Evaluating Two Trap-and-Release Methods for Bobwhites

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Introduction

**Why do we trap**
- Capture and tag study individuals
- Collect data such as trap info for survival or population estimation

**Assumptions:**
- We have little-to-no impact on individuals sampled
- Sample tagged is representative of the population we are studying
Two Release Techniques

 Trap and release at trap site

 Trap, transport and hold overnight ... workup and release in AM

 **This is different from “hard” versus “soft” release**
# The Cost – Benefit

<table>
<thead>
<tr>
<th>Trap and release at night</th>
<th>Hold overnight</th>
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<tbody>
<tr>
<td><strong>Pros:</strong></td>
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<tr>
<td>• Minimize handing time and birds back in the wild immediately</td>
<td>• Higher data quality/integrity → good working light</td>
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<td>• Less time consuming</td>
<td>• Less vulnerable to predation upon release (AM vs PM)</td>
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<td>• Guaranteed release back at the correct site</td>
<td><strong>Cons:</strong></td>
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<td><strong>Cons:</strong></td>
<td>• Increased handling time and frequency → increased stress?</td>
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<tr>
<td>• Data collection and data integrity may suffer (esp w/ rotating interns) – poor working light</td>
<td>• Hard on birds (head condition)</td>
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<td>• Alone and vulnerable at night</td>
<td>• Risk not releasing back at original capture site</td>
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Study Area

2011 Landcover

Legend:
- Black: Cultivated
- Dark Green: Forested
- Light Green: Rangeland
- Yellow: Wood
- Blue: Water
- Red: Developed

Key locations:
- Deer Cleaning Barn
- Land Manager's Home
- TV Station and Tower
- TITRIS Campus

Map showing areas such as:
- Tall Timbers
- Georgia
- Florida
- Lake Iamonia
- Woodyard Hammock
- Marina Hammock
- Anders Fort

Inset of Florida showing location of Tall Timbers.
Confusion-style funnel traps baited with milo and/or cracked corn

Radio-tagged 5-6 birds in ≥5 coveys per quadrat on Tall Timbers during fall, winter or spring of 2014 – 2017.

All remaining birds/coveys were brought back to the lab for workup.

Birds checked within 24 hrs.

Birds checked ≥2 times/week.

Burnham’s model (MARK)
Radio-tagged 841 birds ($n_{field} = 356$, $n_{lab} = 485$, $n_{control} = 1,268$)

Cold weather ($\beta = -0.049$, CI: $-0.066$, 0.004)
Summary

- No difference between release methods
- Choose method that best suits your study and personnel
- Training is important...
- Goal is to reduce handling time and reduce stress in order have a “good, representative” sample
Questions???