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INTRODUCTION

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Disease can play an important role in the life-history, morphological, behavioral, and genetic evolution of birds. It also frequently presents conservation challenges—for example, dealing with a new and invasive pathogen or determining whether a newly detected parasite is naturally endemic and, therefore, might not be of concern. Alternatively, disease can potentially interact with other problems, such as habitat fragmentation and the associated small metapopulations of forest-dependent birds. Therefore, it is crucial to determine the epizootiology of both endemic and newly invasive species and to seek an understanding of the complex ways in which these diseases influence the birds they infect. The vast range of disease-related questions that can consequently be explored are both compelling and valuable.

Ornithological Monographs No. 60 grew out of a combined American Ornithologists' Union and Society of Canadian Ornithologists conference in Québec in 2004; an author of each of these papers contributed a talk at the conference. The present collection of explanatory and research papers represents new work from these researchers and their collaborators, and the variety of topics encompassed reflects the great diversity in avian disease research. The range of pathogens represented is diverse, including two viral diseases (avian influenza and West Nile virus), one bacterial disease (*Mycoplasma gallisepticum*), and avian blood parasites (avian haemosporidia).

The H5N1 subtype of avian influenza looms as a potential calamity for migratory, resident, and domesticated birds, as well as for humans. Therefore, Chapter 1 is especially timely. Authors Clark and Hall explain in detail the role that wild birds play in the development and movement of avian influenza, as well as the associated risks to humans and agriculture.

The second invasive disease agent represented in this monograph is the bacterium *Mycoplasma gallisepticum,* responsible for outbreaks of conjunctivitis within finches—notably the House Finch (*Carpodacus mexicanus*). In Chapter 2, the population- and group-level responses of House Finches to this bacterium are explored by Hochachka and Dhondt, who highlight interactions among House Finches at individual sites as a key factor influencing the effects of the disease.

The other invasive disease, and second virus, addressed in this volume is the West Nile virus (WNV). This is an arthropod-borne virus (arbovirus) that has spread across the United States since its arrival in 1999. The effects of WNV are ongoing, and there is still much to learn about the disease ecology of this pathogen (including host susceptibility and reservoir competence). We also have much yet to learn about the consequences of WNV-attributed mortality for surviving populations of susceptible species. In Chapter 3, the first of three chapters on WNV, Robert McLean provides a valuable description of the changing events and unique characteristics of WNV within naïve North American avian hosts since its arrival, as well as what is known about the evolving ecology of this virus. In Chapter 4, Anne Clark and co-authors explore the effects of WNV on the social structure of a marked population of American Crows (*Corvus brachyrhynchos*). And in Chapter 5, James Marshall and co-authors present current reports of WNV within permanent resident birds of Ohio, including winter persistence.

Finally, chapters 6 and 7 focus on blood parasites, primarily two genera of avian haemosporidia (Phylum: Apicomplexa), *Haemoproteus* spp. and *Plasmodium* spp. (species of the latter genus cause malaria). In Chapter 6, Luis Padilla

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