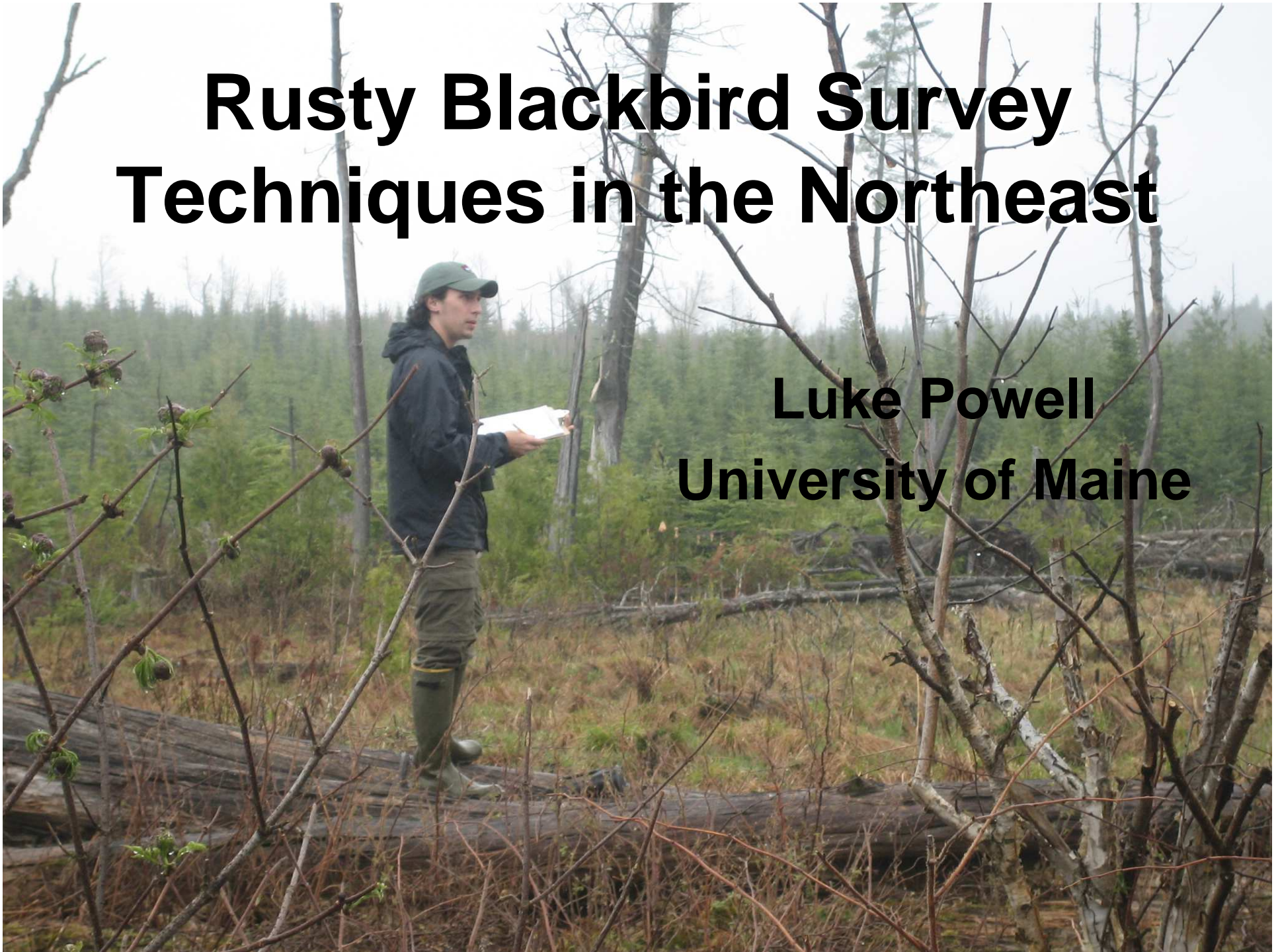


Rusty Blackbird Survey Techniques in the Northeast

**Luke Powell
University of Maine**



Techniques

1. Breeding Bird Atlases

- Passive, all species

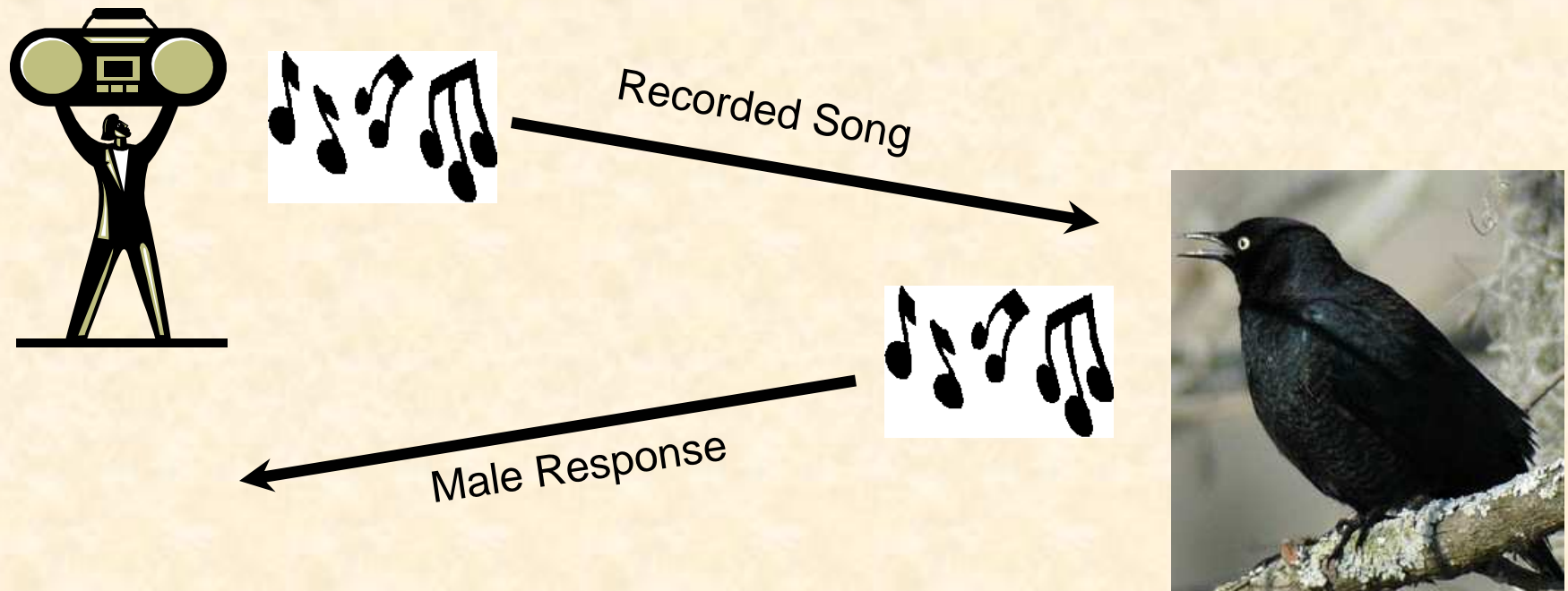
2. Boreal Bird Survey: WCS, Adirondacks

- Point counts targeting 10 boreal species
- Rusty Blackbird is the rarest

3. Rusty-specific callback surveys in New England

Callback Survey Protocol

- Nesting period only (~May 10 to June 15)
 - 3 min passive observation
 - 1 min broadcast
 - 5 min post-broadcast observation
- Record suite of habitat characteristics, other species etc.



Survey Objectives

1. Determine extent of range contraction
2. Obtain an **unbiased** estimate of “abundance” for
 - Trend analysis
 - Comparisons to other regions
3. Determine important habitat variables
4. Find as many birds as possible

Occupancy Modeling

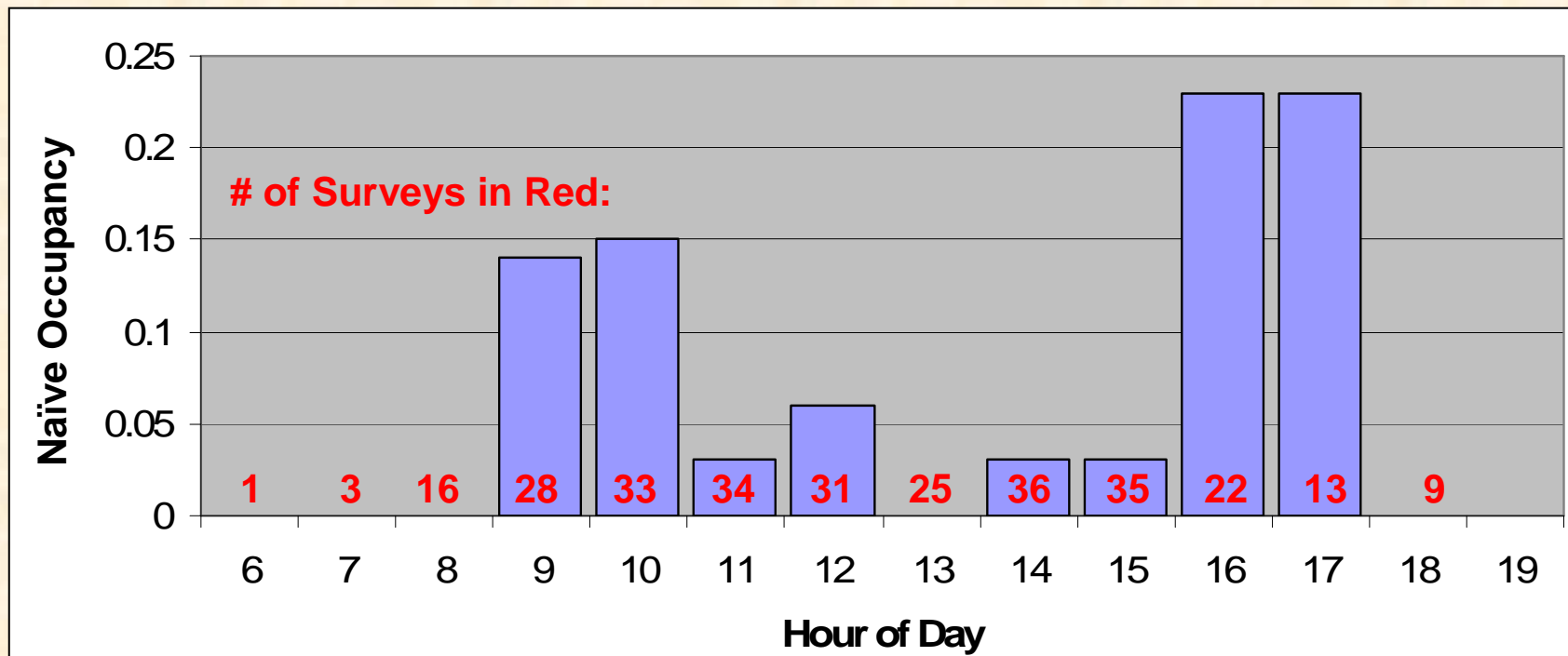
- Darryl MacKenzie et al.'s approach
- Looks at % of wetlands occupied
 - Not absolute abundance
- Less sampling effort for rare and patchy species
- Uses AIC to choose the model that best accounts for spatial and temporal differences in occupancy and detectability

My Occupancy Questions

- Do management practices affect Rusty Blackbird wetland Occupancy?
- Are there differences in occupancy between different wetland types?
- Can roadside surveys alone properly survey for Rusty Blackbirds?

My Detectability Questions

- Are Rusties harder to detect in large wetlands?
- Does date of survey affect detectability?
- E.g. Does time of day affect detectability?

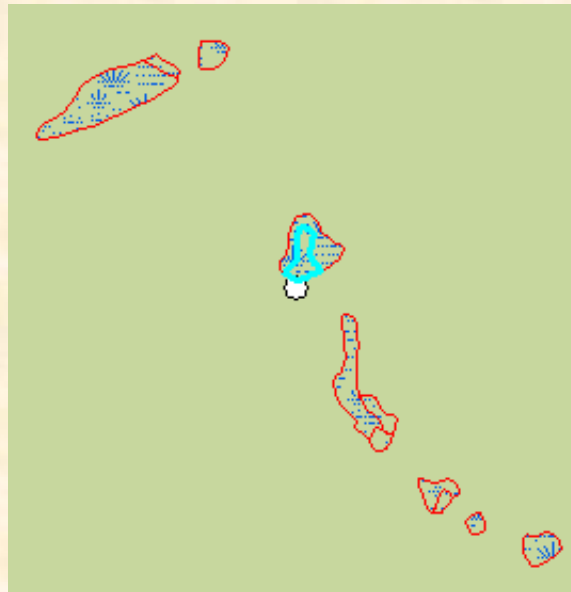


2007 Survey Design

- Multi-layered Stratified Random
 - Spatial and temporal stratification
 - Stratify by wetland area
 - Target probable wetlands
 - e.g. Palustrine Unconsolidated Bottom
 - Include non-roadside wetlands
 - Adaptive sampling near positives
- Multiple visits for detectability measure

Q: Does Stratification Bias Statewide Occupancy Estimates?

- Adjust model later based on overall abundance of wetland type
 - Using NWI or NLCD GIS layer



Thank You.

