

State Management of Sharp-tailed Grouse in Michigan

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Overview

- Brief history of sharp-tailed grouse in Michigan
- Monitoring tools
- Current status
- Active projects
- Our path forward: Next steps



Brief History

- Michigan at eastern edge of range. Historically habitat conditions likely prevented significant populations.
- Forest removal/fires from human disturbance created habitat
- Peak range in 1950s
 - Facilitated by relocations



1920-1956: Ammann (1957)

2014: Porter et al.(unpublished)

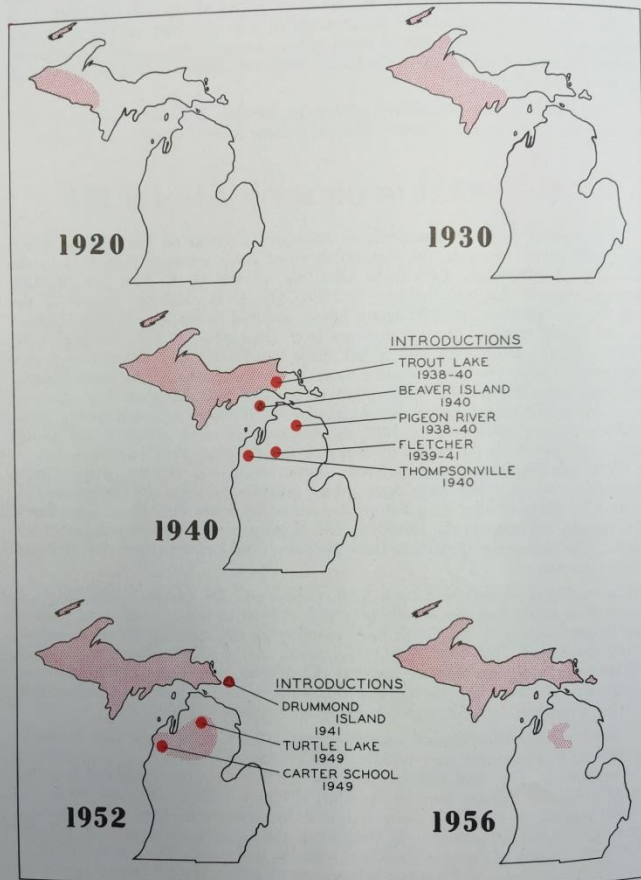
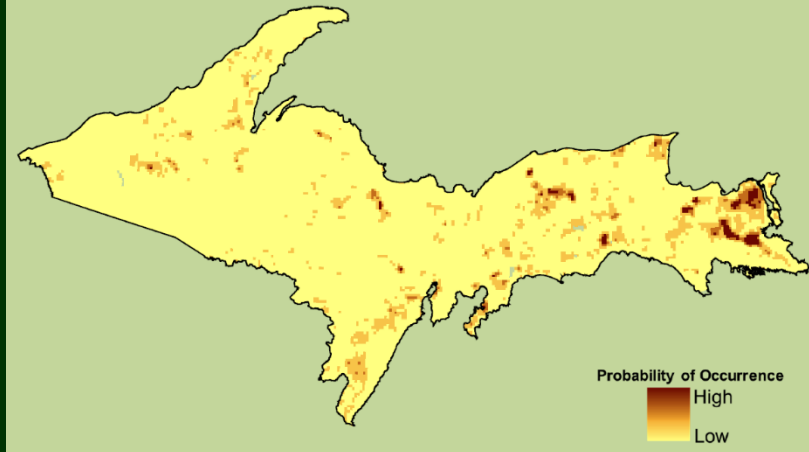


Fig. 3. Changes in Michigan sharp-tail range.

2010 Habitat Suitability Map



Hydric



Xeric



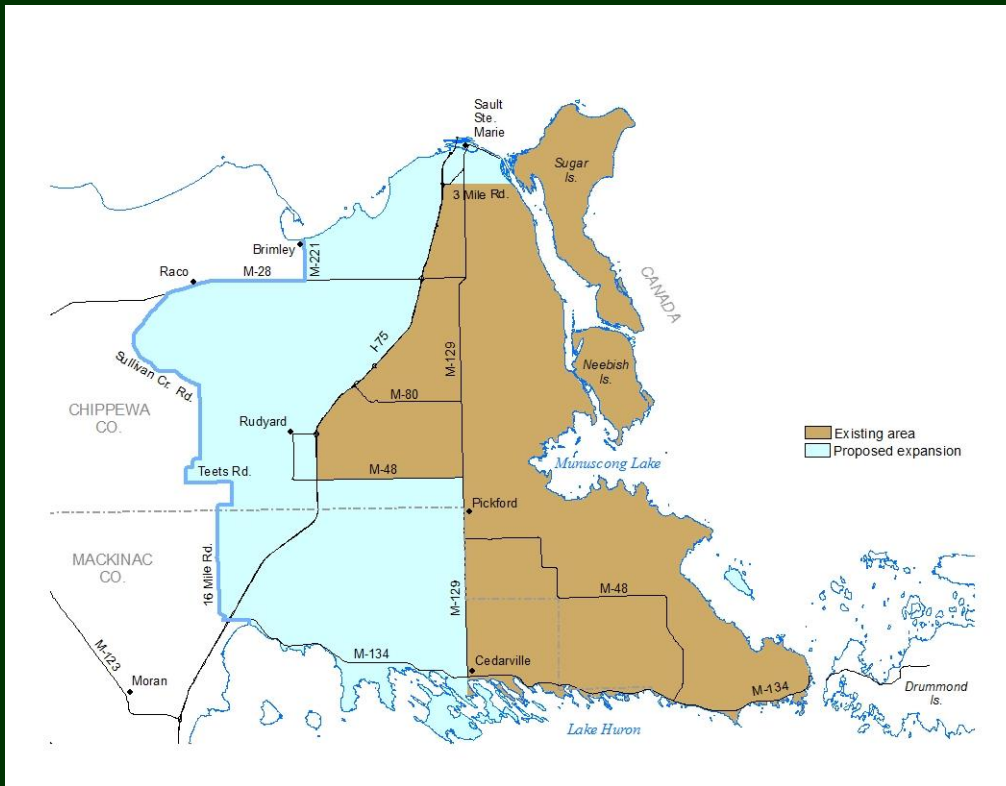
Sharp-tailed Grouse Hunting History in Michigan, 1935-2023

- 1935: First hunting season
- 1940-1997: Season open in all or part of Upper Peninsula
- 1998-2009: Season closed statewide
- 2010-2023 Reopened season (EUP)

Fig. 47a. Good sharptail habitat planted to pine. Sharptails were abundant. Ottawa National Forest, Ontonagon County. Photograph by Ben East.



Sharp-tailed Grouse Hunting History 2010-2023



- Fall 2010-2014: season opened on east portion
- Fall 2015-2023: west portion of hunt area opened

Monitoring Tools

- Currently have 4 active monitoring tools
 - All under evaluation/discussion
 - Lek survey
 - Section occupancy survey
 - Abundance survey
 - Harvest survey
- Goals primarily linked to occupancy survey

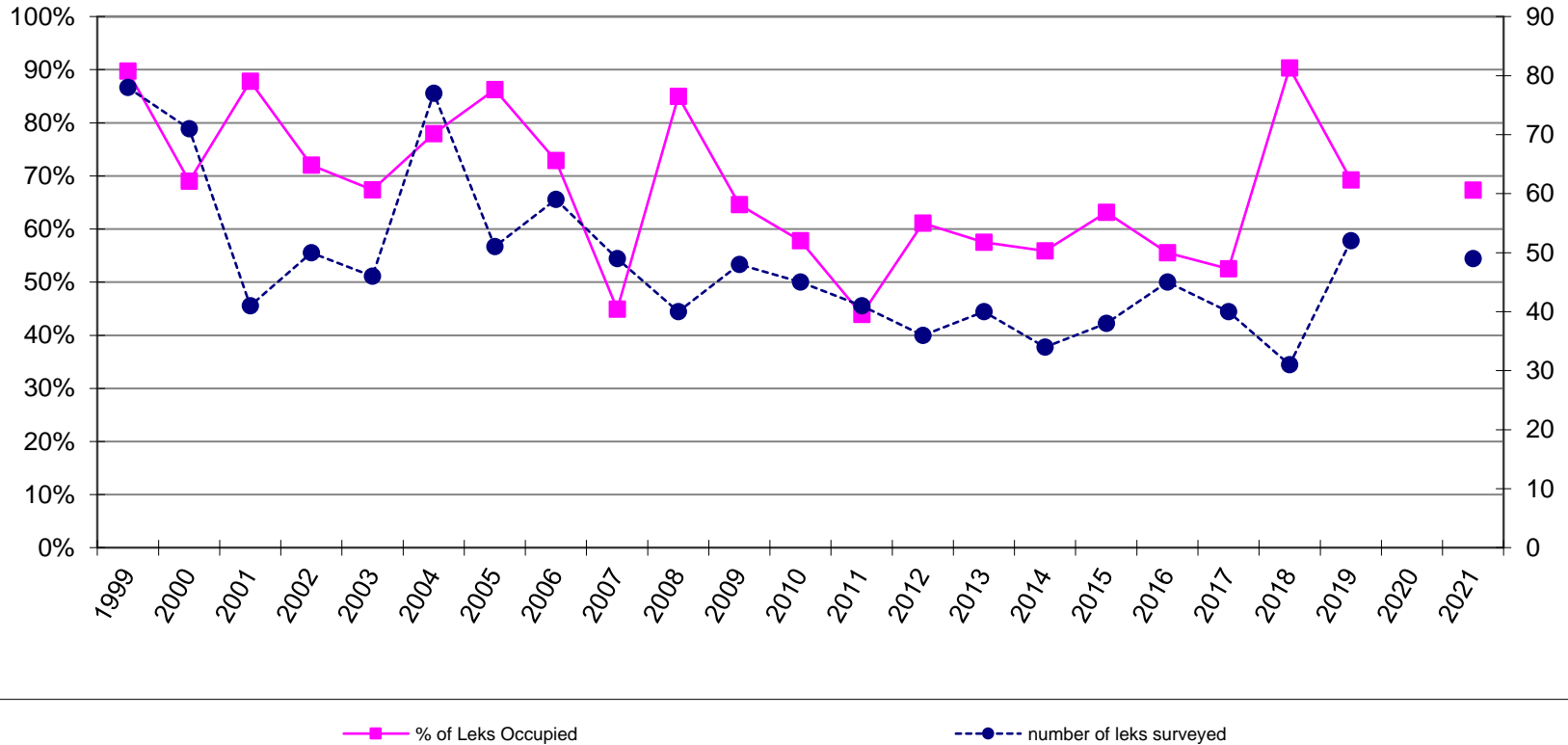


Lek Survey

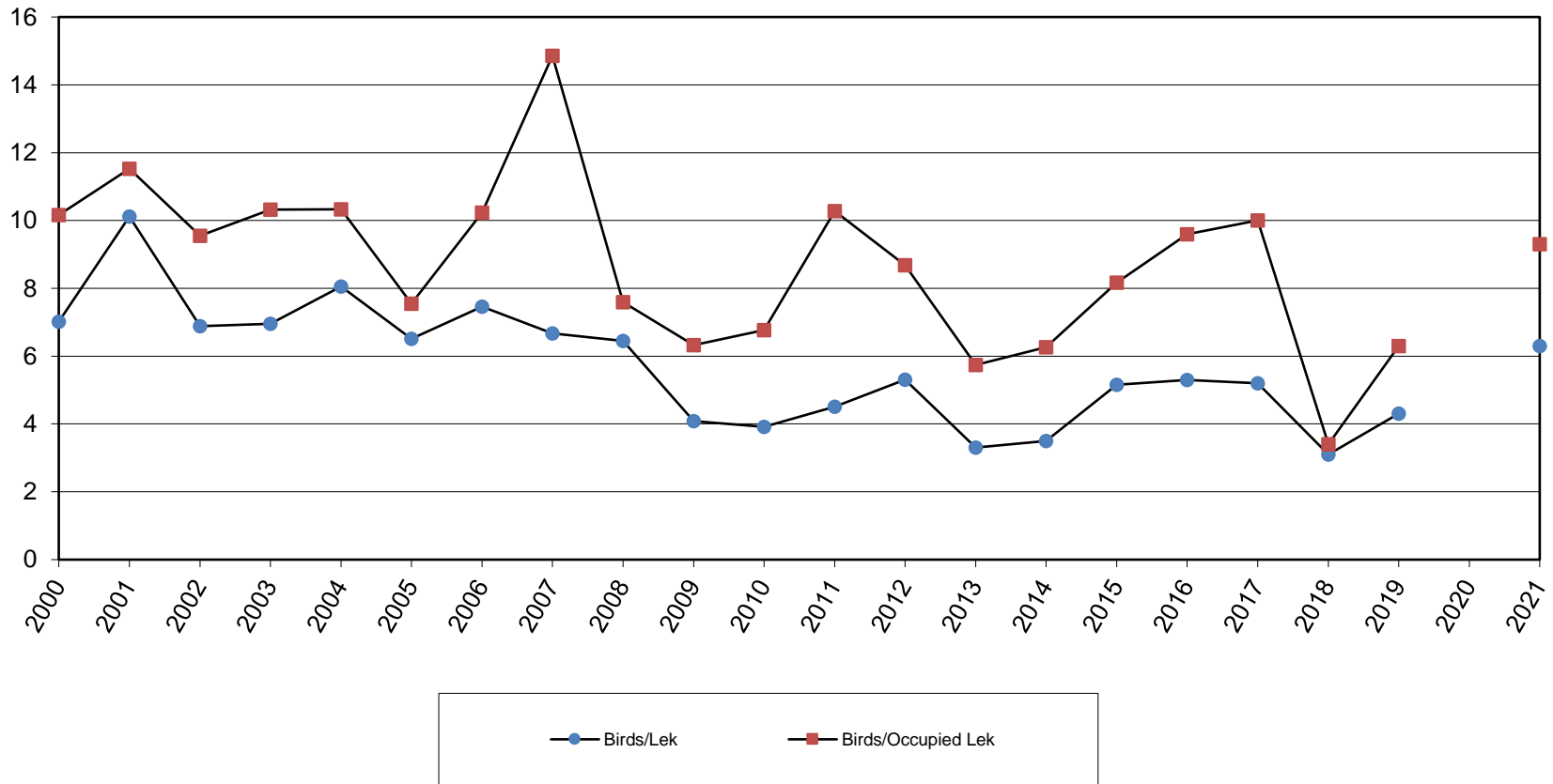
- Monitor known leks
- April 1 - May 15
- Count males then flush lek to count total birds
- DNR, USFS, volunteers
- 2022: 54 leks, 261 birds counted



Number of Leks Surveyed and Percent Leks Occupied



Average Number of Sharp-tailed Grouse per Lek and Average Number of Sharp-tailed Grouse per Occupied Lek



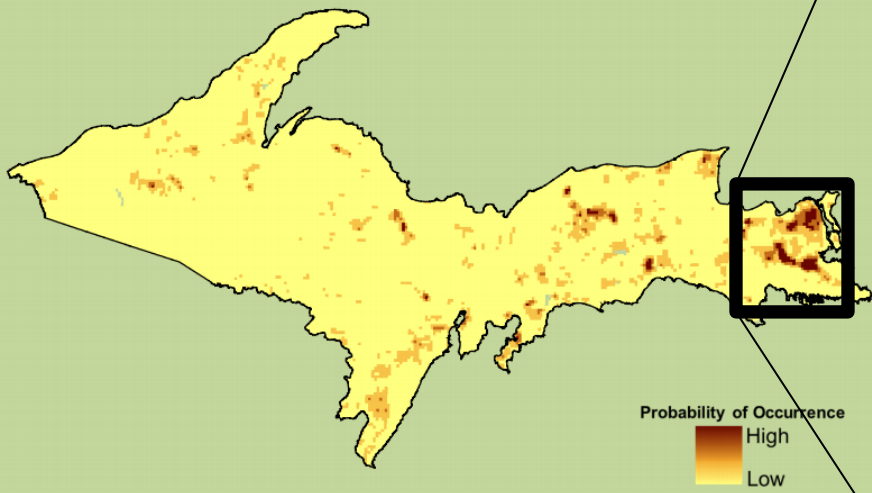
Section Occupancy Survey

- Continuation of research project related to evaluating harvest
- Set route process for presence/absence in a section
- Routes run 2-3 times April 1 – May 5
- Additional detail collected
- Began as annual survey now once every 2 years



Occupancy Survey Location

2010 Habitat Suitability Map



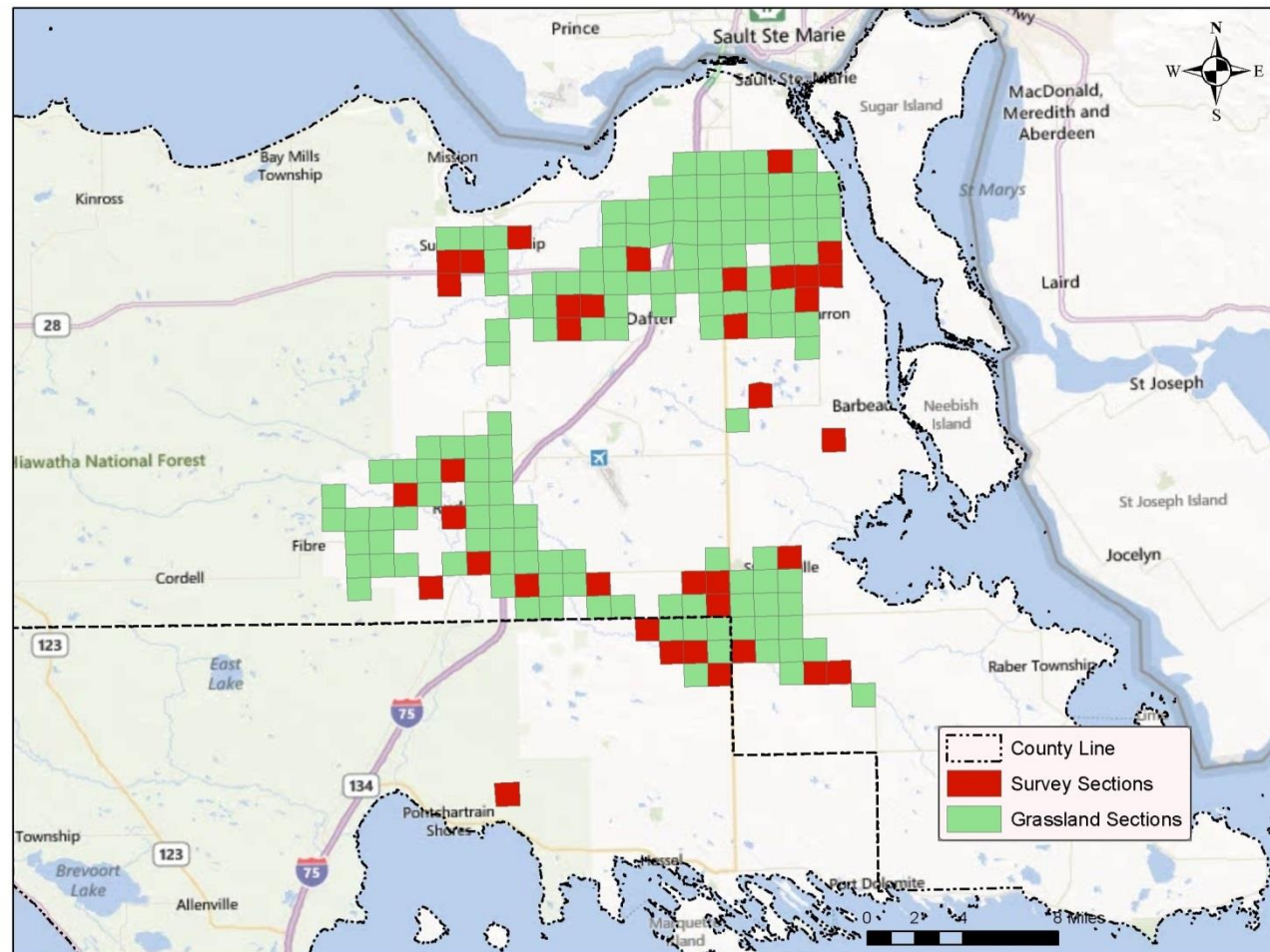
East UP Occupancy Survey Methods, 2009-2023

Sampling frame:

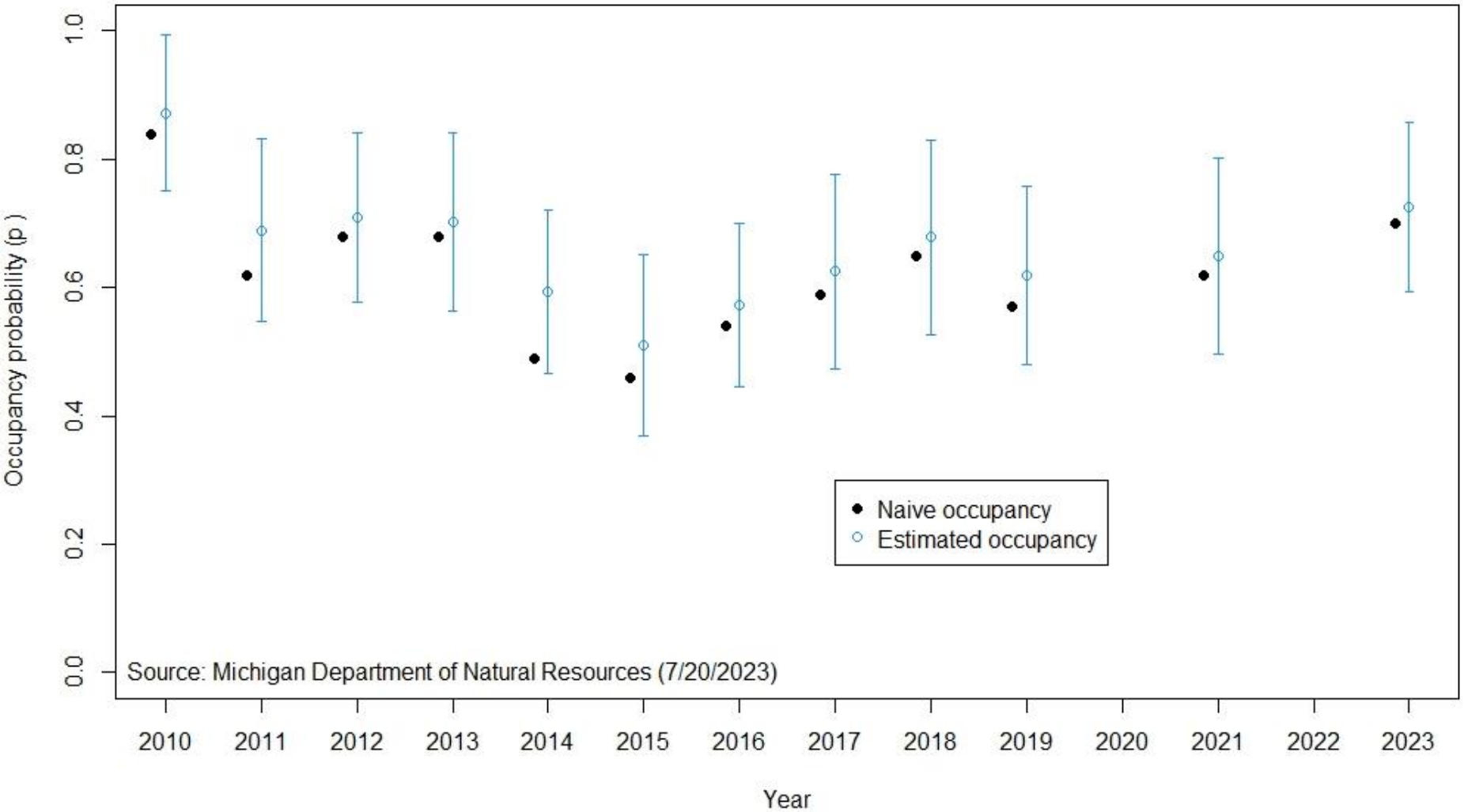
- Random sample of sections < 50% forested (N = 167), and
- Sections occupied since mid-1990's
- Total sample n = 37

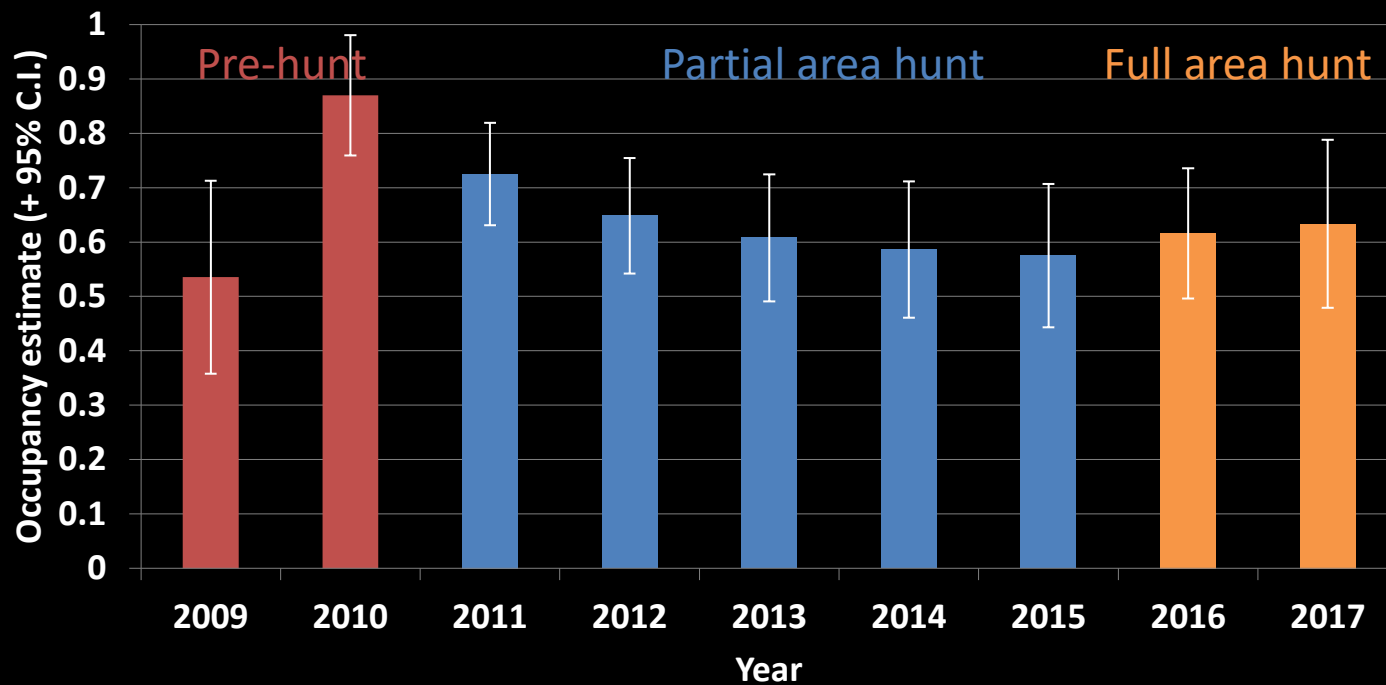
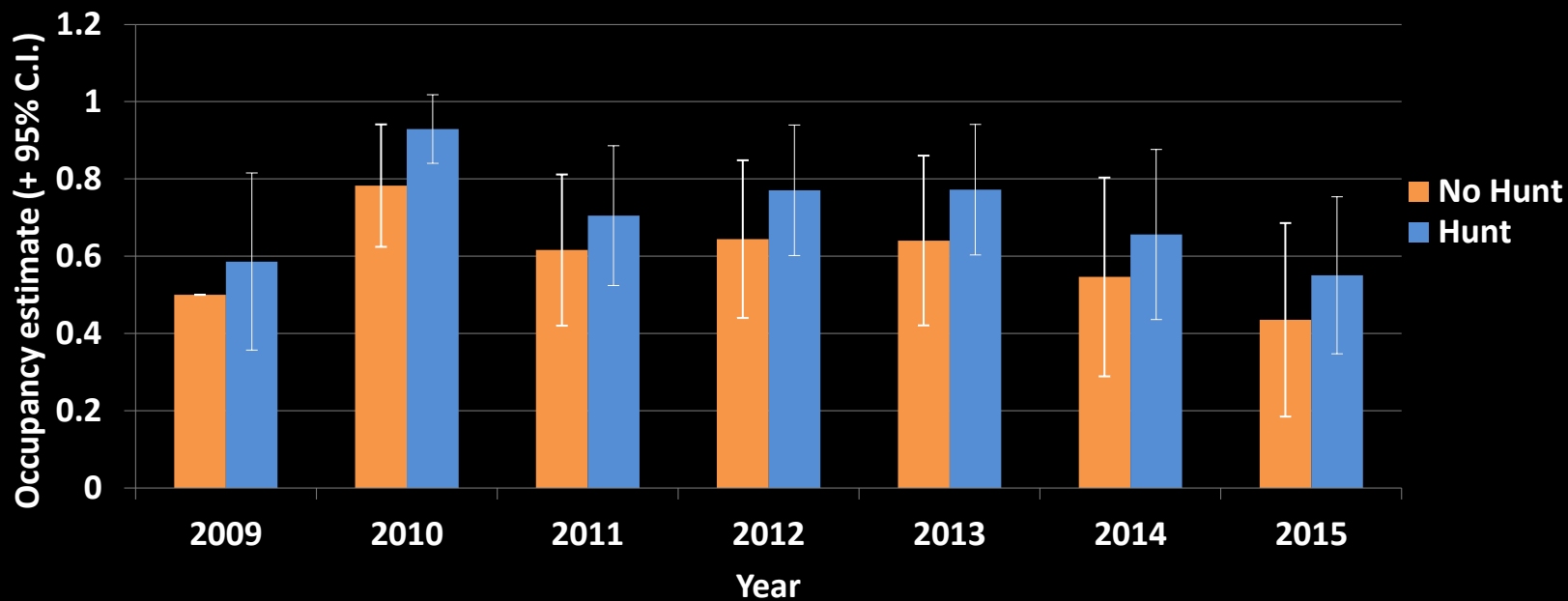
Survey methods:

- 8-stop road routes
- 4-minute observation periods
- Record bearings of STG heard or seen
- Survey routes 3-4 times between Apr. 1 – May 15



EUP Section Survey: Sharp-tailed Grouse Occupancy





Abundance Survey

- Relatively new
- Field developed to attempt an abundance assessment for birds in the section occupancy survey area
- Similar to a combination of lek survey and occupancy survey



Harvest Survey

- Mail survey conducted for sharp-tailed grouse hunters
- All hunters required to have a free “stamp”
 - Helps in targeting survey but newer licensing issues create problems
- Last survey report completed in 2019 (available online)



2019 / 2021* Estimates

- 249 / 198 hunters
- 869 / 738 days afield total
- 98 / 113 Sharp-tailed grouse harvested
- 25% / 34% of hunters took at least one bird
 - 2 birds daily, 4 possession, 6 per season
- 61% / 61% satisfaction
- 87% / 90% likely to continue to hunt



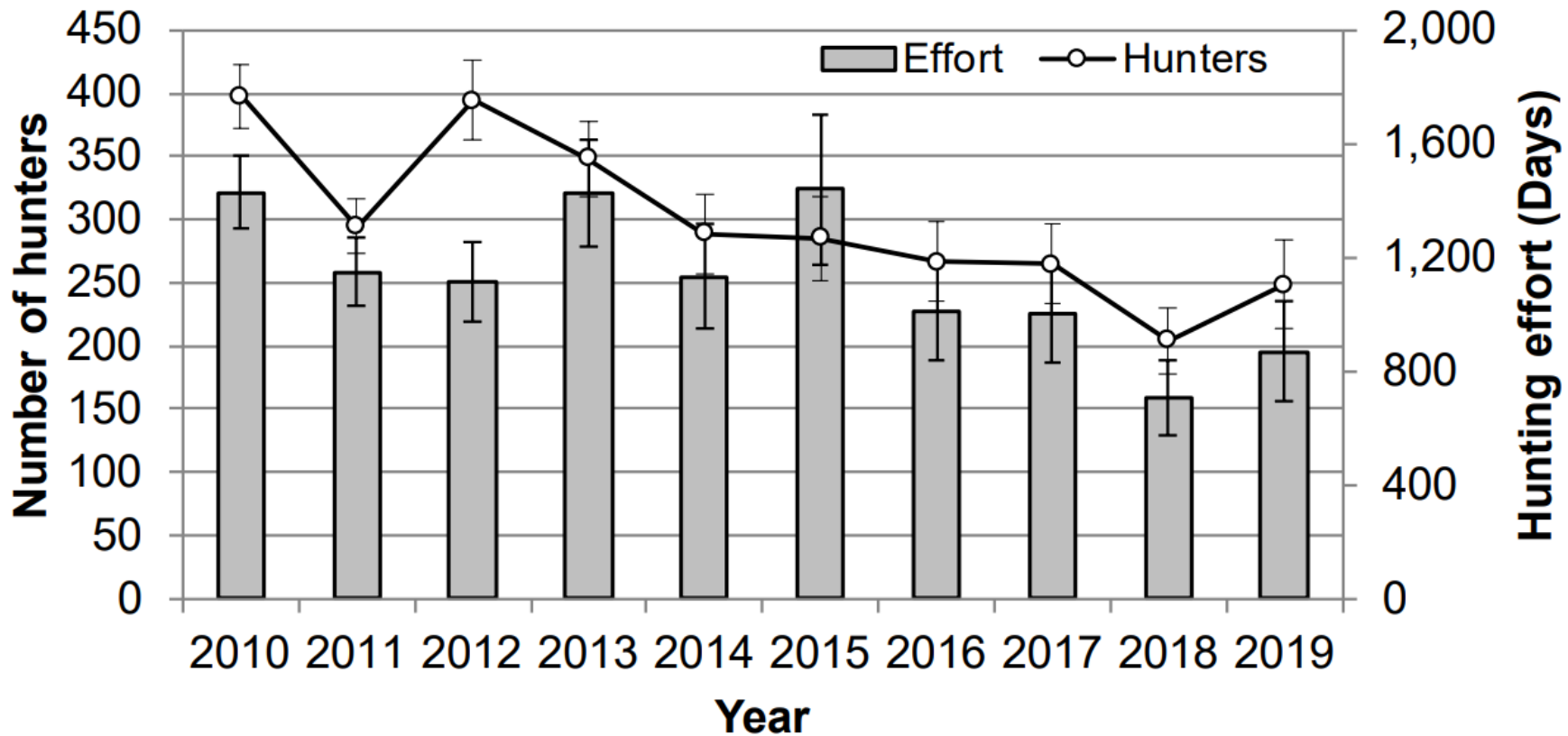


Figure 3. Estimated number of people hunting sharp-tailed grouse and the number of days of hunting effort during 2010-2019. Vertical bars represent the 95% confidence interval.



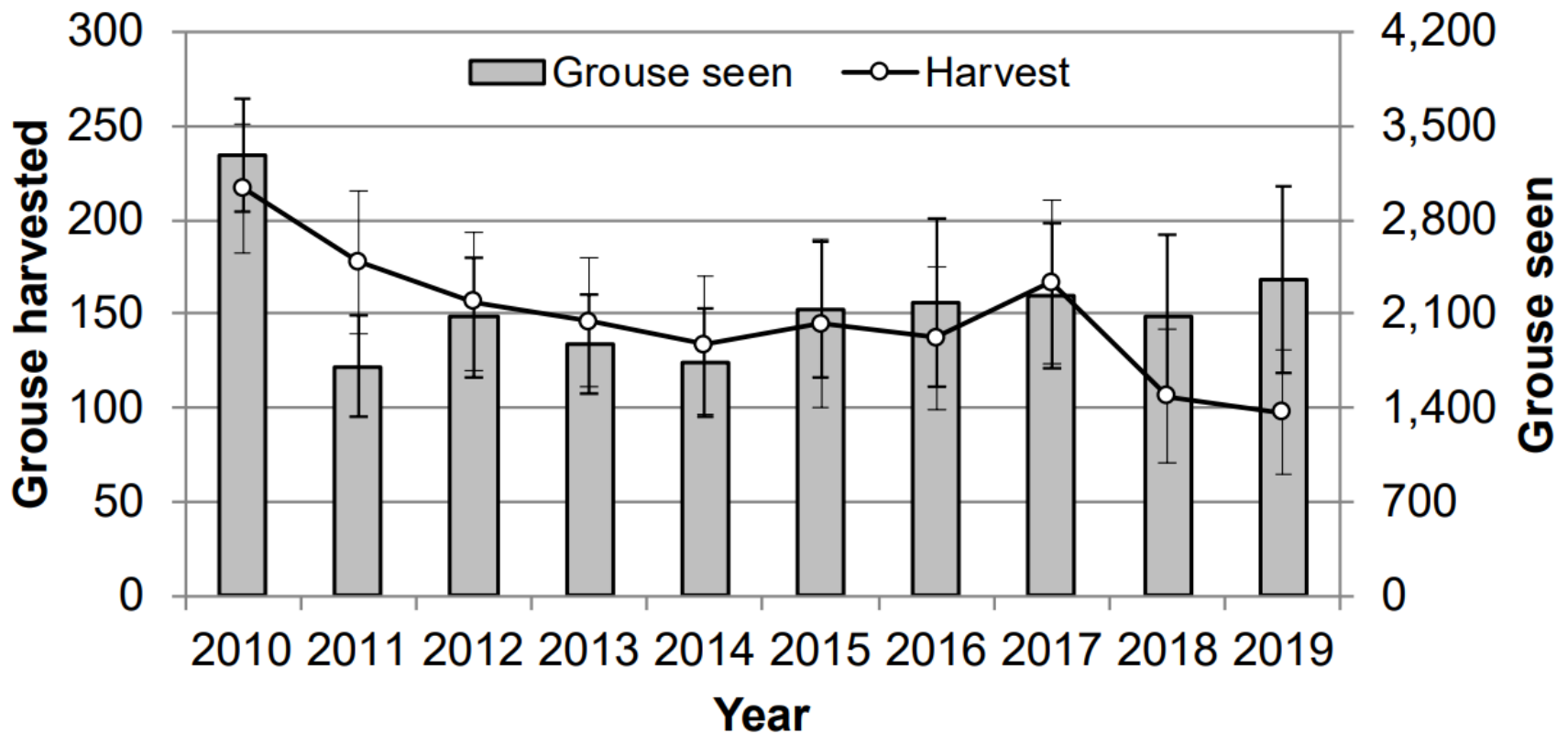


Figure 4. Estimated number of sharp-tailed grouse seen by hunters and the number of sharp-tailed grouse harvested during 2010-2019. Vertical bars represent the 95% confidence interval.



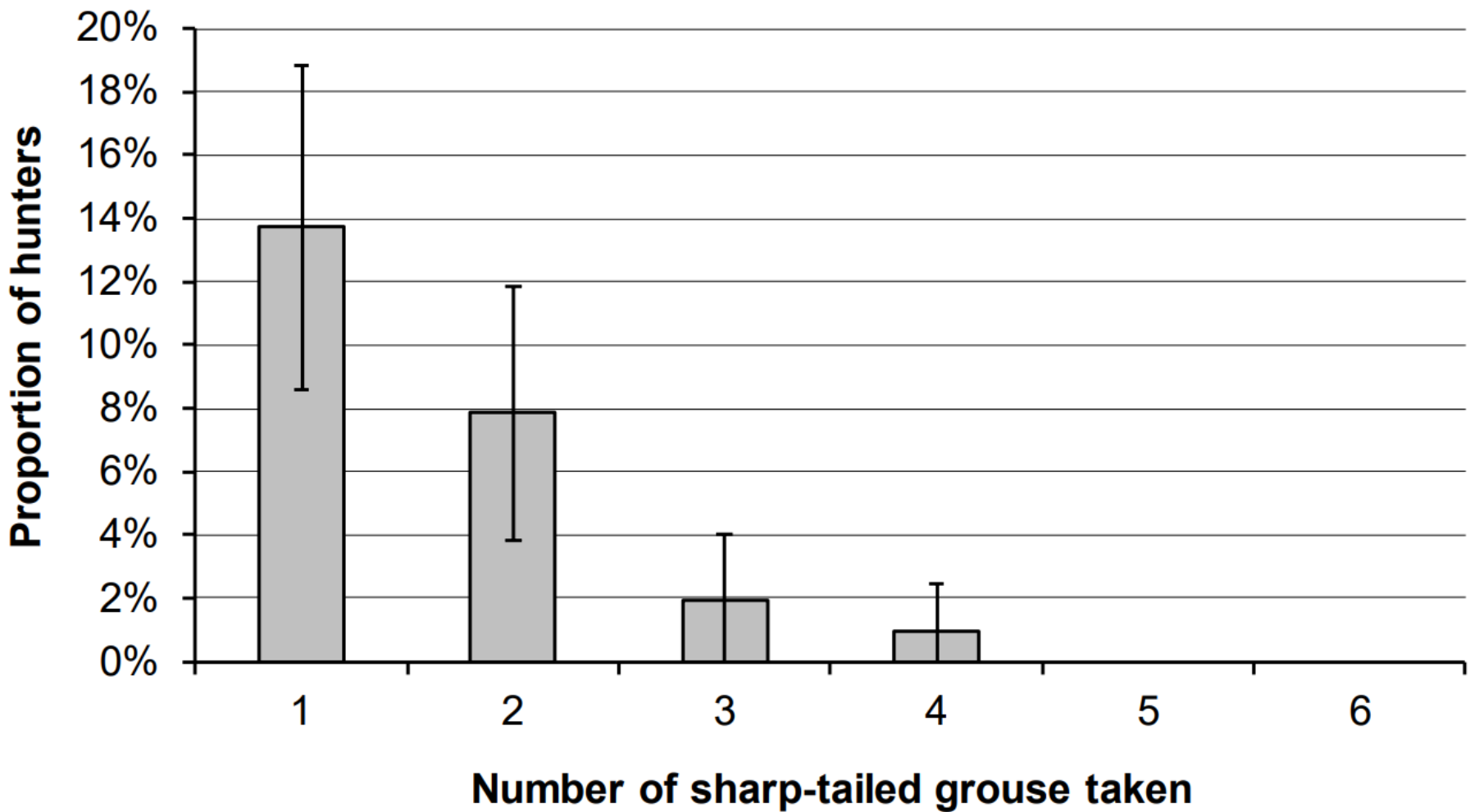


Figure 7. Estimated proportion of sharp-tailed grouse hunters that harvested one or more grouse during the 2019 hunting season, summarized by number of birds taken. Vertical bars represent the 95% confidence interval.

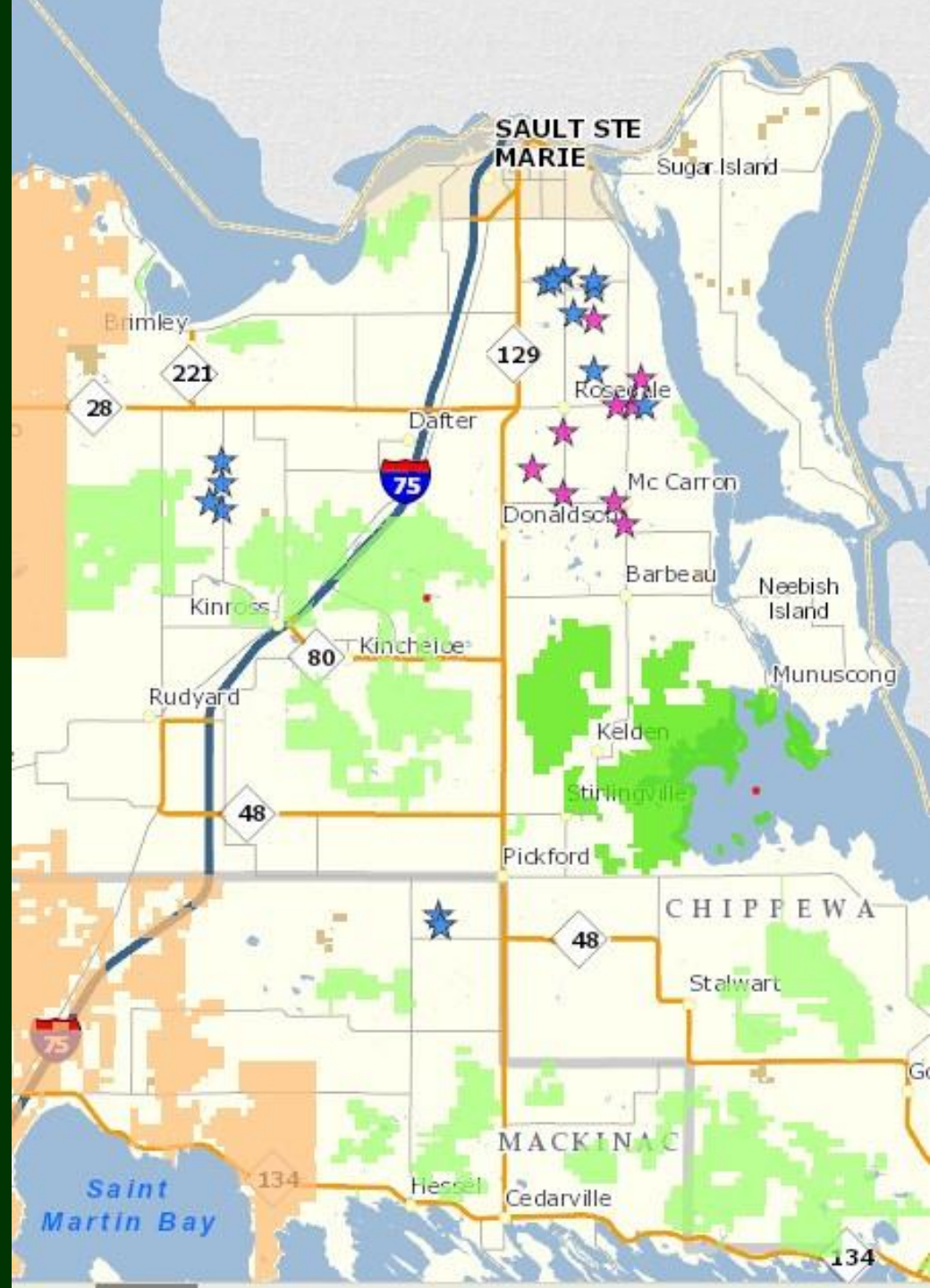


Active Projects

- Habitat Management
 - Prescribed fire
 - Lots of challenges in Michigan (DNR) but still try to use
- Updating occupancy model
 - Evaluating all monitoring
 - Common understanding of actions and needs
- Hunter Access Program
 - Maintain hunting opportunities- incentive for farming that benefits STG



- 23 locations
- All allow STG hunting, some also allow other small game hunting
- More details on our HAP page
- Maps for each location can be found on MiHunt



Looking Forward

- Deep dive review and exploration of program and its history
- Internal discussions on goals and objectives
- Monitoring needs and capacity
- Engaging with partners/collaboration
- Evaluate habitat projects and practices





Thank you!

