

MS Thesis
Department of Environmental Science and Policy
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Title: Avian Responses to Difference Anthropogenic Disturbances and Habitats

Thesis Director: Dr. David Luther

Committee: Dr. David Luther, Dr. Thomas Lovejoy, Dr. Jessica Deichmann, Dr. Rebecca Forkner

ABSTRACT

To describe how birds are impacted by inhabiting disturbed environments, I analyzed data from (1) a self-collected research project in Virginia and (2) a long-term study conducted in the Brazilian Amazon. This thesis was originally to be based solely on research collected at the Biological Dynamics of Forest Fragments Project outside of Manaus Brazil, however, visa restrictions and a global pandemic inhibited my ability to conduct personal field research. The first chapter examines how animals avoid being predated upon in the presence of relatively loud anthropogenic noise. Field experiments were conducted to assess if the effectiveness of alarm calls, that warn about predators, is reduced in the presence of anthropogenic noise. Any changes to alarm calls can be extremely detrimental to the overall fitness of bird populations, as these calls aid in the ability of birds to avoid predation and to communicate with heterospecifics. The second chapter examines the effects of forest fragmentation on the body condition of understory birds of the Brazilian Amazon. This project aims to further the knowledge of how increased fragmentation may negatively impact the fitness of essential species, as there is limited information on the impacts on fragmentation on the health of birds. Understanding the effects on bird health provides direction on the best conservation practices for fragmented habitats.