



CHAPTER 1

INTRODUCTION: RESEARCH AND PERSPECTIVES ON THE STUDY OF ANTHROPOGENIC NOISE AND BIRDS

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WELCOME TO THE *Ornithological Monographs* volume focused on how anthropogenic noise affects both birds and the study of birds. Concomitant with the growth of human populations and infrastructure development that has left few landscapes untouched by human activities (Ellis and Ramankutty 2008), there has been an increase in anthropogenic noise that emanates from urban areas, as well as from industrial agriculture, resource extraction activities, and our dendritic transportation networks (Barber et al. 2010). Although the negative effects of anthropogenic noise on humans are fairly well documented (e.g., Alberti 1998, Babisch 2003, Jarup et al. 2008), only recently have biologists recognized that anthropogenic noise represents a serious concern for other species as well. Several recent reviews have highlighted potential and known effects of noise on terrestrial organisms (Patricelli and Blickley 2006, Warren et al. 2006, Slabbekoorn and Ripmeester 2008, Barber et al. 2010, Kight and Swaddle 2011); the present volume is the first compilation specifically focused on this important conservation issue.

Born of a symposium on the effect of anthropogenic noise on birds and bird studies at the 2008 Joint Meeting of the American Ornithologists' Union, Cooper Ornithological Society, and Society of Canadian Ornithologists, this volume represents an effort to bring increased awareness to the issue as well as highlight diverse and interesting research in this area of study. In 2008, organizers at that symposium had difficulty locating enough North American investigators studying the effects of noise on birds to fill all the speaking

slots. Now, just a few years later, there would be no such problem; the body of studies involving noise and birds has quickly expanded (Fig. 1) and includes a diversity of species, environments, and noise types. Illustrative of the growing interest in this topic, in 2008 we knew of only four urban-adapted songbirds that have distinctly different singing behavior in noisy areas than in quiet areas (e.g., Slabbekoorn and Peet 2003, Brumm 2004, Fernández-Juricic et al. 2005, Wood and Yezerinac 2006, Fuller et al. 2007). This list has now grown to comprise more than 25 species, including suboscine (suborder Tyranni; Francis et al. 2011b) and nonpasserine species (family Psittacidae; Hu and Cardoso 2010) that are found in both urban and nonurban environments. The individual contributions in the present volume further our knowledge of how noise affects bird communication, and they also address other important issues and consequences associated with noise exposure that have received less attention.

One goal in putting together this *Ornithological Monograph* was to provide an overview of this emerging subfield and present a road map for future research. To this end, the review presented by Ortega (2012) describes the history of studies on the influence of noise on birds, presents a brief primer on how noise is measured, and discusses the many ways in which noise can affect birds. Ortega concludes by presenting several areas in need of future research. This review is a good starting place for people who are unfamiliar with the issues surrounding noise and birds or for those interested in pursuing future studies on this topic.

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