



## Ring-necked Pheasant Status in Michigan, 2019



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### ABSTRACT

Several surveys are conducted each year to monitor ring-necked pheasant (*Phasianus colchicus*), including hunter cooperator survey (2017-2018), mail-carrier brood survey (2018-2019) and harvest survey (2013-2015). Hunters' records were available from 7 cooperators, who hunted 173 combined hours in 2018. The average number of rooster pheasants flushed per hour by cooperators (0.88) increased 76% compared to flush rates from 2017 (0.49). Pheasant mail carrier brood surveys were conducted statewide along 541 surveys in July 2019. Mail carriers observed an average of 0.15 broods per 10 carrier-days. Pheasant broods contained an average of 3.0 chicks. There was no significant statistical change in the number of chicks observed per brood ( $t=1.55$ ,  $P=0.05$ ) between years. In 2019 mail carriers observed 3.00 chicks per brood; in 2018 they observed 3.43 chicks per brood.

### INTRODUCTION

Pheasants (*Phasianus colchicus*) are a popular game bird associated with grasslands and agricultural areas primarily in southern Michigan. About 23,209 Michigan hunters pursued pheasants statewide in 2015 (Frawley 2018). Hunters spent an average of 3 to 4 days hunting pheasants in 2015 and harvested over 22,390 pheasant in Michigan in 2015 (Frawley 2018).

The Michigan Department of Natural Resources (DNR) annually monitors pheasant distribution and abundance using summer brood surveys and harvest surveys. Harvest is monitored using mail surveys of randomly selected small game license buyers and a separate survey of volunteer cooperators. From 1949 through 2002, pheasant crowing surveys were also conducted each spring. However, in 2003 crowing surveys were discontinued because trend information could be obtained through summer brood surveys. Also, the introduction of Sichuan pheasants (*P.c. strauchii*) to Michigan during the mid-1980's complicated interpretation of crowing survey results because Sichuan pheasants crowed less frequently than pheasant subspecies previously established in Michigan (Luukkonen et al. 1997).



## **METHODS**

### **2013-2015 Comparisons**

#### ***Harvest Survey***

Each year, questionnaires are sent to a randomly selected set of people who had purchased a small game hunting license during the previous hunting seasons. Detailed methods and results from the 2015 small game harvest survey are compiled in a separate report (Frawley 2018). Findings pertaining to ring-necked pheasants have been summarized in the results section of this report.

### **2018-2019 Comparisons**

#### ***Pheasant Mail Carrier Brood Survey***

Cooperating rural mail carriers conduct the pheasant brood survey during a 2-week period from late July through early August. Mail carriers stationed at post offices in southern Michigan record the number of pheasant broods, chicks, and lone hens observed each day along their mail delivery routes during the survey period. An index of pheasant brood abundance is calculated as the number of broods observed per 10 carrier-days (1 mail carrier observing 1 day = 1 carrier-day). In Michigan, the brood index has been a good indicator of fall pheasant abundance and harvest (Luukkonen 1998a).

### **2017-2018 Comparisons**

#### ***Pheasant Hunter Cooperator Survey***

Cooperator surveys rely on a group of volunteer hunters who record numbers of hours hunted and pheasant and quail flushed each day. Data obtained from cooperating hunters are summarized as the number of pheasant and quail flushed per hour of hunting. Although final estimates of hunting effort and harvest come from a mail survey of randomly selected hunters, flush rate surveys from pheasant cooperators provide an early indication of harvest. Hunters may participate in the cooperator survey by contacting the Lansing Wildlife Division office or by printing and completing the cooperator form which is available at [https://www.michigan.gov/dnr/0,4570,7-350-79136\\_79608\\_83992-79702--,00.html](https://www.michigan.gov/dnr/0,4570,7-350-79136_79608_83992-79702--,00.html).

## **RESULTS**

### **2013-2015 Comparisons**

#### ***Harvest Surveys***

An estimated 22,391 pheasant were harvested in Michigan during 2015 which was slightly higher than 2013 with 21,555 harvested, respectively (Figure 1). Approximately 23,209 hunters spent 78,385 days afield hunting pheasants in Michigan during 2015 hunting season. Estimated number of days of hunting efforts on private and public lands in 2015 for pheasants, showed 60% of hunters hunt on private lands, public land hunters (18%) and Both (20%), respectively.

### **2018-2019 Comparisons**

#### ***Pheasant Mail Carrier Brood Survey***

In 2019, mail carriers returned 541 usable survey forms. Comparison between 2018 and 2019 surveys revealed no significant difference in the brood index ( $t=-0.43$ ,  $P=0.05$ ). In 2019, mail carriers observed 0.15 broods per ten carrier-days: in 2018 they observed 0.13 (Figure 2 and Appendix A). There was no significant statistical change in the number of chicks observed per brood ( $t=0.08$ ,  $P=0.05$ ) between

years. In 2019 mail carriers observed 3.00 chicks per brood; in 2018 they observed 3.43 chicks per brood.

## **2017-2018 Comparisons**

### ***Pheasant Hunter Cooperator Surveys***

Records were available from 7 cooperators, who hunted 173 combined hours in 2018. Cooperators flushed an average of 0.88 roosters per hour and 1.49 hens per hour while hunting afield. These flush rates were significantly higher than flush rates of 0.49 roosters per hour in 2017 and hens per hour in 2017 (0.49). The highest average pheasant flush rates were reported in Tuscola and Huron Counties in 2018 (Appendix B).

## **DISCUSSION**

The decline of pheasant populations in Michigan has been well documented (Figure 2). Ring-necked pheasants, bobwhite quail, and other grassland species have declined on Michigan Breeding Bird Survey routes during the period 1968-2011 (Sauer et al. 2011) as well as on DNR survey routes. Data from DNR breeding indices over the past 10 years indicate pheasant abundance has been relatively stable, however, much reduced from historic highs of abundance during the 1950's.

Factors such as changes in agricultural practices, land use and the regional climate may have contributed to the pheasant decline. Areas such as southeastern Michigan, which once contained some of the best pheasant habitat in the state, have experienced extensive human development and loss of grasslands. Additionally, pheasant abundance appears to decline as the amount of tree cover exceeds 10% of the landscape (Luukkonen 1998b). The amount of forest cover in southern Michigan increased by about 40,000 acres per year from 1980 to 1993, which may have been a major contributing factor in the decline of pheasants (Luukkonen 1998b).

Belya (1991) noted that state and federal land management programs have not reversed the downward trend of pheasant numbers. However, private land initiatives implemented by the DNR, Natural Resources Conservation Service, and private conservation organizations may prove beneficial to landowners wishing to improve habitat conditions for pheasants (Sargent and Carter 1999). In 2018, DNR staff worked with a variety of partners to develop the Southern Michigan Pheasant and Monarch Recovery State Acres For wildlife Enhancement (SAFE) program to positively impact pheasant and other wildlife populations. As an enhanced version of USDA's Conservation Reserve Program (CRP), SAFE was developed with an emphasis on installing conservation practices to provide 40,000 acres of nesting, brood-rearing and winter habitat for pheasants. Under this program, private landowners agree to convert eligible cropland into wildlife habitat, including grasslands, filter strips, riparian buffer, wetland restorations and early successional habitat. Eligible landowners may enroll for 10-15 years and are provided an annual rental payment and enhanced cost-share to establish selected conservation practices. SAFE enrollment was open at USDA Service Centers from June 4 to August 15, 2018, in which time 17,289 acres were offered for enrollment. Because pheasant populations seem to respond to habitats on a broad, landscape scale, habitat improvements made on a few isolated sites are often ineffective in increasing pheasant abundance (Luukkonen 1998b). The landscape scale of SAFE may influence local pheasant abundance to increase due to habitat changes made through this program. For more information about this program, please visit [www.mi.gov/dnr](http://www.mi.gov/dnr).

Winter weather conditions for 2019 were fairly similar to last year, with some intermittent cold snaps. Most of the severe weather occurred from late January to early February. The winter was cooler, had more precipitation and snowfall than normal. The beginning of spring was cooler but became normal once April began. The precipitation in March was normal, however, April had more precipitation than typical. May was overall normal with pretty dry conditions getting slightly wetter as the month progressed. Weather during the nesting and brood rearing period showed average to slightly cooler

temperatures with the precipitation being quite variable. May was not as wet until the end, while June experienced sporadic heavy rain events, resulting in June being much wetter than usual. Pheasant numbers increase with mild winters (less than 19 inches snowfall) and warm, dry springs (less than 6 inches rainfall) and decline with snowy winters (30+ inches snowfall) and cold wet springs (8+ inches rainfall) (Bogenschutz 2014). Michigan mail-carrier broody survey results showed chicks per brood were below normal in the past ten years and broods per ten carrier-days were slightly up from last year and about average in the past ten years. Numerous wildlife biologists and landowners are reporting that the pheasant numbers are equivalent or up a little compared to last year. Based on current survey data, hunters should see about the same to slightly better than last year.

While pheasant numbers are far below the historical high levels on the 1950s and 1960s, pheasants still are widely distributed in southern Lower Michigan and in some areas of the Upper Peninsula (Belyea 1991). Some of the best pheasant habitat is located on private lands. Hunters are encouraged to contact private landowners prior to the fall hunting season to gain access to these areas. Idle fields and warm season grasses adjacent to agriculture lands are prime areas to look for pheasants. Late season hunters should concentrate their efforts in dense grasslands adjacent to cattail and shrub wetlands near picked corn and bean fields. Best areas for pheasant hunting will include landscapes with less than 15% woodland, where grassland fields provide nesting cover. Some of the highest pheasant numbers reported in the central, southcentral and thumb regions of the State (Appendix A & B). Funding from Wildlife Habitat Grant Program (WHGP) with a portion of hunter dollars, have provided resources to conservation organizations such as Pheasants Forever and Michigan Association of Conservation Districts in 2014-2016 to assist the DNR-Wildlife Division with development and improvements of quality habitat and food plots for upland game birds in prominent pheasant territory. Operation Freedom Outdoor, National Wild Turkey Federation and Michigan United Conservation Club partners, also assist the DNR in cooperation, creation and enhancement of quality upland game bird habitat.

Pheasant season is open from October 10-31 in the Upper Peninsula; October 20-November 14 in the Lower Peninsula. The bag limit is two male pheasants per day, four in possession. The late pheasant season in part of Zone 3 will be open from December 1-January 1 with a bag limit of two male pheasants, four in possession. Information on zone boundaries may be found at [DNR – Pheasant Seasons](#) or in the 2019 Michigan Hunting and Trapping Digest. Hunters who would like to get into pheasant hunting or would like to take someone new pheasant hunting should consider the new Michigan Pheasant Hunting Initiative (MPHI). The Michigan legislature passed Public Act 618 of 2018, which appropriated funds to the MDNR for a two-year pheasant release program beginning this year. This was made possible by MUCC and the Michigan Pheasant Hunters Initiative. The pheasants will be released in two periods on 12 state game areas in the October-November pheasant hunting season and nine state game areas in the December pheasant hunting season. There will also be two state game areas receiving a special one-time release, Allegan and Shiawassee, geared toward hunter recruitment and retention. Michigan Association of Game Breeders and Hunting Preserves partnered with the MDNR to handle release the birds on a weekly basis. You will need a free pheasant/sharp-tailed grouse endorsement on your hunting license. To learn more visit [www.mi.gov/dnr](http://www.mi.gov/dnr) or [click here](#). Hunters and outdoor enthusiasts that want a total outdoor experience for the whole family can attend “The Great Outdoors Youth Jamboree” at Lake Hudson Recreation Area in Lenawee County, Michigan. This free event in mid-September provided by amazing organization partners and the DNR offers outdoor activity stations to learn the skills needed to hunt, fish and a lot more hands-on activities. For information on other events, visit [www.michigan.gov/dnr](http://www.michigan.gov/dnr).

The Michigan Department of Natural Resources along with many conservation partners continues to expand the Michigan Pheasant Restoration Initiative (MPRI). During the last five years, the activities associated with this initiative have expanded small game hunting opportunities on both public and private lands, increased wildlife populations, improved hunter satisfaction and helped Michigan’s economy. A MPRI Coalition Midpoint Accomplishment report was completed in 2016 and highlights the achievements of the initiative. Landowners are encouraged to get involved with the MPRI. Through

this initiative, property-owners can receive technical and financial assistance, plus help in forming local cooperative to create and enhance pheasant habitat. In 2015, a cooperative coordinator position was created by partners to help expand co-ops. As of 2018, 12 cooperators were actively working to expand and improve pheasant habitats. In 2018, MPRI assisted over 400 landowners to improve over 8,000 acres. The Hunting Access Program (HAP) enrollment currently has 155 properties, totaling 22,415 acres. Bringing back quality pheasant hunting to Michigan is one way the DNR plans to create world-class recreational opportunities with funding from hunting and trapping license sales.

## **ACKNOWLEDGEMENTS**

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## LITERATURE CITED

- Belyea, G. 1991. Ring-necked pheasant. Pages 180-181 in R. Brewer, G.A. McPeck, R.J. Adams, Jr., eds. *The Atlas of Breeding Birds in Michigan*. Michigan State University Press, East Lansing, Michigan, USA.
- Bogenschutz, Todd. 2014. 2014 Pheasant Nesting Outlook. Iowa Department of Natural Resources. Boone, IA
- Bogenschutz, Todd. McInroy, Mark and Kruger, Lile 2013. The 2013 Iowa August Roadside Survey. Iowa Department of Natural Resources. Boone, IA
- Curtis, Rachel. 2013. The 2013 Minnesota August Roadside Survey. Minnesota Department of Natural Resources. Farmland Wildlife Populations & Research Group. Madelia, MN.
- Frawley, B.J. 2018. 2015 Michigan Small Game Harvest Survey. Michigan Department of Natural Resources, Wildlife Division Report Draft. Lansing, Michigan, USA.
- Luukkonen, D.R., H.H. Prince, and I.L. Mao. 1997. Evaluation of pheasant crowing rates as a population index. *Journal of Wildlife Management* 61:1338-1344.
- Luukkonen, D.R. 1998a. Pheasant population status in Michigan, 1998. Michigan Department of Natural Resources, Wildlife Division Report 3284. Lansing, Michigan, USA.
- Luukkonen, D.R. 1998b. Abundance, distribution, and winter survival of pheasants in Southern Michigan. Ph.D. Thesis, Michigan State University. East Lansing, Michigan, USA.
- Sargent, M.S. and K.S. Carter. 1999. *Managing Michigan's Wildlife: a landowner's guide*. Michigan United Conservation Clubs, Lansing, Michigan, USA.
- Sauer, J. R., J. E. Hines, and J. Fallon, K.L. Pardieck, D.J. Ziolkowski, Jr., and W.A. Link. 2012. *The North American Breeding Bird Survey, Results and Analysis 1966 - 2011*. Version 07/03/2013. United States Geological Survey Patuxent Wildlife Research Center, Laurel, Maryland, USA.
- United States Department of Agriculture, Farm Service Agency. Conservation Reserve Program Monthly Summary. May 2015.

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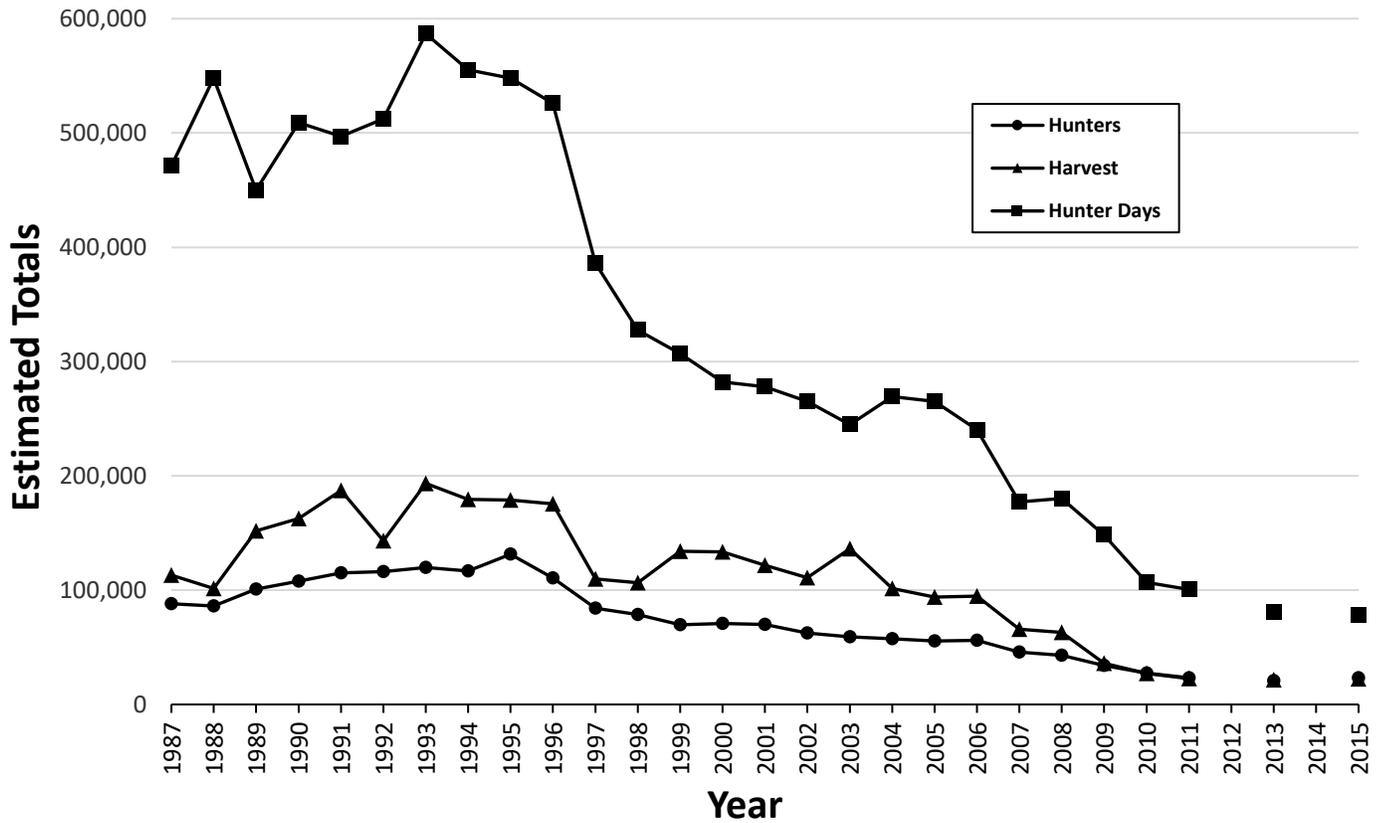


Figure 1. Mail harvest survey estimates of the number of pheasant hunters, hunter days, and harvest in Michigan, 1986-2015.

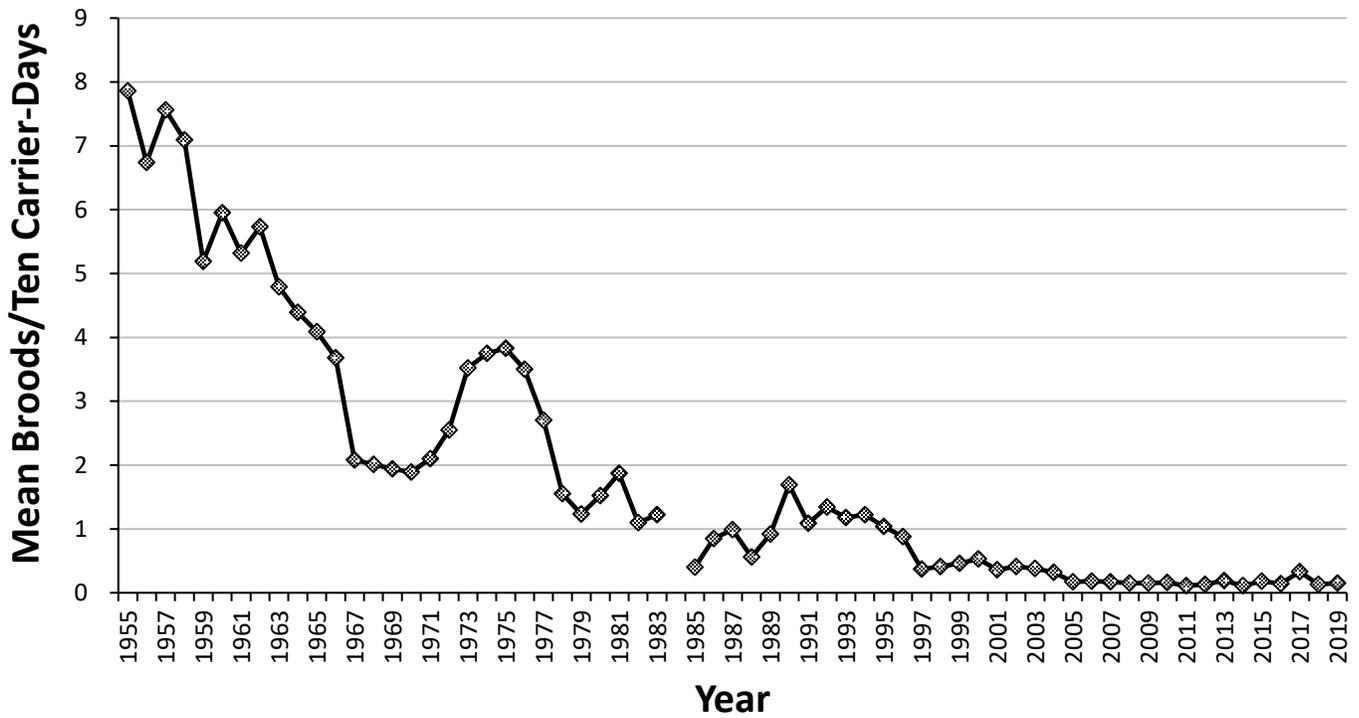
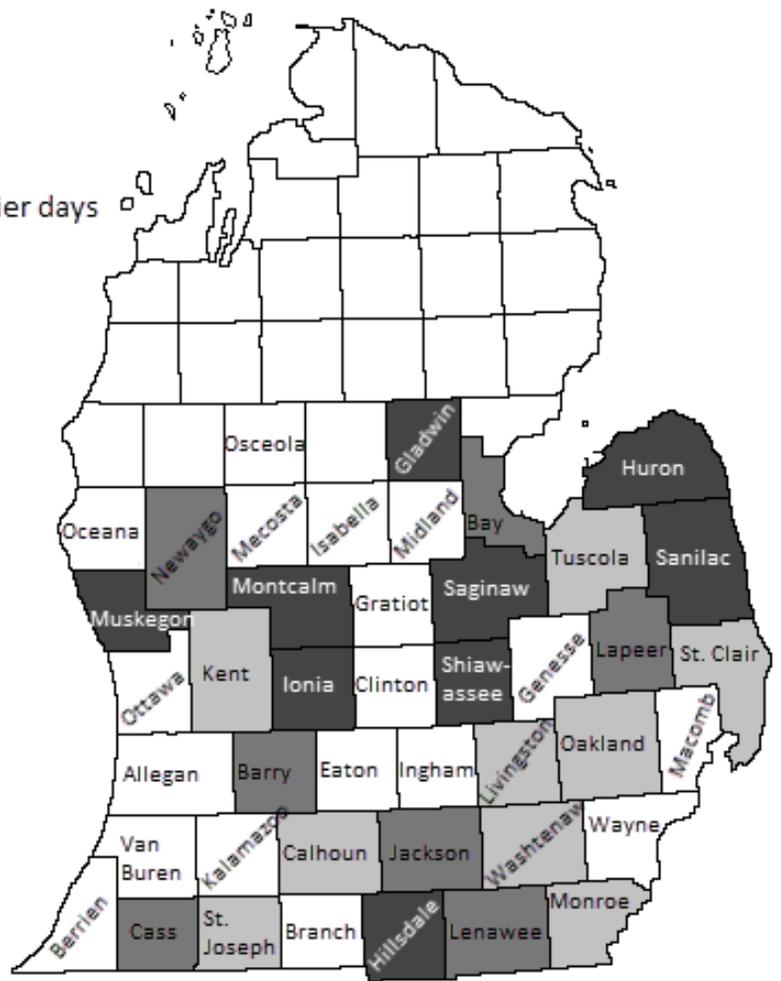


Figure 2. Pheasant brood indices in Michigan, 1955-2019.

Legend

Pheasant broods observed per ten carrier days



Appendix A. Mail carrier pheasant brood indices for Michigan counties, 2019.

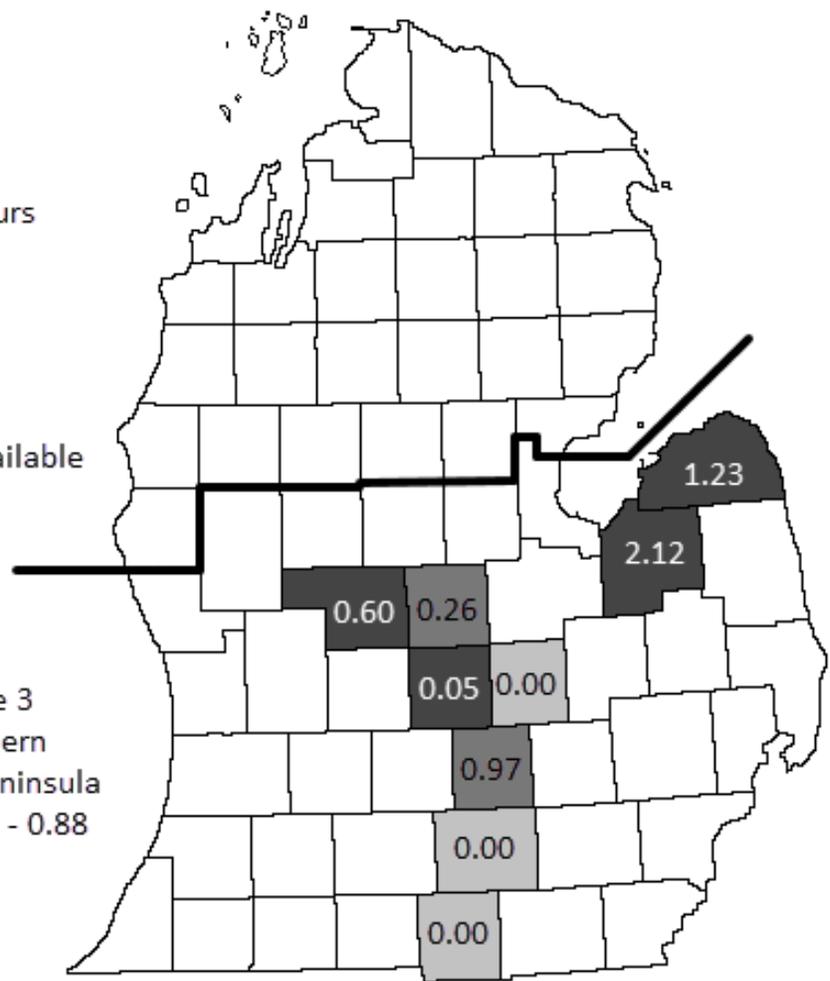
Legend

Number of cooperator hunting hours

-  Greater than 20 hours
-  10-20 hours
-  Less than 10 hours
-  No hunting information available

 Zone boundaries

Zone 3  
Southern  
Lower Peninsula  
Average - 0.88



Appendix B. Average number of rooster pheasants flushed per hour by cooperators (numbers) and number of hunter hours (shading), 2018.