

Rusty Blackbird Survivorship and Habitat Selection During the Post-fledging Period

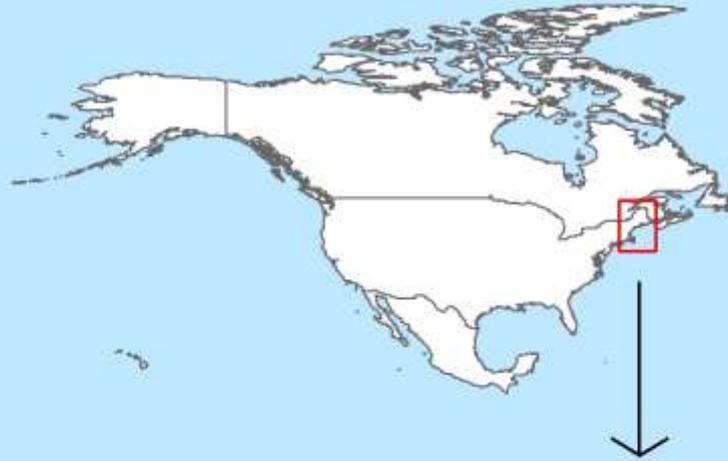
Patti Newell Wohner

Carol R. Foss

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North America



New England



New Hampshire



44.5° to 45.0° N
<1200' to >2000'
360m to 630m







Nest survival 2014



Total nests monitored	47
Nests with known outcome	42
Nests failed	9
Nests fledged	33
Success rate	78.6%

Model likelihoods

Location model (upland vs. wetland)	1.0000
Null model	0.1807
Isolation model (single vs. colony)	0.0862
Date model	0.0664

Daily Survival Rates

	Upland	Wetland
Estimate	0.9929	0.9655
SE	0.0035	0.0153
Lower 95% CI	0.9814	0.9193
Upper 95% CI	0.9973	0.9856

Annual Survival



Banding Effort

	AHY	HY	Recapture/Resight
2009	20	0	0
2010	25	32	4
2011	35	77	9
2012	19	25	7
2013	37	80	5
2014	36	125	16
Total	172	339	41

Return Summary

Banded as HY	214	Banded as adult	134
Returned	4	Returned	23
Return rate	1.9%	Return rate	17.2%
One recapture	3	One recapture	18
Two recaptures	1	Two recaptures	5

Survival Analysis

Model	AICc	Delta	Weight	ML
Phi(t)p(.)	274.6942	0.0000	0.4314	1.0000
Phi(.)p(.)	275.4860	0.7918	0.2904	0.6731
Phi(.)p(t)	276.0385	1.3443	0.2204	0.5106
Phi(t)p(t)	278.7066	4.0124	0.0580	0.1345

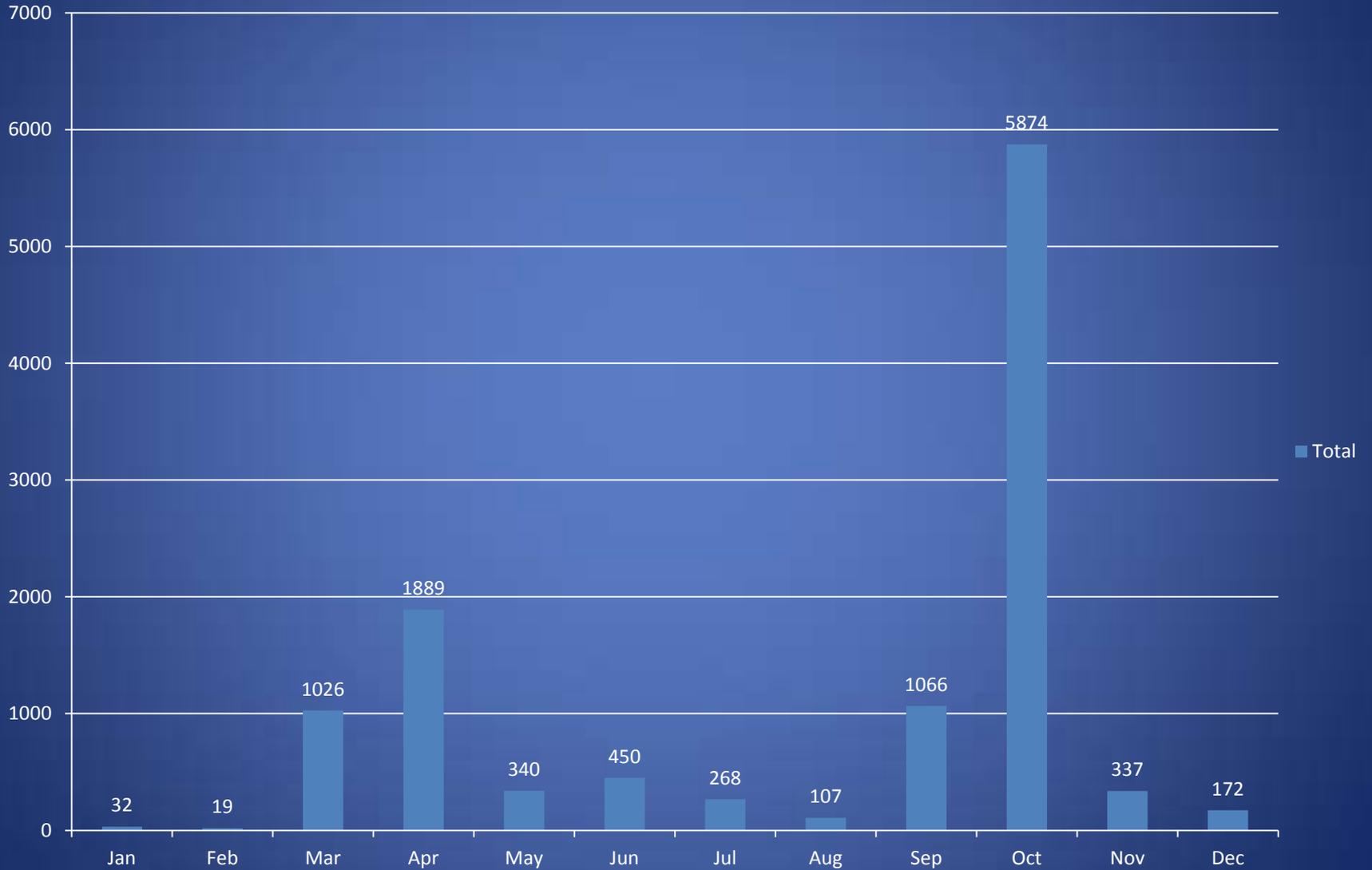
Real Estimates

Parameter	Estimate	SE
Apparent Survival Parameter (Phi)		
09-10	0.54215	0.31334
10-11	0.89076	0.35953
11-12	0.25542	0.10339
12-13	0.35589	0.14910
13-14	0.74019	0.31084
Recapture Parameter (p)		
	0.13670	0.05212

Telemetry



NH Bird Records Rusty Blackbirds January-December 1949-2009

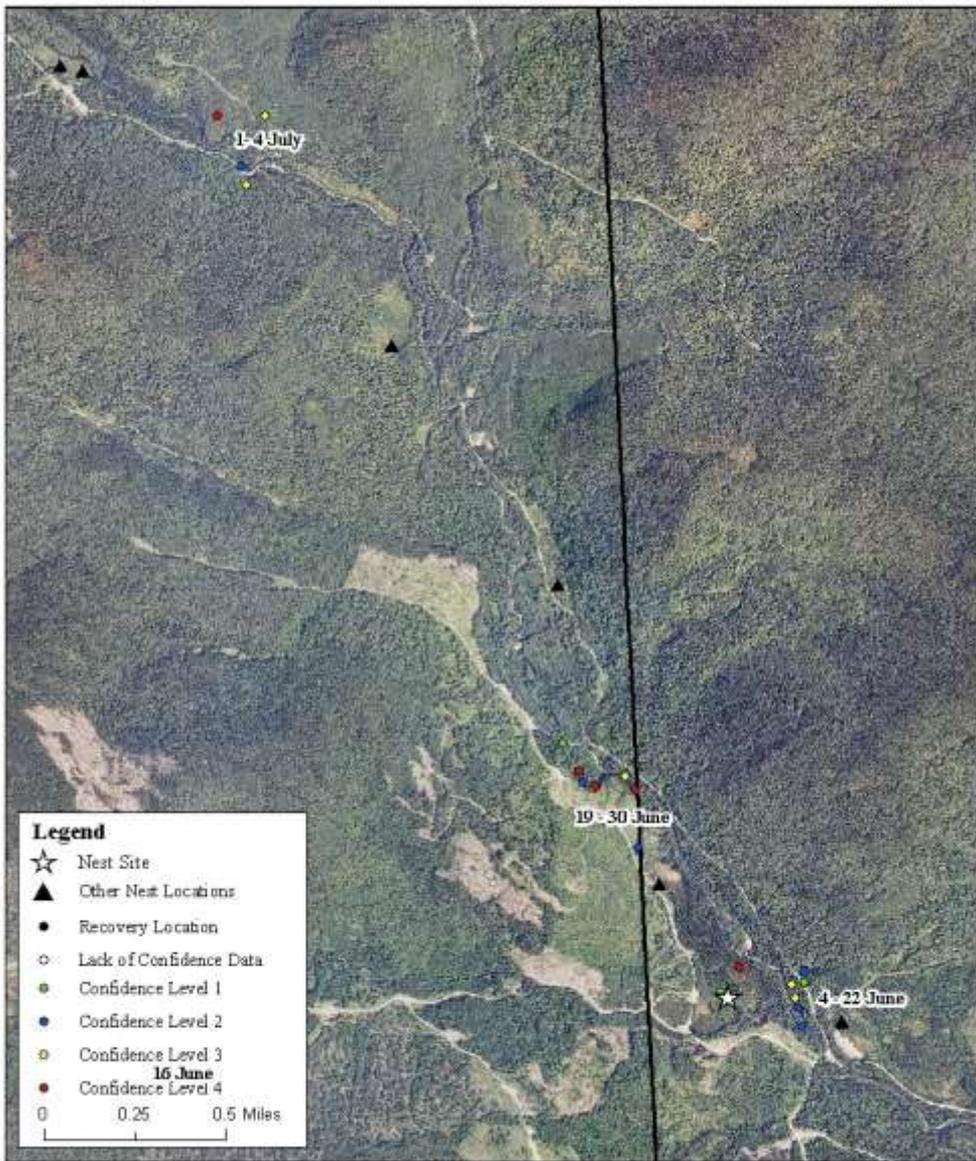


Radio-transmitted 61 Rusty Blackbirds 2010-2012

Included both adults and fledglings

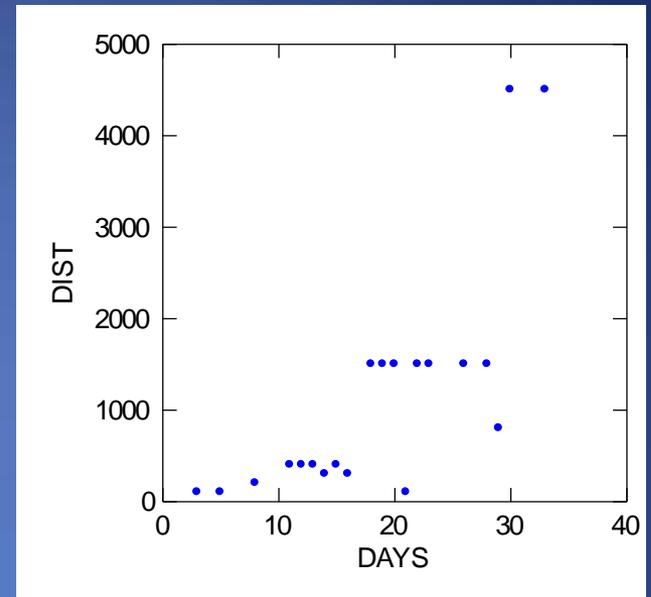
Collected location data daily June to mid-August



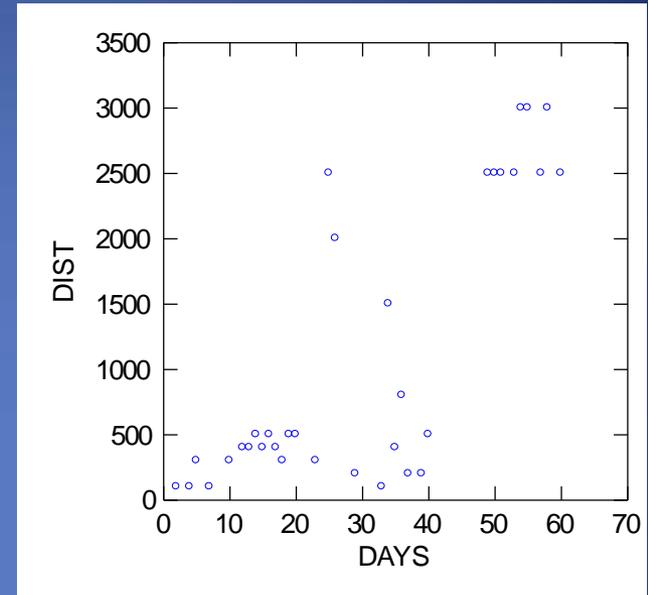
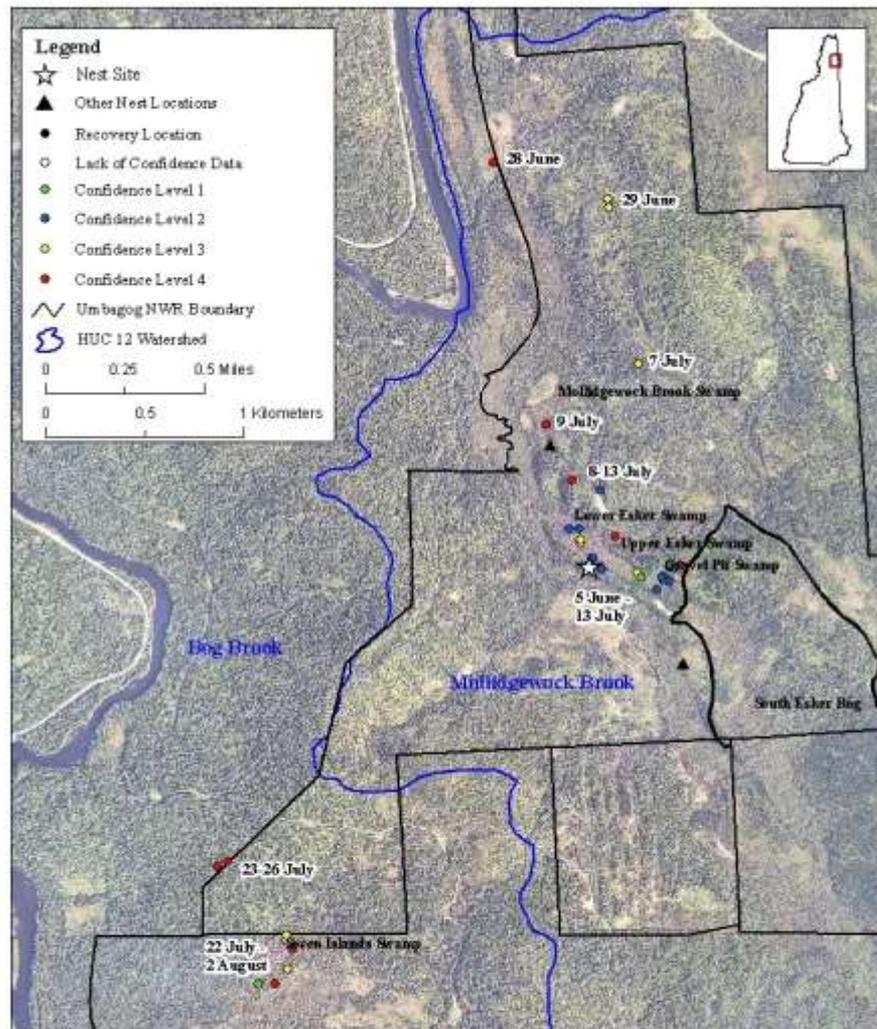


2011 RUBL Locations for Dixie Brook, Frequency 1.290

Map created by Bill Ashbom, October, 2011



Hatch year
 20 observations
 33 days
 $R=0.782$

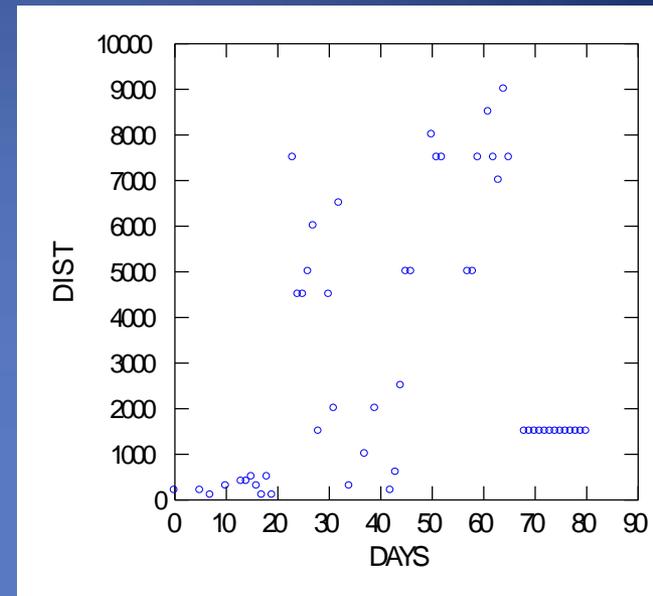
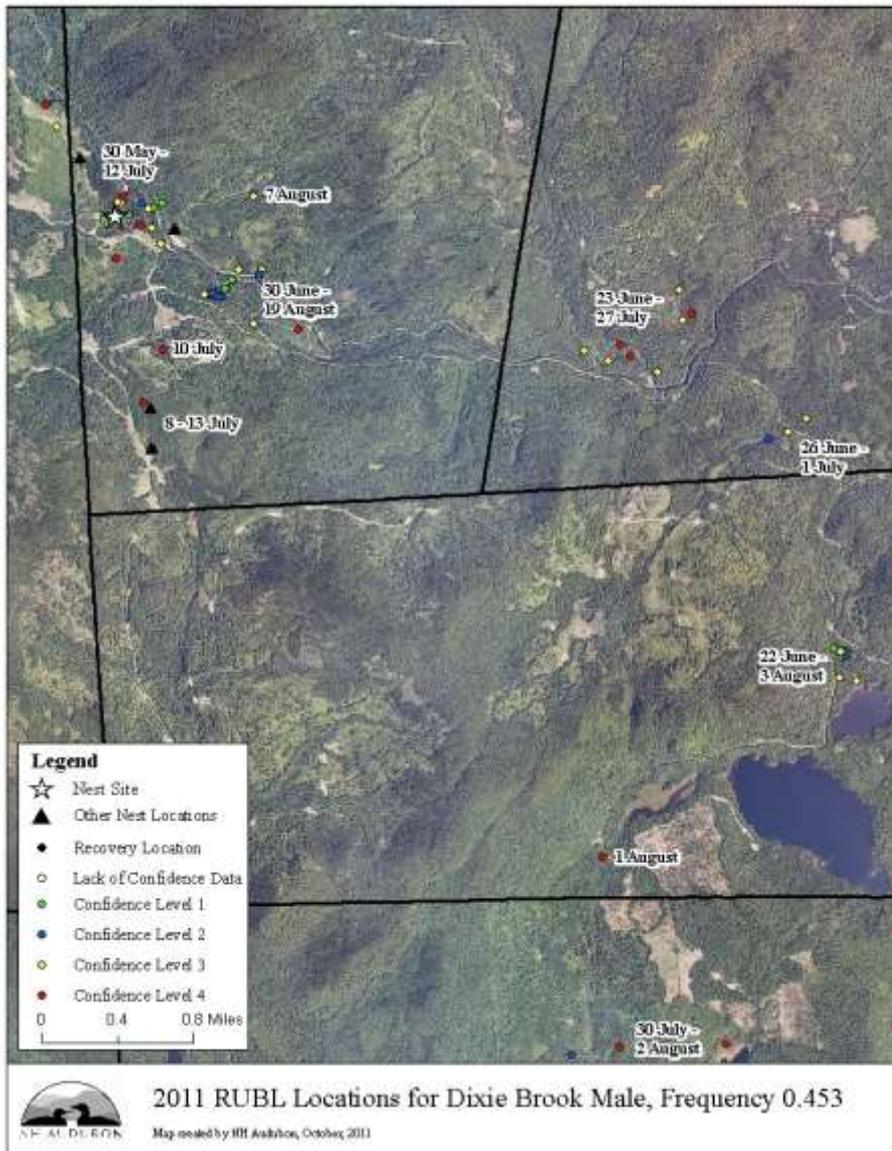


Hatch year
34 observations
60 days
 $R=0.707$

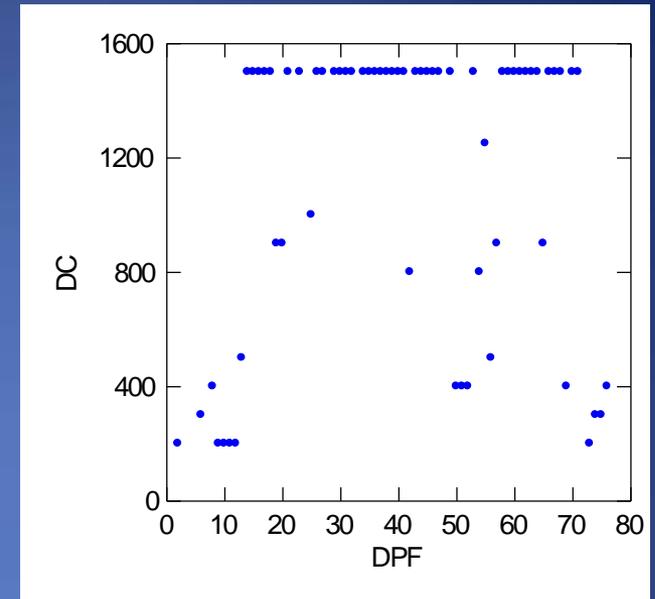
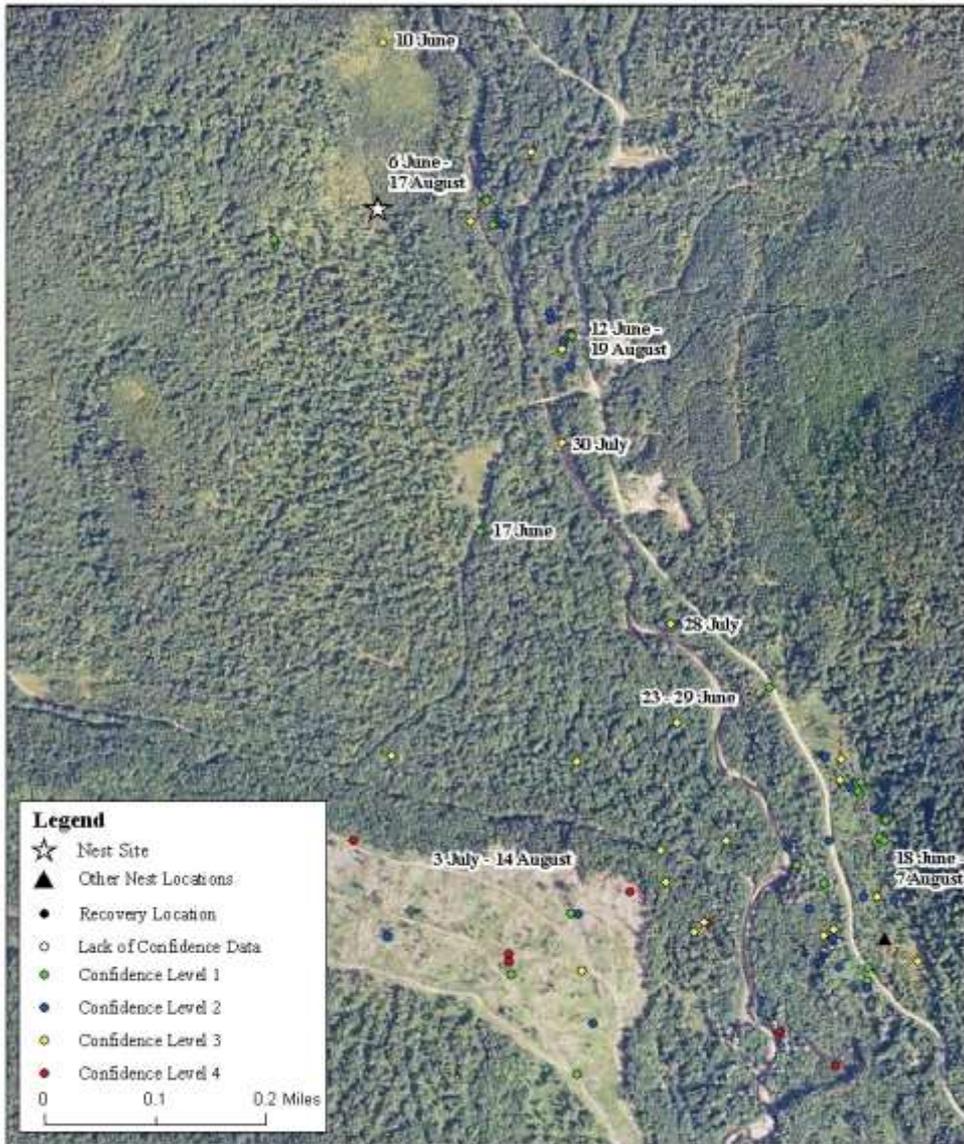


Figure 11. Locations for Snowmobile Bridge Hatch Year (151.260), 5 June - 2 August 2011

Map created by NH Audubon, January, 2012



Adult male
52 observations
80 days
 $R=0.372$



Adult male
 67 observations
 76 days
 $R=0.101$



2011 RUBL Locations for Nathan Pond Junction Male, Freq. 0.270

Map created by N.F. Audubon, October, 2011

Telemetry Data

Year	# Birds	# Points
2010	20	318
2011	24	993
2012	17	626

735 location points from post-fledging period

38 birds (28 adult, 10 HY) that survived >30 days

806 randomly generated pseudo-absence points

30-m radius around each point



Model Variables

NH Rivers and Streams layer

- 3rd to 6th order streams
- 1st to 3rd order streams
- Any order stream

NH Wetlands layer

- Beaver-created wetland
- Seasonal wetland
- Forested wetland
- Any wetland

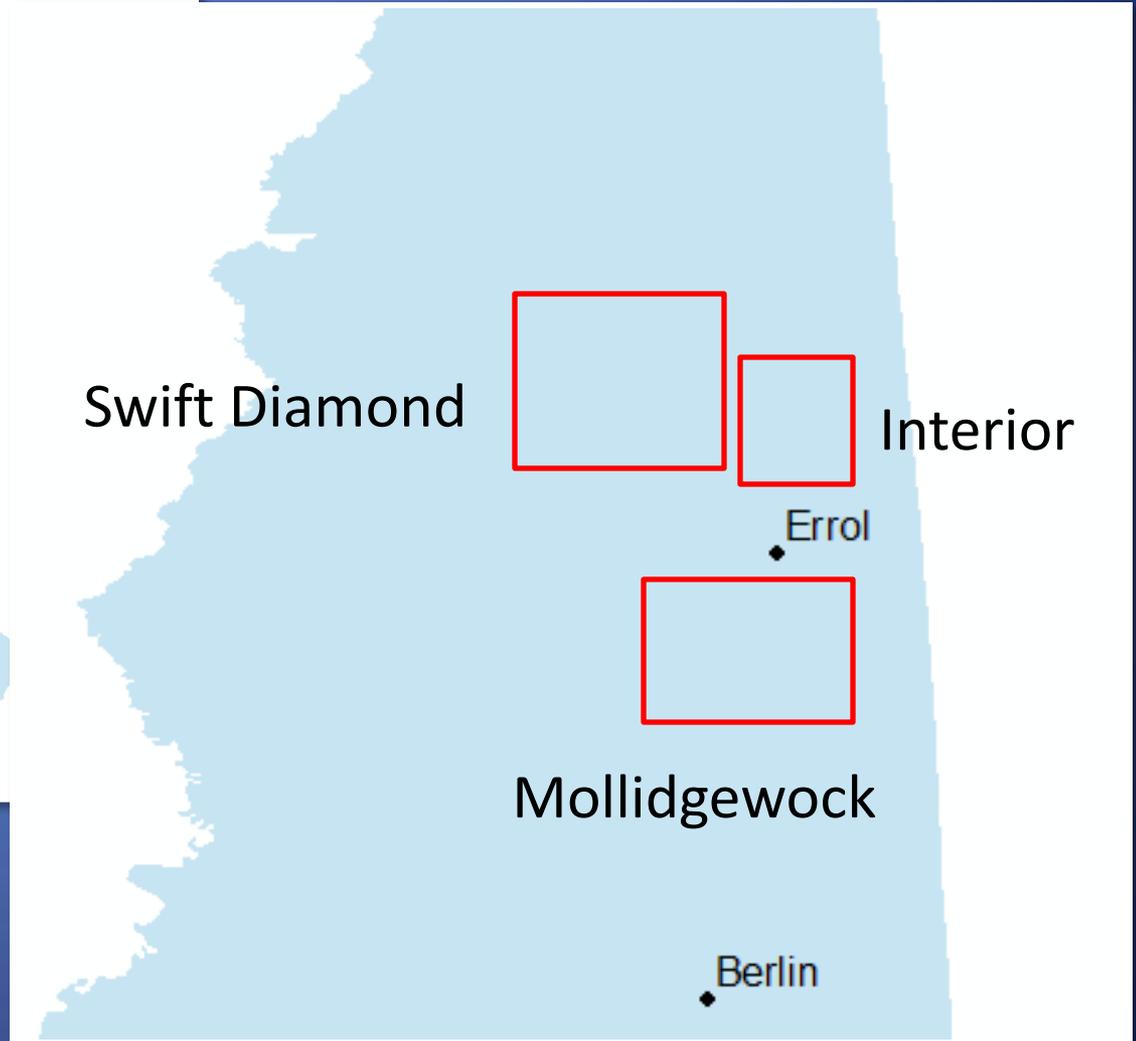
NH Soils layer

- Poorly drained soil
- Slope <8%

Forest Stand Cover data

- Alder wetland
- Any vegetated wetland
- Softwood timber
- Seedling/sapling timber
- Softwood seedling/sapling timber

Three areas evaluated separately



Habitat Use Model

- Spatial logistic regression
- Used model selection to determine best model
- Avoided correlated variables (>0.5) in same model
- Used SAM to account for space in the error term



Rachel Rabinovitz

Results

No significant difference between adults and HYs

No significant difference between years

Predictive variables for all sites and years combined

- + spruce-fir seedling/sapling stands

- distance to any wetland

- distance to any order stream

- + low slope

Similarities between sites → saplings, any wetland

Differences between sites → distance to streams

low slope, poor drainage



Field crews

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Sam Edwards

Sean Hribal

Shannon Buckley Luepold

Grace Mitchum

Luke Powell

Eian Prohl

Rachel Rabinovitz

Cindy Ross

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