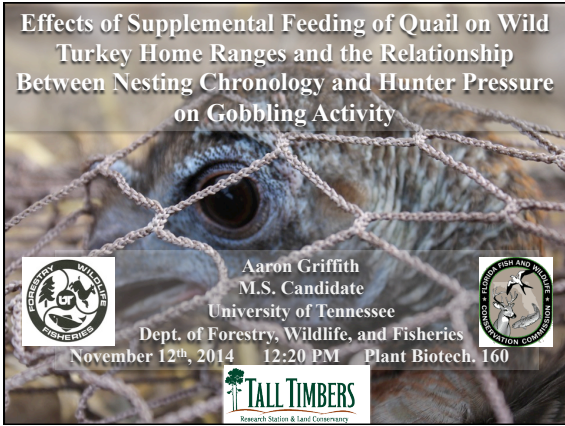





Effects of Supplemental Feeding of Quail on Wild Turkey Home Ranges and the Relationship Between Nesting Chronology and Hunter Pressure on Gobbling Activity



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Supplemental Feeding for Quail

- Common practice on intensively managed properties to increase survival (Sisson et. al. 2000)
- Grain spread across properties on established feed lines
- Spread at 1 bushel per acre per year




Traditional Thoughts on Gobbling

- 2 peaks in gobbling activity (Kurzejeski & Vangilder 1992)
- 1st peak associated with winter flock break up (Miller et. al. 1997)
- 2nd peak occurs during peak incubation of nests (Kienzler et. al. 1996)



Gobbling Activity



A single turkey is shown in a field. Above it is a white line graph that starts at a low point, rises to a peak, and then falls to a low point before rising again.

Gobbling Activity



A group of turkeys is shown in a field. Above them is a white line graph that starts at a low point, rises to a peak, and then falls to a low point before rising again.

Gobbling Activity



A turkey is shown in a field. Below it are two smaller images: one of a nest and one of hunters in a field. Above the turkey is a white line graph that starts at a low point, rises to a peak, and then falls to a low point before rising again.

Why is the 2nd Peak Important?

- **Timing of turkey seasons** (Bevill 1975)
- **Turkey hunter satisfaction** (Shields 2014)
- **Protects hens from illegal harvest** (Vangilder 1992)

Objectives

1. Determine if supplemental feeding affects the size and location of wild turkey's home range.
2. Determine if gobbling activity increases around the time of peak nest incubation.
3. Determine if an increase in hunter pressure suppresses gobbling activity.

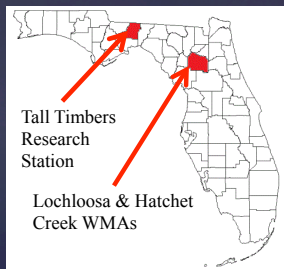
Justification

- **Few studies on effects of broad cast supplemental feed for quail on other species** (Godbois et al 2004, Morris et al 2010)
- **Turkey hunters in Florida claim the season comes in too late** (Shields pers. comm.)
- **Traditional double peak gobbling model may not exist everywhere** (Miller et al. 1997)

Outline of Methods

- Study Sites
- Recording Gobbling Activity
- Capturing Turkeys
- GPS Transmitters
- Collecting Hunter Effort

2 Study Sites



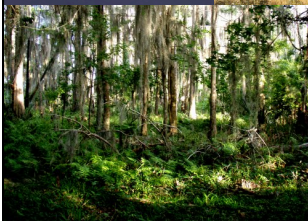
Tall Timbers

Open Pine Woods
Hardwood Drains and
Hammocks
Fallow fields




Lochloosa & Hatchet Creek

Pine Flatwoods
Sandhills
Hammock
Swamp



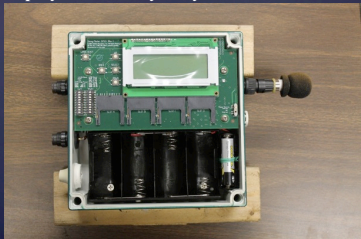
Recording Gobbling Activity

- SongMeter SM2+ Recording Units
- Records 209m radius around unit (Colbert 2013)
- Records for 10 min every 30 min around sunrise
- 8 units randomly distributed across each study site
- Deployed February-May




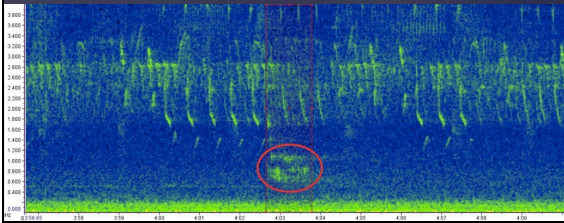
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Analyzing Recordings

- Template matching in spectrograms (Scott Brandes 2008)
- Xbat & Raven Pro software










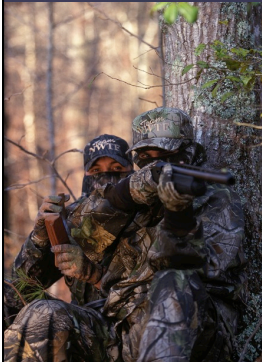


Attach GPS Transmitters to Turkeys

- Tall Timbers
20 GPS & 15 VHF Units
- Lochloosa & Hatchet
Creek WMA
10 GPS & 25 VHF Units
- Distributed evenly among
gobblers and hens
- VHF monitoring ≥ 5 days/
week during breeding
season
- GPS 9 fixes 4 days/week
1 fix 3 days/week



Collecting Hunter Effort



Tall Timbers

- All hunters will be
required to carry
GPS data loggers

Hatchet Creek WMA

- Quota hunt area
- Hunters will be asked
to carry GPS data
loggers

Analysis

- **Brownian Bridge method for home ranges** (Horne et al. 2007)
- **Simple Saddle Point Approximation**
- **AIC mixed modeling**

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