

**WEST VIRGINIA  
RACCOON FIELD TRIAL SURVEY  
2011-2012**

West Virginia Division of Natural Resources  
Wildlife Resources Section  
and  
West Virginia Coon Hunters Association

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## **WV RACCOON FIELD TRIAL SURVEY 2011-12**

### **Hunter's Summary**

#### **What it is**

In 1992, the West Virginia Division of Natural Resources and the West Virginia Coon Hunter's Association started a survey to monitor raccoon populations by using nite hunt scorecard information. Keeping a check on raccoon numbers is an important step in identifying problems if and when they should occur. This survey has been a way for houndsmen and biologists to work together for the good of the raccoon resource.

#### **How it works**

The state has been divided into 4 regions based on similarities in hunting pressure and habitat. Average numbers of raccoons seen on a cast are calculated for each region. The survey begins in April of each year when most young are born.

#### **What we learned**

Although there are numerical changes, coon hunting success (#coons seen/2 hrs. hunting time) and cast success (% casts where coon are seen) are again statistically unchanged from last year. Results from 33 hunts were used in this year's survey which is well below half of the registered hunts and includes a few non-registered hunts. *This continues to show a poor level of participation by most clubs! Please have your club participate in this survey!*

Statewide coon hunting success remained stable and was similar to last year. With the exception of Region 2, championship casts saw more coons than registered casts in all regions.

Now refer to the figures on the next page. Region 1 is once again the top region for hunting success. Regions 2&3 show similar numbers of coons seen per cast. Mast conditions in 2010 were good throughout the state and probably contributed to high recruitment of young the following year. Very mild winter conditions may also have contributed to increased survival.

Region 4 produced the lowest hunting success in the state this year. Region 3 showed the greatest increase in hunting success over last year. This was probably due to greater survival and reproduction through a mild winter and good mast conditions the previous year.

#### **Our conclusions**

Raccoon numbers were statistically similar to last year, but numerically higher for the whole state. The best hunting reports came from Region 1. Poorest reports came from Region 4.

Our main prediction is that hunting success will be similar this year due to excellent survival during last year's mild winter.

**Due to lack of interest and participation, this survey will only be conducted every three years. It has been determined that this will allow the Division of Natural Resources to adequately track trends in raccoon populations in the future. Thanks to all who have participated in past years.**

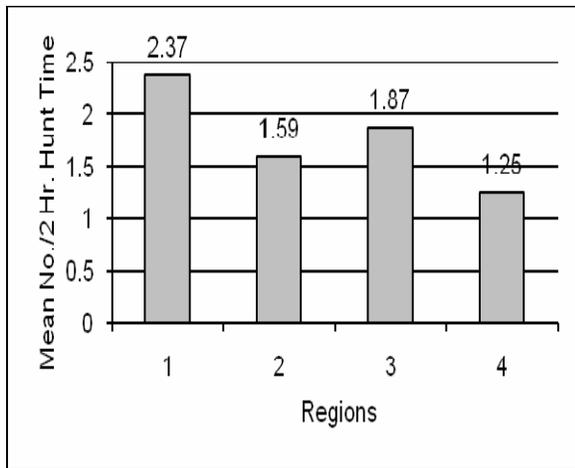
**Additional Notes**

Positive raccoon strain rabies cases continue to occur in the eastern and northern panhandles, Monongalia and Greenbrier County. Feeding and moving raccoons can lead to spread and increased incidence of rabies.

**PLEASE HAVE YOUR CLUB PARTICIPATE IN THIS SURVEY!!!**

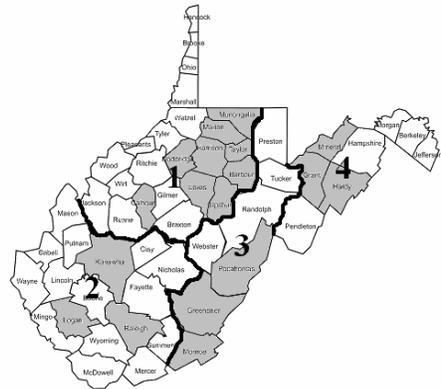
**This 2 page summary was provided for those wishing to know the highlights of this survey. Read the following pages for a more detailed report.**

Average number of raccoons seen per 2 hours hunting time by region.



Raccoon Field Trial Survey regions. Counties with data are shaded.

- Region 1 – Northern WV Hills
- Region 2 – Southern WV Hills
- Region 3 – Allegheny Plateau
- Region 4 – Allegheny Ridges



## INTRODUCTION

The raccoon is the most popular furbearer species in the State of West Virginia. Hunters spend more hours and more dollars in pursuit of this animal than any other furbearer in our state. Traditionally, demands placed on the raccoon population have been high and will probably remain so into the near future.

Reliable means of monitoring wildlife populations are important for identification of problems should they occur. In the past, fur dealer transaction reports have been the main source of data used to keep track of our furbearer populations. In reality, these reports are heavily influenced by hunter and trapper willingness to sell their fur. This, in turn, is influenced by demand of the fur market (fur prices). It is difficult to extract reliable information from these reports during periods of low or changing fur prices.

In 1992, the **West Virginia Division of Natural Resources** (WVDNR) in cooperation with the **West Virginia Coon Hunters Association** initiated a survey to monitor raccoon populations using scorecard information obtained from raccoon field trials. Field trials, or “nite hunts”, are held year-round in most counties of the state. The hunts involve a detailed scoring system based upon trail striking, tracking, and treeing abilities of coonhounds. Killing of raccoons is not allowed during these trials. Hunts are generally 2 hours long and the *number of raccoons seen* is recorded. This information is averaged to show the number of raccoons seen per 2 hours of hunting time for different regions of West Virginia and is useful in showing changes in raccoon populations from year to year. The information collected is actually more important in showing general trends in raccoon numbers over longer time periods. It is important to note the *number of raccoons seen* may actually be the number of times a cast or group of dogs trees and at least 1 raccoon is seen. The actual numbers of raccoons may not be recorded if forms are filled out later than the night of the hunt.

A similar survey has been used successfully in Arkansas, North Carolina, South Carolina, and Virginia. As a population trend monitor the technique has proven to be inexpensive, is probably more accurate than fur buyer reports, and results are not as influenced by changes in the fur market. It has also provided a means for houndsmen and biologists to work together for the welfare of the furbearer resource.

## SURVEY METHODS

A packet of forms are mailed in March to all clubs holding United Kennel Club “nite hunts”. This organization accounts for the majority of the sanctioned hunts in West Virginia. Clubs holding events sanctioned by other organizations including the Professional Kennel Club and the American Coon Hunters Association are encouraged to participate as well. Results from non-sanctioned club hunts are included if the clubs volunteer the information.

A designated person at each hunt completes the survey form to include date, counties hunted, and number of raccoons seen per cast. A cast is a group of up to 4 dogs usually hunting for a 1 or 2 hour period of time during the night of a hunt. Data from casts not completing the hunt are not used.

The state is broadly divided into 4 regions based on similarities in hunting pressure and habitat (Fig. 1). Similarities in hunting pressure were given greater weight since hunter and trapper related mortality is the main source of mortality in raccoon populations. Data are compiled by region beginning in April - the start of recruitment of young raccoons into the population. Number of raccoons seen per 2 hours of hunting time is averaged for each region. Percent of casts actually seeing raccoons are also calculated for each region. One-way analysis of variance ( $P < .05$ ) is used to test for significant differences between years and regions for hunting success and cast success as defined in the following sections. It must be remembered when interpreting results that the survey draws conclusions from last year's data as it pertains to last year's raccoon populations.

### **Region Descriptions**

The following regions were determined from past habitat studies, land use patterns, ecological zones, and personal observations of biologists and wildlife managers on raccoon hunter densities and demands placed upon the raccoon resource:

**Region 1 - Northern WV Hills.** Composed of West Virginia's northern panhandle and northern hill region. Generally, this area has fair raccoon habitat and moderate hunter density.

**Region 2 - Cumberland Mountains and Southern WV Hills.** Composed of southern coalfields and surrounding influenced areas. Generally characterized by poor raccoon habitat and the highest raccoon hunter density in the state. The southeastern counties are a subdivision and represent the poorer habitat and higher hunter densities of this region.

**Region 3 - Allegheny Plateau.** The remote, high mountain regions of West Virginia. Generally poor-fair raccoon habitat with low to moderate hunter density. Greenbrier and Monroe counties are a subdivision and represent the better habitat of this region. Hunter density in these 2 counties is felt to be higher than the rest of the region.

**Region 4 - Allegheny Ridges and Valleys.** West Virginia's eastern panhandle. Generally, fair-good raccoon habitat representing the best conditions for raccoons in West Virginia. Hunter density is considered to be low to moderate.

## **2011-12 SURVEY RESULTS**

Eleven active coon clubs participated in the 2011-12 survey. Results were compiled from 33 hunts totaling 141 casts or 282 hours of hunt time. This represents the fewest number of hunts reported since the survey began in 1992. Eight casts were reported from PKC hunts this year. Hunt information was obtained from only 19 counties (Fig. 1). Fortunately, every survey region was represented. Participation in the survey remains low.

### **Hunting Success**

As last year, *average number of raccoon seen per 2 hours of hunt time*, hereafter defined as *raccoon hunting success*, for all of West Virginia remained similar to last year (Fig. 2). Since the difference is not statistically significant ( $P < .05$ ), it can be said that hunting success has not actually changed from over the last two years statewide. Nineteen years of data indicate that greatest success is experienced in July and August after young raccoons have left dens (Fig. 3). Success declines steadily through December as raccoons become more experienced and movements decrease with onset of colder weather. January seems to be the month when success increases again indicating increased raccoon activity with the beginning of mating season.

All regions except Region 2 showed numerical increases in hunting success. *None of the differences were significant ( $P < .05$ ) meaning there were no changes from last year in any region. Additionally, regions were not statistically different from one another.* It can again be concluded that hunting success is the same throughout the state with overall trend steadily increasing. Lower harvests due to continued depressed fur prices and decreased hunter recruitment and retention have probably been significant factors in this trend. Increased harvests due to climbing fur prices are expected to somewhat reverse this trend.

Region 1 was again numerically on top with the highest level of hunting success at 2.37 raccoons seen/2 hours of hunting time (Table 1, Figs. 4,5 & 6). Hunting success in Regions 2&3 were good at 1.89 and 1.87, respectively. Region 4 showed the lowest hunting success at 1.25 raccoons seen/2 hours of hunting time. Good mast conditions statewide the previous year probably contributed to increased survival and raccoon productivity during the survey year.

### **Cast Success**

The *percentage of all casts actually treeing raccoons*, referred to as *cast success*, was 91% this year for the whole state (Table 2). Lowest cast success was found in Region 1 at 89%. Highest cast success was found in Region 4 at 100%. This is unusual in that it is the reverse of hunting success as explained above.

### **Differences Between Registered and Champion Casts**

Champion cast hunting success was, for the most part, better than registered casts except in Region 2. Cast success was better in registered casts in all regions.

## **SUMMARY**

Raccoon numbers remained stable ( $P < .05$ ) for the whole of West Virginia during the survey period. Hunting success was up numerically in all regions except Region 2. Good mast conditions in much of the state in 2010 and low harvest during the previous season due to very severe winter conditions in 2010-11 contributed to increases in hunting success in 2011-12.

Mild winter in 2011-12 led to a bumper harvest among fur takers in West Virginia. Hunting success, however, should remain stable in the coming year due to concurrent increased raccoon productivity.

### **Additional Notes**

Last year was the third year that fur buyers were required to report whether raccoon pelts were purchased from hunters or trappers. Results indicate that 10% of all pelts purchased by fur buyers in West Virginia were obtained from hunters

For those not already aware, a biannual WV Furbearer Management Newsletter was started in the spring of 2008. This newsletter is available for viewing on the WVDNR website at [www.wvdnr.gov](http://www.wvdnr.gov).

Also, for additional copies of the 2011-12 Raccoon Field Trial Survey, contact the address at the beginning of this report.

**This survey will no longer be conducted on a yearly basis. It has been determined that collecting data every three years will be sufficient for the Division of Natural Resources to adequately monitor trends in raccoon populations in West Virginia.**

Thanks to the following clubs for participating in the 2011-12 Raccoon Field Trial Survey:

### **2011-12 Participants**

Allegheny Coonhunters Association  
Buckhannon Coonhunters Association  
Bunners Ridge Coonhunters Association  
Central West Virginia Coonhunters Association  
Clear Creek Coonhunters Association  
Elk Valley Coon Hunters Association  
Hillbilly Coonhunters Association  
Marsh Fork Coonhunters Association  
Mercer County Coonhunters Association  
Pocahontas-Nicholas Coon Hunters Association  
West Virginia Coon Hunters Association



Figure 2. Statewide average number of raccoons seen per 2 hours of hunting time by survey year.

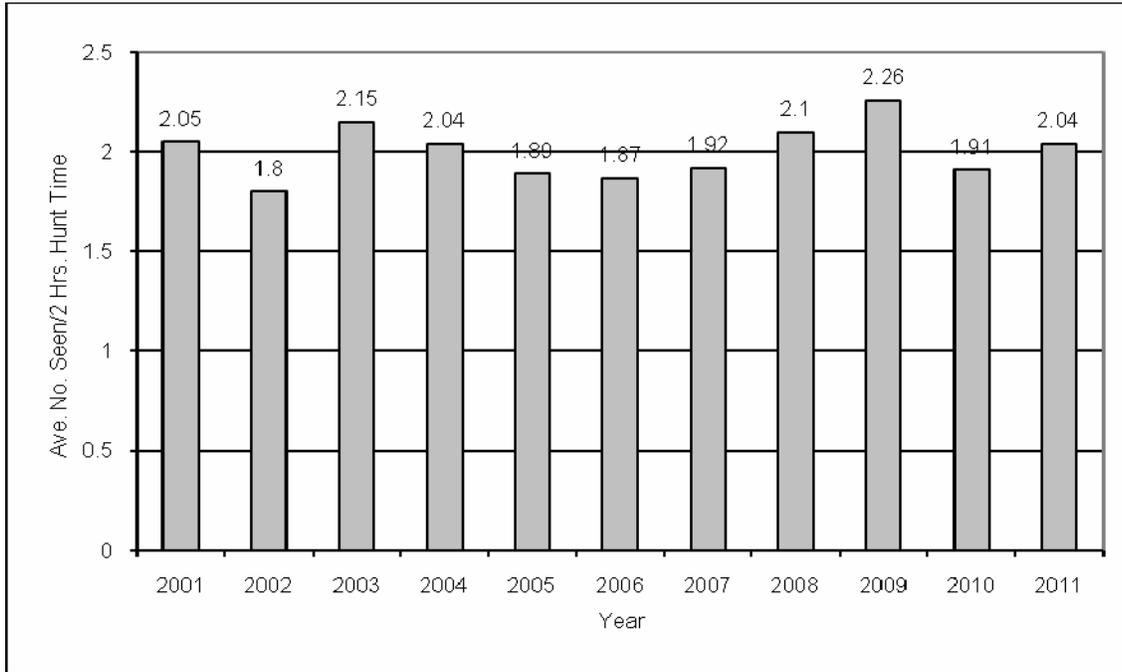


Figure 3. Statewide average number of raccoons seen per 2 hours of hunting time by month for 1992-2011.

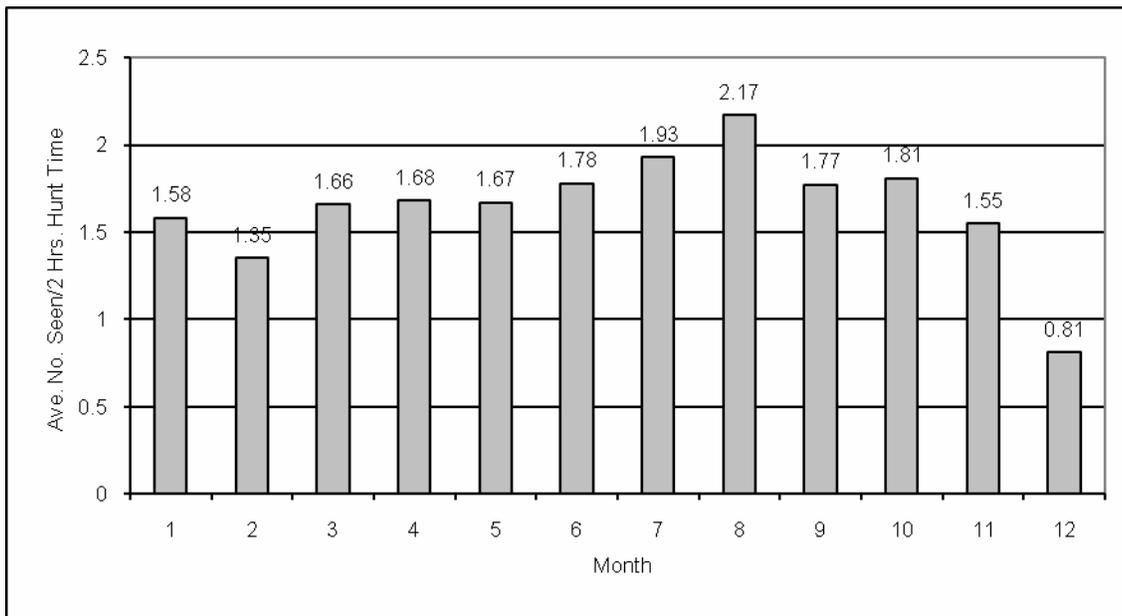


Figure 4. Average number of raccoons seen per 2 hours hunting time by region and for all West Virginia, 1992-2011. Light gray line indicates state trend from 1992-2011.

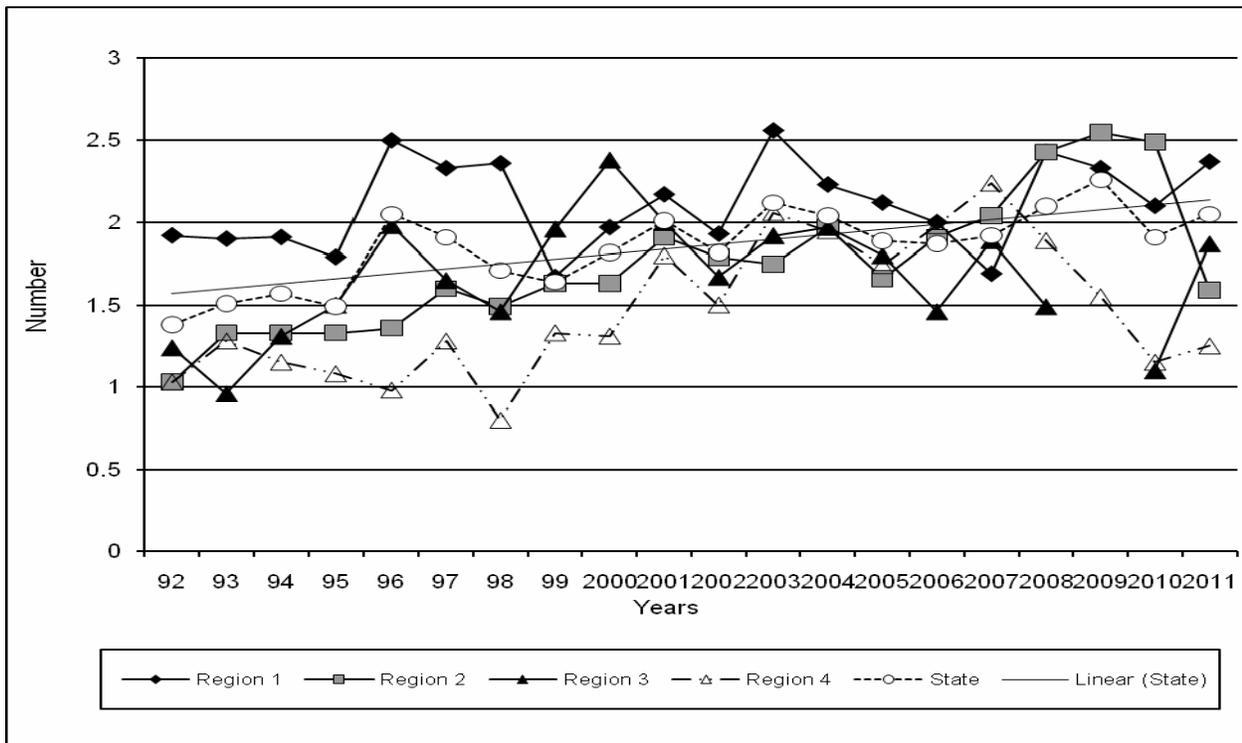


Figure 5. Average number of raccoons seen per two hours of hunting time by region for 2011-2012.

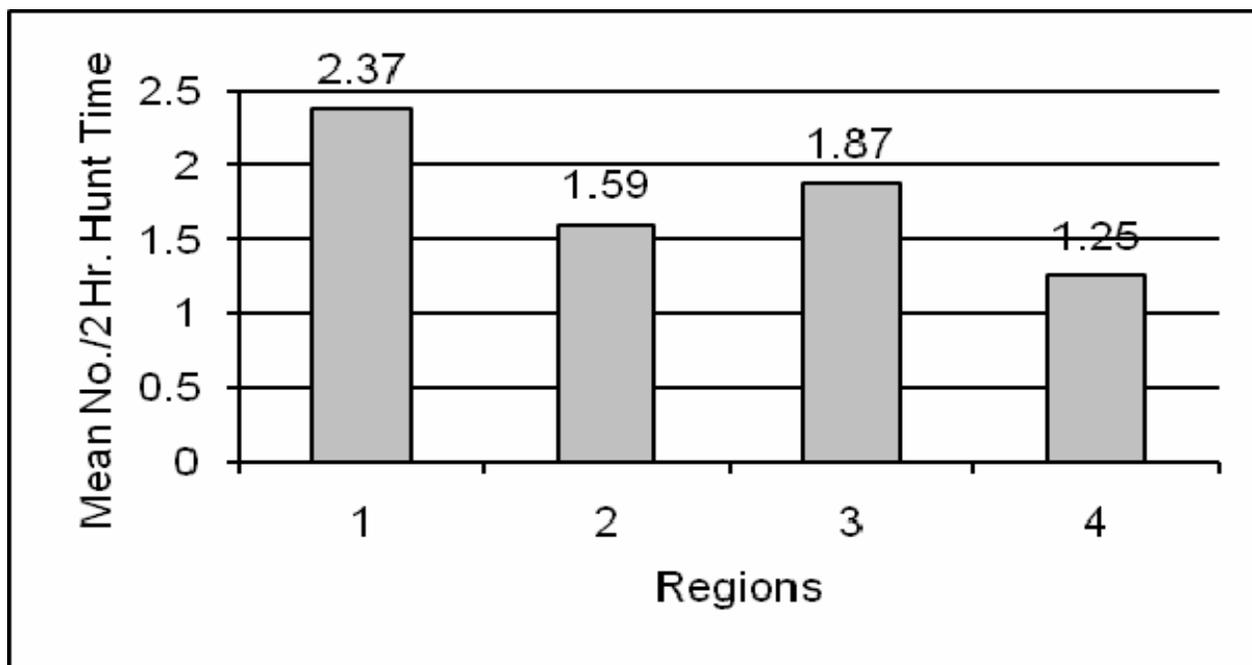


Figure 6. Average Number of raccoons seen per 2 hours hunting time for each region compared to the entire state, 1992-2011. Gray lines indicate long-term state trend. Solid black line indicates long-term region trend.

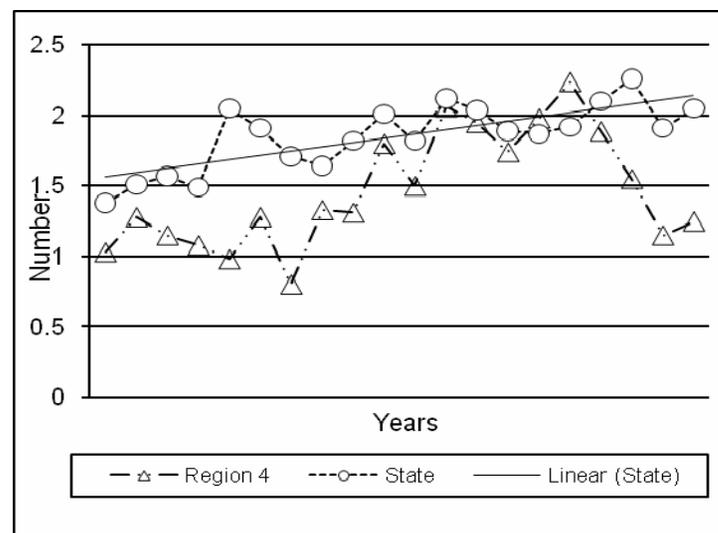
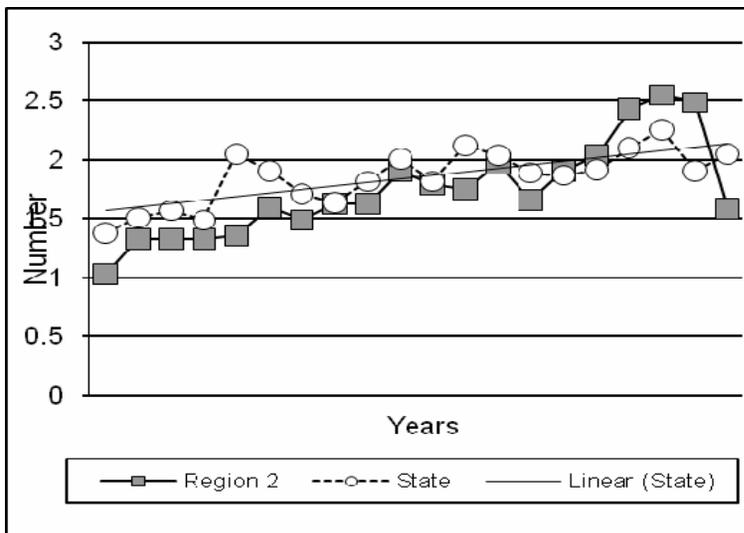
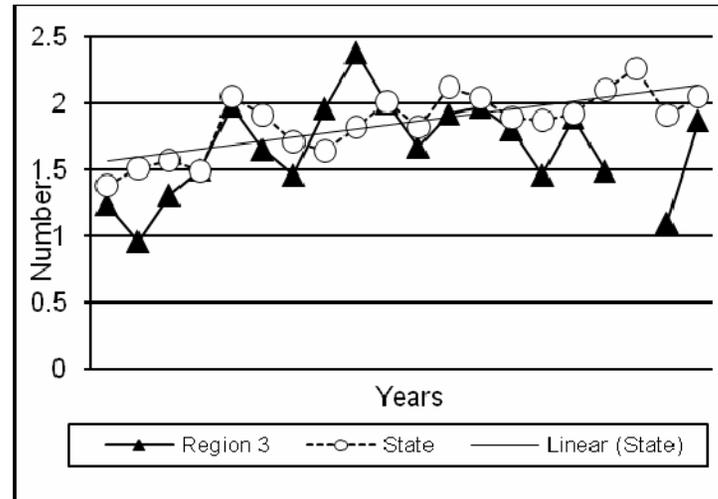
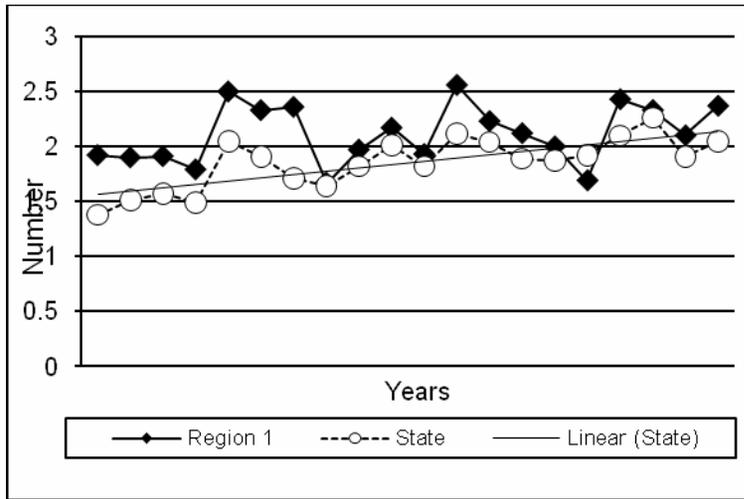


Table 1. Average number of raccoons seen per 2 hours of hunting time in WV by region for 2011-2012 and percent change from 2010-2011.

Region	Number of Casts	Avg. number raccoons seen/2 hour hunting	Percent change from 2010-2011
1	71	2.37	+13%
2	17	1.59	-36%
3	45	1.87	+70%
4	8	1.25	+9%
ALL WV	141	2.05	+7%

Table 2. Percentage of casts actually treeing raccoons during hunts in WV and by region and percent change from 2010-2011.

Region	Number of casts	Percentage of casts actually treeing raccoons	Percent change from 2010-2011
1	71	89%	+2%
2	17	94%	+7%
3	45	91%	+11%
4	8	100%	+43%
ALL WV	141	91%	+12%

Table 3. Average number of raccoons seen per 2 hours of hunting time in WV by region for 2011-2012 for both registered and champion casts.

Region	Number of casts		Avg. number raccoons seen 2/hr. hunting	
	Registered	Champion	Registered	Champion
1	43	28	1.91	3.07
2	13	4	1.77	1.00
3	29	16	1.83	1.94
4	6	2	1.00	2.00
ALL WV	91	50	1.80	2.50

Table 4. Percentage of casts actually treeing raccoons during hunts in WV by region for 2011-2012 for both registered and champion casts.

Region	Number of casts		Percentage of casts actually treeing raccoons	
	Registered	Champion	Registered	Champion
1	43	28	90%	86%
2	13	4	100%	75%
3	29	16	97%	81%
4	6	2	100%	100%
All WV	91	50	95%	84%

# WEST VIRGINIA RACCOON FIELD TRIAL SURVEY

CLUB NAME: \_\_\_\_\_

DATE OF HUNT: \_\_\_\_\_

LENGTH OF HUNT:  1 HR.  2 HRS.  3 HRS.

NAME OF INDIVIDUAL FILING REPORT: \_\_\_\_\_

CAST #	COUNTY OF HUNT	DID CAST HUNT ENTIRE PERIOD?	TOTAL NUMBER RACCOONS SEEN
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
NITE			
GR. NITE			

## WEATHER CONDITIONS DURING HUNT (please check)

**Cloud Cover**

- Clear
- Partly cloudy
- Overcast

**Temperature**

- Hot (70°+)
- Mild (50-69°)
- Cool (30-49°)
- Cold (less 30°)

**Precipitation**

- None
- Drizzle
- Moderate
- Downpour
- Snow

**Wind**

- None
- Breezy
- Strong

**INSTRUCTIONS FOR NITE HUNT REPORT**

This survey is being conducted to provide hunters with information on relative raccoon abundance and population trends from year to year in different areas of the state. A report should be completed for each hunt your club sponsors during the year. Results will be made available each year to each club, and at the WV State Championship hunt.

It is very important that this form be filled out as precisely as possible. Familiarize yourself with the form and the instructions before attempting to fill it out. It would be best if the form is filled out as scorecards are turned in.

1. Record only the actual number of raccoons seen at the tree or number of times dogs treed as reported on score card during the official hunt period.
2. If judge did not record # of raccoon seen, leave the space blank or request the information from the individual reporting scores. **DO NOT GUESS!**
3. Record casts which saw no raccoons with an "O" and casts which did not return with "NO RETURN".
4. If more than 1 county is hunted by a cast, record main county hunted only with all raccoons seen during hunt.
5. Do not report casts that spend any hunt time outside of West Virginia.
6. Record only raccoons seen at the tree where the dogs were scored. Record all raccoons seen. Do not record raccoons seen at trees where dogs were not scored.
7. Use more than 1 sheet if needed.

**MAIL COMPLETED FORM TO:**

**WV RACCOON FIELD TRIAL SURVEY  
Rich Rogers, Furbearer Program Coord.  
WV Division of Natural Resources  
1 Depot St.  
Romney, WV 26757**

**COMMENTS (anything of value - weather, food conditions, etc.):**

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