PhD Dissertation

Department of Environmental Science and Policy

College of Science

George Mason University

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**Title:** Behavioral and Physiological Dynamics of Musth in Asian Elephants

**Dissertation Director:** Dr. Elizabeth Freeman (chair) / Dr. Wendy Kiso (co-chair)

**Committee:** Dr. Rajnish Vandercone, Dr. Kathleen Hunt, Dr. David Luther, Dr. Cody Edwards

**ABSTRACT**

Asian elephants (*Elephas maximus*) are unsustainable in the long-term and require integrative approaches to address issues impacting their conservation. Musth is a unique sexual state in male elephants and is a major challenge to management strategies. The purpose of this dissertation was to characterize the behavioral and physiological variation of musth in wild and zoo-housed male Asian elephants, emphasizing the variation associated with behavioral and physiological correlates of musth. In identifying the intrinsic and extrinsic influences of this variation, we can develop informed approaches to conserve elephants as they respond to ever-changing internal and external environments.