

PhD Dissertation
Department of Environmental Science and Policy
George Mason University

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Title: Assessment of current captive management of the fishing cat (*Prionailurus viverrinus*)

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ABSTRACT (one page only please)

Fishing cats (*Prionailurus viverrinus*) are a small felid found primarily throughout Southeast Asia. Wild populations have been rapidly dwindling due to degradation and loss of habitat along with retribution killings. Captive populations have been established throughout the world to help ensure this species persists. In North America, Species Survival Programs (SSP) are committees formed within the Association of Zoos and Aquariums (AZA) made up of a group of species-specific experts dedicated to sustaining a healthy captive population that can serve to educate the public and potentially replenish dwindling wild populations if needed in the future. The SSPs make breeding recommendations for this captive population based on genetics, age and keeper intuition. The fishing cat SSP recommended several new breeding pairs in 2010, 2011, and 2012. These recommendations allowed for the monitoring of institutional transfers and breeding introductions on fishing cats to identify whether specific management strategies lead to or enhance the odds of reproductive success.

The study ultimately had four objectives:

1. Examine the current management and breeding behaviors of captive fishing cats.
2. Validate a glucocorticoid assay for longitudinal monitoring of exogenous stressors on males and females.
3. Determine relationship between adrenal activity and gonadal function in females.
4. Characterize temperament within the population and correlate with behavioral traits, breeding success and adrenal activity.

Recommendations include transfers in the late spring or early summer of males allowing at least three months post quarantine release for physical introductions, to allow the transferred individual time to return to baseline glucocorticoid concentrations before experiencing another stressful event (breeding introductions). Institutions with breeding pairs can improve breeding success via reducing their stress levels with positive animal keeper interaction through training and providing indoor off-exhibit refuge areas. It is also suggested that videotaping breeding introductions and providing at least 1-2 nest boxes for females may all contribute to greater captive breeding success in the fishing cat. The information gained by this study provides an outline for fishing cat SSP managers on how this species is managed in captivity. It also provides a solid foundation of longitudinal monitoring of adrenal activity and recommendations for the future sustainability of the ex situ population of fishing cats.