

# CLIMATE CHANGE AND NORTHERN BOBWHITES: THE STATE OF OUR KNOWLEDGE, POSSIBLE OUTCOMES, AND THE RISK OF IGNORANCE

James A. Martin<sup>1</sup>

College of Forest Resources, Mississippi State University, Mississippi State, MS 39762, USA

## ABSTRACT

No disturbance in the Holocene has received more scientific resources or public scrutiny than global climate change. This phenomenon and associated uncertainty in its' potential effects reduces our ability to effectively manage species such as northern bobwhite (*Colinus virginianus*). This uncertainty is complex because of the hierarchical nature of spatial and temporal scales of ecological and societal processes that can influence bobwhite persistence. A loss of financial resources can occur if the threat of climate change is false because of inefficient resource allocation. However, if effects are real and system dynamics are altered, management concerns and decisions must adapt in response to new information. Furthermore, decisions relative to climate change occur at time scales for which scientists are not accustomed. Climate change effects will likely be subtle in regions inhabited by bobwhites and occur over decades. The climate change paradigm (and all that it encompasses) should be viewed as a decision-making issue and not a scientific exercise. It behooves bobwhite scientists and managers to understand potential effects of climate change regardless of the causal agent. Ecological changes are likely to occur even if variation in climate is minimal; thus, the risk is too high to ignore. I propose addressing bobwhite management relative to climate change using a hierarchical decision framework that incorporates a mechanistic approach of relevant processes (e.g., land-use changes, raptor migratory patterns, and bobwhite life history) at multiple spatial and temporal scales.

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<sup>1</sup>E-mail: [jmartin@cfr.msstate.edu](mailto:jmartin@cfr.msstate.edu)