

# 2007-08 RUFFED GROUSE POPULATION STATUS REPORT



**KENTUCKY DEPARTMENT OF FISH AND WILDLIFE RESOURCES**

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## **METHODS**

Historically, the Ruffed Grouse Population Status Report has been a compilation of three surveys that the Kentucky Department of Fish and Wildlife Resources (KDFWR) conducts annually to track the status of Kentucky's grouse population. First, a drumming survey utilizes KDFWR biologists to conduct 15-stop driving routes during the month of April to listen for and record the number of grouse drumming at each stop. Second, the Grouse Hunter Log Survey summarizes hunting activity and success of hunters across the state. Combining the information we receive from those two surveys, we can create population trends from flush and harvest data and track hunter effort and success. The Grouse Wing Survey was the third survey used to provide information about the age and sex ratio of the harvest; however it was discontinued in 2007 because the data obtained was far less useful than the data provided by the hunter cooperators survey.

Kentucky's 2007-08 ruffed grouse hunting season began Nov. 1, 2007 and ended Feb. 29, 2008. Hunters were able to pursue grouse in 53 eastern Kentucky counties. An early grouse season was open on 7 wildlife management areas (WMA) from Oct. 1 to Dec. 31, 2007 (90 days). Those WMAs included Beaver Creek, Big South Fork National River and Recreation Area, Cane Creek, Clay, Dix River, Fleming, and Lake Cumberland.

## **GROUSE POPULATION STATUS**

*Drumming Survey* – The number of drummers increased slightly from last year (Figure 1). The overall trend has been declining since the survey began nearly 20 years ago, most likely due changes in grouse habitat. Many survey stops were once characterized by dense understories, but over time, they have developed into more mature stands of timber. However, the number of drummers has remained stable over the last 4 years. This year's average of 8.10 drummers/100 stops is slightly higher than the 20 year average of 7.98.

*Flush Rate* – The flush rate showed a decrease for the 2007-08 season (Figure 2). The 2007-08 flush rate of 0.48 birds per hour was below the long-term average of 0.89 birds per hour. The overall trend of the grouse population based on flush rates is slowly decreasing. Flush rate data is the most reliable indicator of the grouse population if sample sizes are adequate. In order to obtain a more accurate estimate, we need to recruit more hunter cooperators!

## **HUNT AND HARVEST DYNAMICS**

*Hunt Characteristics* - Hunters reported data from 362 hunts in 2007-08. The typical hunt was 3.5 hours long consisting of roughly 2 hunters. Dogs were used on 98% of all hunts with an average of 1.7 dogs/hunt. Hunting parties harvested 0.35 grouse/hunt. Hunting effort increased as the season advanced (Figure 3). Also, as the season progressed, hunters flushed and harvested more grouse/hour (Figure 4).

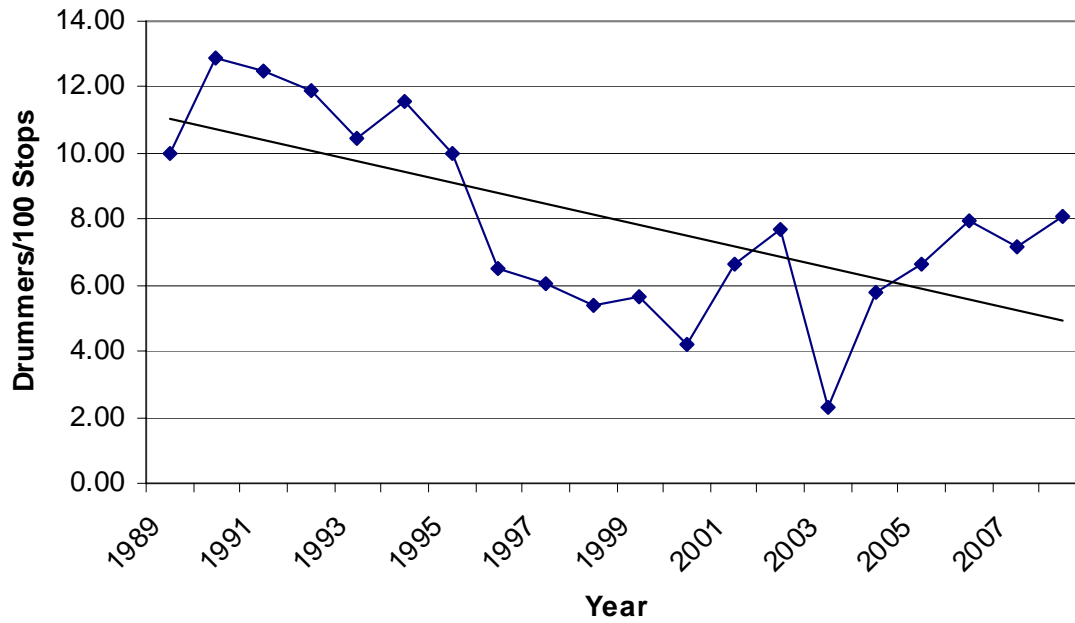
## **OUTLOOK FOR THE 2008-09 GROUSE HUNTING SEASON**

Kentucky grouse hunters should expect to see fewer grouse in the woods this season. The 2007 mast crop was 'spotty' across the state, providing less food for grouse throughout the winter months. Research has shown that the productivity of hens is linked to the fall mast crop. Simply, healthy hens lay better eggs and are better able to raise a brood. Simply put, less mast and other food equals fewer birds. However; 2008 spring drumming surveys showed an increase in the number of drummers per 100 stops. As always, there will be local areas where grouse are plentiful, and areas where grouse are scarce. Get outside and scout to find the best areas in your neck of the woods!

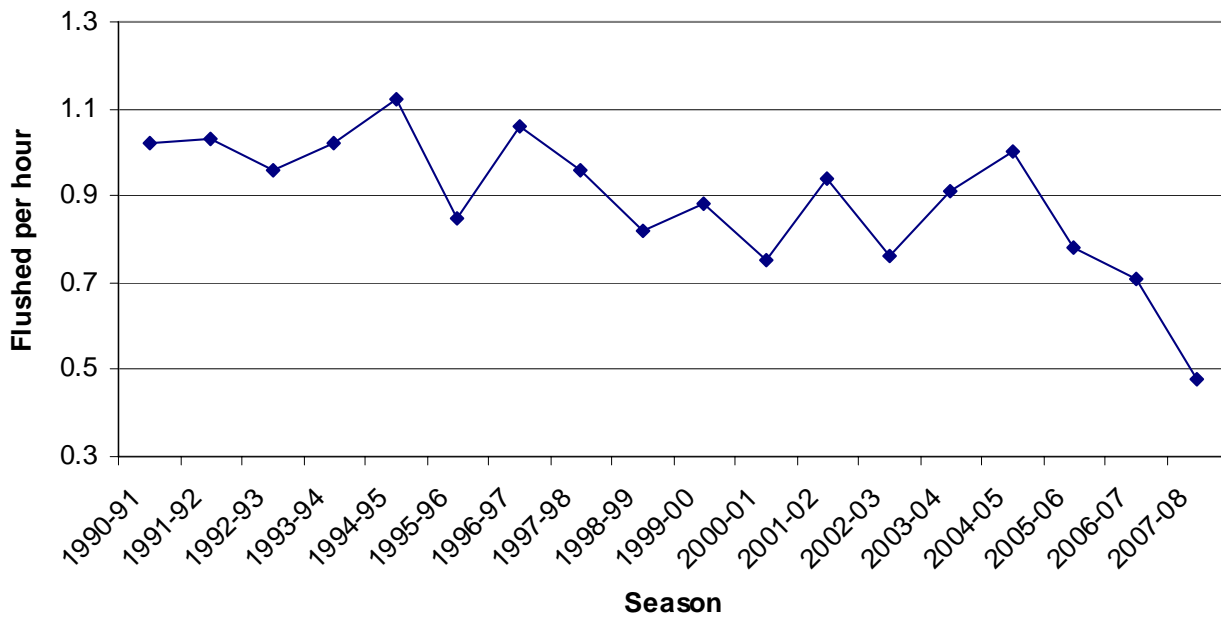
## **ADDITIONAL HELP IS NEEDED**

Grouse hunters can improve the survey information used to track Kentucky's grouse population. First, more participants are needed! Please prompt your friends and neighbors to track their hunts and pass that information on to KDFWR. Forms are available from the Department by calling (1-800-858-1549) or by visiting the Department website: [fw.ky.gov/smallgame/logs.asp](http://fw.ky.gov/smallgame/logs.asp). We remain pleased with the Hunter Log Cooperator Survey and hope to see it expand with every passing season. The KDFWR Wildlife Division sincerely thanks the grouse hunters who have participated in the grouse surveys for many years. Your dedication makes this report possible and helps track grouse populations across the state.

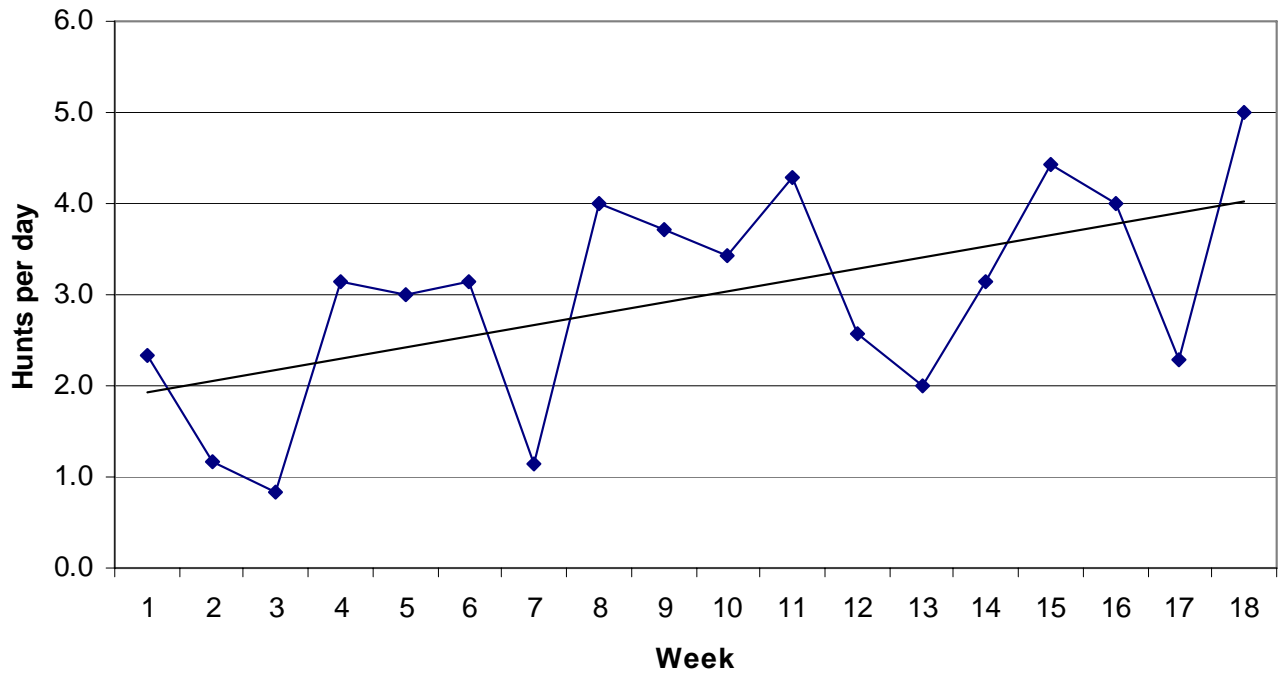
**Figure 1: Individual displaying grouse from Grouse Drumming Survey in Kentucky, 1989-2008**



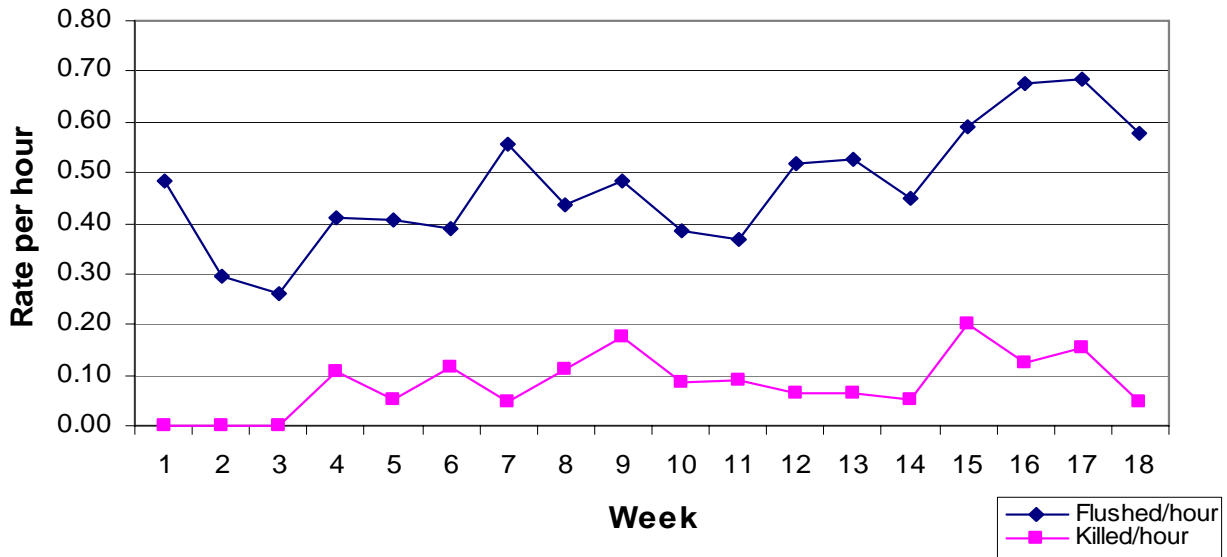
**Figure 2: Flush Rates From Grouse Hunter Logs in Kentucky; 1990-2008**



**Figure 3: Hunts per available day from Grouse Hunter Logs in Kentucky; 2007-08**



**Figure 4: Flush and Harvest Rates From Grouse Hunter Logs in KY; 2007-08**



Appendix A. Kentucky Ruffed Grouse Drumming Survey Results (Drummers heard from a station on both survey days assumed the same.)

<u>Route</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>
<b>NORTHEAST REGION</b>																				
Bracken County	1	0	0	1	0	0	.	.	.	.	2	1	0	2	0	0	1	1	1	0
Grayson Lake WMA	4	3	3	3	1	6	7	1	0	1	1	0	4	1	0	1	5	2	2	0
Fleming WMA	5	5	7	4	0	1	0	2	3	2	2	3	4	5	.	1	.	10	7	16
Paintsville Lake WMA	.	.	2	8	8	6	1	2	3	1	1	2	5	2	0	1	0	0	3	0
Yatesville Lake WMA	3	5	5	4	6	7	2	3	0	2	1	0	1	1	1	5	5	4	0	2
Clay WMA	4	3	2	3	3	2	3	2	1	5	.	4	2	.	.	.	.	1	0	1
Fishtrap Lake WMA	6	3	1	1	12	8	4	7	4	6	4	2	6	6	.	3	.	1	.	1
N. Grouse Demo Area	1	4	4	2	2	1	1	1	0	0	0	0	2	2	2	4	5	5	4	9
<b>SOUTHEAST REGION</b>																				
Beech Creek	.	.	.	.	.	.	0	0	0	.	1	1	1	0	1	2	0	0	0	0
Mill Creek WMA	2	2	2	3	1	2	3	2	1	1	3	3	3	3	0	2	2	2	3	3
War Fork	4	4	3	2	0	4	2	1	2	2	3	2	3	4	1	2	2	2	4	2
Cane Creek	.	.	0	2	1	0	0	1	1	1	4	1	3	3	2	2	1	2	2	0
Redbird WMA	.	6	16	.	7	11	9	3	.	2	3	1	5	9	.	.	2	.	0	.
Pine Mountain WMA	2	1	4	2	2	2	1	5	2	1	1	0	2	.	.	2	.	.	.	.
South Fork	3	.	2	1	2	2	3	1	1	2	0	0	0	0	0	0	0	0	1	0
Buck Knob	0	.	1	1	1	0	0	1	2	1	1	0	0	0	1	0	0	0	0	0
Blue Diamond Coal	.	.	.	.	.	.	.	.	.	.	4	2	3	4	.	0	.	.	.	.
Tunnel Ridge	5	6	3	6	3	4	0	5	3	0	0	0	0	0	0	1	.	.	2	.
<b>Total</b>	<b>40</b>	<b>42</b>	<b>55</b>	<b>43</b>	<b>49</b>	<b>56</b>	<b>36</b>	<b>37</b>	<b>23</b>	<b>27</b>	<b>31</b>	<b>22</b>	<b>44</b>	<b>42</b>	<b>8</b>	<b>26</b>	<b>23</b>	<b>31</b>	<b>28</b>	<b>34</b>
<b>Stops</b>	<b>480</b>	<b>465</b>	<b>585</b>	<b>555</b>	<b>630</b>	<b>630</b>	<b>690</b>	<b>660</b>	<b>630</b>	<b>555</b>	<b>690</b>	<b>735</b>	<b>735</b>	<b>570</b>	<b>345</b>	<b>450</b>	<b>345</b>	<b>390</b>	<b>390</b>	<b>420</b>
<b>Drummers/100 Stops</b>	<b>8.33</b>	<b>9.03</b>	<b>9.40</b>	<b>7.75</b>	<b>7.78</b>	<b>8.89</b>	<b>5.22</b>	<b>5.61</b>	<b>3.65</b>	<b>4.86</b>	<b>4.49</b>	<b>2.99</b>	<b>5.99</b>	<b>7.37</b>	<b>2.32</b>	<b>5.78</b>	<b>6.67</b>	<b>7.95</b>	<b>7.18</b>	<b>8.10</b>
*Drummers heard on consecutive days at same station assumed to be the same individual																				