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# *Current and Historical RUBL Status: Canada*

*Meeting of IRBTG, Mississippi April 12-13, 2007*



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Environment Canada (Science and Technology  
Branch/Wildlife and Landscape Science)



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Canada

# *Acknowledgments*

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- Craig Machtans (CWS)
- Steve van Wilgenburg (CWS)
- Julienne Morissette (DU Canada)



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# Outline

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- COSEWIC status report
- Retrospective comparison (NWT)
- Extensive wetland surveys in the southern boreal
- Ontario Atlas



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# *COSEWIC (2006) Report*

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- Minimum pop'n: 110,400
- Max pop'n: 1.4M



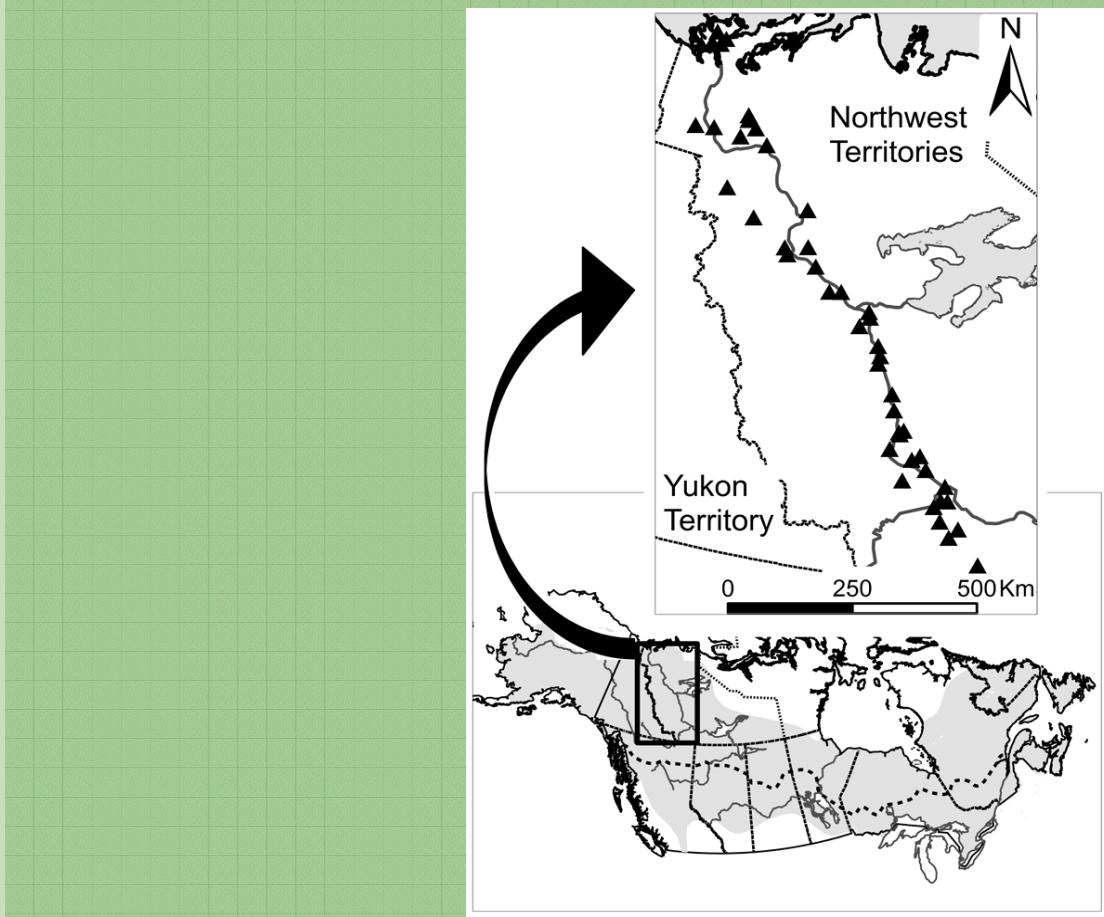
Table 2. Summary of Rusty Blackbird population trends according to various population monitoring programs. \* P<0.05, \*\* P<0.001, ns = non-significant

Region	Period	Annual rate of decline (%/yr)	p	n	Tracking program	Source
North America	1966-2003	-5.1	*	-	CBC	Niven <i>et al.</i> 2004
North America	1994-2003	-0.02	*	-	CBC	Data provided courtesy of Dan Niven, trend calculated by E. Dunn
North America	1966-2003	-9.97	*	96	BBS	Sauer <i>et al.</i> 2004
Canada	1968-2002	-10.3	*	198	BBS	Downes <i>et al.</i> 2003
Canada	1993-2002	-6.0	ns	88	BBS	Downes <i>et al.</i> 2003
Northern British Columbia	1996-2002	-24.3	*	-	Mackenzie Nature Observatory	Bird Studies Canada 2004
Lake Superior	1996-2002	-3.76	ns		Thunder Cape Bird Observatory	Bird Studies Canada 2004
Quebec (south of the 52 <sup>nd</sup> parallel)	1970-1995	-4.6	*	-	ÉPOQ.	Cyr and Larivée 1995
Quebec (south of the 52 <sup>nd</sup> parallel)	1970-2003	-2.7	**	-	ÉPOQ.	J. Larivée, unpubl. data

# *Historical comparison (1970's – 2006)*

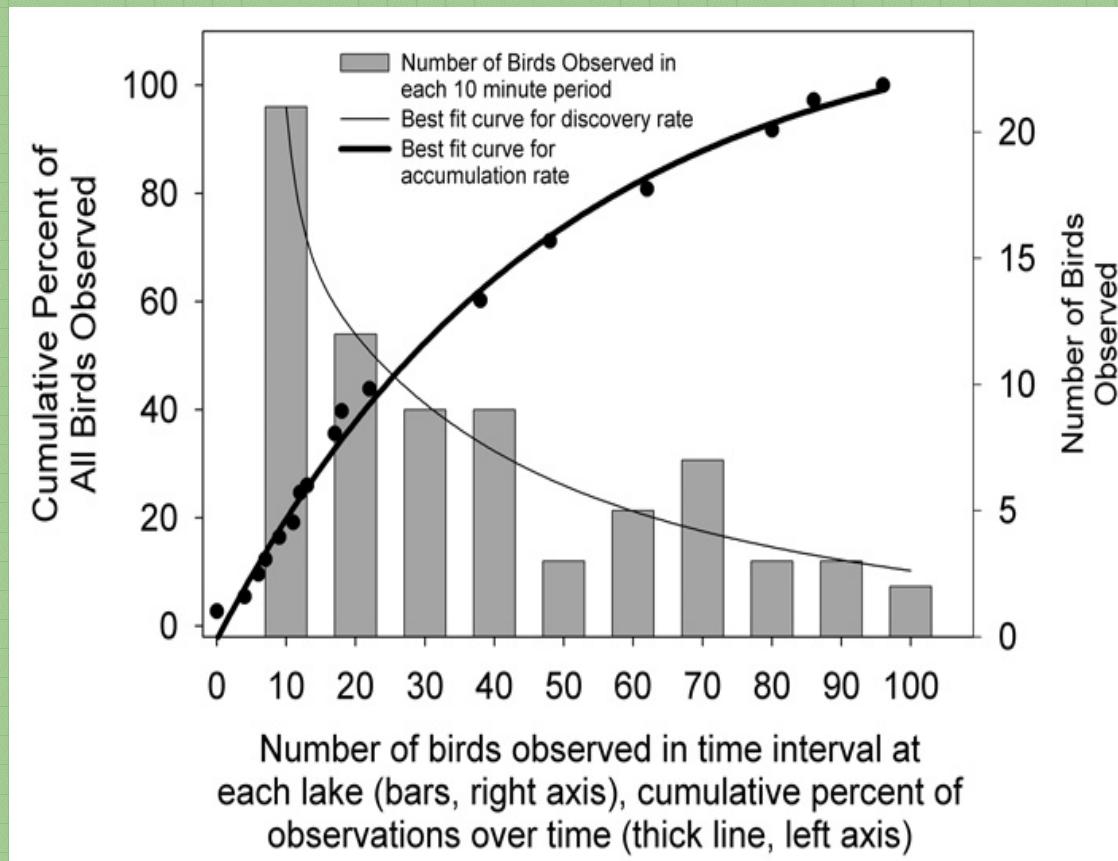
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Machtans et al. (2007)





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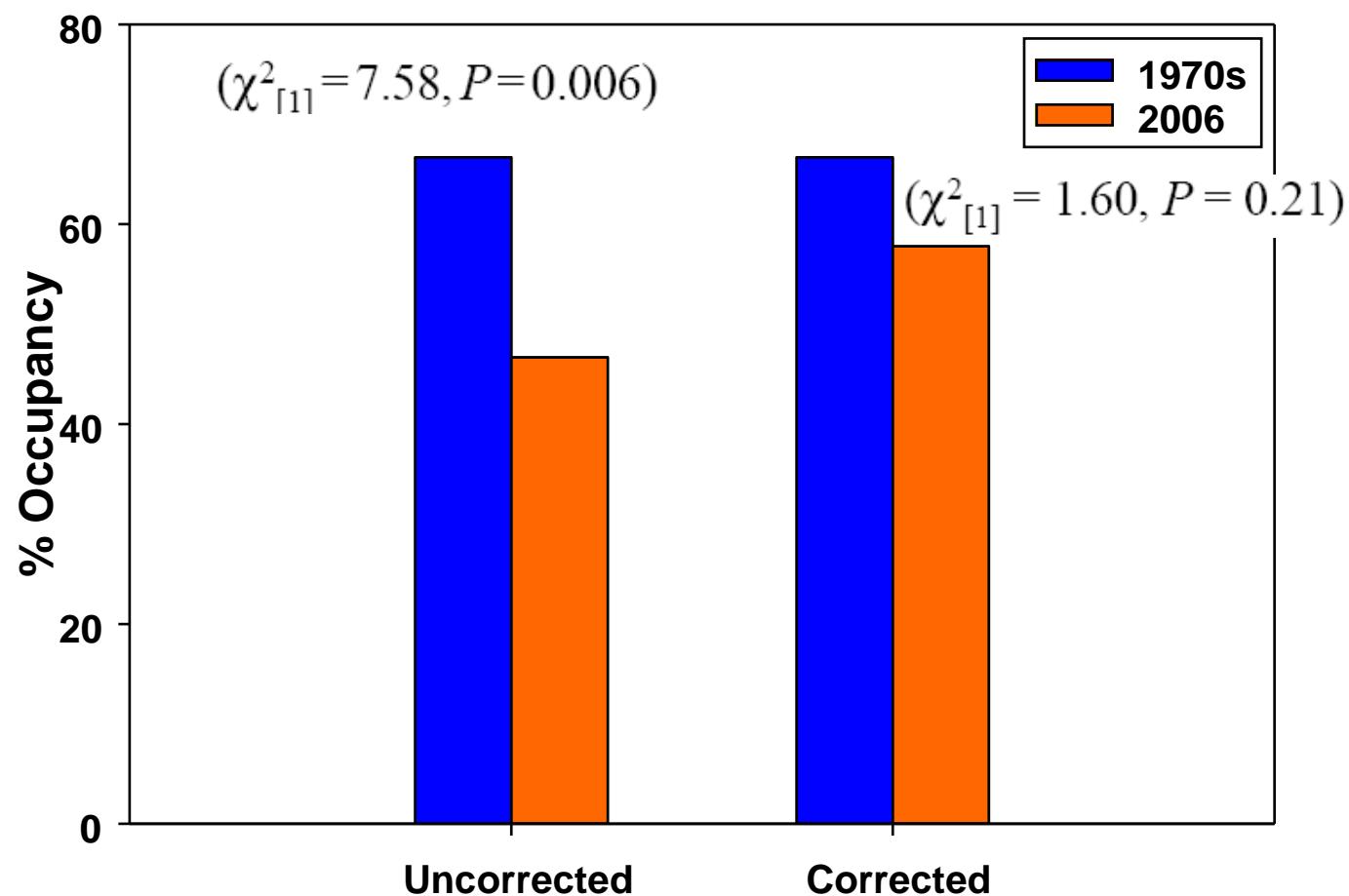


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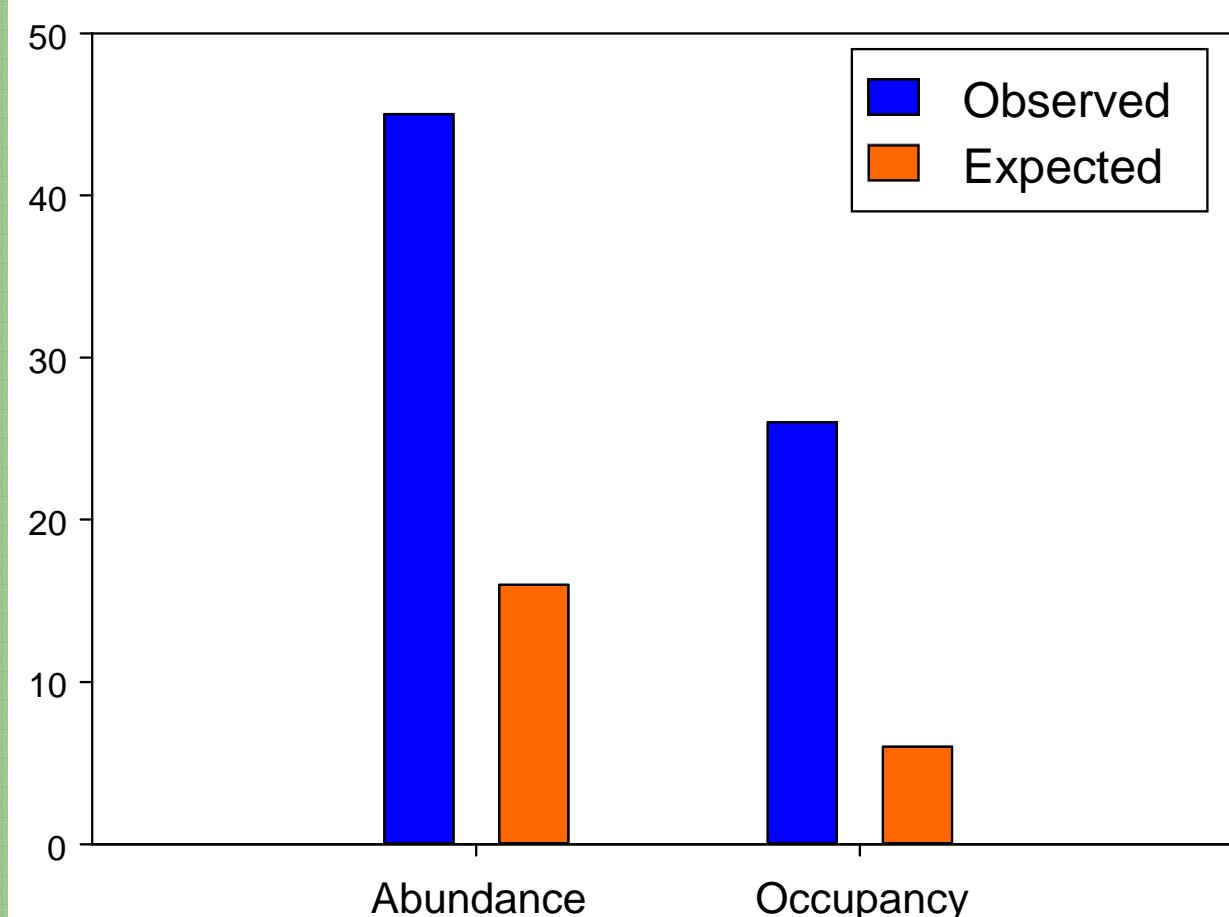
**Table 2.** Possible presence-absence ratios and their chances of being drawn from an initial case, i.e., historical value, of 30:15 when a 62% repeatability ratio is assumed for re-surveys. Probabilities calculated in Microsoft Excel 2002 using HYPGEOMDIST ( $((47 - x) / 2), 17, 30, 45$ ) where  $x$  ranges from 13 to 43 based on calculations in the text.

Possible presence-absence ratios	Chance of drawing this ratio
13:32	0.00011
15:30	0.00198
17:28	0.01477
19:26	0.05998
21:24	0.14820
23:22	0.23547
25:20	0.24786
27:18	0.17527
29:16	0.08346
31:14	0.02655
33:12	0.00554
35:10	0.00073
37:8	0.00006
39:6	$2.6 \times 10^{-6}$
41:4	$5.5 \times 10^{-8}$
43:2	$3.9 \times 10^{-10}$

# *Wetland Occupancy*



# *Range-wide Decline?*



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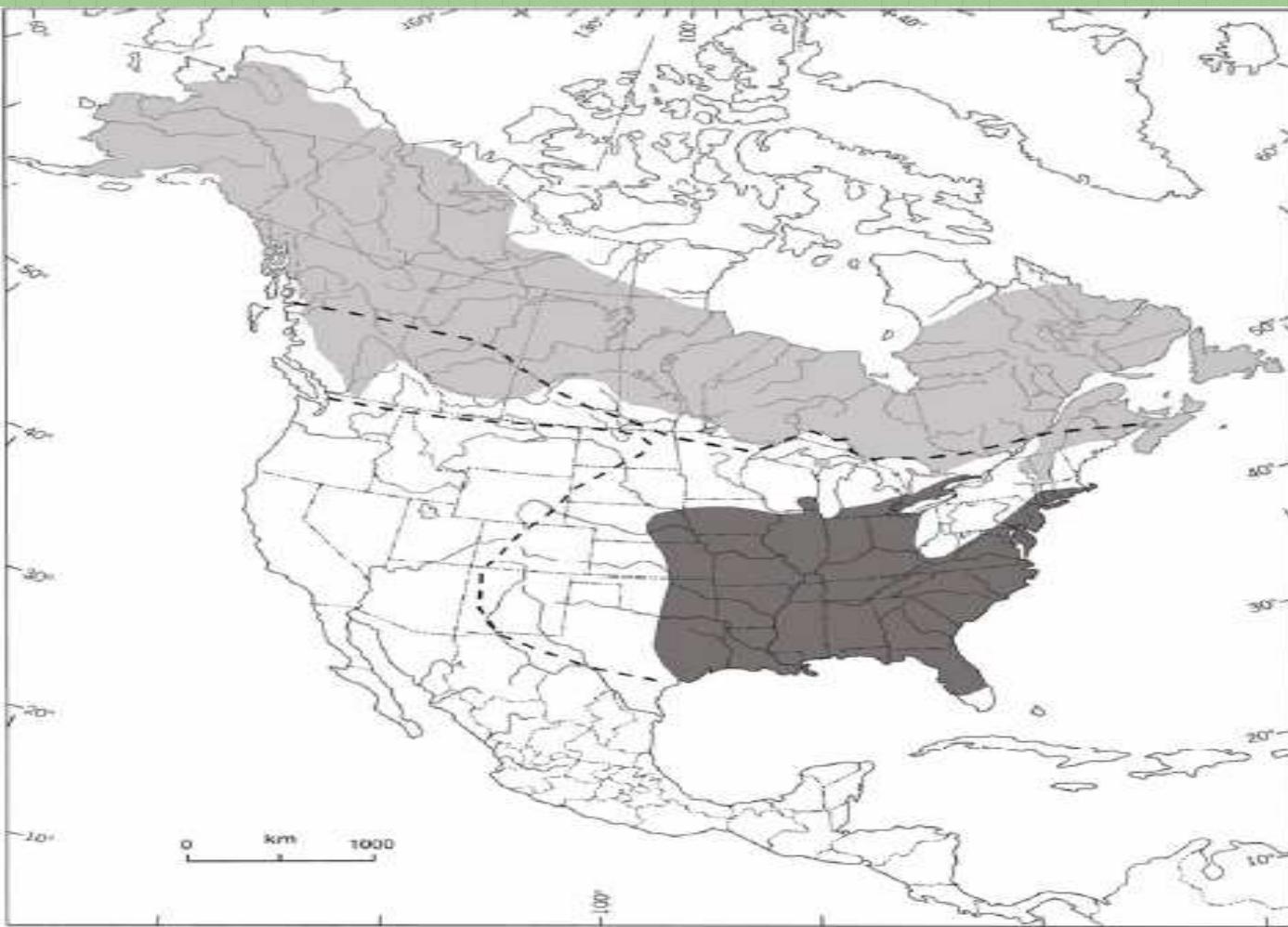
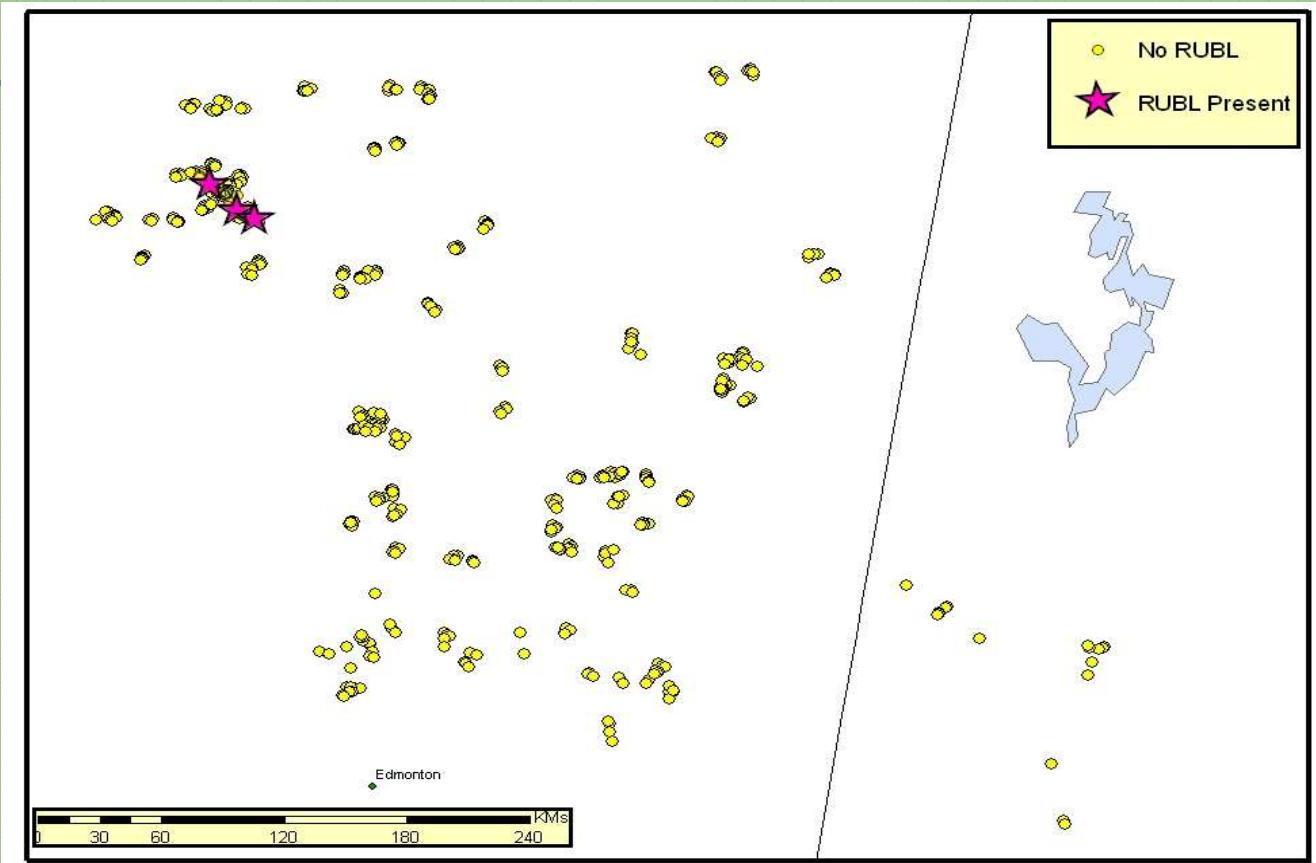
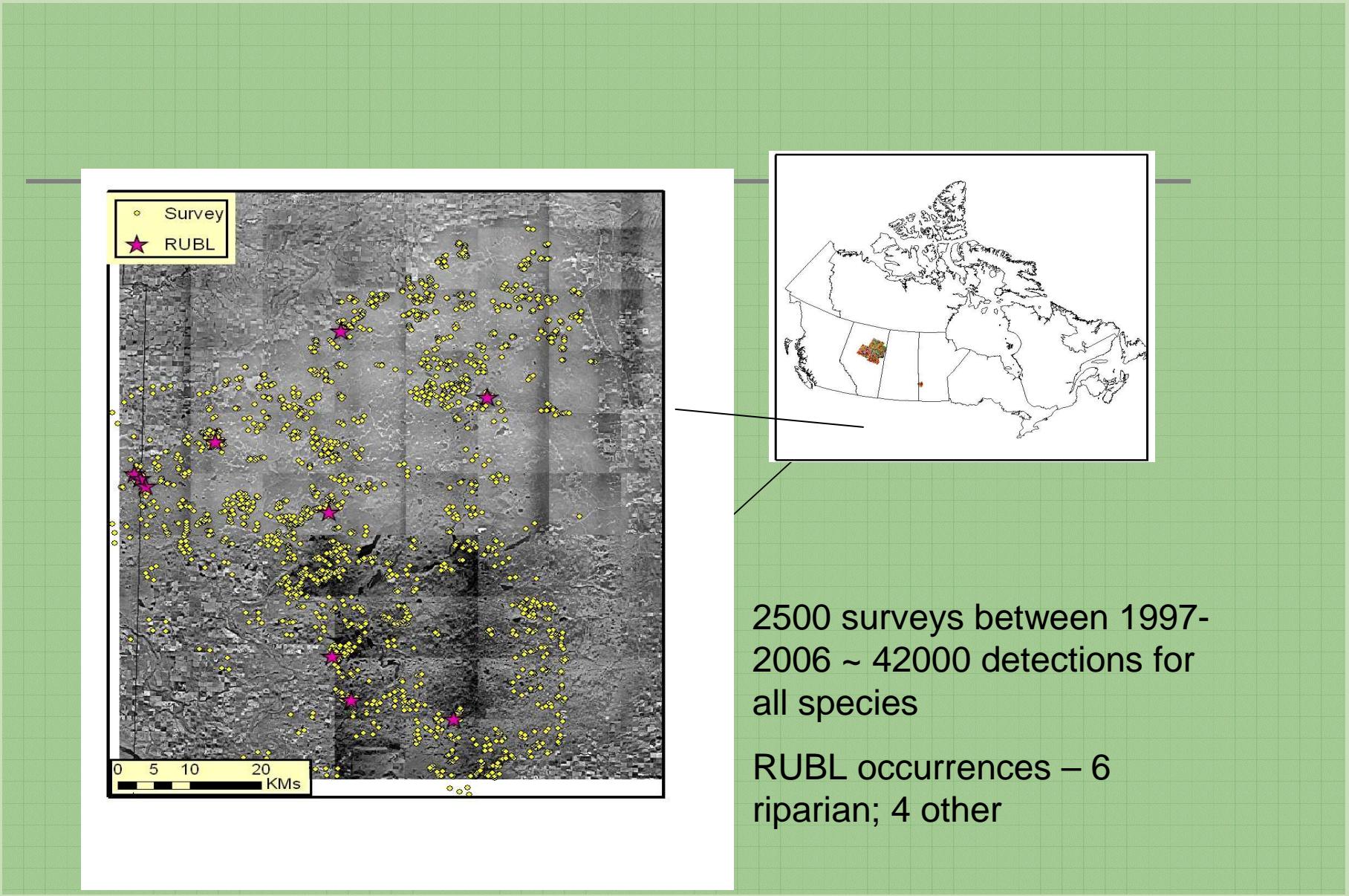


Figure 1. North American distribution of the Rusty Blackbird during breeding (light grey) and wintering (dark grey) seasons. The Rusty Blackbird also winters irregularly within the dotted area (adapted from Avery 1995, based on Gauthier and Aubry 1995; Campbell et al. 1997; Norment et al. 1999; Manitoba Avian Research Committee 2003; Sinclair et al. 2003, and <http://www.birdsource.org>).

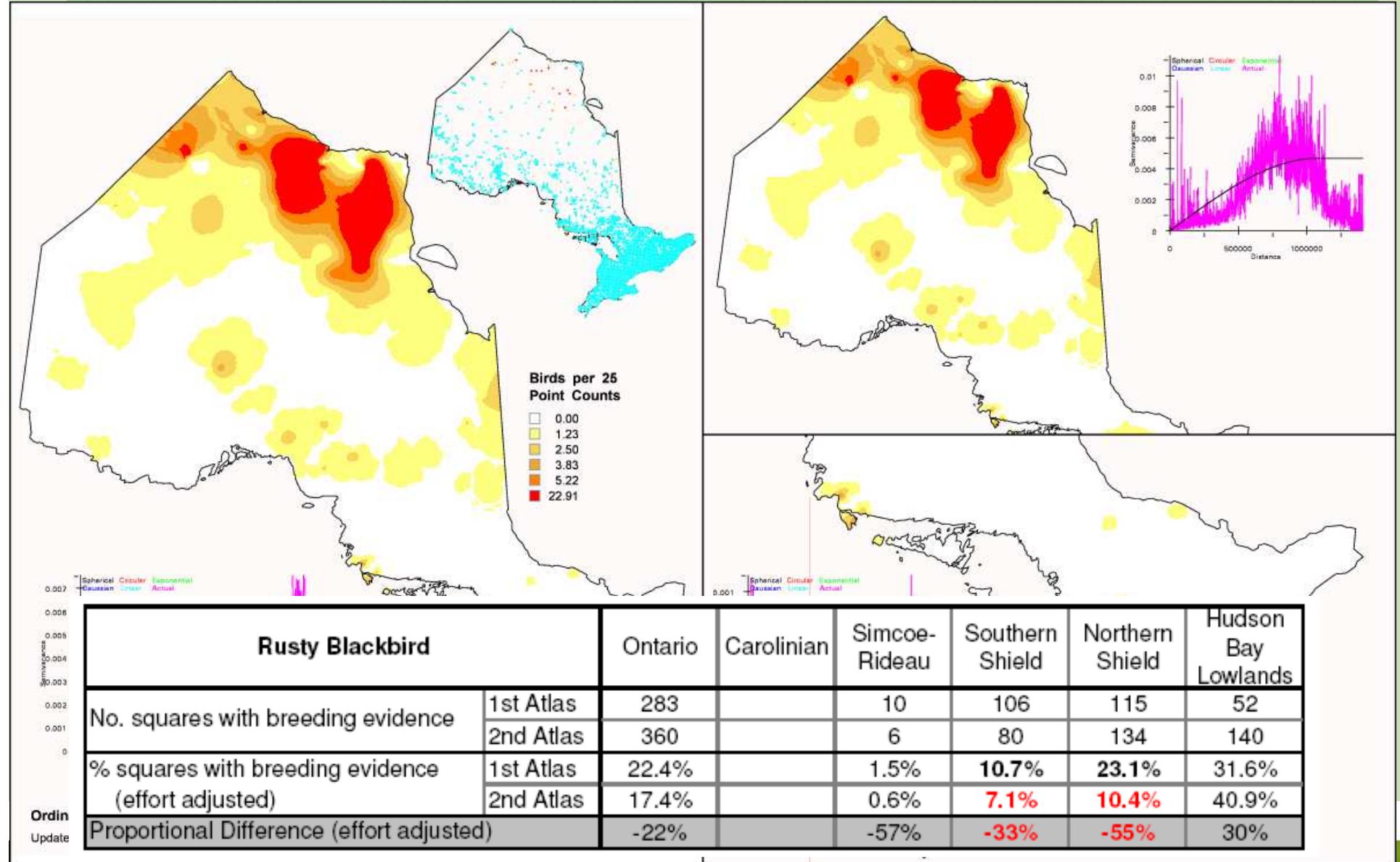




18 370 detections for all species combined (2002-2004)  
4 RUBL detections

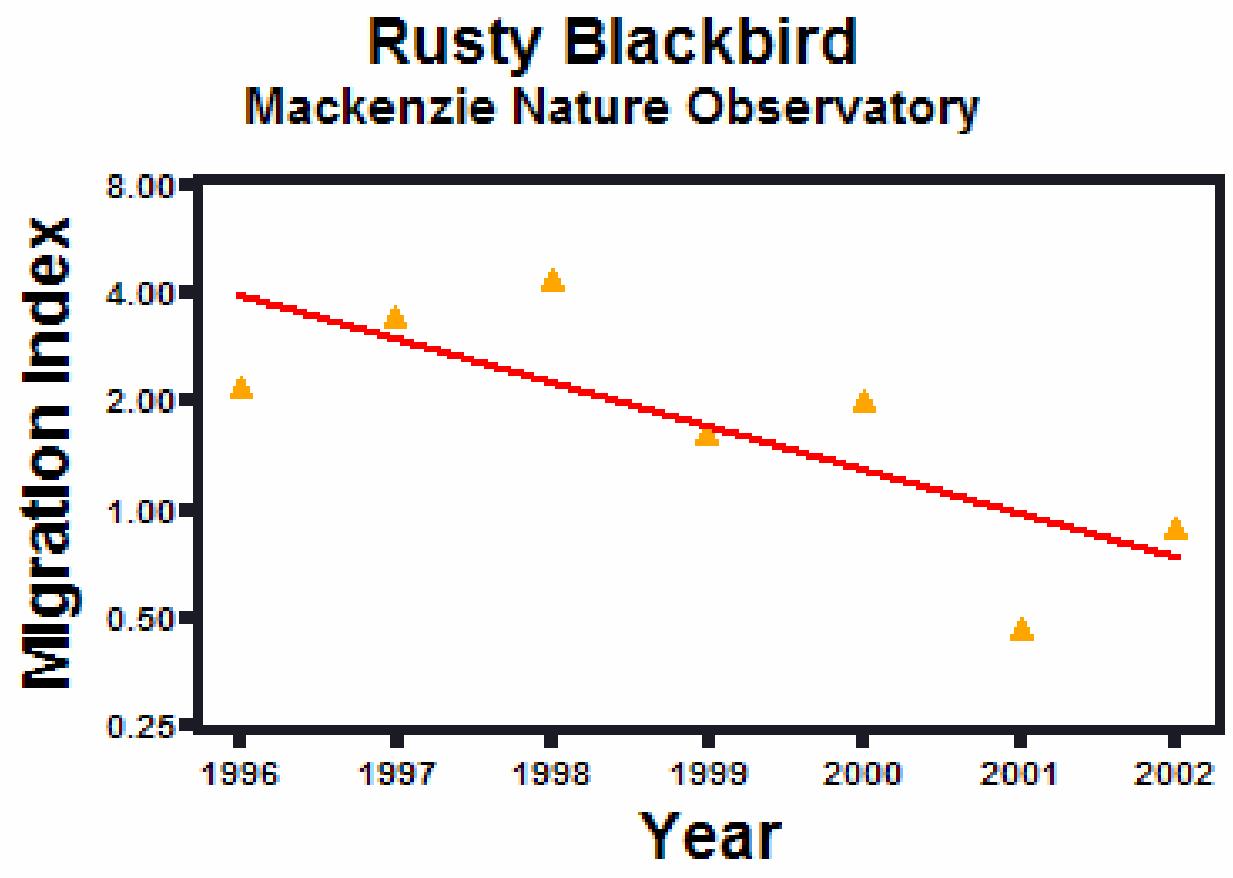


# Ontario Bird Atlas



# *Migration Monitoring*

Fall: -24.26%/year \*

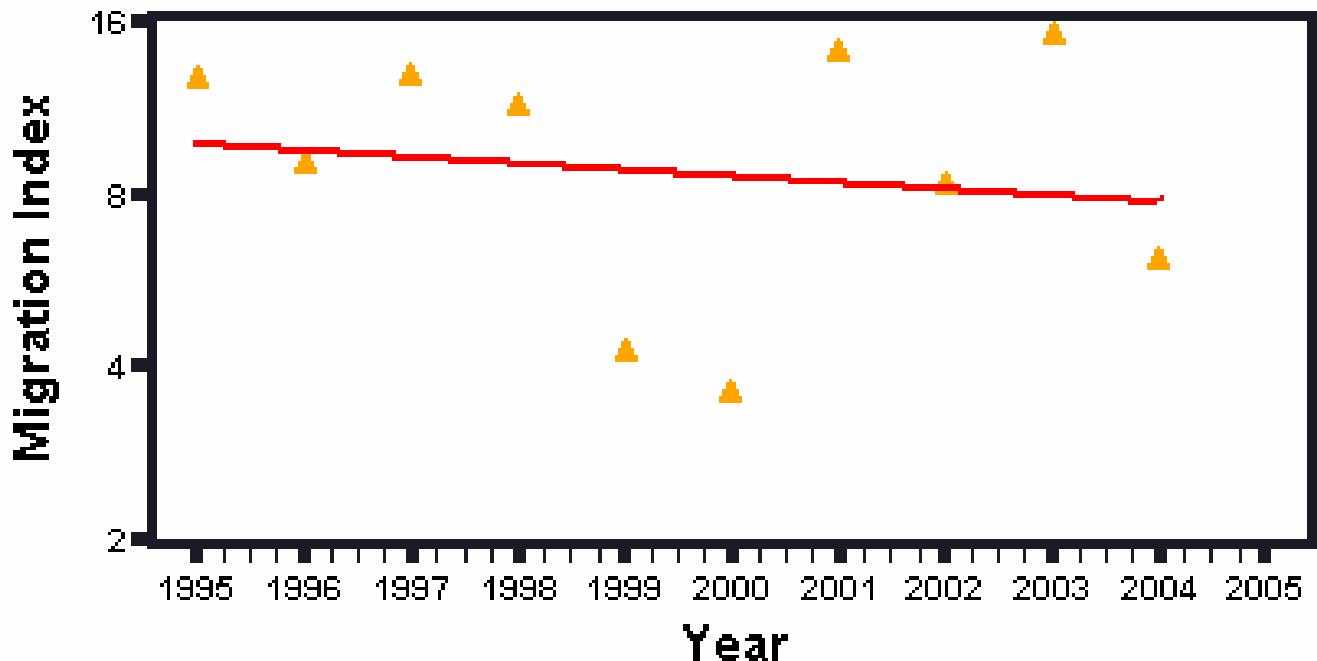


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# Migration Monitoring

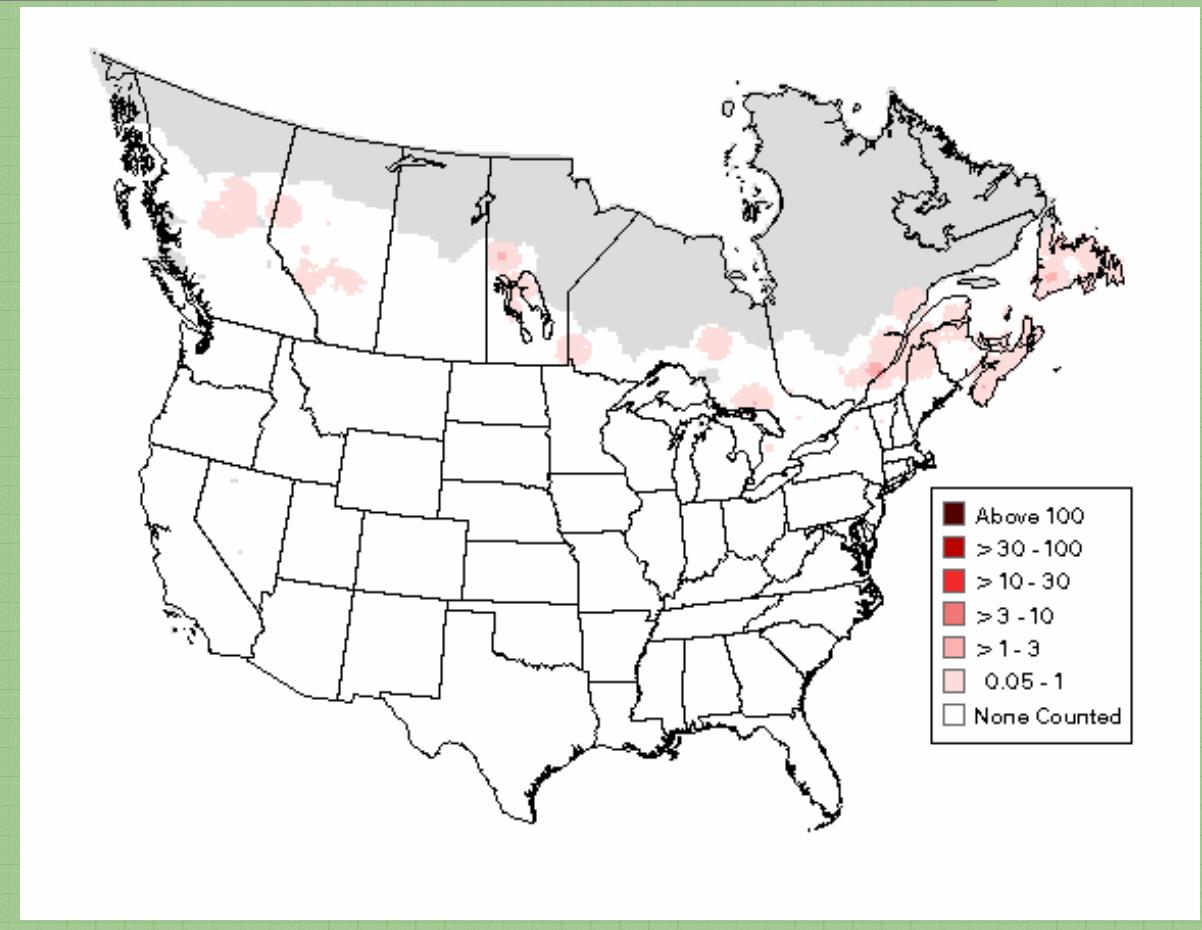
Fall: -2.41%/year n.s.

## Rusty Blackbird Thunder Cape Bird Observatory

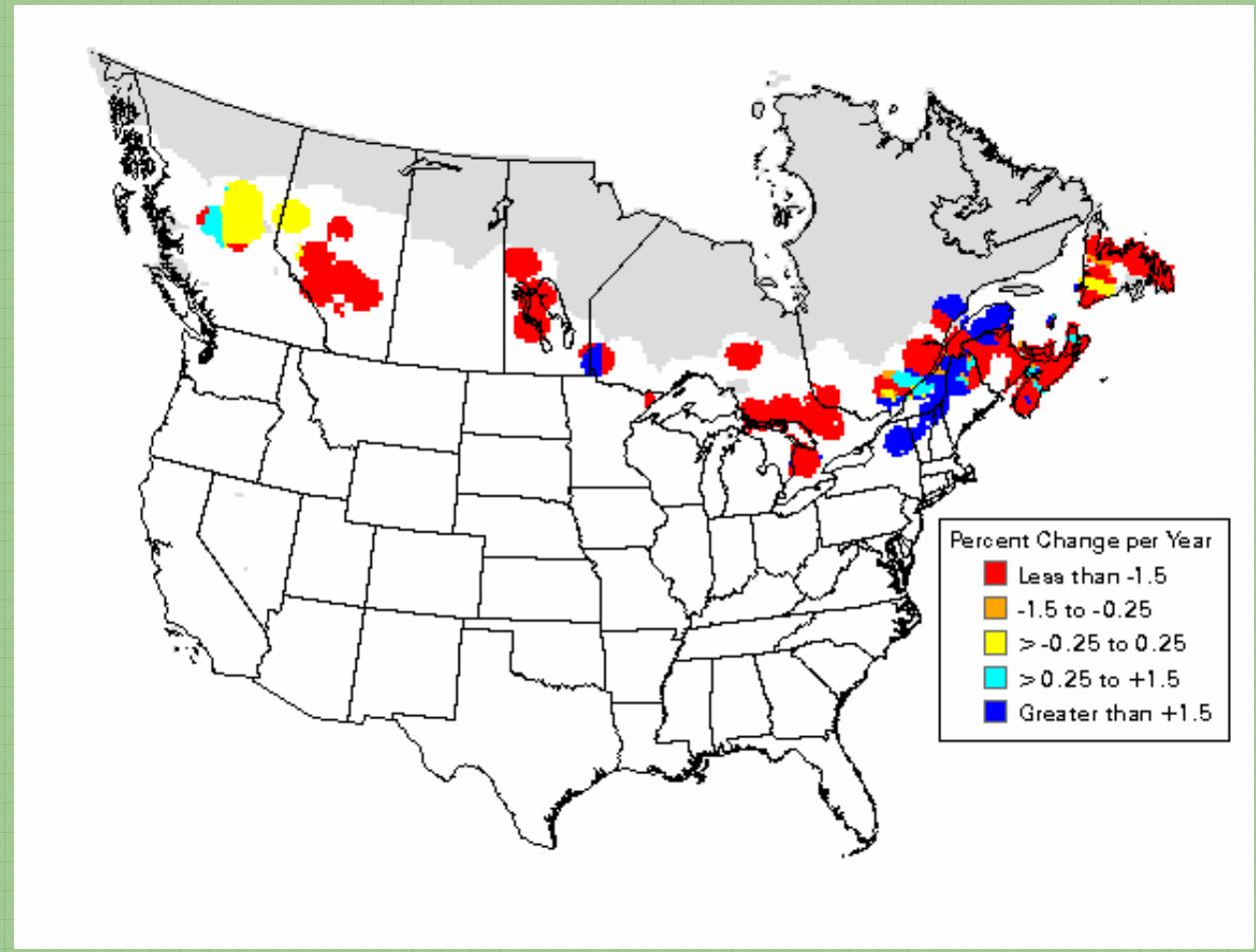


# *BBS has limited usefulness ....*

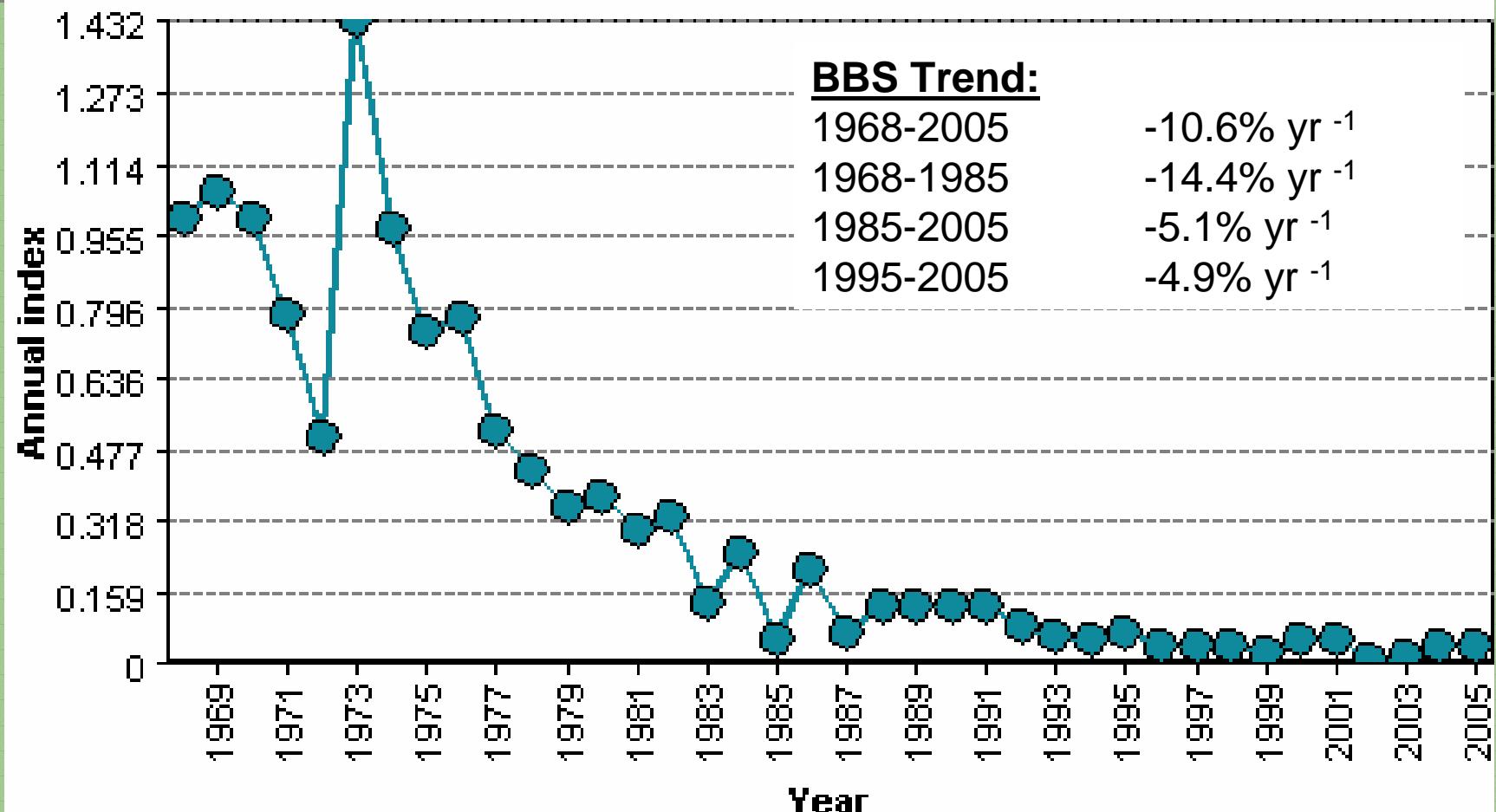
BBS – 1994-2003  
summer distribution



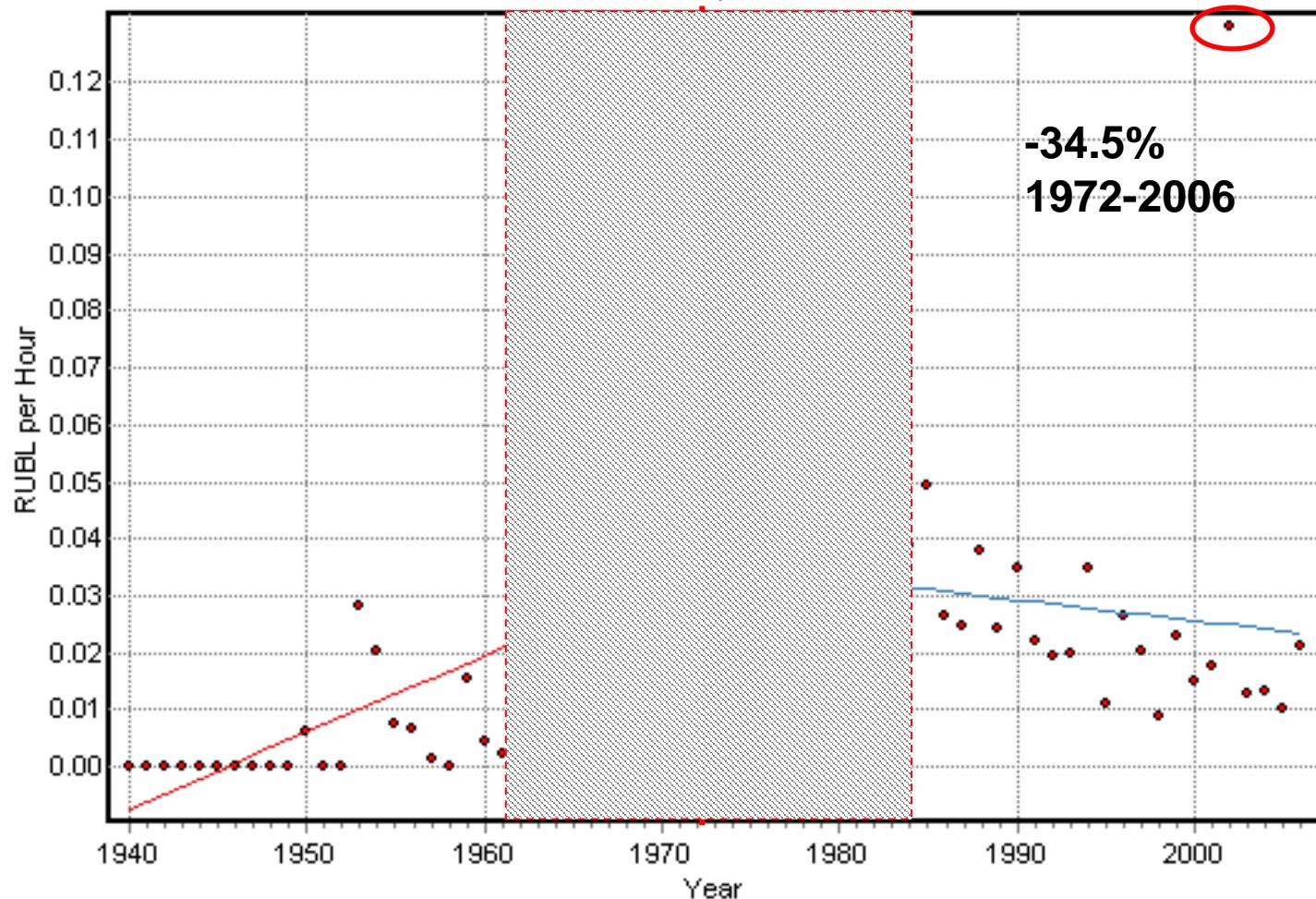
## BBS - 1966-2003 trend map



# *BBS trend within Canada*



# *CBC Birds/Party Hour Canadian Counts*

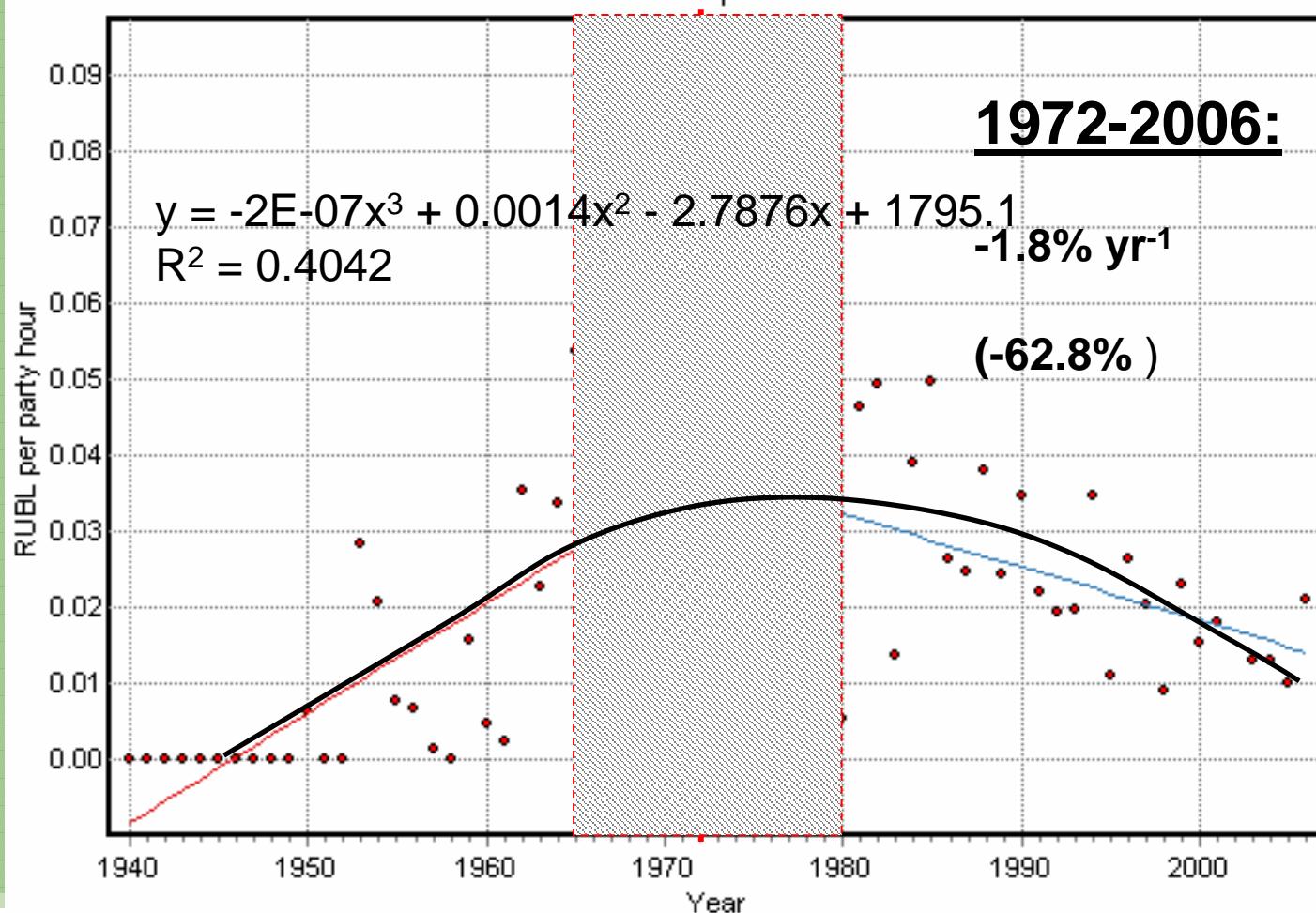


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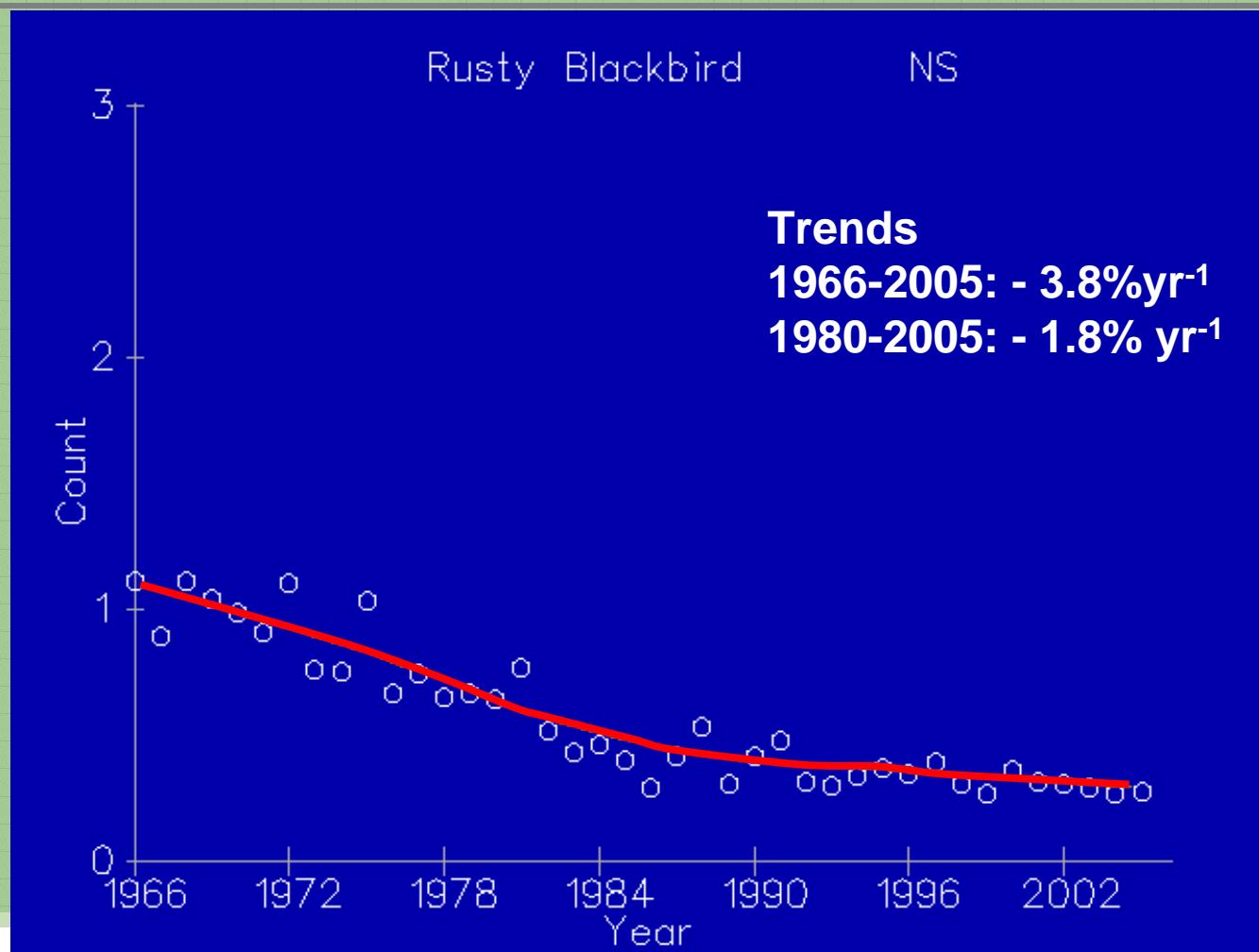
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# *CBC Birds/Party Hour Canadian Counts*



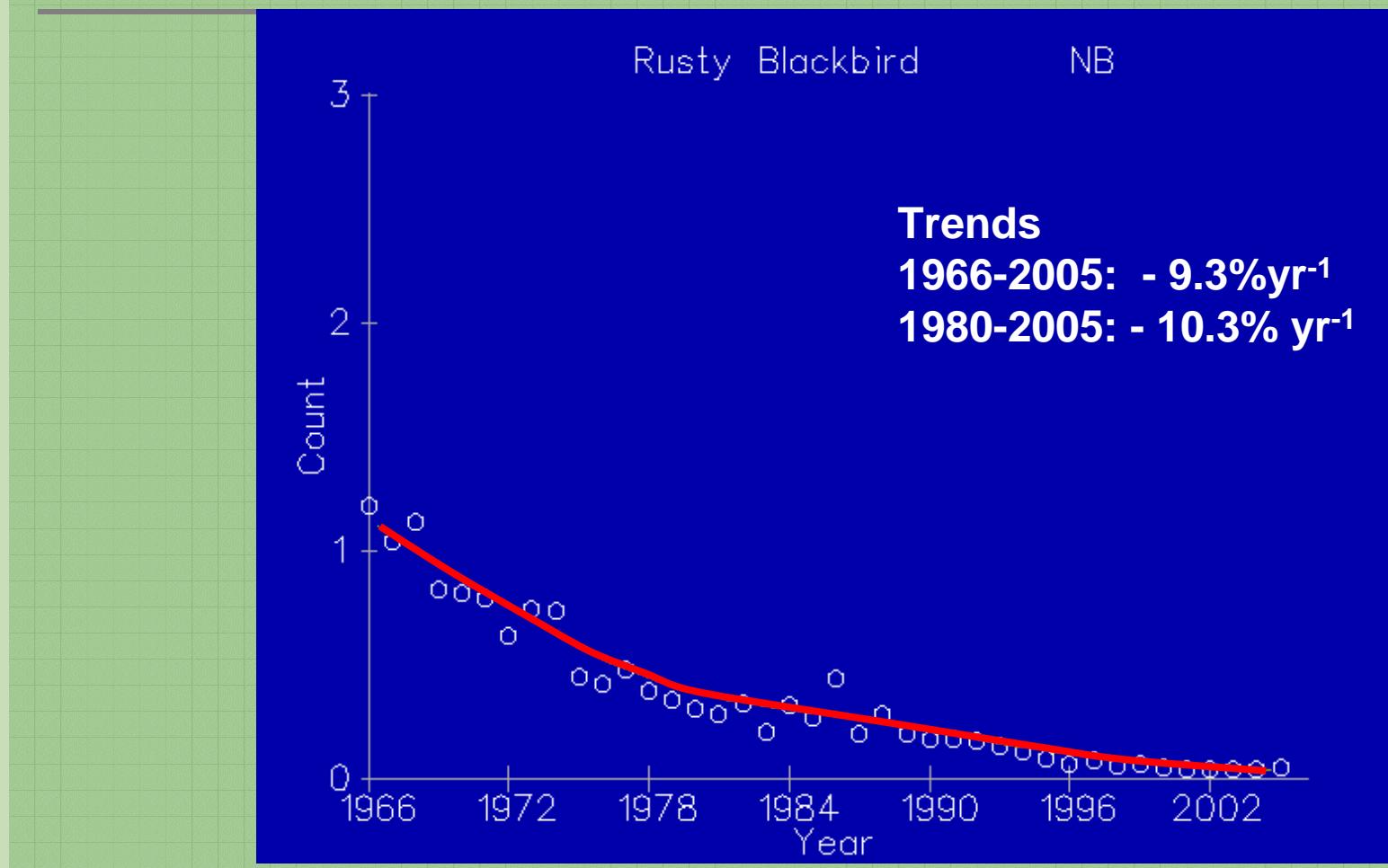
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# Nova Scotia



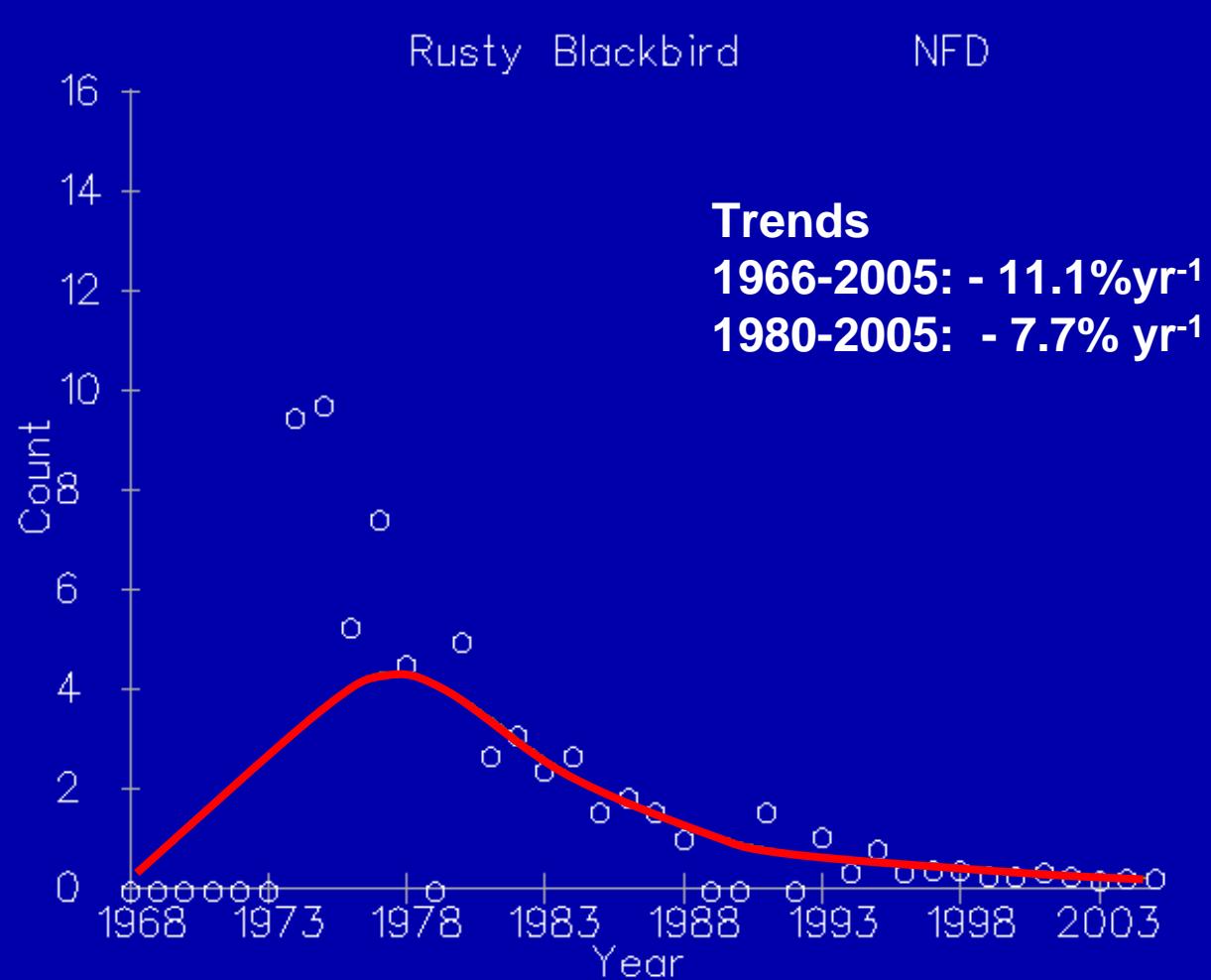
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# New Brunswick



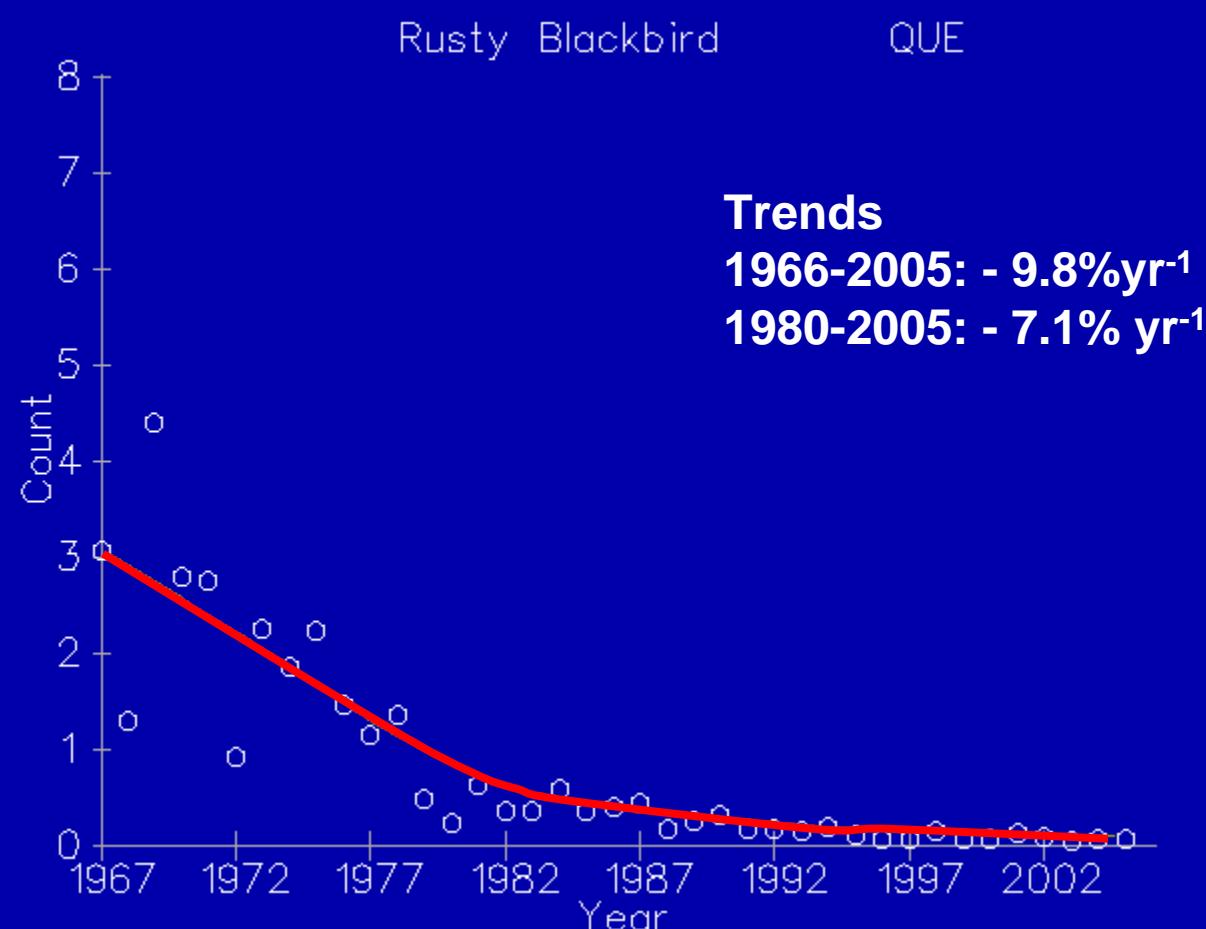
Environment Canada  
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# Newfoundland

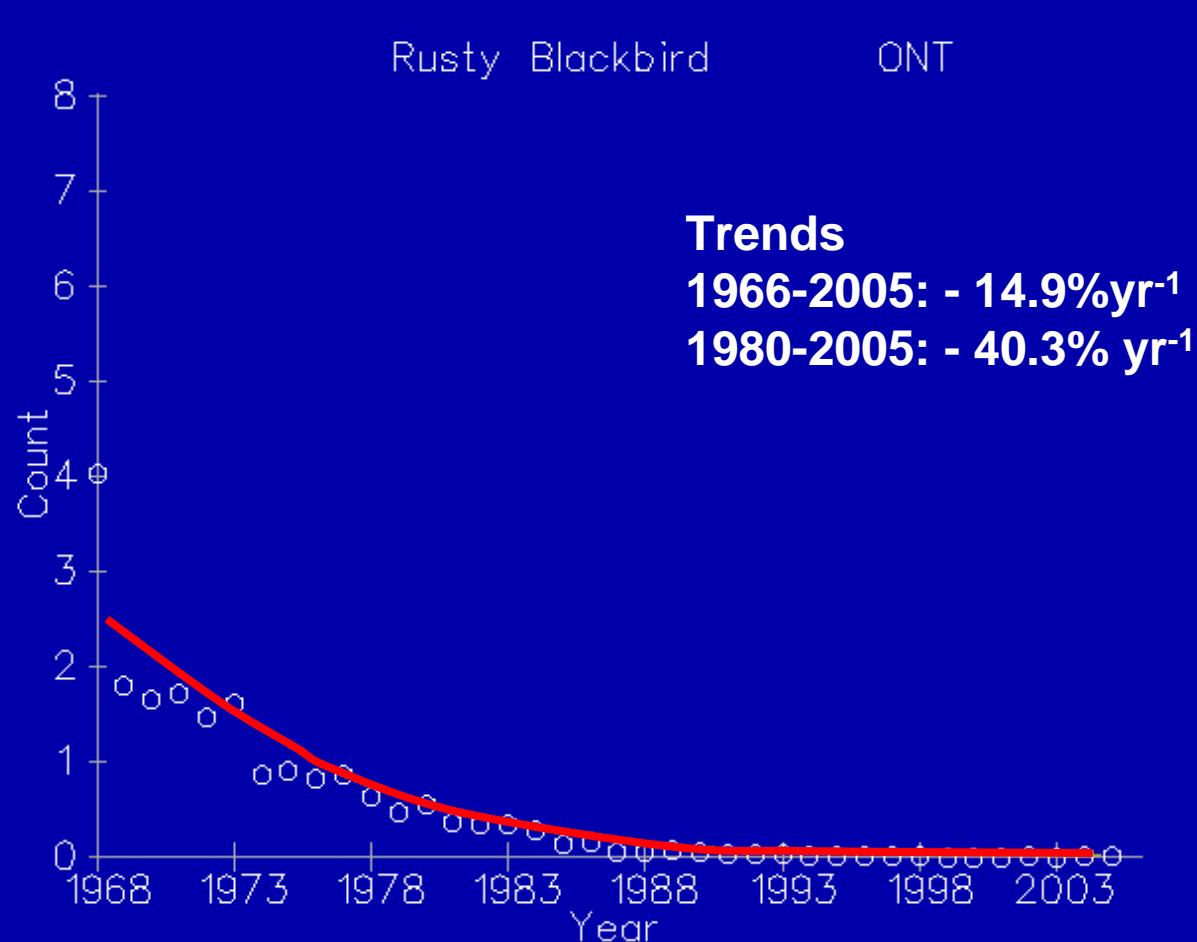


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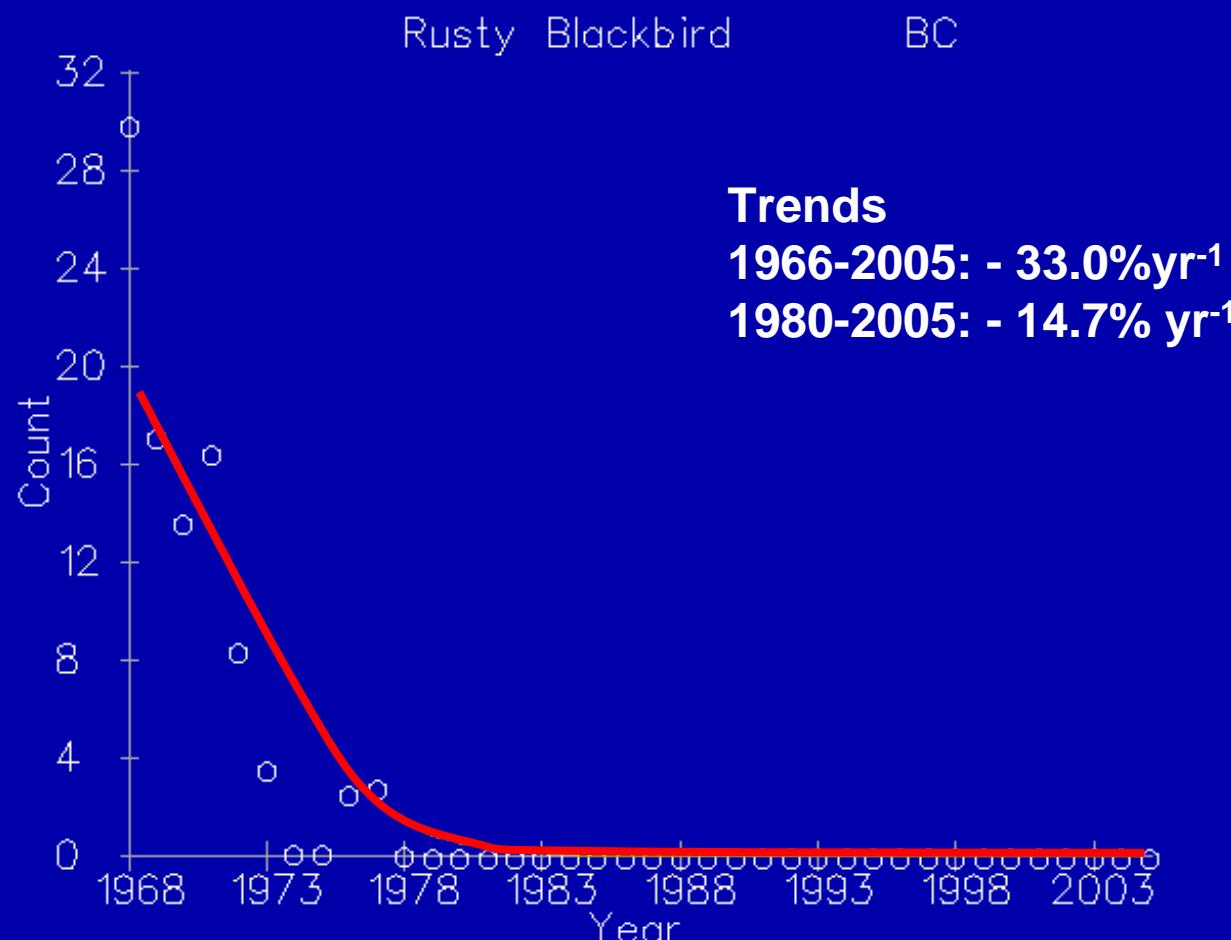
# Quebec



# Ontario

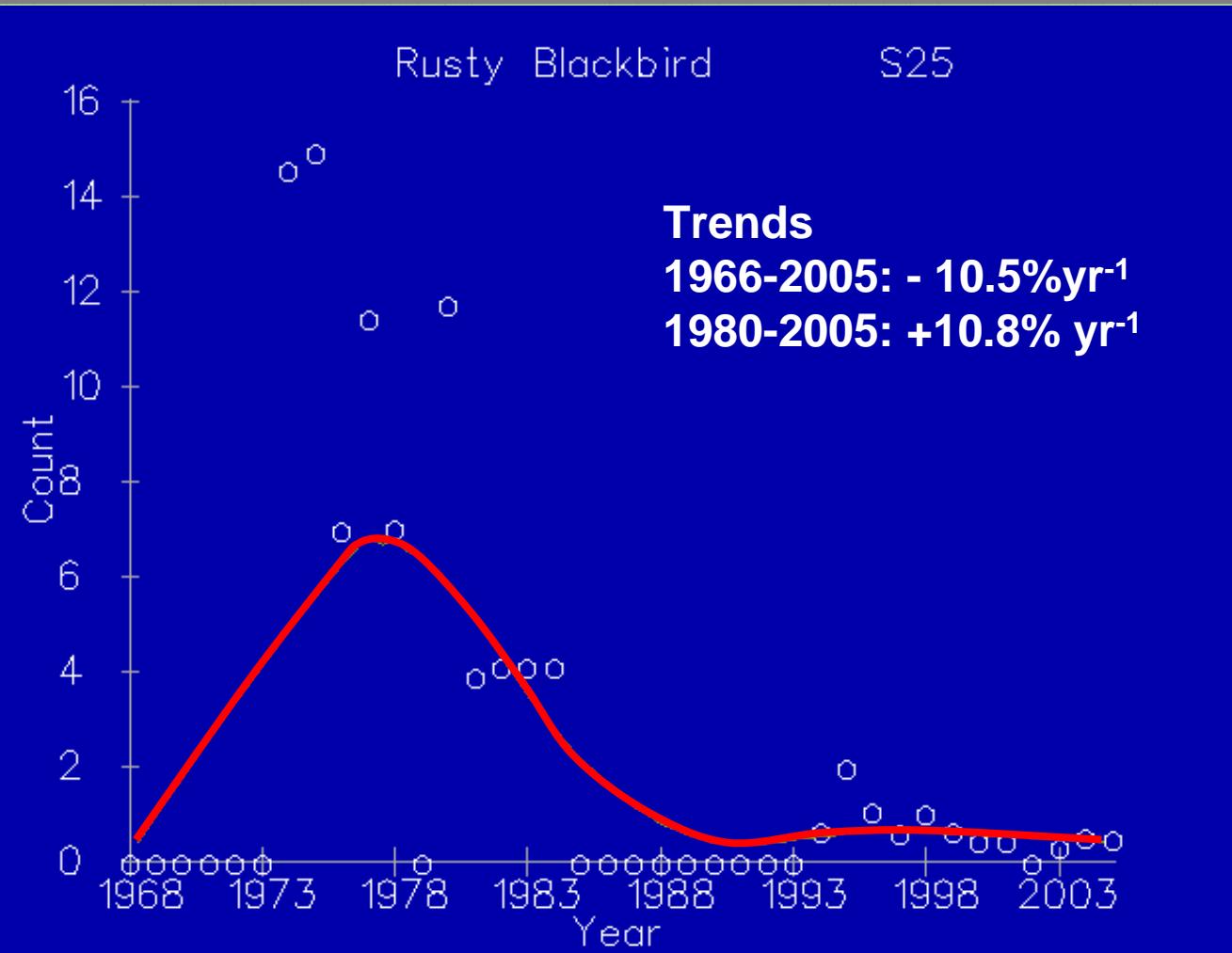


# *British Columbia*



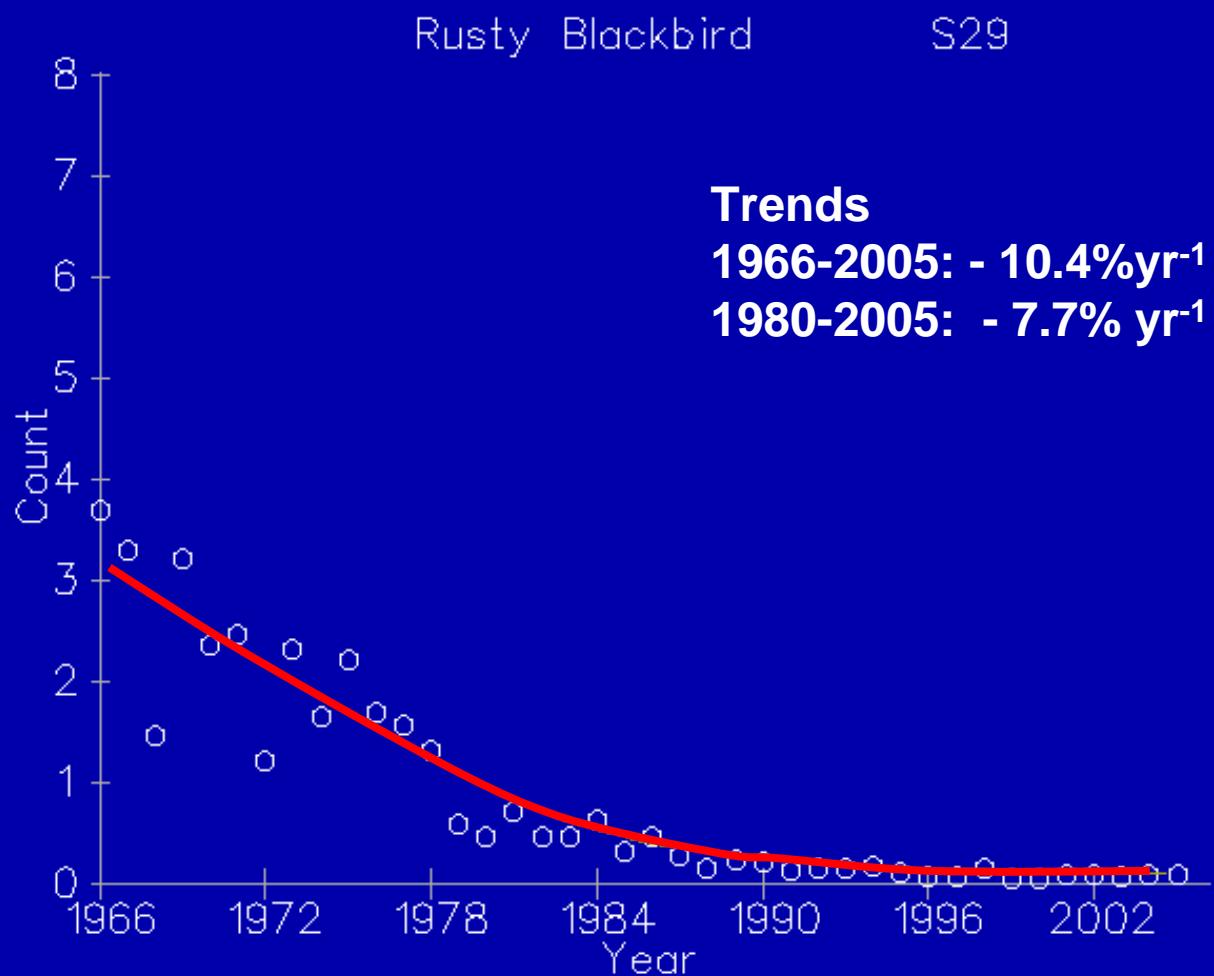
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# *Open Boreal Forest*



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# *Closed Boreal Forest*



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