Northeast Rusty Blackbird Conservation Initiative:
Tentative Steps in the Face of Uncertainty

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A Rusty Blackbird Primer

• Feeds on invertebrates (mainly) at the edge of small puddles by flipping leaves and matted vegetation

• Breeds in habitat that resembles the stunted taiga of more northern latitudes

• Detectability highly variable through the breeding season

• Has experienced the most dramatic decline of any North American songbird
Rusty Blackbirds Observed During Christmas Bird Counts, 1959 to 2003

Graph showing the number of Rusty Blackbirds observed per party hour from 1960 to 2004.
Depends on dynamic, successional habitats for both for foraging and for nesting.
Eastern Spruce Bark Beetle
*Dendroctonus piceaperda*

Eastern Spruce Budworm
*Choristoneura fumiferana*
Brief Summary of Rusty Blackbird Research in New England

- 1990 Ellison - surveys in VT
- 1999-2001 Hodgman - surveys in ME
- 2006-2008 Powell, Hodgman, and Fisher - extensive surveys, demographic, and telemetry studies in ME, VT
- 2007-2009 Edmonds – sampling for Mercury in ME, NH, VT
- 2009 Foss et al. - extensive surveys in NH
- Wicklow – resurveys in White Mountains
- 2010-2012 Foss and Newell - productivity and telemetry studies in NH
- 2011-2012 Buckley et al - productivity and nest predation studies in ME, NH
- 2012 Scarl - resurveys in ME, VT
Rusty Blackbird
Southeastern Breeding Distribution
Circa 1980
Rusty Blackbird Breeding Distribution
Potential Recent Changes

Possible Recent Contraction
Possible Recent Expansion
Approximate Breeding Distribution
Additional Surveys Warranted
Presence-absence Surveys in 2006-7 and 2012
Detection Consistency

Legend
- Blue: Detected 1 out of 3 Years
- Yellow: Detected 2 out of 3 Years
- Red: Detected 3 out of 3 Years
- Black: Never Detected

Map showing locations with detection consistency.
Nest Success

- ME and VT 2006-2007 (n=35):
  - DSR: 98.6%
  - Nest Success Rate: 62%

- NH 2010 (n=20):
  - DSR: 99%
  - Nest Success Rate: 74%

- NH 2011-2012 (n=40):
  - DSR: 98.0%
  - Nest Success Rate: 56%

- ME 2011-2012 (n=25):
  - DSR: 96.2%
  - Nest Success Rate: 31%
RUBL Nest Habitat: Landscape-Level

Wetland Types within 500 M Radius of Nests

Maine (n = 55)

- 87% Scrub-Shrub/Forested
- 10% Pond
- 3% Emergent
- 16% Non-Wetland
- 84% Wetland

New Hampshire (n = 43)

- 91% Scrub-Shrub/Forested
- 5% Pond
- 4% Emergent
- 11% Non-Wetland
- 89% Wetland
RUBBL Nest Habitat: Landscape-Level

Percent area of forest types within 500 m radius
Maine (n = 12)
New Hampshire (n = 17)

Distance to nearest wetland
Maine (n = 55)
New Hampshire (n = 43)
Post-breeding Landscape Use

• Any wetland type (beaver flowages, alder swales, forested wetland, bog)

• Within 200m of a stream of any order

• High proportion of trees in the sapling stage

• Slope < 8%
Some of What We Have Learned

• Regional population is low, with some evidence of range contraction
• Detectability varies with stage of breeding cycle
• Nesting success and productivity vary in space and time
• Squirrel predation can affect nesting success in high population years
• Breeding pairs may forage in multiple wetlands within a watershed
• Post-fledging, families range widely, sometimes over multiple (HUC12) watersheds, and use a variety of habitats
Moving Forward

• Factors contributing to the long-term decline are of continuing interest but still unclear, and may never be fully understood.

• We need to move forward with actions to conserve the population we have today.
Some of the Remaining Research Needs

• Quantifying detectability at different stages of the breeding cycle
• Determining long-term role of cone production and squirrel population cycles on nest success
• Quantifying fledgling survival rates
• Identifying important migration stopover habitats
• Assessing effects of climate change on habitat conditions and phenology
Some Conservation Strategies Ready for Implementation

- Recommended stand characteristics to maintain suitable breeding habitat
- Outreach to key landowners
- Outreach to state and federal agencies
- Improved survey and monitoring techniques
Collaborating Researchers

- Shannon Buckley, SUNY ESF
- Stacy McNulty, SUNY ESF
- Patti Newell, UGeorgia
- Judith Scarl, VCE
- Luke Powell, Umaine
Supporting Partners

- Plum Creek
- Wagner Forest Management Ltd.
- Umbagog National Wildlife Refuge
- J.D. Irving Ltd.

- Appalachian Mountain Club
- Blake-Nuttall Fund
- Davis Conservation Foundation
- Edna B. Sussman Fund
- Garden Club of America
- Lorus and Margery Milne Fund at New Hampshire Audubon
- Maine Outdoor Heritage Fund
- NH Charitable Foundation Conservation Biology Fund
- State Wildlife Grants
- USFWS Division of Migratory Birds
- William P. Wharton Trust