

Introduction to the Biology, Distribution, and
Demography of Golden-winged Warblers



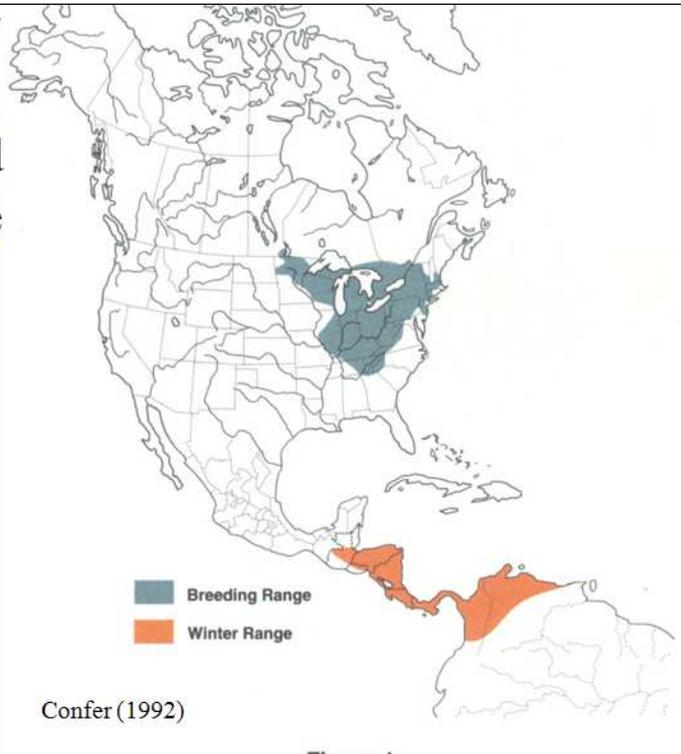
David Buehler
University of Tennessee



Today....

- population status
- breeding habitats
- reproduction and survival
- migration and wintering distribution and habitat use
- factors potentially limiting populations.
- efforts of GWWA Working Group

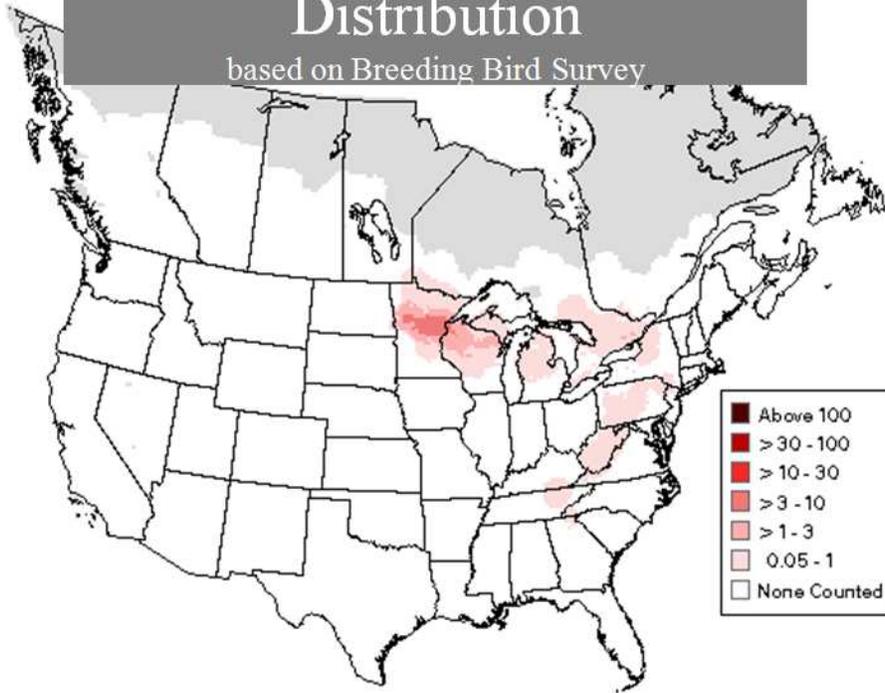
Golden-winged Warbler Range



Confer (1992)

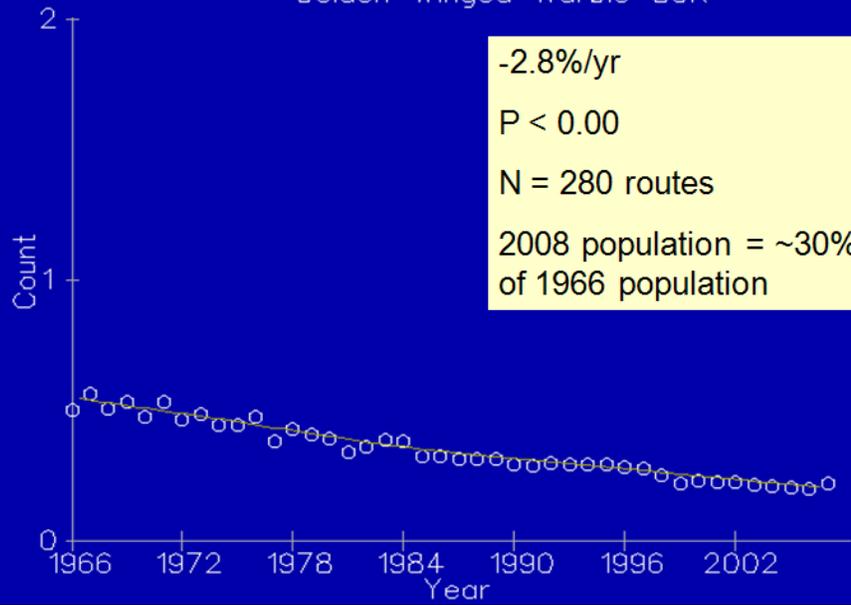
Distribution

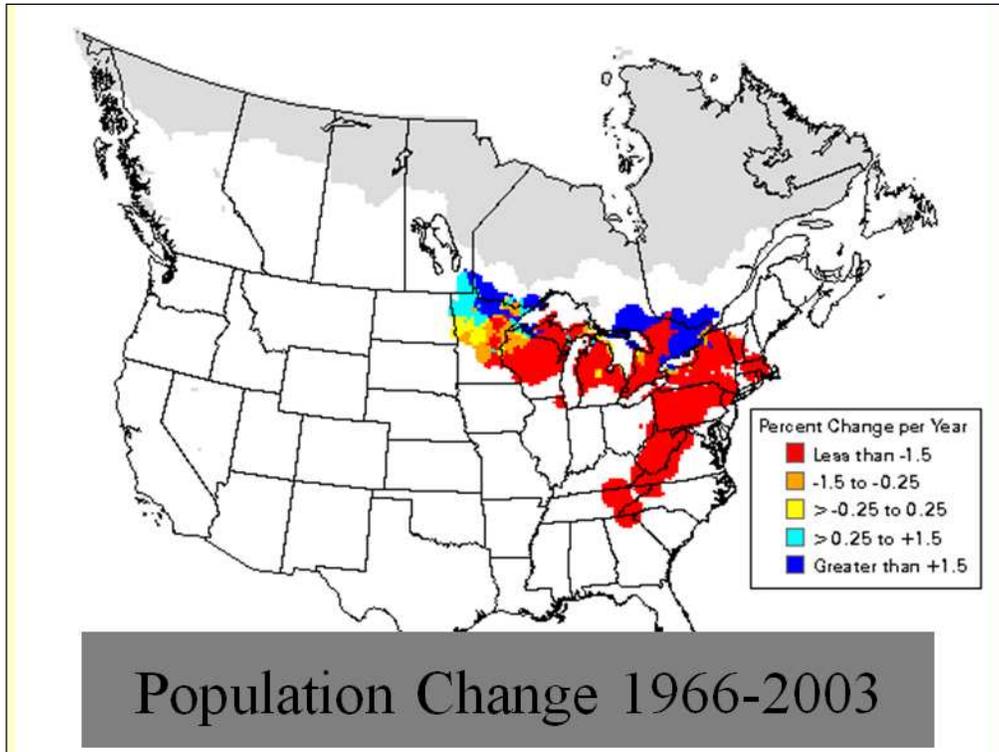
based on Breeding Bird Survey



North American Breeding Bird Survey

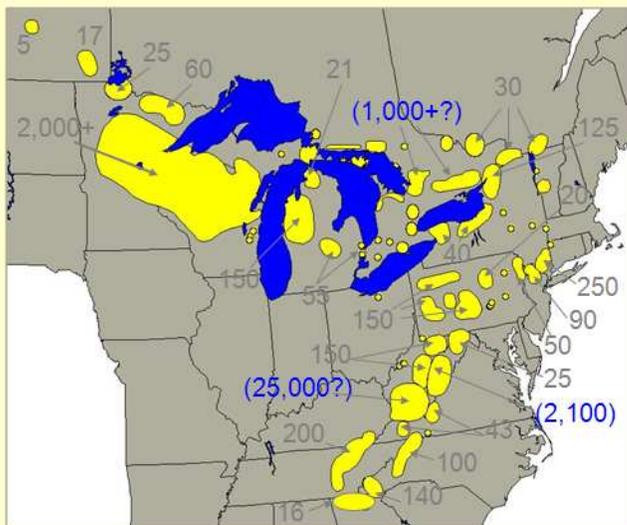
Golden-winged Warble SUR





GOWAP: Population Surveys

2,000 golden-wings located at 1,080 sites



(Barker and Rosenberg 2005)

Over 2,200 sites were surveyed for the Population Survey protocol during the 5 year period with approximately 2,000 golden-wings at 1,080 of these sites. Blue numbers are extrapolations.

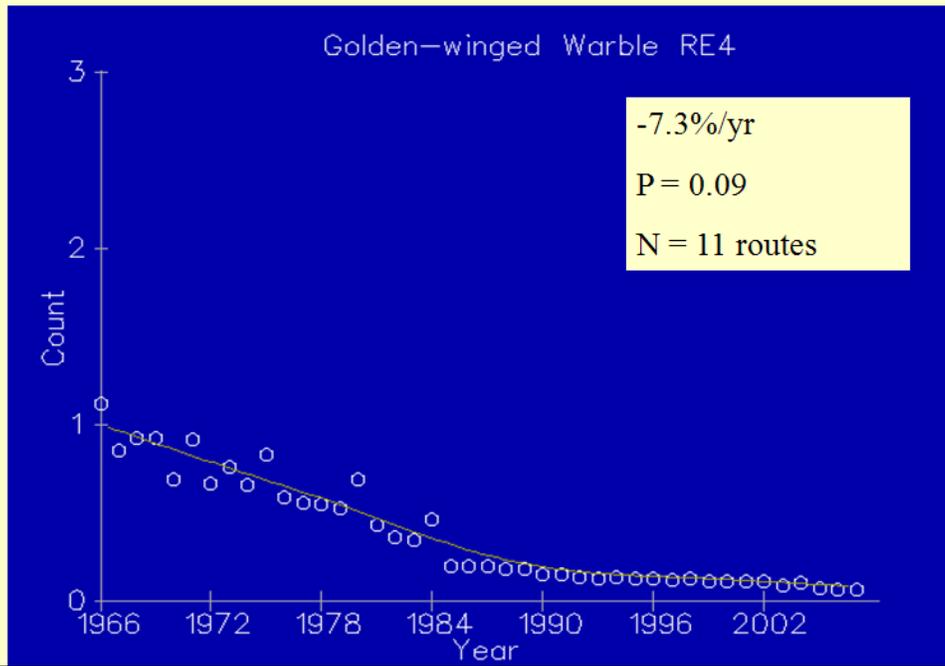
PIF Population Estimates

Rosenberg and Blanchard

State/Prov	# pairs	% of population
Minnesota	44,300	42
Wisconsin	23,600	22
Ontario	19,150	18
Michigan	5,400	5
West Virginia	3,800	4
Pennsylvania	3,500	3
New York	2,300	2
Tennessee	1,200	1
Virginia	400	< 1
North Carolina	300	< 1
Quebec	200	< 1
Maryland	180	< 1
New Jersey	80	< 1
Manitoba	65	< 1

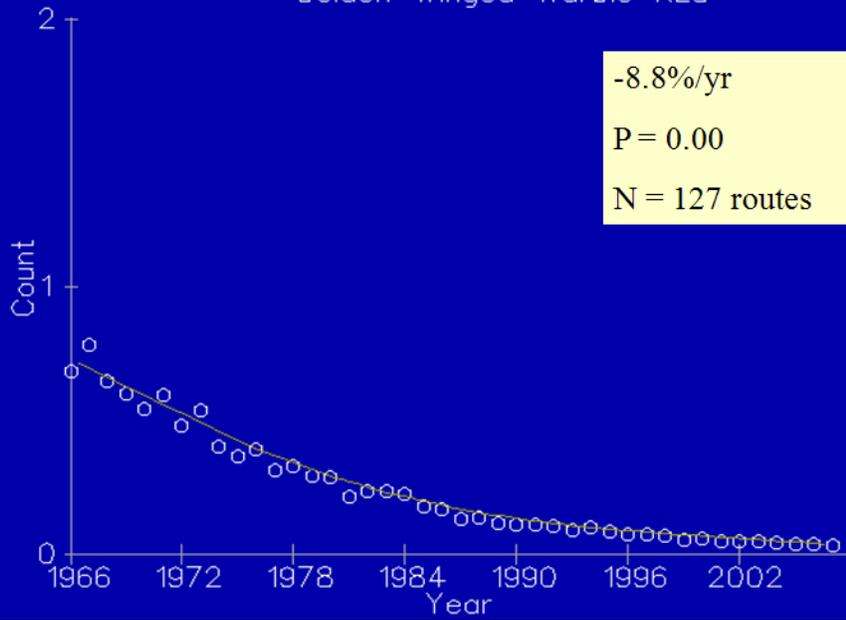
82% of total

BBS SE US Region

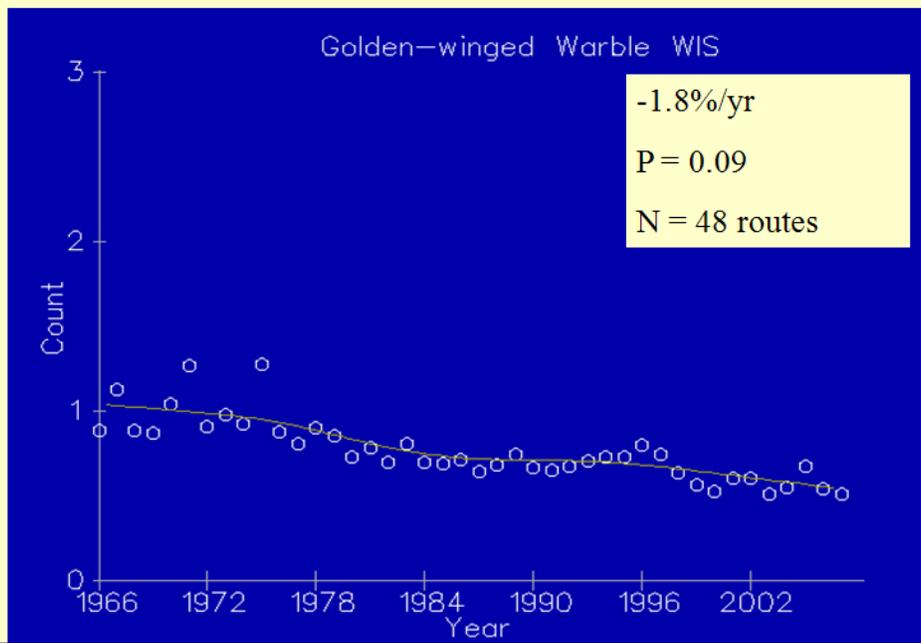


BBS NE US Region

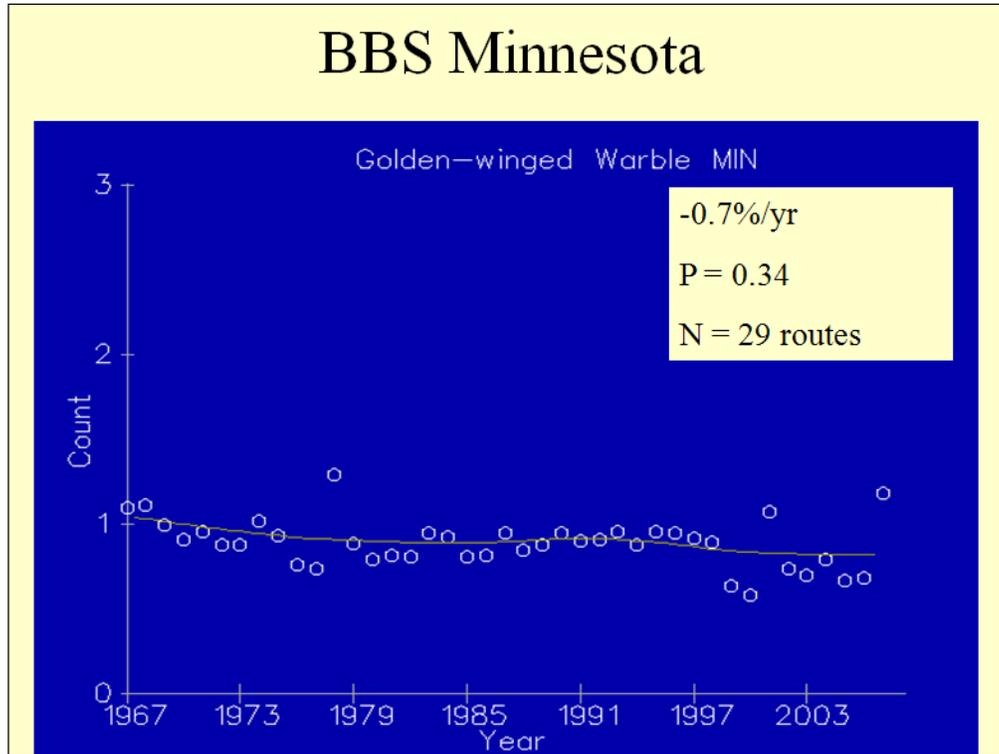
Golden-winged Warble RE5



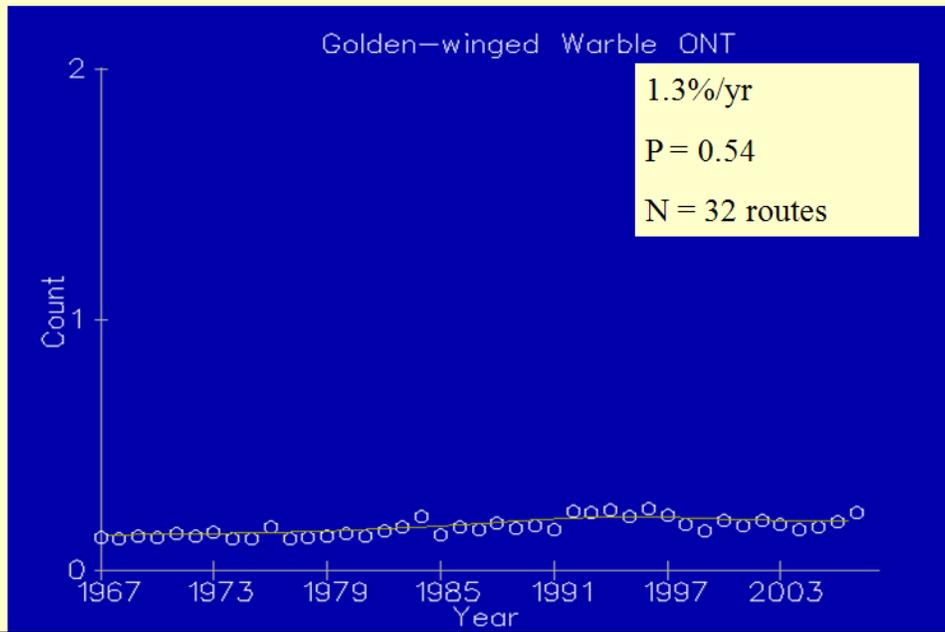
BBS Wisconsin



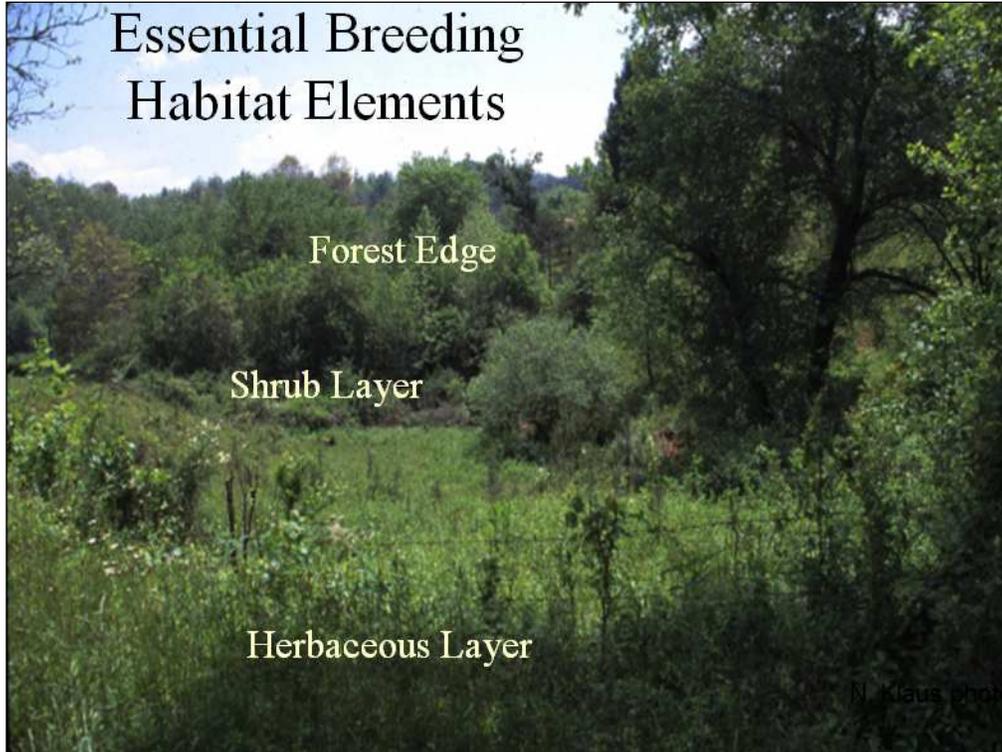
BBS Minnesota



BBS Ontario



Essential Breeding Habitat Elements



Reclaimed Coal Strip Mines Tennessee





GWWA and Grazing



K. Aldinger, WVU photo

Beaver Meadow, NY



John Confer

Utility ROW, NY



John Confer

Restored Shrubland, NY



John Confer



Reproduction



Site	N	Years	Nest Success (%)	Clutch Size	% Parasitized	Author
ON	86	2001-04	33	4.75	2	Vallender & Robertson
NY	69	1988-94	38	4.39	30	Confer & Larkin
NC	23	1997-98	72	4.5	0	Klaus & Buehler
PA	39	2002-03	37	4.0	15	Kubel & Yahner
WV	347	1987-96	61	4.8	0	Canterbury
MI	13	1981-83	85*	4.69	31	Will
TN	102	2003-06	49	4.3	3	Bulluck & Buehler

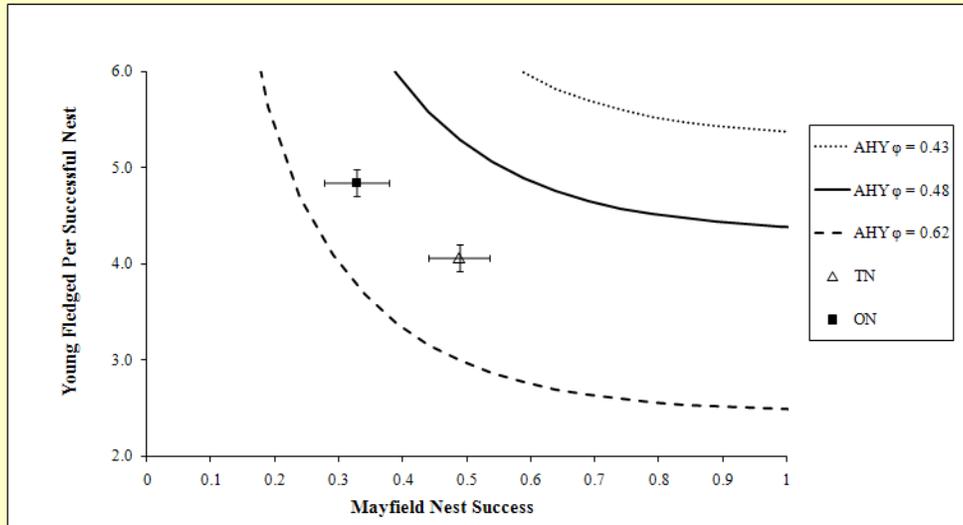
* Nest success = # successful/total nests x 100%, all other estimates are based on Mayfield (1975).



Survival

Site	n	Years	Return Rates AD ♂	Return Rates AD ♀	Author
ON	292	2001-04	62	48	Fraser & Robertson
TN	142	2003-06	62	43	Bulluck & Buehler
WV	85	1988-95	24	17	Canterbury
NY	63	1992	48	---	Confer
MI	63	1981-83	54	---	Will

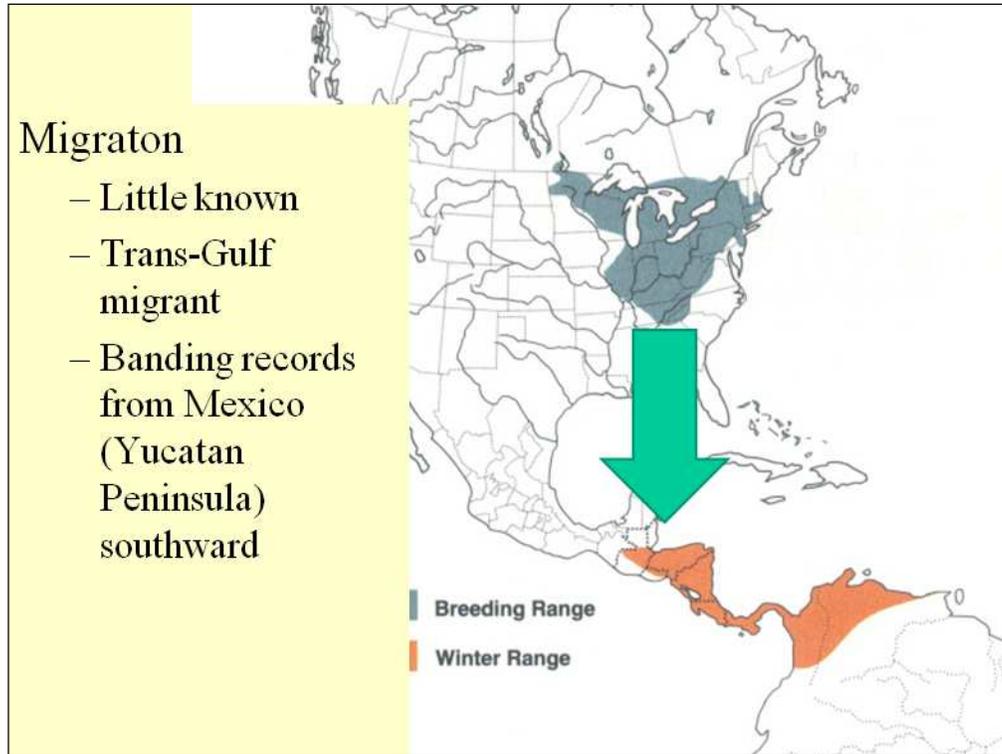
Population Source/Sink Dynamics Tennessee and Ontario



Model developed by J. Giacomo, University of Tennessee

Migraton

- Little known
- Trans-Gulf migrant
- Banding records from Mexico (Yucatan Peninsula) southward



Wintering Grounds



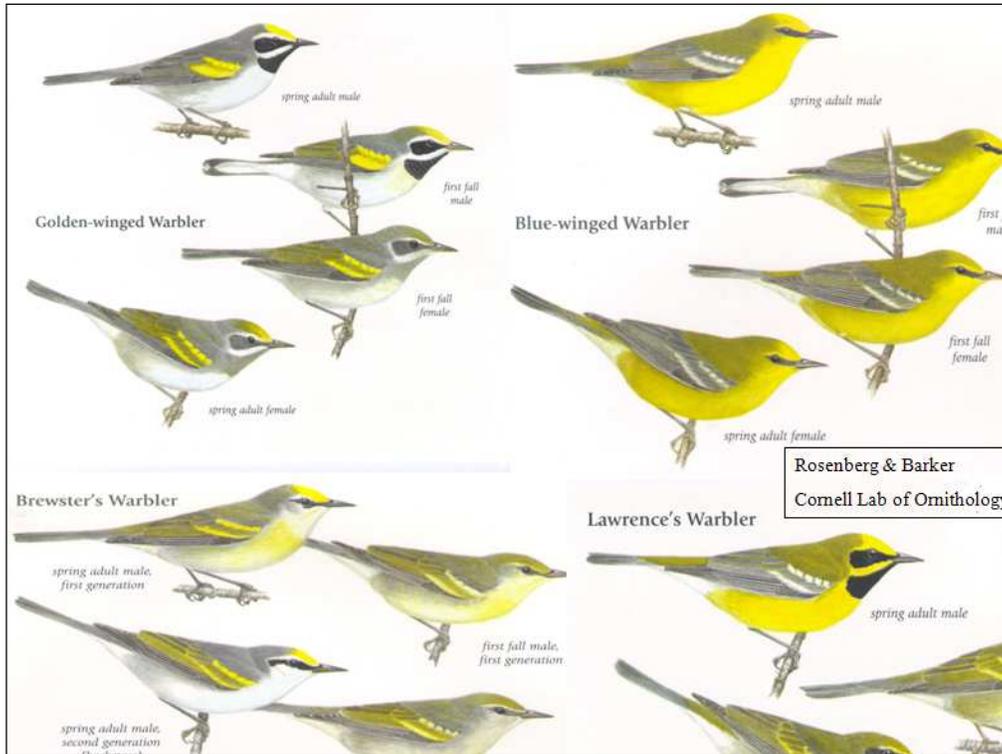
Wintering Grounds Habitats?

- “Young” second-growth forests at 500~1500 m elevation
- Shade grown coffee
- Others???

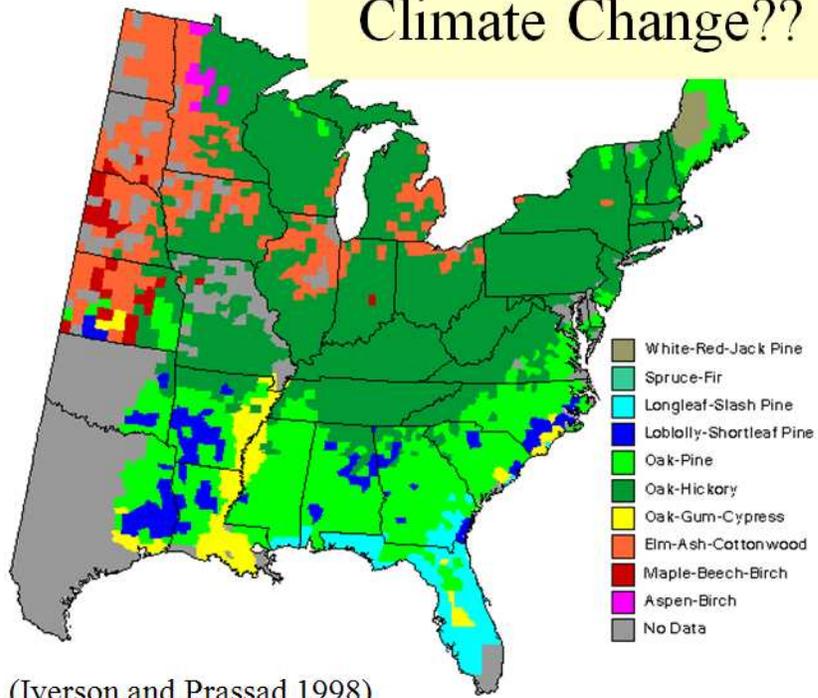


Possible Limiting Factors

- **Habitat loss**
 - Forest succession
 - Development
 - Coal mining
 - Reduced forest management (clearcutting)
- **Hybridization/Competition**
- **Climate change**
- **Survival during migration/wintering grounds**



Climate Change??



(Iverson and Prasad 1998)

Golden-winged Warbler Working Group



- **History:** Founded in 2003
 - 2005 Workshop in Siren, Wisconsin
- **Goal:** Ensuring the conservation of Golden-winged Warbler populations through sound science, education, and management.
- **Members:** 80 United States, Canadian, and Latin American ornithologists, conservationists, and managers

from academia, federal and state agencies, international non-governmental organizations, and industry

GW Working Group Structure

Committees:

- Steering
- Breeding Grounds Monitoring & Research
- Breeding Grounds Conservation
- Alianza Alas Doradas--(Non-breeding Grounds Monitoring, Research, & Conservation)

Breeding Grounds

Research and Monitoring

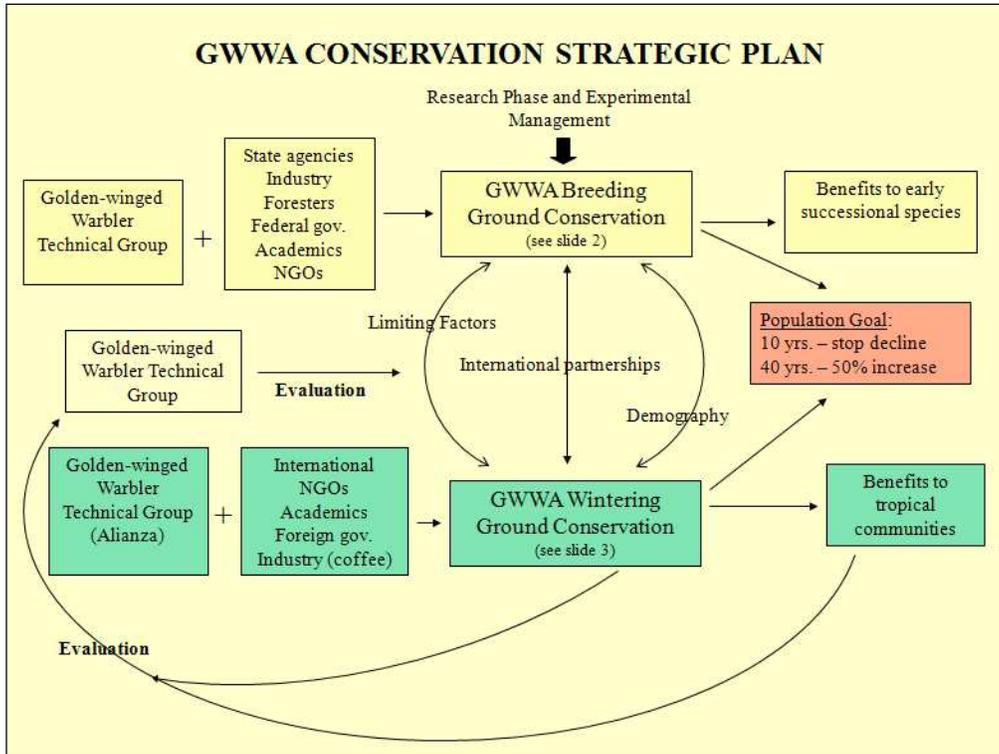
- Expanded GWWA Atlas
 - Fill in gaps of original atlas work
 - Develop monitoring protocols where BBS doesn't work (BCR 28)
- Genetic Atlas
 - Document extent of introgression
- Habitat Management Research
 - 7 states (TN, NC, WV, PA, NY, WI, MN)
 - Document basic demographics
 - Experimental habitat manipulations
 - Develop habitat management guidelines

Alianza Alas Doradas

- Conservation on wintering grounds and during migration
 - Field surveys to document distribution
 - Document habitat associations
 - Develop predictive model of winter distribution
 - Document trends in land use related to GWWA habitat
 - Identify and work towards conservation of hot spots
 - Work on outreach and education

Become a Member

- Send email to:
LISTSERV@LISTSERV.UARK.EDU
- Placing the following command in the message
body (not the subject line):
SUBSCRIBE GWWALL-L Your Name



NFWF Keystone Project 2008

Business Plan for the Recovery of American Woodcock and Golden Winged Warbler and other Eastern Birds Dependent upon Early Successional Habitat

- ***Strategy 1: Reverse population declines through habitat restoration***
 - *Halt the decline of AMWO populations and achieve population growth to 1970's levels by 2022.*
 - *Stop the decline of GWWA by 2019 and increase the population 50% by 2049.*