Rusty Blackbird Monitoring
in the Atlantic Northern Forest

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Rationale

- Declines in every state
- BBS not adequate
- Forest management issues
- Range contraction to NW Maine
Goals

1) Measure change in occupancy over next 15-30 years
   - 90% power to detect 15% change over 5-yrs

2) Determine factors affecting occupancy
   - forestry practices
   - landscape characteristics
   - wetland-scale habitat characteristics
   - climate change
   - abundance of potential nest predators
Goals (cont.)

3) Share data to support the conservation of RUBL

4) Collect data on conspecific birds of conservation concern to estimate population trend and habitat selection
Sampling Design

- Roadside surveys
- Survey all wetlands < 50 m of road
  – must be at least 1 km apart
- Routes 20-30 miles in length
- 50 routes in each sub-region located in best habitat for RUBL
  – Classified as scrub/shrub in LULC
- Routes identified by sub-regional coordinators
Sub-Regional Coordination

- New York: NYSDEC
- NH/VT: VCE & NH Audubon
- Maine: MDIFW
- New Brunswick: NB DNR
- Missing:
  - Quebec
  - Nova Scotia
  - PEI
Protocol

- May 8 – June 24
- Morning survey: 20 min before sunrise – 4.5 hrs later (4.5 hr total)
- Evening survey: 4.5 hrs before sunset to 1 hour before sunset (3.5 hr total)
- 2 survey length options
- Three visits to all wetlands with RUBL
- Reviewed by Andy Royle
Protocol

• Minute-by-minute + playback
• 3 Surveys

First survey
Second survey
Third survey

RUBL detected on route

Yes, survey again; RUBL points = long survey; all other points, same protocol as first survey

No, don’t survey again

Repeat
Short or Long?

Step 1: Habitat Questions:

a) Are there puddles?
b) Is the wetland > 0.5 ha?
c) Is the upland >70% coniferous?

Step 2: Roll a die

<table>
<thead>
<tr>
<th>Nbr of &quot;yes&quot; responses to habitat questions</th>
<th>Long survey if random number is a ...</th>
<th>Probability of performing a long survey</th>
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<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>0.17</td>
</tr>
<tr>
<td>1</td>
<td>1 or 2</td>
<td>0.33</td>
</tr>
<tr>
<td>2</td>
<td>1, 2, 3, or 4</td>
<td>0.67</td>
</tr>
<tr>
<td>3</td>
<td>1, 2, 3, 4, or 5</td>
<td>0.83</td>
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</table>
Short vs Long Procedure

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Passive</th>
<th>Broadcast</th>
<th>Post-broadcast</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short</td>
<td>1 min</td>
<td>30 sec</td>
<td>1 min</td>
<td>2.5 min</td>
</tr>
<tr>
<td>Long</td>
<td>3 min</td>
<td>30 sec</td>
<td>5 min</td>
<td>8.5 min</td>
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</tbody>
</table>

RUBL DATA: For each minute, if you detected any RUBLs, circle the letter H (heard) and/or V (visual) indicating how it was detected (e.g., for long survey, Min 0 is 0:00 to 59 sec, Min 3 is 3:30 to 4:30). Don’t forget to PLAY THE 30 second BROADCAST (after 3 min for the long survey, after 1 min for the short survey)!

Short Survey

Long Survey:

RUBL Detectability:

<table>
<thead>
<tr>
<th></th>
<th>Min0</th>
<th>Min1</th>
<th>Min2</th>
<th>B’cast</th>
<th>Min3</th>
<th>Min4</th>
<th>Min5</th>
<th>Min6</th>
<th>Min7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H</td>
<td>V</td>
<td>H</td>
<td>V</td>
<td>H</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
</tr>
</tbody>
</table>

# RUBL seen <50m away / minute:

# RUBL seen >50m away / minute:

Total # Male RUBL(s):

Total # Female RUBL(s):

Total # Juvenile RUBL(s):

RUBL Breeding evidence:

Singing Male: Poor, Good, Excellent

Pair RUBL W/Food: RUBL W/ Nest Material: Nest, Fledglings

Target Species:

COGR, RWBL, BHCB, BLJA, GRJA, AMRO, OSFL, NOWA, TEWA, RESQ
Proposed Timeline

Jan: hire coordinator
March: id potential routes, make database, and produce training CD
April: hire techs, select routes
May-June: surveys, data entry
Sept: stats analyses completed
March 2010: propose long-term plan for monitoring
Remaining Questions

• Technicians vs citizen science
• Annual or every few years?
• Role within IRBTG
• Host organization
• Funding
  ~$25,000 for pilot year
• Is this a priority?