

The Effect of Age-at-Release on the Survival of Parent-Reared Bobwhite Chicks



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Introduction

- Population Decline
- Habitat Restoration
- Restocking Efforts



Restocking Efforts

- Pen-Reared
- Translocation
- Parent-Reared



Parent-Rearing at TTRS

- Palmer et al. 2012
 - Pinion Point
 - Mt. Pleasant
- Macaluso et al. 2017



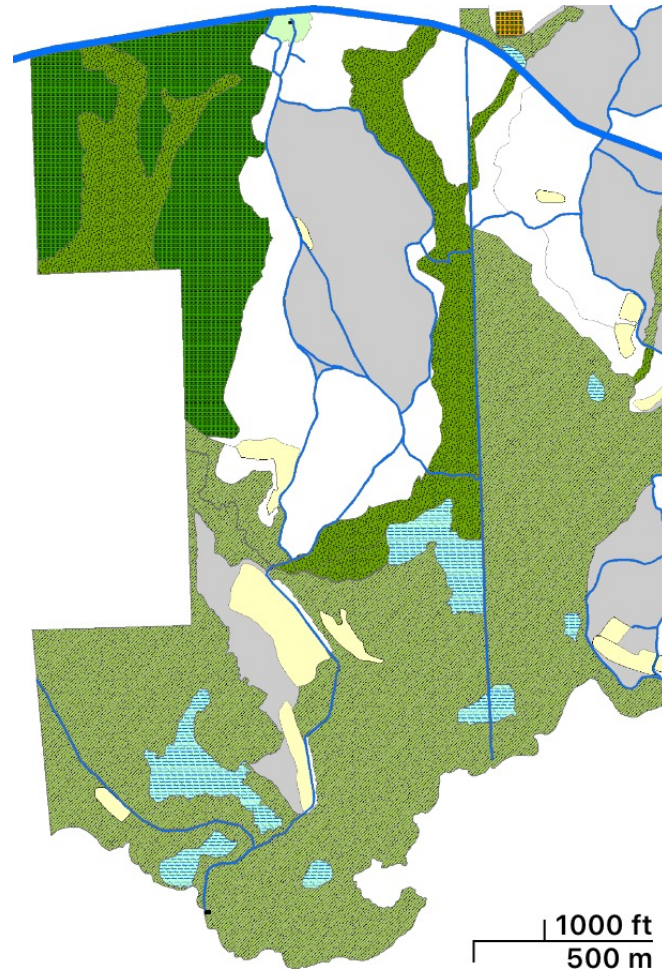
Our Study

- Evaluate the effect of age-at-release on survival rates
 - Only 6-weeks has been tested
 - Evaluate younger and older chicks
 - Human Habituation
 - Physiological Development
 - Adoption Potential
 - Reduce Costs



Study Area

- Hanna Hammock – Tall Timbers Research Station
- Aviaries
 - Tower Course
 - Hanna Hammock



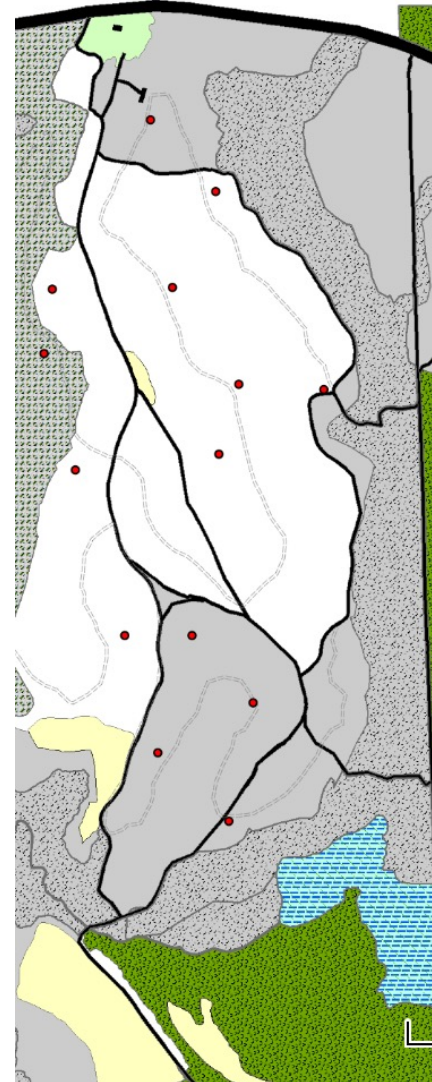
Incubation & Brood Rearing

- Incubation Process
- Parent Selection and Adoption Process
- Aviaries
 - Adult Placement
 - Holding Period
 - Release
 - Rearing
- Nutrition



Release

- Release Sites
 - Chosen by placing 200m grid across Hanna Hammock, with two random points per grid block
 - Landscape Features: Feedline, Drains, etc.
- Radio-Tagging, Banding, Mass
- Modified-Hard Release Technique



Data Collection & Analysis

- Radio-telemetry
 - Tracked everyday for first four weeks to ensure proper fate dates are assigned, 3x per week thereafter
 - Mortality: determined by evidence at kill site

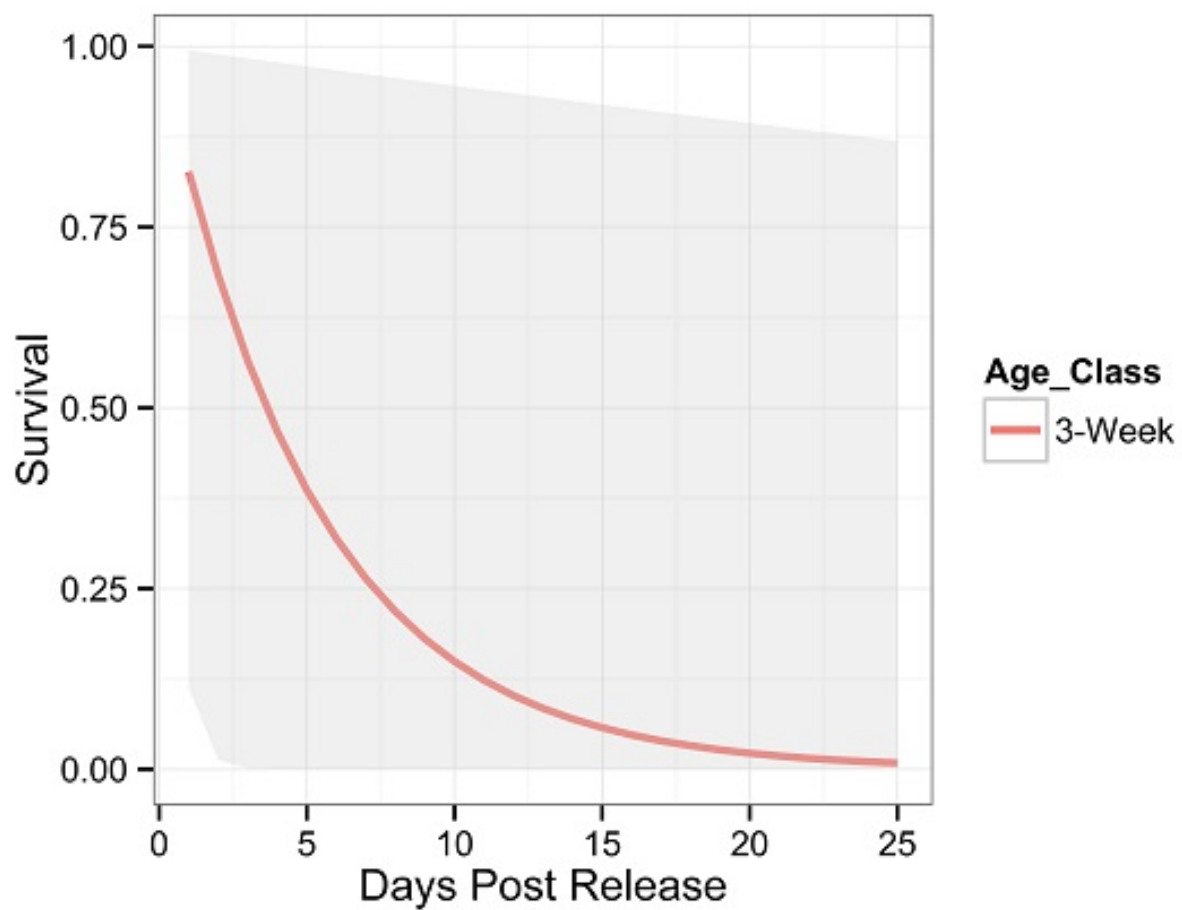
Data Analysis

- Known Fates Models in Program MARK
 - Variables
 - Age
 - Group
 - Aviary
 - Linear Time
 - Quadratic Time
 - Model Selection

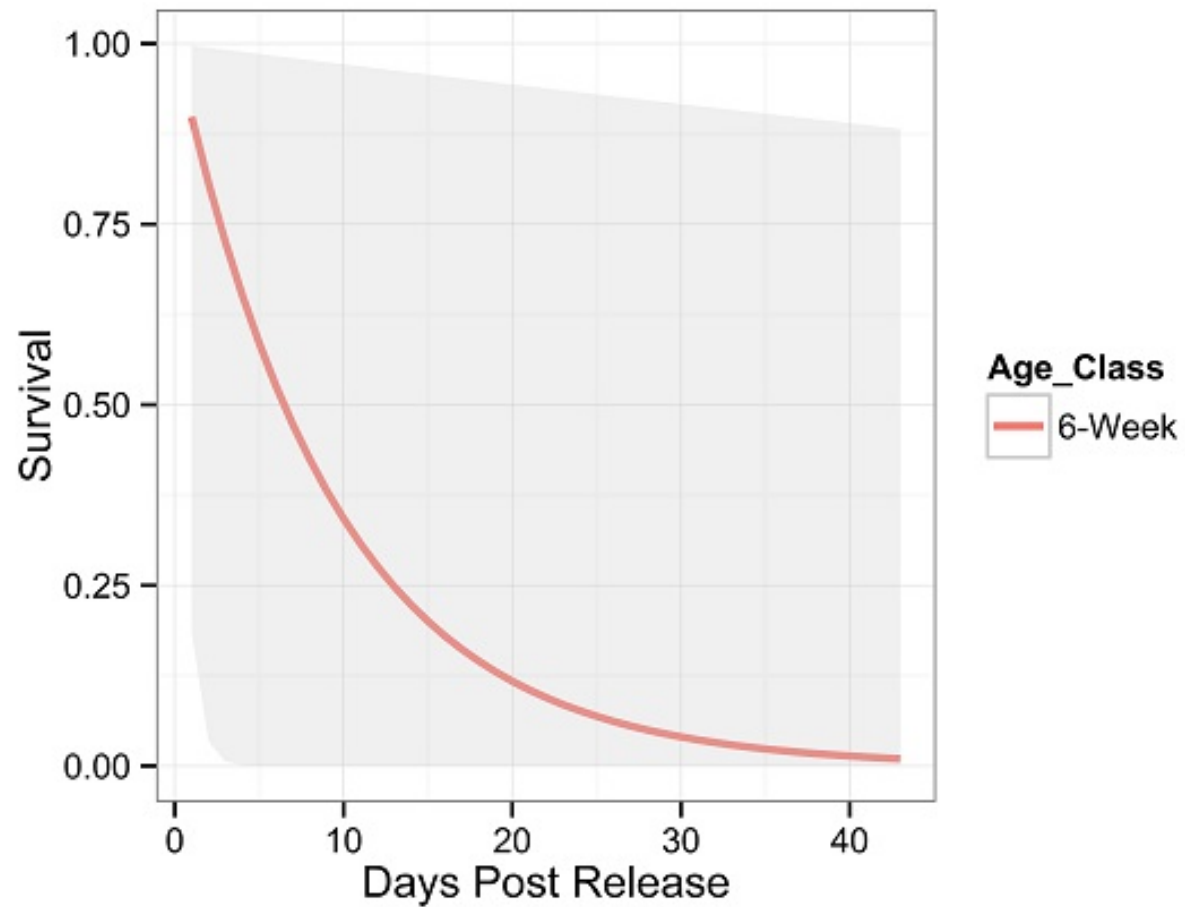
Results

- Top Model: Age + LinTime + QuadTime
- Beta Estimates
 - Age & Linear Time affected DSR
 - Other variables were not significant
- Model-Averaged Daily Survival Rates (DSR)
 - 3-Week: 0.827
 - 6-Week: 0.898
 - 9-Week: 0.965

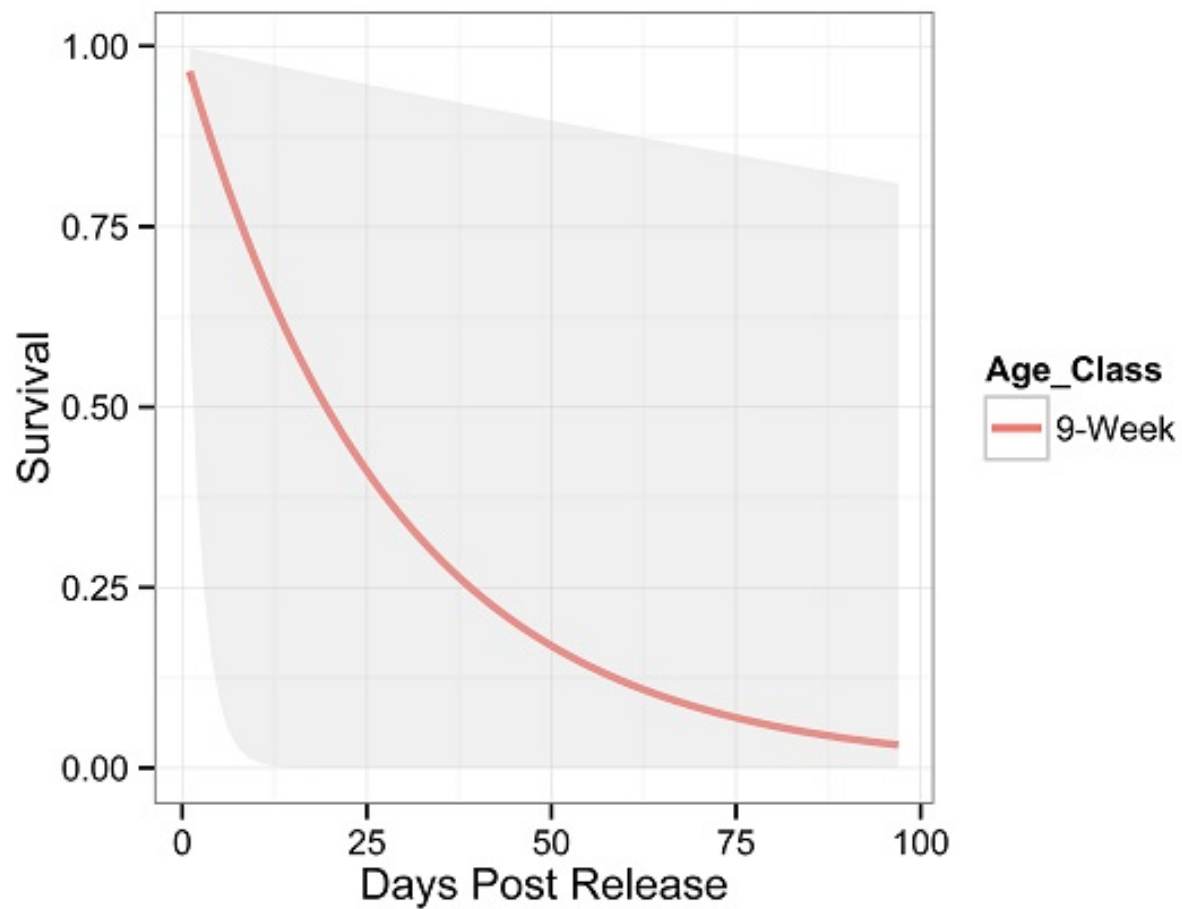
Results



Results



Results



Discussion

- Age has some effect on survival rates of parent-reared bobwhite chicks
 - Human Habituation
 - Physiological Development
 - Adoption Potential
- High Mortality expected in the first 3 weeks
 - 9-week age class was the only cohort to survive study period
- Anti-predator behaviors

Future Directions of PRAP

- Behavioral Conditioning
 - Anti-predator training
- Age Modification
 - Increasing Age-at-release
- Brood Augmentation
 - Placing artificially hatched chicks with wild parents

Management Implications

1. Population Recovery Tool
2. Age-at-release Modification
3. Number of Birds Released
4. Modify Current Rearing System

Questions?

Acknowledgements



TALL TIMBERS

