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Abstract

As urban areas worldwide continue to grow, the cities in which we live, work, and play can take on an increasingly vital role in sustaining biological diversity. Studies of bird communities in metropolitan areas show that our cities generally remain places inhospitable to most native bird species. However, gaps exist in our understanding of the principles needed to design metropolitan landscapes that better sustain native birds. Long-term data collected over a range of spatial scales across a city can aid in filling these gaps. To evaluate an approach to collecting such data, and to address unanswered questions concerning birds in populated areas, I organized a volunteer-based bird monitoring project (the Tucson Bird Count, or TBC) in Tucson, Arizona, USA. In the TBC, skilled observers surveyed the breeding bird community at hundreds of sites

...BC, skilled observers surveyed the breeding bird community at hundreds of sites throughout Tucson. This paper reports results after the second year of this ongoing project, and has four objectives. First, it discusses issues of survey design in relation to scientific and conservation data needs. Second, it tests the ability of a citywide survey to rapidly prioritize species according to their sensitivity to development. Third, it presents a novel approach for quantifying the impact to humans of reduced diversity in urban areas. Finally, it concludes with an evaluation of the viability of volunteer-based, citywide surveys as tools for research and monitoring in cities in general, citing specific examples from this Tucson study. Volunteer-based, citywide surveys offer high visibility, efficient means to acquire data unobtainable by other methods, presenting great potential to advance ecology and conservation.



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Keywords

Birds; Urban wildlife; Conservation; Monitoring; Tucson Bird Count

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Will R. Turner is a PhD student in the Department of Ecology and Evolutionary

Biology at the University of Arizona. His research interests include avian conservation in human-dominated landscapes, the role of scale in organismâ€™environment relationships, spatial distributions of species and species diversity, and the biological monitoring tools which allow insight into all of these.

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