

Turkey Management:

2 Bird Spring Limit

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DNR Wildlife Division

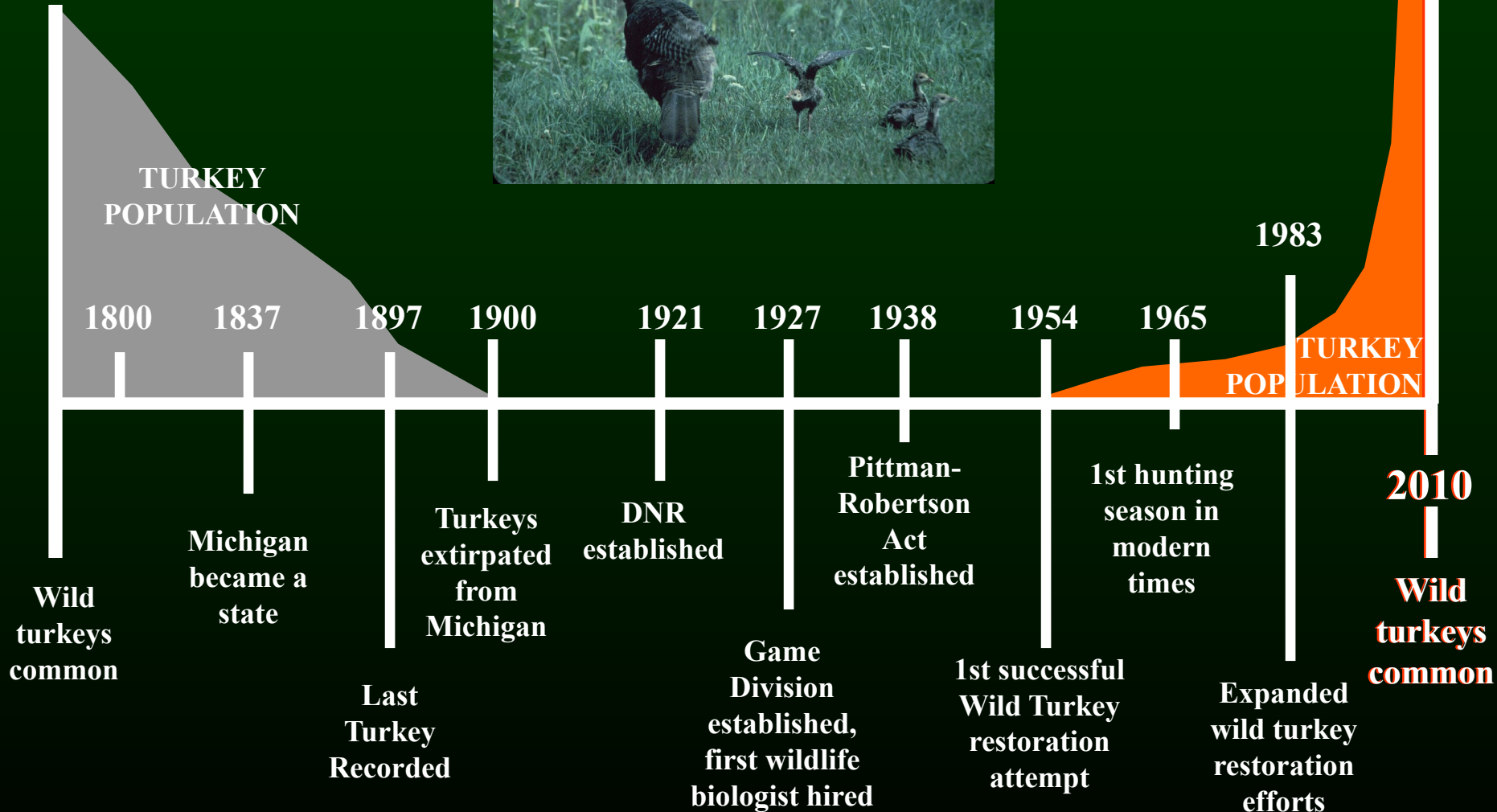


Overview

- Brief history of turkeys/harvest
- 2 bird limit discussions
- Michigan turkey populations
- Moving forward
- What's next



Wild Turkey Timeline



Michigan Spring Turkey Season

- First modern season 1968
- Gradual expansion of areas open and license quotas
- Harvest peaked in 2008
- Hunter satisfaction and success rates have been high for many years
- Hunt quality has been a priority



1969

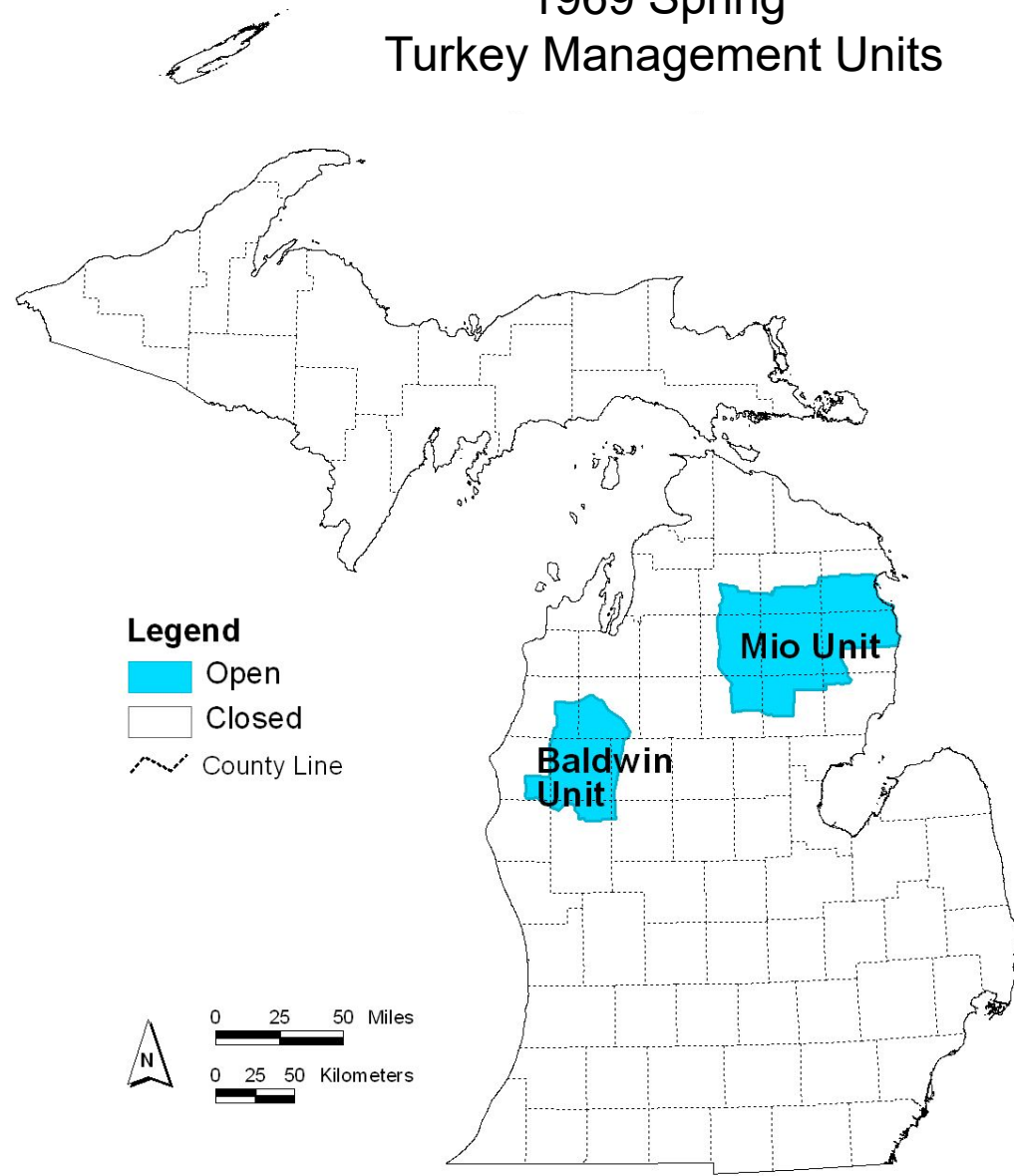
2nd Spring Season In Modern Times

Spring Season:
May 9 to May 19

SUMMARY:

- * 3,200 Hunters
- * 11,895 Applicants
- * 50 Turkeys Harvested
- * 2% Success Rate

1969 Spring Turkey Management Units



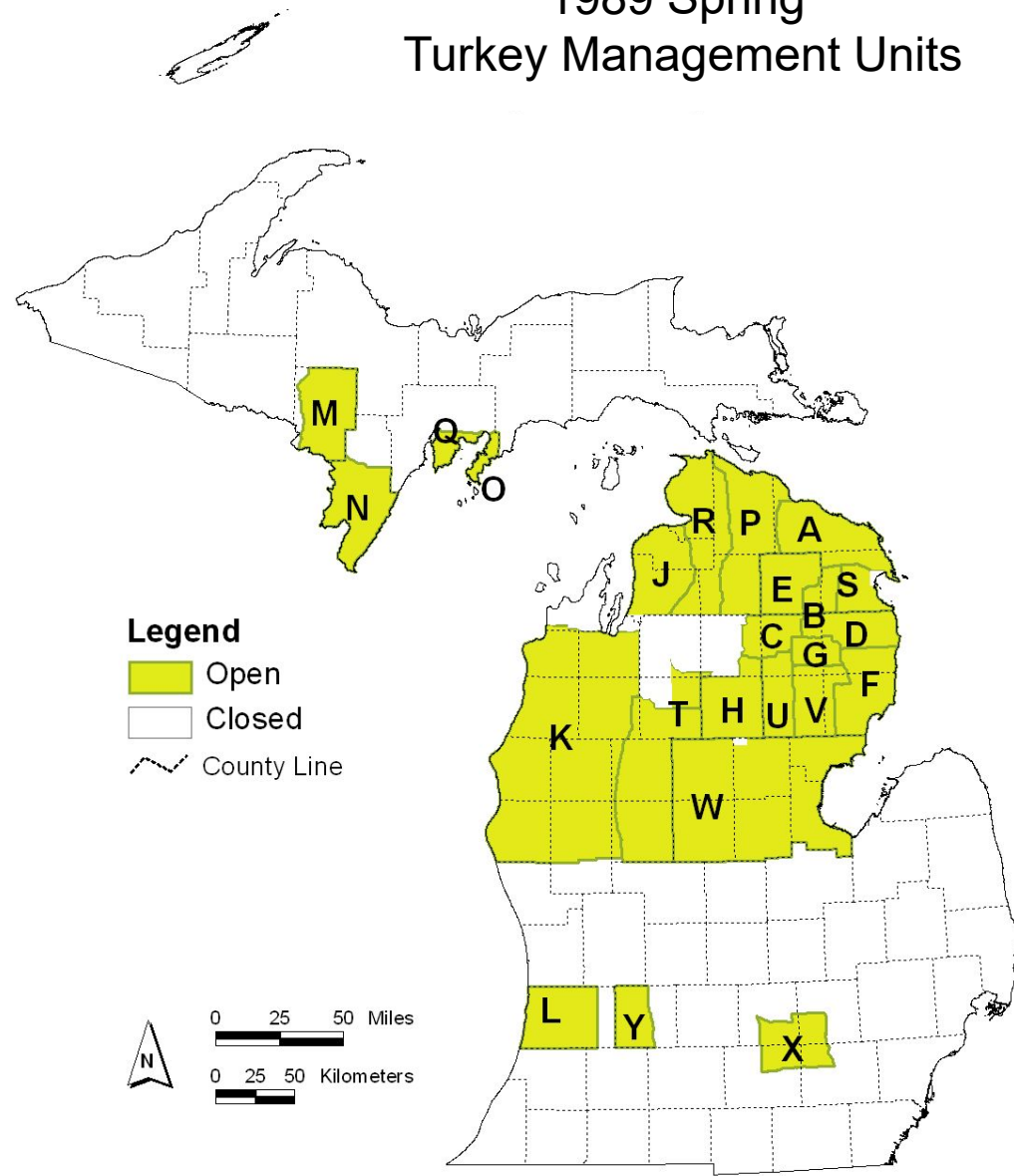
1989

**Spring Season:
April 17 to May 19**

SUMMARY:

- * 22,199 Hunters
- * 38,782 Applicants
- * 6,195 Turkeys Harvested
- * 28% Success Rate
- * 18,682 Sq. Miles Open

1989 Spring Turkey Management Units



2013

**Spring Season:
April 23 to May 31**

SPRING SEASON DATES

General Limited Quota Hunts

Open April 23

Close May 31

Private Land Limited Quota Hunt

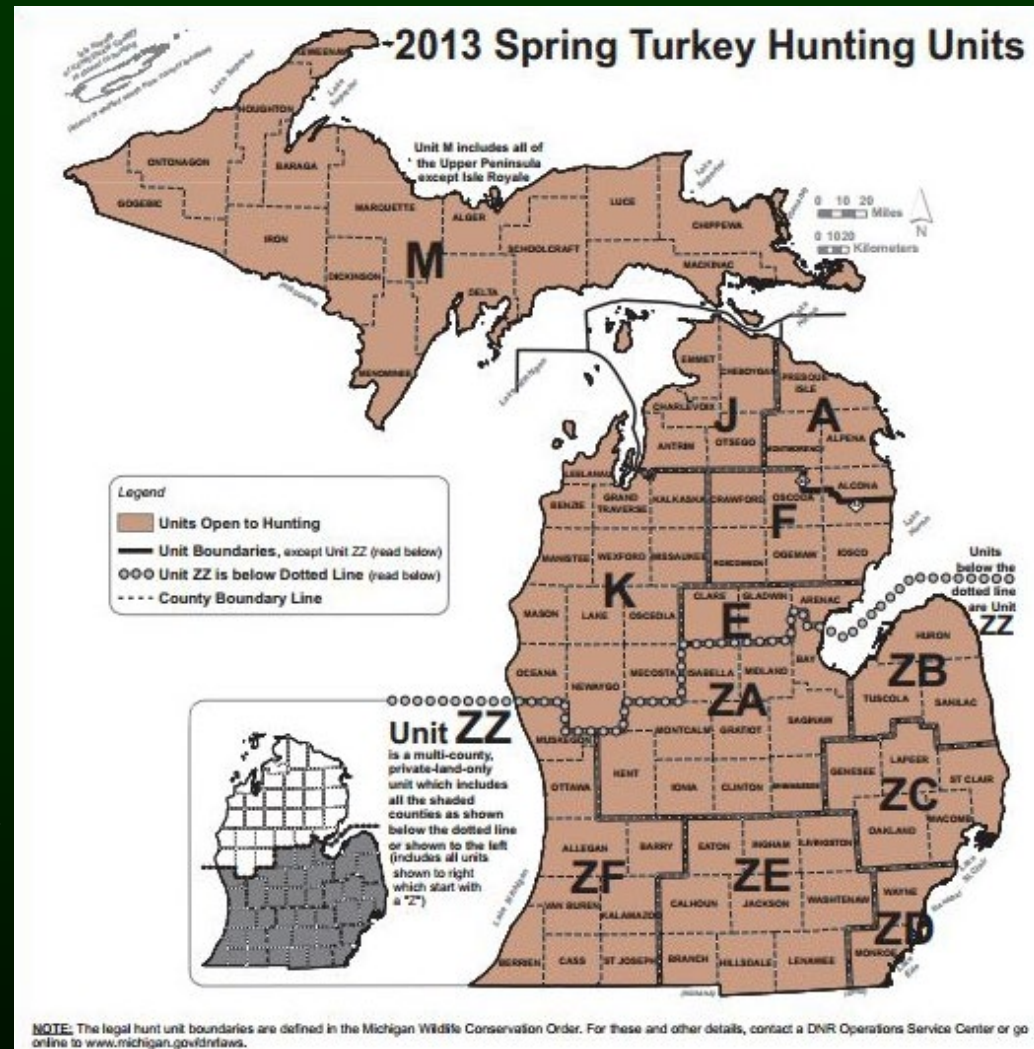
Open April 23

Close May 2

Guaranteed Hunt Period

Open May 7

Close May 31



Recent Expansions of Opportunity

- Hunt 1- First week then 1 week in June
- Longer seasons
 - ZZ hunt full 6 weeks (42 days)
 - Fewer 1-week seasons
- Hunt from elevated platform
- Saturday opener



Michigan's Turkey Hunters

- Satisfaction high
 - Over 70% since 2017
 - Over 50% every year (except 1994) since data was collected
- Success high
 - Nearly 50% in 2020
- Interference low (part of quality)
- 6th in nation in overall #s of hunters



Michigan Turkey Data/Research

- Most information comes from our harvest surveys
- In mid 2000s, a large turkey project was conducted by MSU



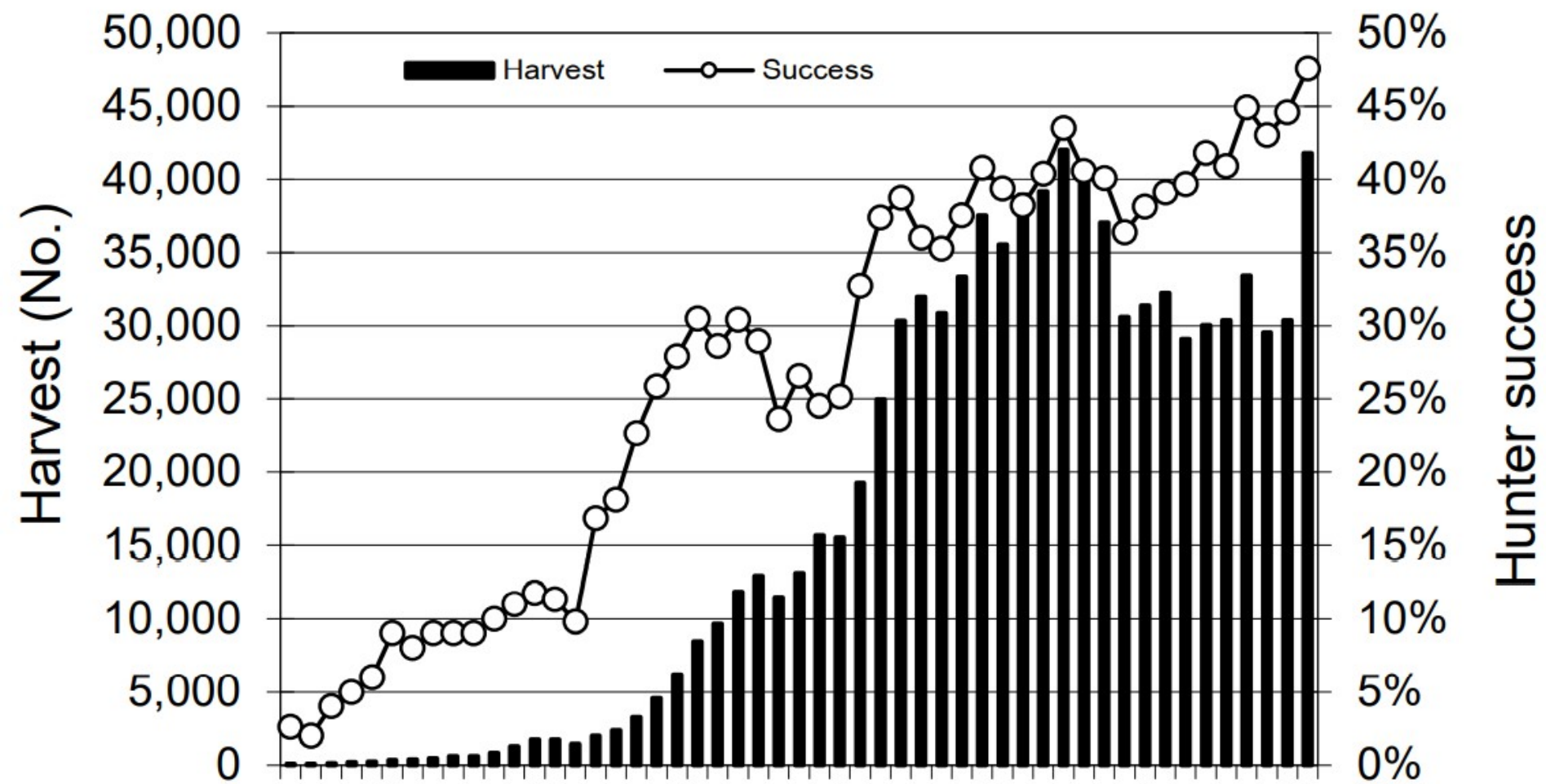


Figure 6. Estimated number of hunters, harvest, hunting efforts, hunter success, and area open to hunting during the Michigan spring turkey hunting season, 1970-2020. Estimates of hunting effort generally were not available before 1981.

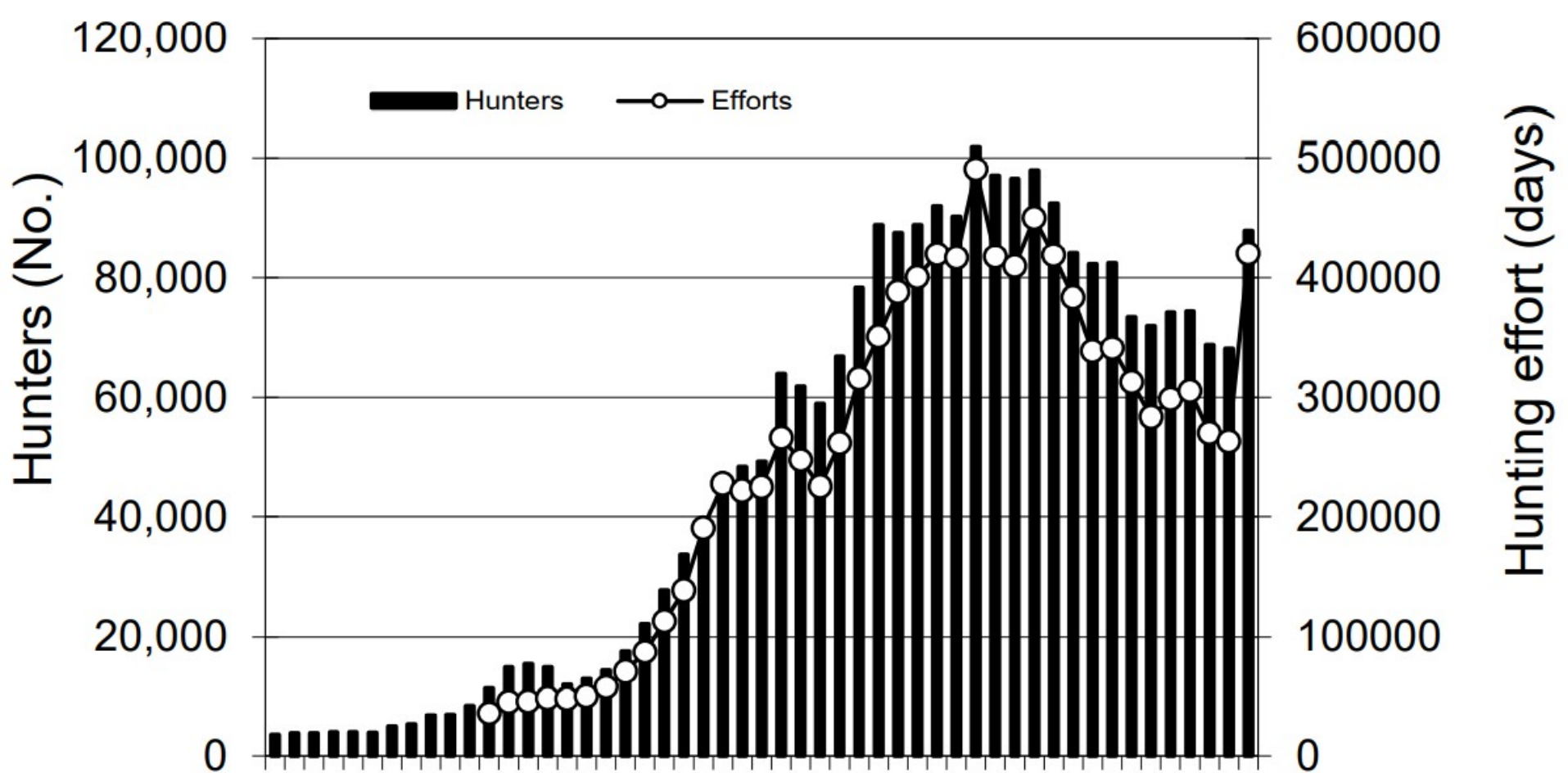
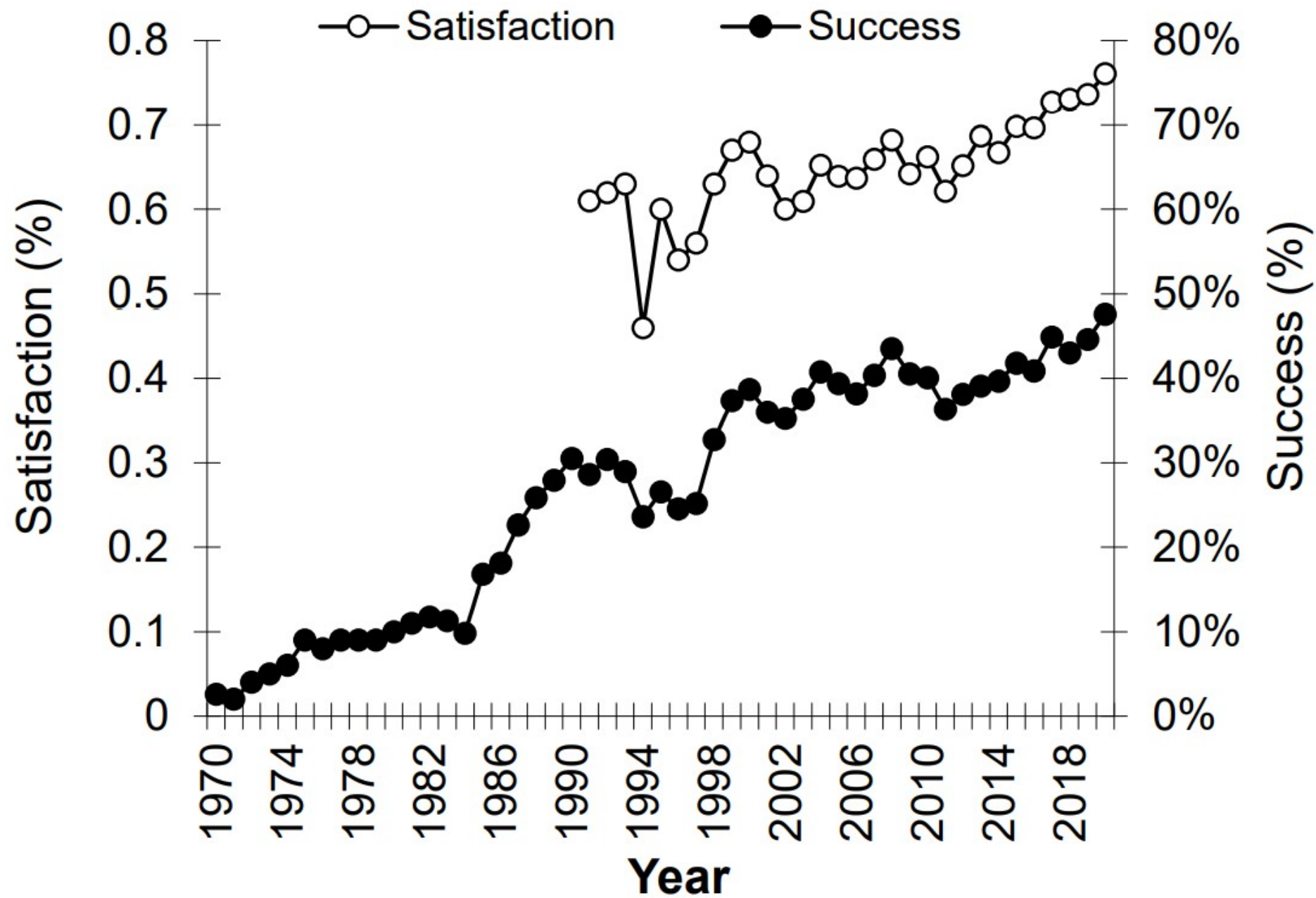


Figure 6. Estimated number of hunters, harvest, hunting efforts, hunter success, and area open to hunting during the Michigan spring turkey hunting season, 1970-2020. Estimates of hunting effort generally were not available before 1981.



Michigan Turkey Research: Bryan Stevens Project 2016

- Modelling of abundance
 - Stable male population
 - Less recruitment of males
 - Overall population stable over study period
 - Hunter effort information important
 - Some suggestions on other data needs
- Evaluated Season Structure
 - 1 Bird spring harvest structures were optimal

Michigan Turkey Research: Engagement

- Structured decision making
 - Informs modelling and management
 - Integrates engagement/stakeholder input into overall management strategies
- Stakeholders wanted to maintain:
 - Socially desirable populations, current or increased social carrying capacity
 - High hunter satisfaction
 - Hunting traditions and ethics
 - Turkey hunters
 - Funding that is currently earmarked for turkey management



Ok...What About 2 Birds in Spring?

- One topic of many on ways to expand opportunity
- Population increases the norm since re-establishment
- Follows long thought ideas on harvest of males in spring
- Desired partially due to high success rates
 - Season over too soon
 - Why not?



Recent Changes = Uncertainty

- Michigan population likely stable
 - Some early indicators of potential issues
 - Many states seeing apparent declines
- NWTf to present on research challenging assumptions about harvest of males
 - May impact populations
 - New management strategies needed
- Sufficient concern to warrant careful consideration



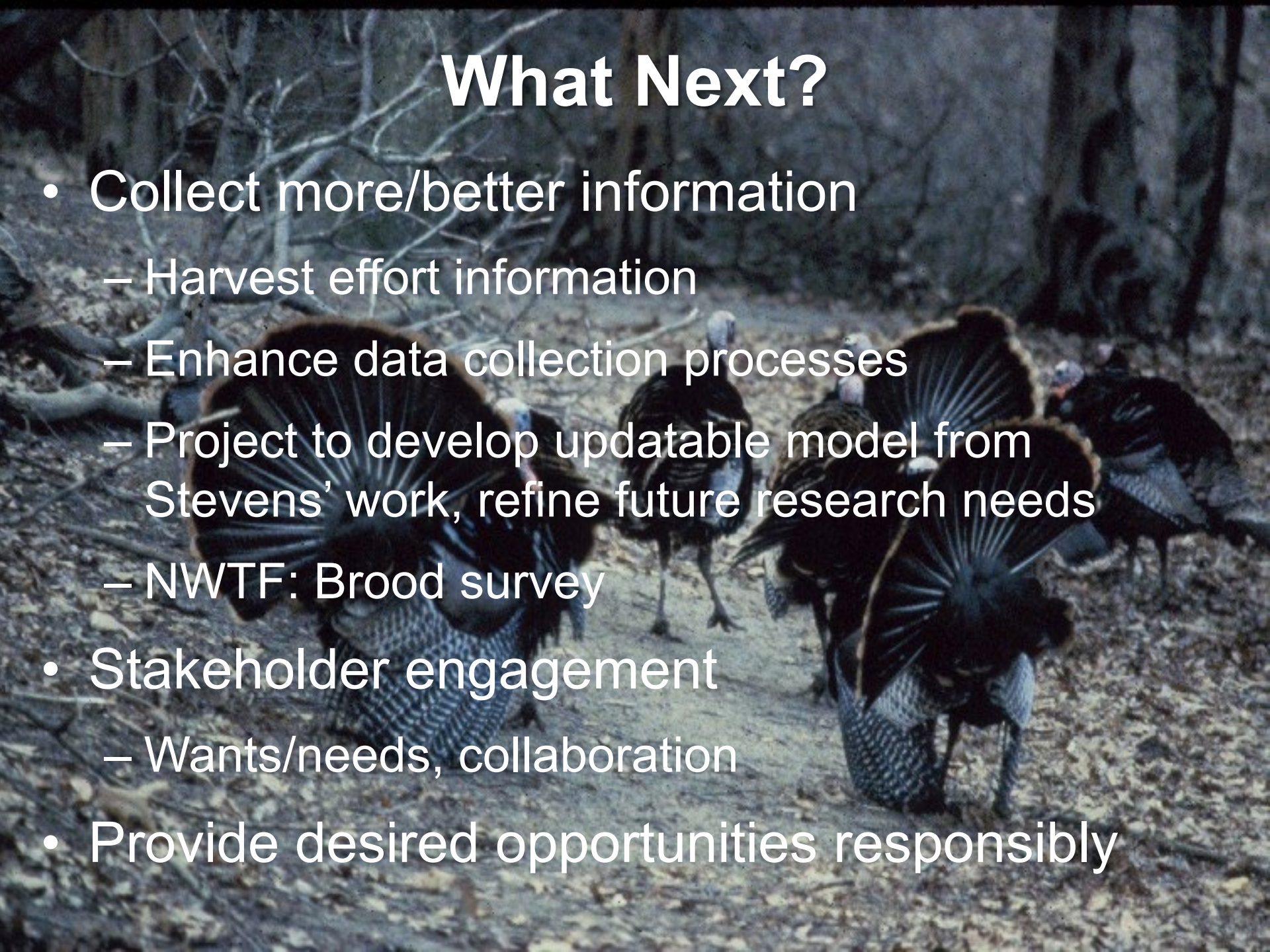
Putting it All Together

- Michigan's turkey population likely stable
- Many states appear to be having declines
- Michigan hunters currently have:
 - High satisfaction and success rates
 - Abundant opportunities
- Recent research and information suggests caution with spring male turkey harvest
- Collect more/better information
- Stakeholder engagement



What Next?

- Collect more/better information
 - Harvest effort information
 - Enhance data collection processes
 - Project to develop updatable model from Stevens' work, refine future research needs
 - NWTF: Brood survey
- Stakeholder engagement
 - Wants/needs, collaboration
- Provide desired opportunities responsibly





Thank You



National
Wild Turkey
Federation



Our mission

Dedicated to the conservation of the wild turkey and the preservation of our hunting heritage.



Status and Trends of the Wild Turkey



Ryan Boyer, Certified Wildlife Biologist ®
District Biologist (MI, IN, OH)
National Wild Turkey Federation
Natural Resources Commission Meeting
August 11, 2022



Range -wide Declines in Abundance

- Mid -Atlantic Region (Casalena et al. 2015)
- Midwest Region (Parent et al. 2015)
- Southeast Region (Byrne et al. 2014)





Status and Distribution of Wild Turkeys in the United States in 2019 (Chamberlain et al. 2022)

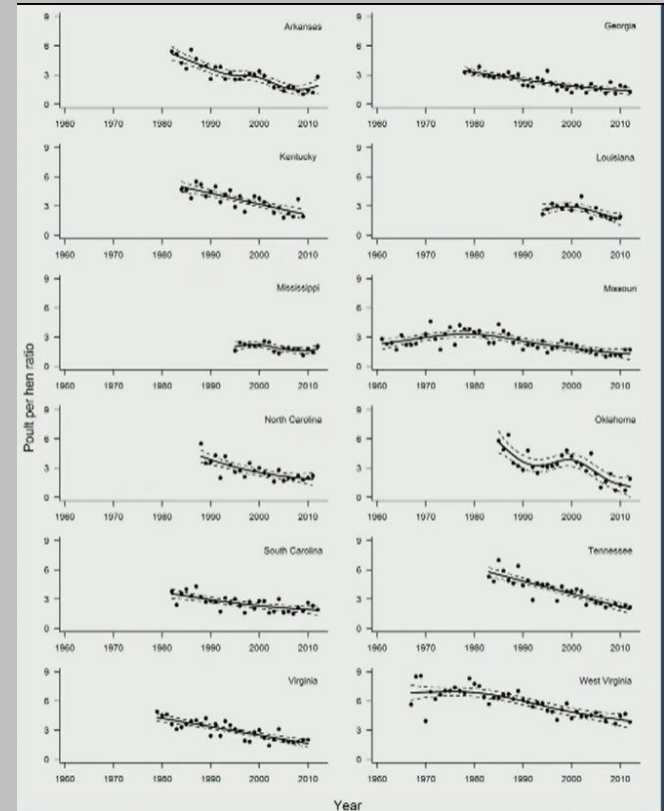
- (2004 -2019) 16% Decline in Turkey Abundance
- Declines in multiple sub-species (e.g., not just Eastern spp.)
- (2004 -2019) 19% Decline in Spring Harvest,





Long term declining trends in brood production

- States estimating production through brood surveys are noting declines in production
- Concerns when poult/per hen average drops below 2.0
- Latest SE research suggests (Mike Chamberlain ; personal communication) :
 - 80 % of nests fail
 - 2/3 of those broods lost before 1 month
 - 7% of nests will produce a poult that lives to make it beyond 1 month





Declines are leading to regulatory changes

- Harvest is the primary tool available to state agencies for managing populations at a state level
- Changes are often contentious and politically and socially charged
- States with recent (e.g., 2020 - 2022) reductions in bag limits and/ or reduction or delay in season openers : SC, TN, OK, OH, KS, AR, AL, GA, MS

Southeast Turkey Hunting Regulations
Changing in Response to Declining
Populations

OUTDOORS

'Numbers have gone down dramatically': Turkey season opens later with reduced bag limit as population dwindles



Ed Godfrey
Oklahoman

New (Effective 2020)

- **Bag limits in Units 3, 5, and 6 (Northeast, Southcentral, and Southeast) have been reduced from two turkeys to one turkey. This change is effective beginning with the spring 2020 season.**



How this all relates to bag limits, harvest and season structure

- Harvest Strategies based on a few key assumptions :
- Spring harvest designed to take place after most breeding has occurred
- Spring Harvest limited to males
- Spring Harvest does not impact long -term population levels
- - This assumption is sustainable if male harvest rates are less than or equal to 30 %

Harvest Rates= $\frac{\text{The percent of individuals removed}}{\text{Total number of individuals}}$

U.S. Fish & Wildlife Service

Wild Turkey Harvest Management: Biology, Strategies, and Techniques Biological Technical Publication

BTP-R5001-1999



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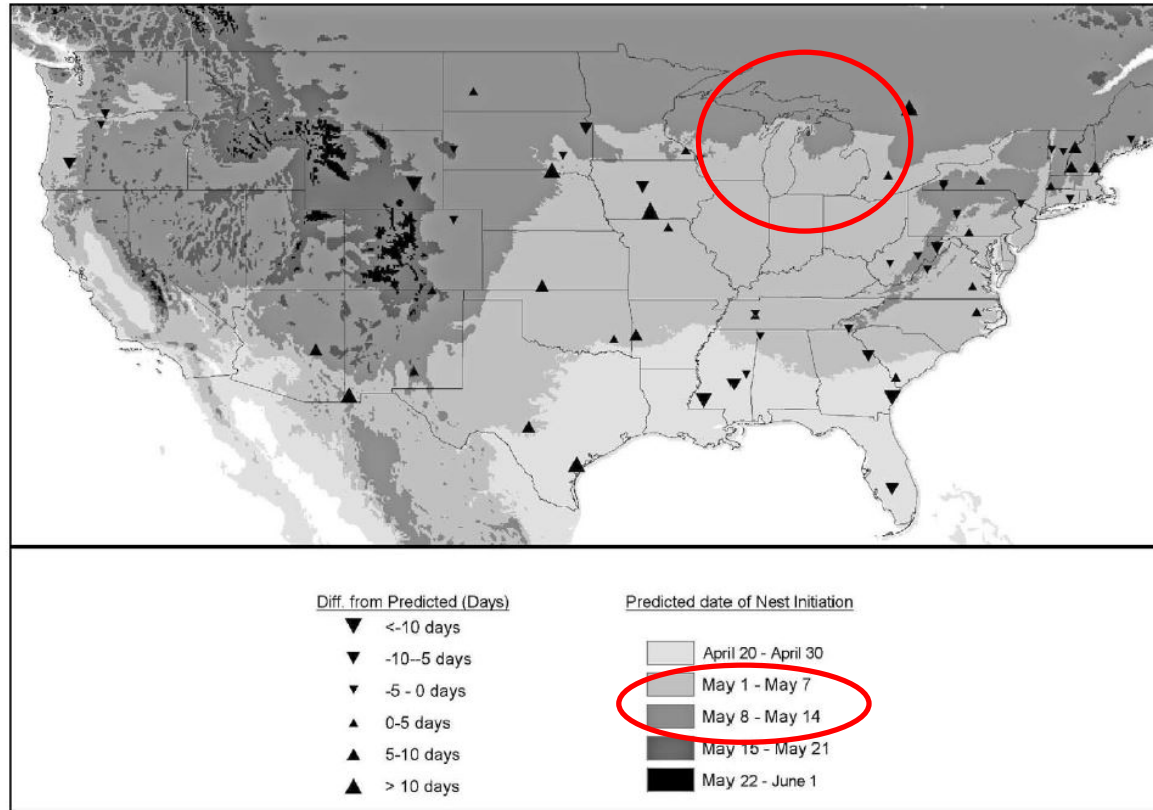


Fig. 1. Predicted Initiation of Nest Incubation (INI) dates for established wild turkey populations, developed by applying the model 16 (Table 3) to a Digital Elevation Model (DEM) of North America. Triangles represent the locations of studies used in our meta-analysis; negative Differences from Predicted (i.e., residual errors) indicate that the actual INI date at that location was earlier than predicted.



2020 Michigan Spring Turkey Harvest Report (Frawley 2021)

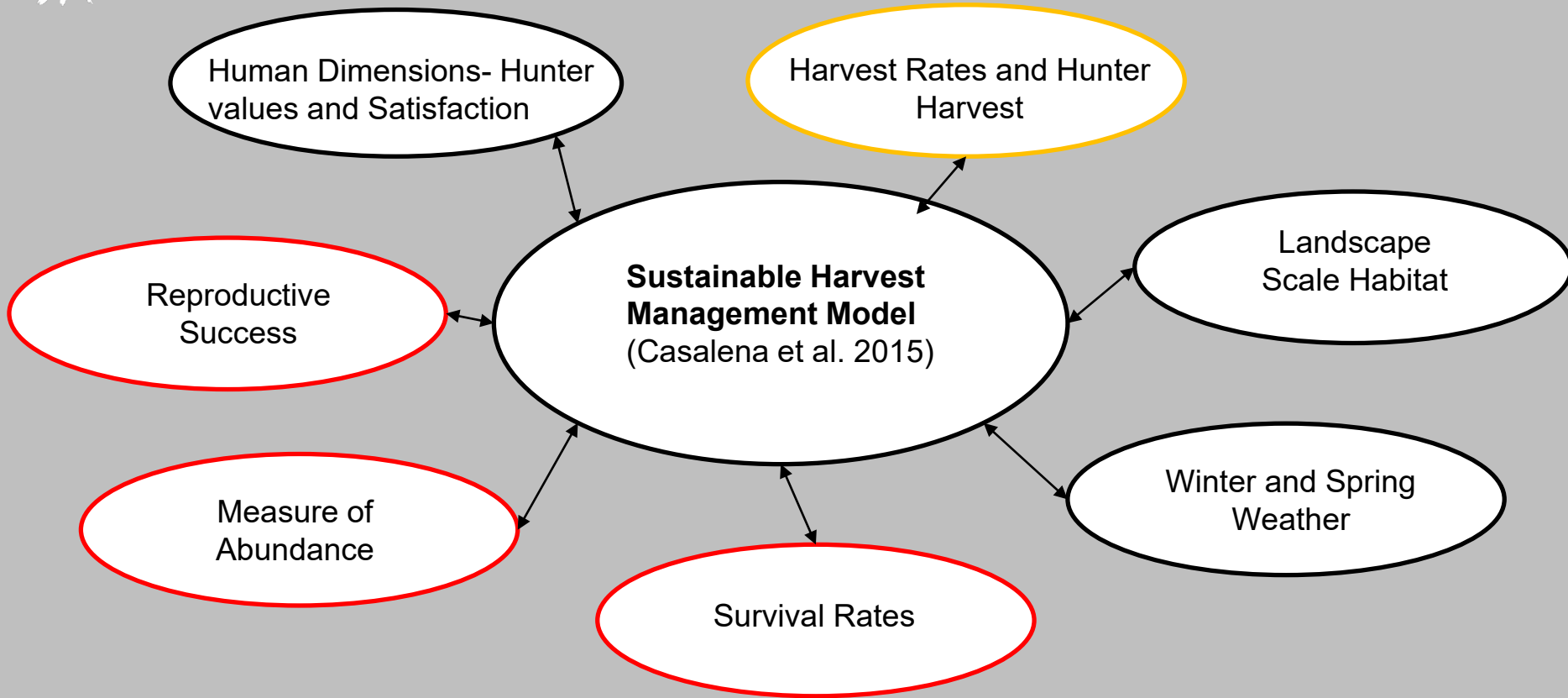
Hunting effort and the number of turkeys harvested were generally highest during the earliest hunting periods (Figures 8-11). For turkeys that the harvest date was known, 43% of these birds were taken during the first seven days (April 18-24). Daily hunter success generally was more than 10% from April 18 through May 6, and daily hunter success was generally below 10% during May 7-29. Hunting effort and harvest generally were greater on the weekends than on the weekdays.



"When the dominant bird in an area gets killed before the breeding occurs, it can cause problems with the entire breeding cycle." — Dr. Mike Chamberlain

State game departments are charged with balancing the health of the flock with the desire of their state's turkey hunters to start the season as early as possible. **Early turkey seasons are a big draw**, and state game agencies depend on license sales for operating capital. In the past decade, many of those agencies have gone with earlier and earlier start dates, sticking with the old theory that, as long as the total harvest of spring male birds stayed close to 30%, turkey populations will remain strong. It is worth noting, says Chamberlain, that many wildlife agencies have only recently started tracking total harvest rates. While it has been assumed that harvest rates of 30% were OK, many states didn't have accurate harvest data to see if their total harvest actually fell in that range.

How soon should turkey seasons open? It's a balance. For the best overall production numbers, Chamberlain says the most conservative starting dates would wait until peak incubation starts for the area. That means not hunting until the vast majority of hens in an area are sitting on nests.





What does all of that mean...

- Turkeys are declining across much of their range following the restoration period .
- Removal of males and timing of removal may be more impactful to populations than we realized
- We lack information on reproduction, harvest rates, and estimates of abundance making it challenging at best to assess what is happening to the population .
- Conservative bag limits likely allowed for fluctuations in reproduction while maintaining high hunter satisfaction





Brood Survey

Brood Survey Dashboard

7/21/2022

Hens

2

13

Poults

2

24

None

krussell@nwtf.net

kvn.patrick@gmail.com

rboyer@nwtf.net

someone@gmail.com

1 of 10

Brood Survey

Date & Time 12/3/2019 10:15 AM

Observation


Number of Hens 8.00

Number of Poults 14.00

Number of Males (Jakes & Adults) 3.00


Last update: a few seconds ago

Average # of Hens

 6


Last update: a few seconds ago

Average # of Poults

 11.9


Last update: a few seconds ago

Average # of Males

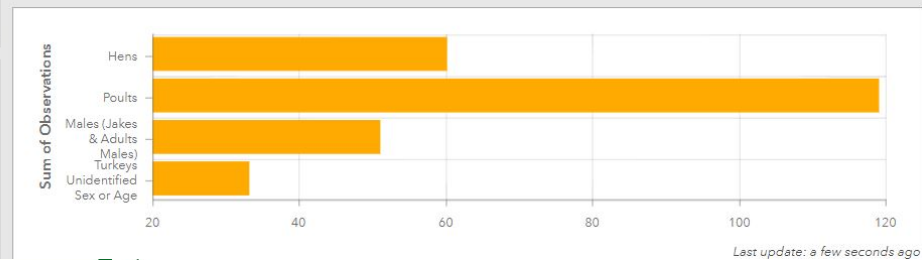
 5.1

Last update: a few seconds ago

Average # of Unidentified

 3.3

Last update: a few seconds ago





Estimates of Abundance and Harvest Rates

- Harvest Rates can be addressed using banding data
- Cost effective and simplest way to address estimates of abundance
- Need 3-4 years to start retrieving data (e.g., band returns)

Harvest Estimate

= Abundance

Rate of Removal





Concerns of Michigan NWT State

Chapter Regarding Proposed Increase in Spring Bag Limit

1. We lack the biological data and harvest rate estimates needed to determine the sustainability of the harvest strategy .
2. We support the approach of the DNR to assess the current data limitations and identify and support research moving forward .
3. We are not advocating to restrict current opportunity, however we recognize the need to address information gaps, have more conversations in order to do what is best for the resource .
4. Timing of the incubation initiation and harvest rates in relation to the initiation of hunting season should be assessed .
5. Many other states are currently reducing bag limits, reducing season length, and delaying season start dates . We are recommending maintaining a conservative spring bag limit (1 bearded bird) while prioritizing and addressing the greatest research needs to determine a harvest strategy that would optimize hunter opportunity without negatively impacting the resource .



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