calculation of functional diversity (FD) for the Brazilian Atlantic Forest and models of species extinction included in global red list (IUCN). Results: The high values of functional diversity are concentrated in the Brazilian Southeast region, coinciding with the location of the largest and most connected Conservation Units and of lesser intensity of the forest fragmentation process. However, the functional loss caused by the extinction of vulnerable species is distributed in the Brazilian Atlantic Forest. Evidencing that the functional diversity of birds presents great spatial clustering, while functional vulnerability is widespread throughout the biome. Main conclusions: The results demonstrate that forest fragmentation acts as an ecological filter, directly affecting habitat specialist species and reducing the functional diversity in forest communities. Key words: forest birds, functional traits, conservations, landscape analysis, biological system, forest communities, Conservation Areas, modified landscape, anthropization, habitat patches.

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