


Breeding Bird Atlases in the Midwest

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A stylized silhouette of a mountain range in a teal color, located in the bottom right corner of the slide.

First atlases

- ◆ Atlas of British Flora 1962
- ◆ Atlas of the Birds of the West Midlands (Staffordshire, Warwickshire, and Worcestershire) 1970
- ◆ New York and Vermont first in USA
- ◆ 31.4% of the world has been atlased at least once. Really??!

MI BBA Background

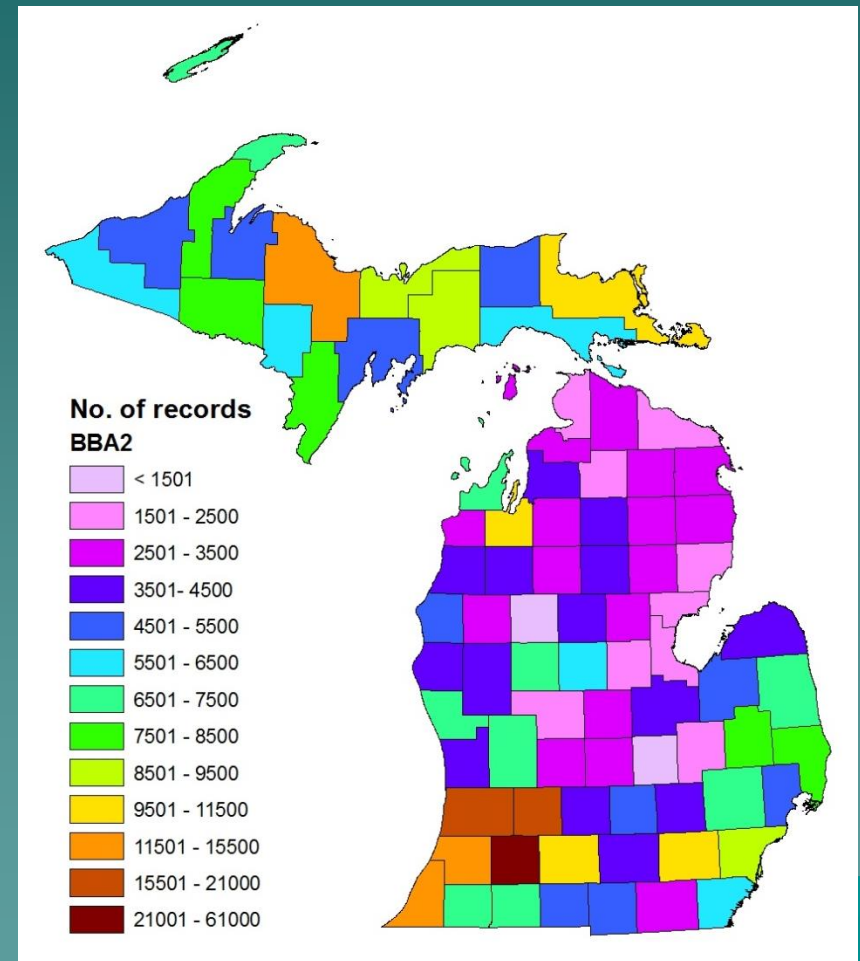
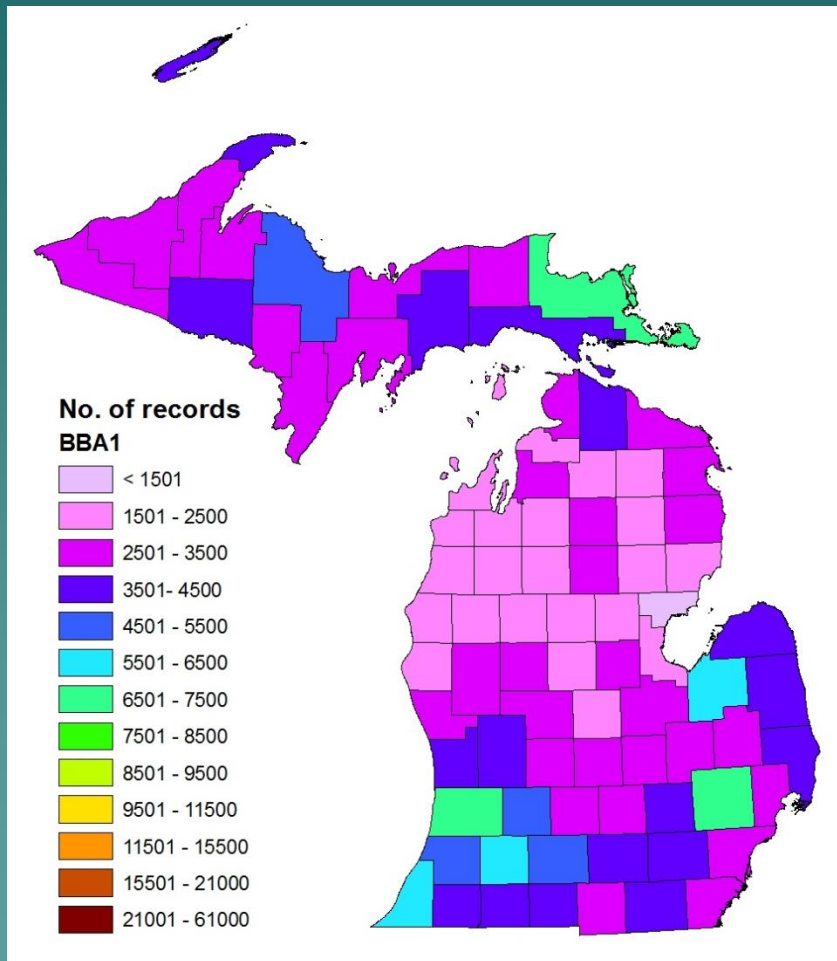
◆ BBA1

- create statewide baseline for bird distribution and relative abundance
- data collection: 1983-1988
- publication: 1991

◆ BBA2

- quantify range shifts since BBA1; create statewide baseline for relative abundance
- data collection: 2001-2008
- publication: 2013 book and online


Distribution of observations



Failures

- spotty coverage in the Upper Peninsula
- secretive or other difficult to survey species not captured well
 - ◆ grassland birds
 - ◆ secretive marshbirds
 - ◆ woodland raptors
 - ◆ owls & caprimulgids
- spotty coverage in much of the Upper Peninsula
- data collection heavily skewed to the SW Lower Peninsula
- poor recruitment of new volunteers or retention of volunteers from BBA1
- lack of technical expertise in species account authors and editing staff

Lessons learned

- keep volunteers engaged year round and be responsive to their needs
 - the expertise, skills, and abilities of your atlas contractor will determine the success or failure of the project
 - Block busters are essential for difficult to reach areas
 - Enlist non-traditional groups (hunters, lake associations)
 - Don't forget about riverine corridors (kayakers)
 - Use winter to contact landowners for permission
 - Give land owners a list of your findings
- 

Atlases in the Midwest

	Not planned	In planning	In progress	Complete	Cancelled/ discontinued
Atlas 1			1	11	
Atlas 2	6	0	2	5	
Atlas 3	11	1			

12 states responded to survey request

Why make an atlas?

- ◆ species distribution information—a map!
- ◆ quantify distribution/abundance trends
- ◆ quantify breeding phenology
- ◆ species-habitat associations
- ◆ inform conservation/management decision making and planning

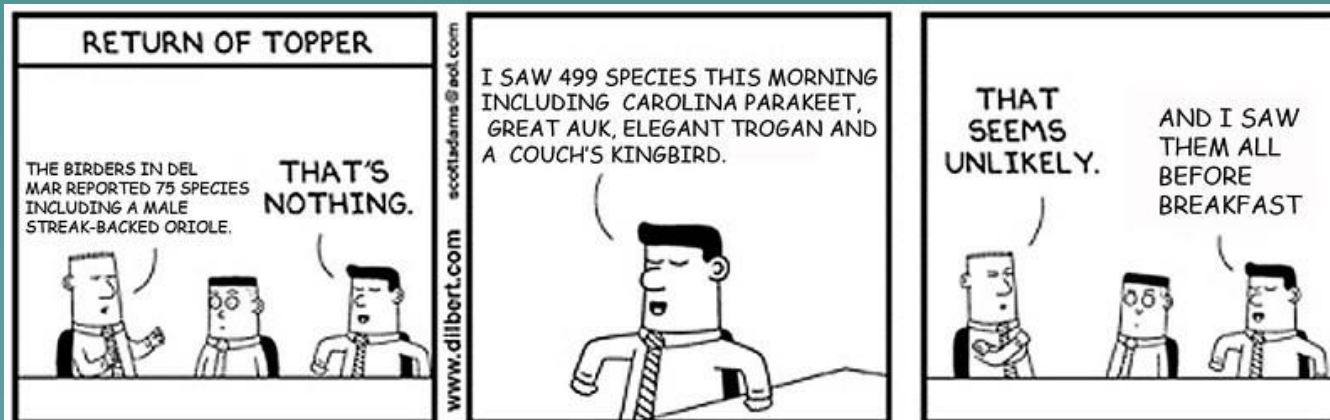


Michigan and Minnesota recommendations

- ◆ Data is the driver – save data at the greatest detail possible
- ◆ Volunteers don't have an expiration date, but they can spoil
- ◆ Don't disregard paid observers (block busters)

Planning for an atlas

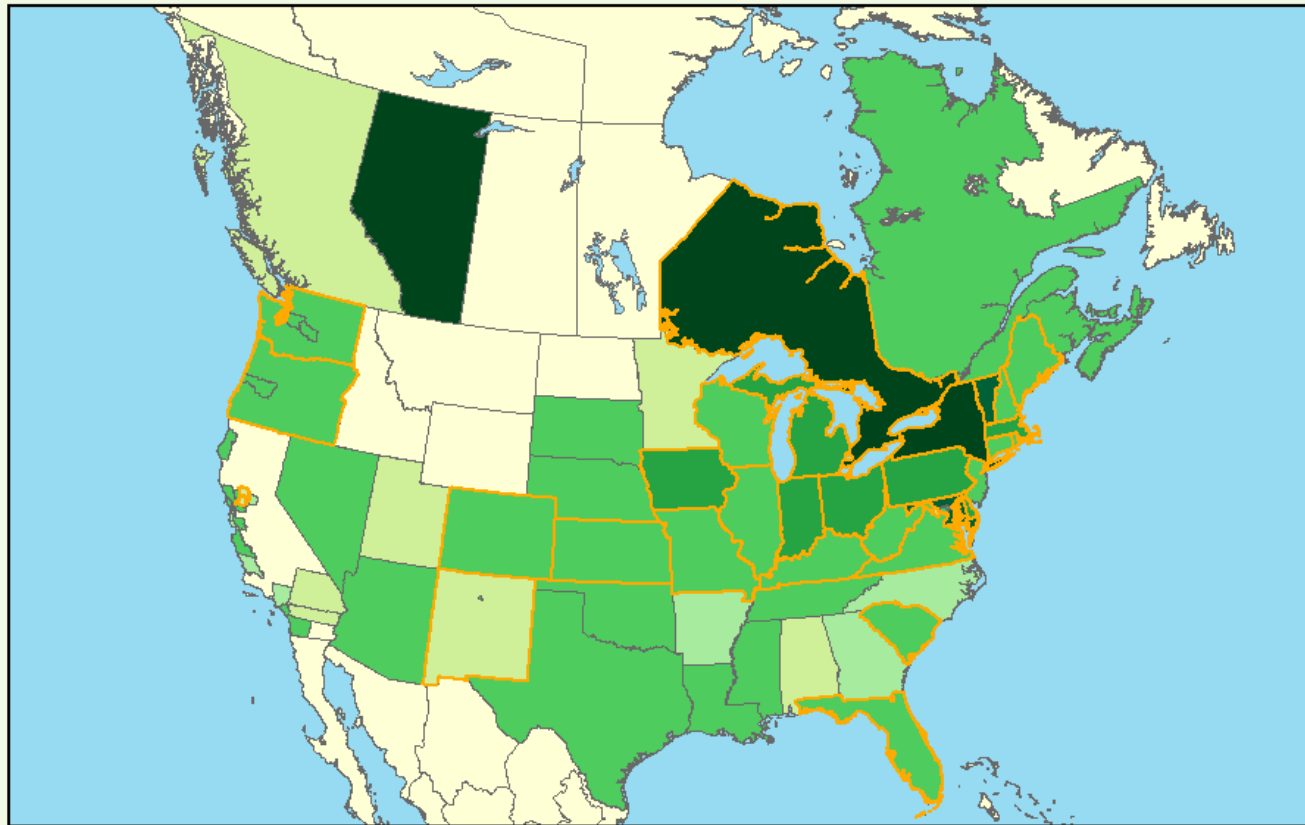
- ◆ What's important? (1:very → 5:not at all)
 - Make sure species are identified correctly (1.8)
 - Think about comparisons with data across your region (2.0)
 - Make sure observation locations are correctly identified (2.1)
 - Think about target species that may need additional effort (2.4)
 - Think about comparisons with your earlier atlases (2.5 overall, 1.2 for states with 2+ atlases)
 - Think about funding and staffing needs (2.6)
 - Think about how the atlas can complement other bird conservation projects (3.0)
 - Think about how technology can be used to improve data collection, data analysis, and production of final products (3.1)
 - Consider effects due to climate change (4.2)



Atlas Status



Status of North American Breeding Bird Atlases



Atlas status as of January 2009.
States shown with second round atlases have completed a first round atlas.
Source: Individual state and provincial breeding bird atlas datasets as archived at: <http://www.pwrc.usgs.gov/bba>

Prepared by the USGS Patuxent Wildlife Research Center, January 2009

First Round Atlases

- 1st in-progress
- 1st completed
- 1st published

Second Round Atlases

- 2nd in-progress
- 2nd completed
- 2nd published

- Atlas in BBA Explorer
- no atlas

Coverage is essential

- ◆ Increasing accuracy with more data entries
- ◆ PA—656,723
- ◆ MN—380,683
- ◆ OH—1,003,757
- ◆ South Africa/Namibia et al. 7M!

Conservation Benefits

- ◆ Identify areas of high biodiversity to target conservation efforts
- ◆ Identify areas with high # of species of conservation concern. Often different from #1
- ◆ Mitigation for energy effects
 - \$20M from recent new pipelines and spills using IL, IN, and OH atlases
 - Identify important riverine and other corridors (St. Croix River for LOWA)

Other Benefits

- ◆ Base population estimates for waterbirds and waterfowl for Joint-Venture Planning
- ◆ Educational and Recreational value
- ◆ (lake associations, kayaking and canoeing, youth involvement—high school bio projects)

Other benefits

- ◆ Regional data analyses
 - Phenology changes
 - range changes
 - relative abundance
- ◆ Seamless mapping across the Midwest for conservation efforts
- ◆ Increased volunteer participation
 - Keep them active in other citizen science projects post Atlas



Ornithological Research Benefits

- ◆ Disjunct distribution = distinct species (i.e. towhees)
- ◆ Atlas data could delineate biogeographic zones and track species retreating or expanding ranges due to climate or other changes (YRWA in WV)
- ◆ Changes in patterns of allopatry and sympatry (GWWA and BWWA)

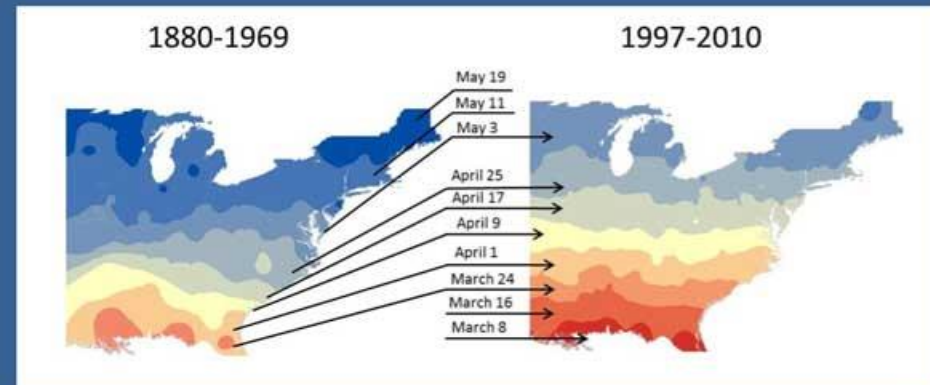
Memories

- ◆ 4 singing Prothonotaries from the compass points along the Mississippi
- ◆ A bolt from the blue as eagle and I do a 180.
- ◆ Sharp-tailed Grouse photobombing a Prairie Chicken lek
- ◆ Finding a Prairie Chicken clutch
- ◆ Common Goldeneye ducklings in the rocks of a sewage plant. No trees nearby. Voted cutest duckling.

Example

- ◆ Synchronize data collection periods
 - Volunteers can contribute to multiple projects. PUMA, RTHU, arrivals, phenology studies, etc.

Hummingbird First Arrival Dates



USGS: National Phenology Network

Example



- ◆ Similar codes
 - Direct comparisons of breeding behavior and phenology between states (i.e. less uncertainty in analyses)

Focus on species with short breeding/song windows

- ◆ Golden-winged Warbler (quiet after 6/15 to 6/20)
- ◆ Nelson's Sparrow 5/25 to 6/20 in a good year
- ◆ Nuthatches, many woodpeckers, even chickadees often easier in April
- ◆ Lek species often done by 10 May
- ◆ Start early!

Tips from MN

- ◆ Wood Duck Houses house more than just woodies:
- ◆ Flicker, Chickadees, Nuthatches
- ◆ Hooded Merganser
- ◆ Eastern Screech Owl
- ◆ Prothonotary Warbler
- ◆ Barred Owl

Snipe winnow in early am until July



More trips from Viking land

Swallows

- ◆ Tree Swallows will breed in martin houses
- ◆ Large Bank Swallow colonies often have a few Northern Rough-winged Swallows
- ◆ NRWS colonies are usually pure
- ◆ NRWS breed in limestone cliffs in Driftless Area and under bridges
- ◆ Cliff Swallows love culverts and Interstate bridges

One-stop shopping

- ◆ Martin Houses: PUMA, EUST, TRSW, HOSP
- ◆ Under bridges: ROPI, BANS, CLSW, NRWS, EAPH
- ◆ Barns: CLSW, BANS, HOSP, ROPI, EUST, TRSW, HOWR, AMRO, EAPH

Don't hang up the bins on May 31!!!—reap other benefits

- ◆ 1-10 June—prime time for Upper Midwest rarities
- ◆ Great opportunity for bird photography in July
- ◆ Vitamin D!
- ◆ Herps and dragonflies
- ◆ Increase your local avian knowledge
- ◆ See Wisconsin's back roads

The Top 12 hardest birds to confirm

- ◆ Worm-eating Warbler
- ◆ Eastern Whip-poor-will
- ◆ Black Rail
- ◆ Yellow Rail
- ◆ American 3-toed Woodpecker
- ◆ Olive-sided Fly
- ◆ Nelson's Sp
- ◆ Le Conte's Sp
- ◆ Bay-breasted Warbler
- ◆ Cape May Warbler
- ◆ Pine Grosbeak
- ◆ Long-eared Owl

New state breeding records Peach-faced Lovebird



Google Black Rail



The real McCoy
Be the first to find this species'
nest in Wis.



Black Rail potential sites

- ◆ Lulu Lake, Scuppernong, Peshtigo River marshes
- ◆ Has nested in wet alfalfa fields, hilltop grain fields, spring runs, spike rush stands (*Elyocharis* sp.)
- ◆ Try reed canary stands (David Brinker pers. comm.) upon seeing SE WI marshes

You can see Wisconsin from
where this species breeds!

Photo by George Jameson



Minnesota will be glad to give
you one of each



Breeding close to Wisconsin

- ◆ Eurasian Tree Sparrow—NE Iowa
- ◆ Least Tern (high water years?)
- ◆ Black-bellied Whistling Duck
- ◆ Black-billed Magpie (MN)
- ◆ Prairie Warbler (MI)
- ◆ Bay-breasted Warbler (MI, MN)
- ◆ Yellow-throated Warbler (MN, IL, IA, MI)

Surely a pair or two breed in
northern flowages



Imagine if there had existed an atlas from the 1850's



Gone but Mississippi Kites are
one county away!



One nest in the history of Wisconsin Ornithology!

