



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

Carol R. Foss

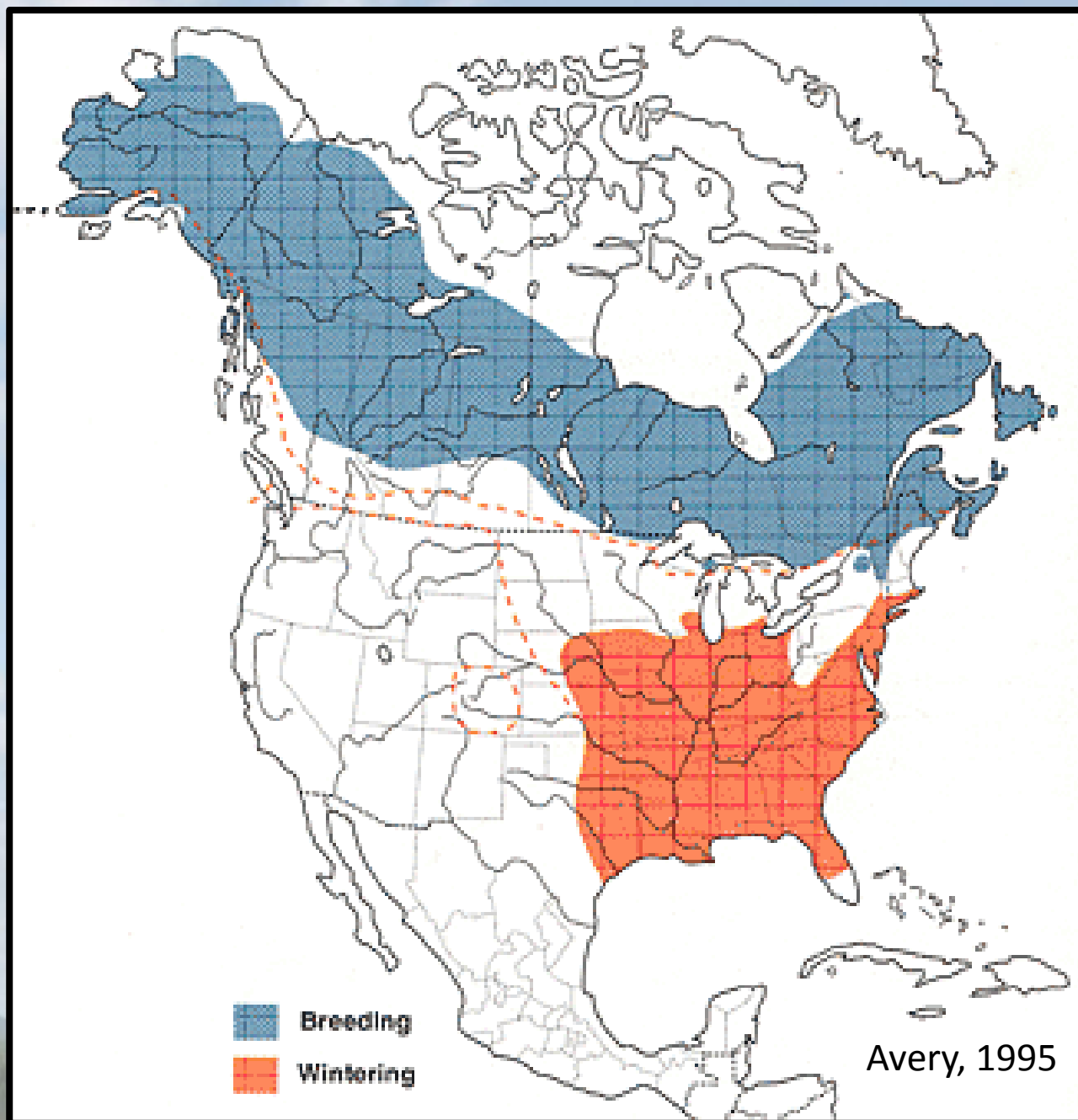
New Hampshire Audubon

and

Thomas P. Hodgman

Maine Dept. of Inland Fisheries and Wildlife

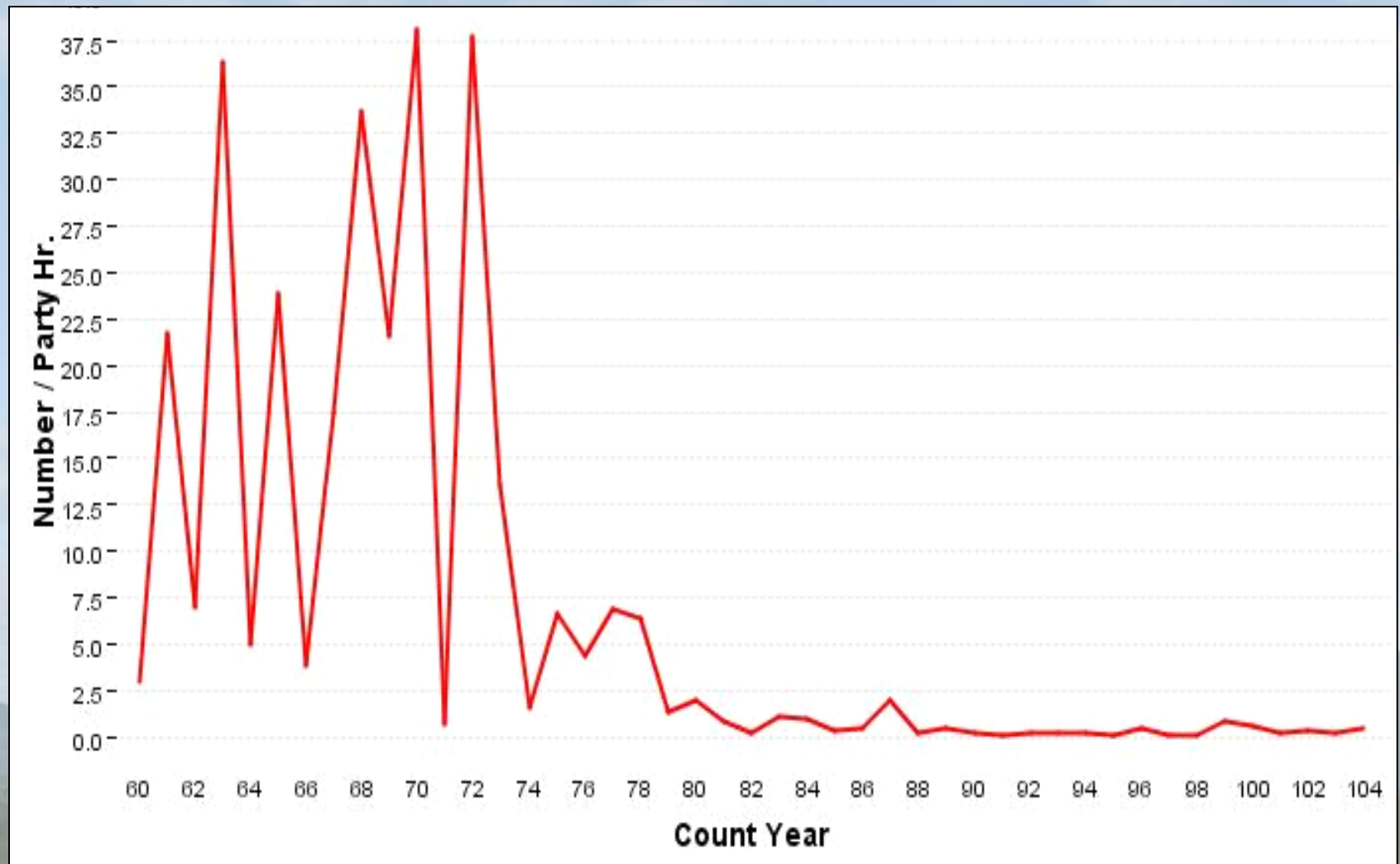




A Rusty Blackbird Primer

- 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



Depends on dynamic, successional
habitats for both foraging and for
nesting.





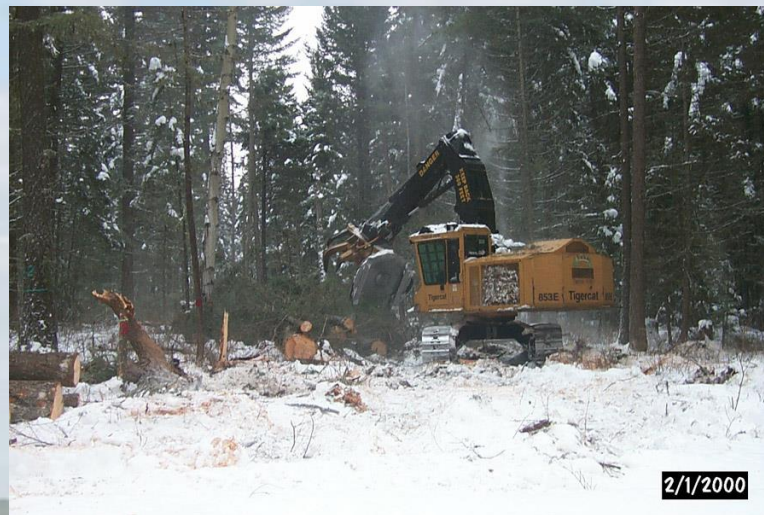




Eastern Spruce Bark Beetle
Dendroctonus piceaperda



Eastern Spruce Budworm
Choristoneura fumiferana



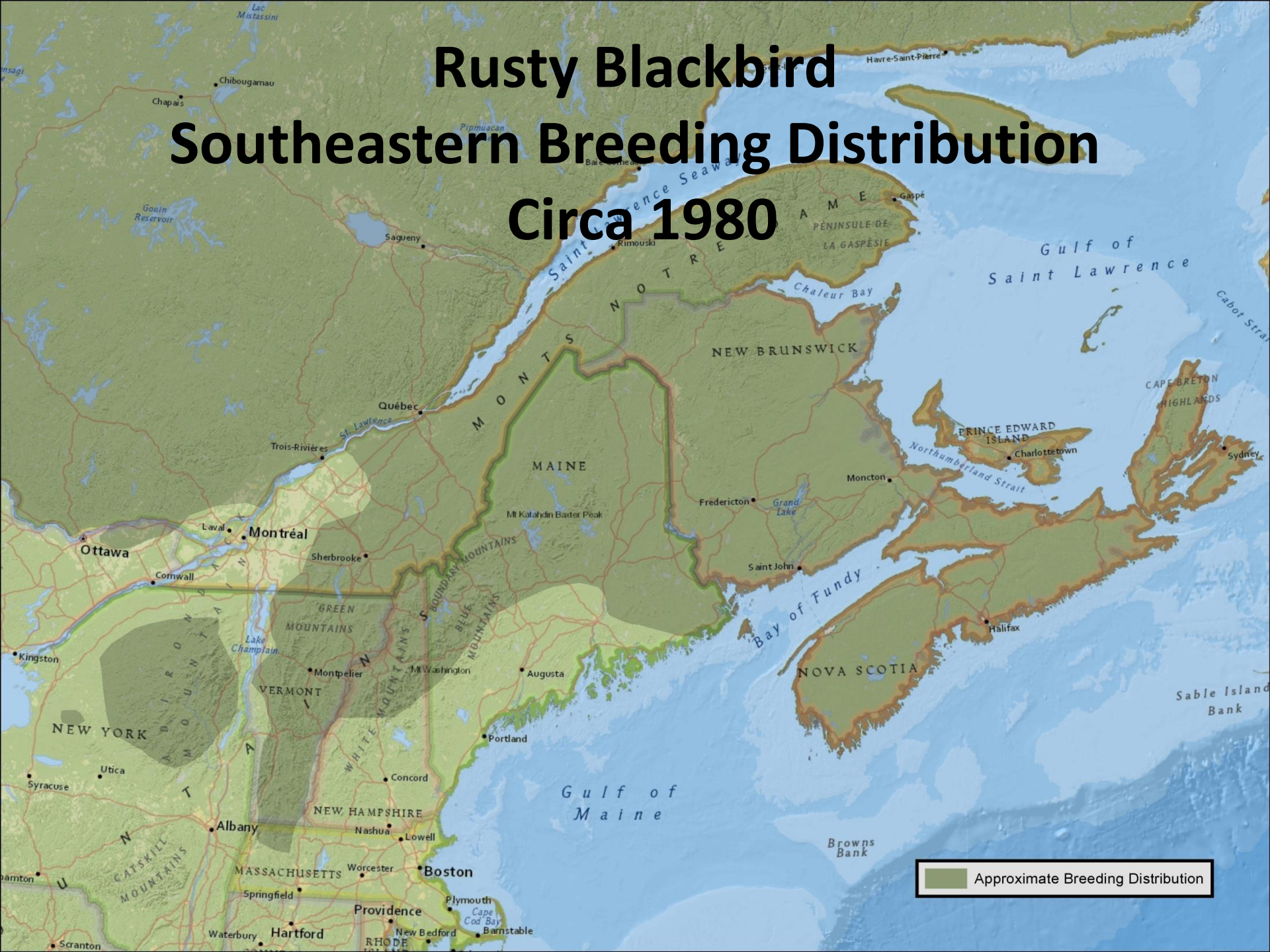
Brief Summary of Rusty Blackbird Research in New England

- 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

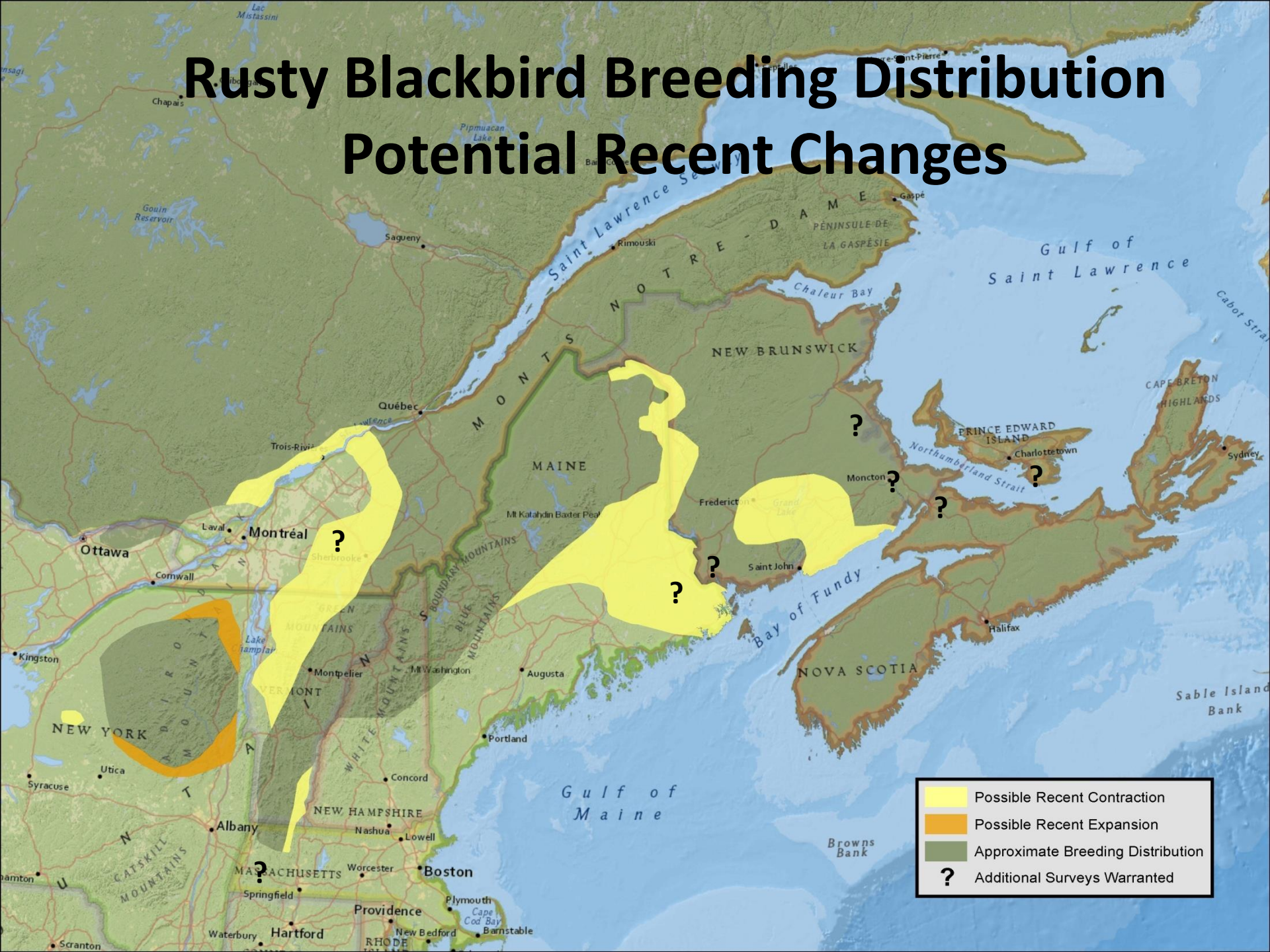
Southeastern Breeding Distribution

Circa 1980

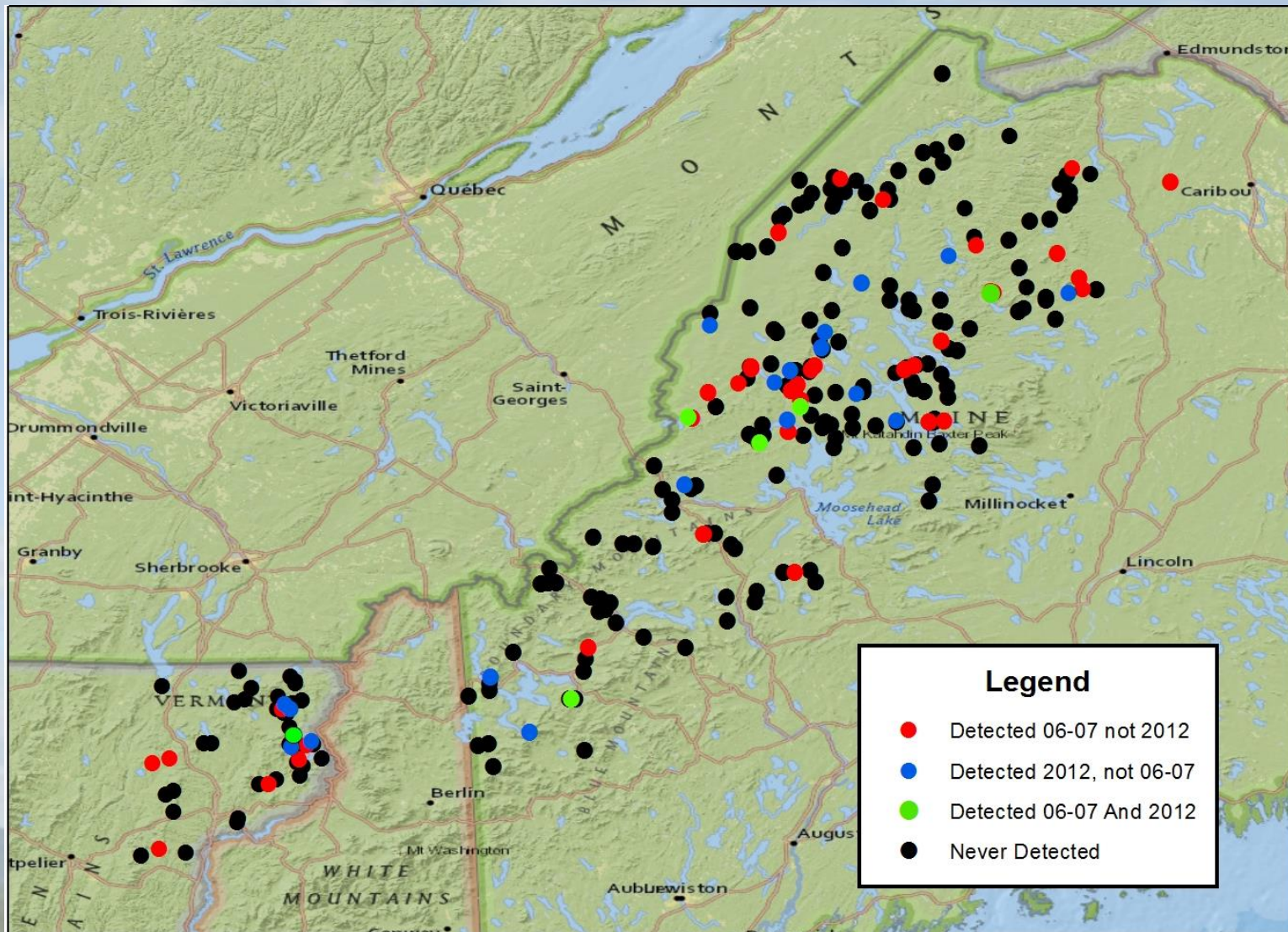


Rusty Blackbird Breeding Distribution

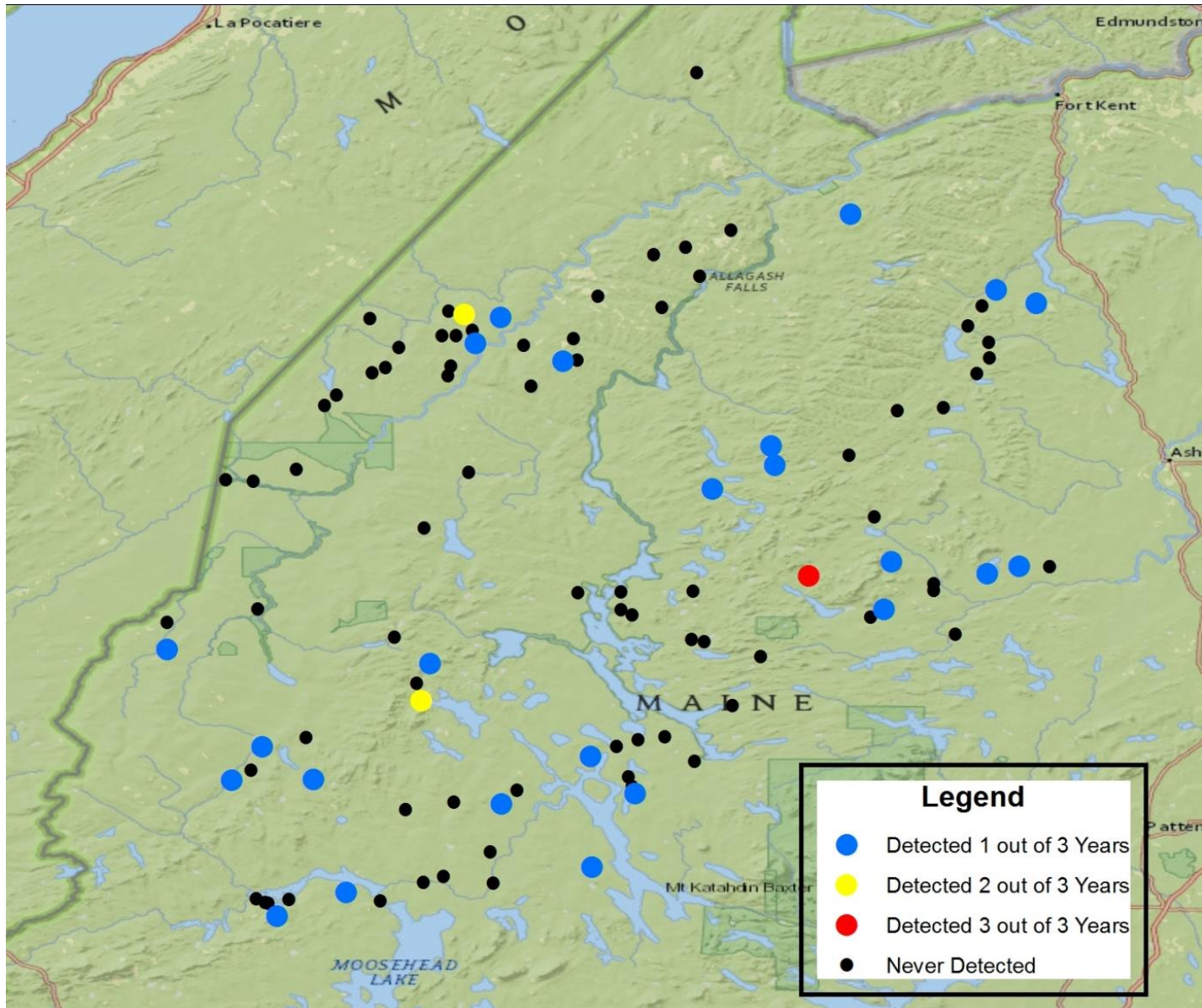
Potential Recent Changes



Presence-absence Surveys in 2006-7 and 2012



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%





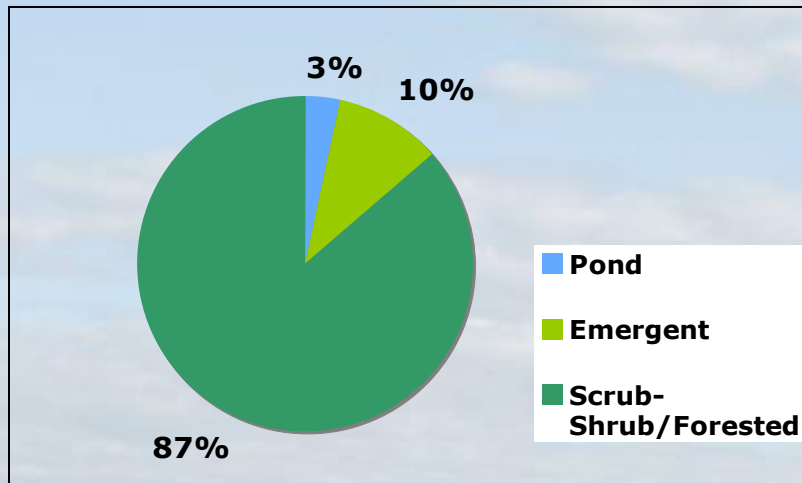
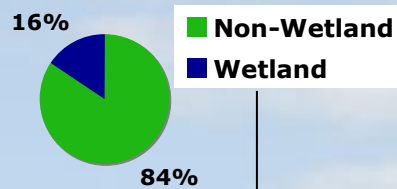
Bushnell

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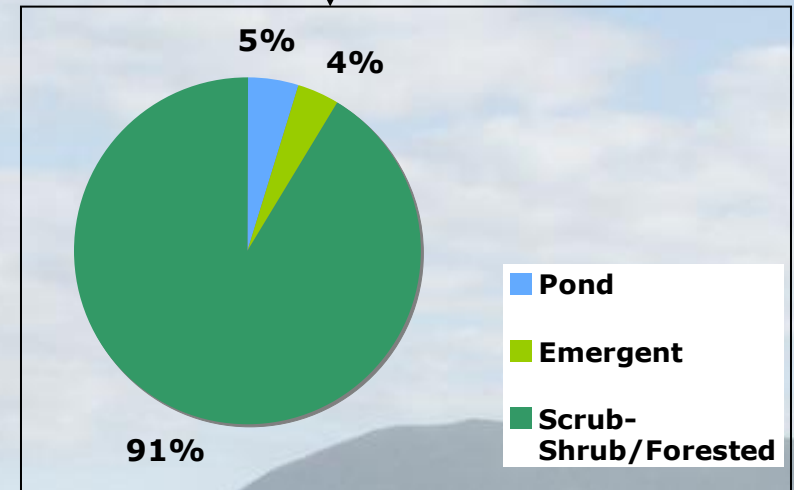
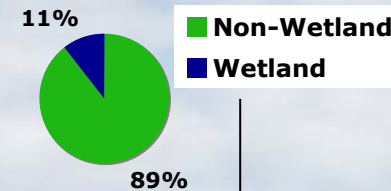
RUBL Nest Habitat: Landscape-Level

Wetland Types within 500 M Radius of Nests

Maine (n = 55)



New Hampshire (n = 43)

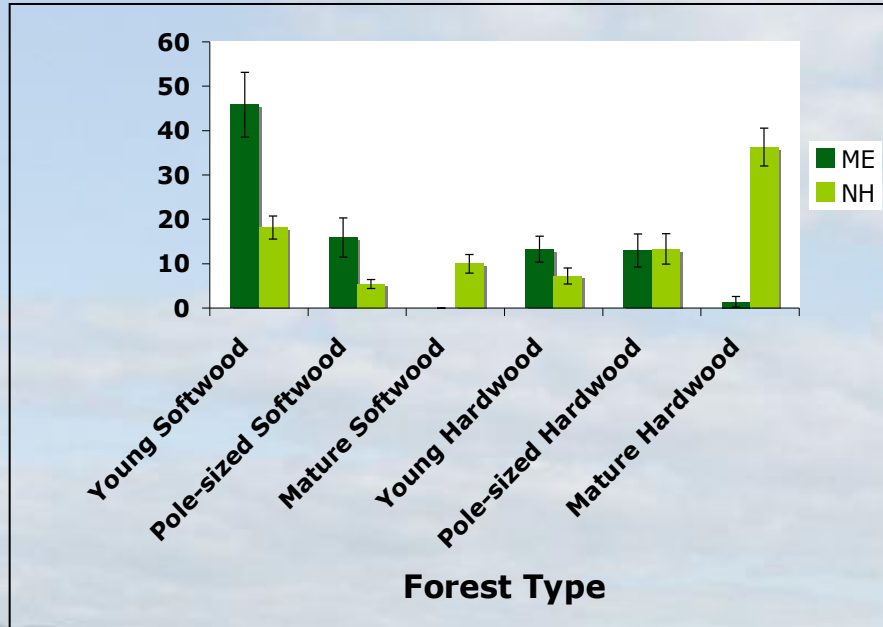


RUBL Nest Habitat: Landscape-Level

Percent area of forest types
within 500 m radius

Maine (n = 12)

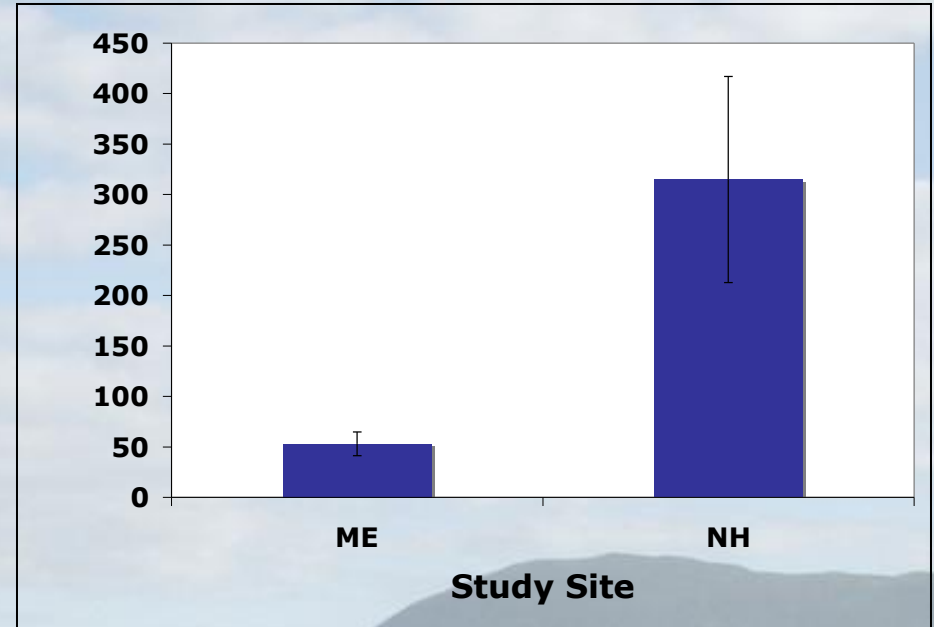
New Hampshire (n = 17)



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.
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- 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

