Is urban avian biodiversity representative of the regional avifauna in Brasília, Brazil?

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Urban areas in tropical regions often have unexpectedly high levels of biodiversity, including the occasional species usually found in pristine habitats. The purpose of this study was to compare the avian species composition of urban fragments and of protected areas in the city of Brasília and surrounding Federal District, Brazil, to determine whether urban areas are representative of the general avian diversity of the region. An additional objective was to test the use of a rapid assessment method, the Mackinnon list, that is suitable for use by citizen scientists and has a well developed analytical framework. We sampled 4 natural and 7 urban sites using 10-species mackinnon lists, compiling 23 surveys in natural areas and 44 in urban areas between may 2016 and february 2021. We recorded 153 species, and the rarefaction-based estimate is 175 species for the natural areas and 150 for the urban area. The natural areas also had higher Simpson diversity (62.7 vs 48.9) Although species richness is similar between urban and natural point sites, there is a major difference in species composition when we examine the most common species in each habitat. The jaccard similarity index of the 51 most abundant species was 0.17 between urban and natural areas, with only 9 species on both lists. Only one species, the Southern caracara, was in the top 10 in both lists. We conclude that although there may be similar species richness in natural and urban habitat sites, the differences in dominance and species composition confirms the need to maintain natural habitats and provides guidelines to manage urban areas to enhance biodiversity.