

Occurrence of Officer-Reported Raccoon Hunting Law Violators in Kentucky

Thomas L. Edwards, *Kentucky Department of Fish and Wildlife Resources, Frankfort, KY 40601*

Abstract: Data concerning violations by Kentucky raccoon hunters from June 1983 through December 1984 is presented. Of 5,692 raccoon hunters who were field-contacted by Kentucky conservation officers, 22% were cited for violation of some fish and wildlife regulation. One of every 6 raccoon hunters was cited for taking or attempting to take raccoons illegally. Highest monthly total violation rates occurred during October. Violation frequently was lowest during December. Most recent findings reveal lower raccoon hunter violations in eastern Kentucky than in the western or central regions. Review of violation rates by day of week show no apparent difference as the frequency of hunters contacted increased from Monday to Saturday.

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Hunting or chasing raccoons with dogs in Kentucky provides sporting opportunities afield which are exceeded in duration by no other type of hunting. The number of individuals (approximately 29,200 based on data from the National Hunting and Fishing Survey—1980) participating in raccoon hunting reveals this to be a major sport in Kentucky. The participants, however, have an unmeasured effect on the hunted species.

Kentucky's fish and wildlife regulations authorize sportsmen to pursue and tree raccoons using hunting dogs year round. However, raccoons may be harvested legally only during the furbearer-taking season or during the shake-out season, which occurs 3 weeks prior to the furbearer-taking season. During the designated shake-out season, a hunter is allowed to carry tree climbers and raccoon calls or squealers to enable him to shake raccoons from trees or to call them to the ground. At no time prior to the furbearer harvest season is a raccoon hunter permitted to carry a weapon or other device capable of killing a raccoon.

Because there is a 365-day-per-year opportunity for Kentucky's estimated 29,200 raccoon hunters (U.S. Dep. of Int. 1982) to enjoy their sport, even a relatively low incidence of individuals taking raccoons illegally could have a significant negative impact on raccoon populations. In separate studies, Minser and Pelton

(1982) and Taylor (1979) stated that illegal raccoon hunting may be preventing the increase or stability of raccoon populations in regions of Tennessee.

Wright (1977), reporting on dog training season violations by raccoon hunters in Kentucky, indicated an average of 28% of hunters checked by conservation officers were cited as taking or attempting to take raccoons illegally. Such findings were the first evidence of a significant occurrence of violations among Kentucky raccoon hunters in general. A difference in violation rates regionally was noted within the state.

There is today an increasing interest among sportsmen for higher raccoon populations. The Kentucky Department of Fish and Wildlife Resources (KDFWR) developed this study to determine the current incidence of violation rates among Kentucky raccoon hunters. Future application of such data may identify the impact of illegal harvests on raccoon populations. Secondly, this study identified periods of greatest raccoon hunter violation incidence during which law enforcement efforts should be concentrated in order to be most effective.

Methods

Raccoon hunter contact survey forms were distributed to all Kentucky conservation officers in May 1983. Verbal instructions and a short discussion of study procedures were given to conservation officers at that time.

During the study, a daily record of all field contacts with raccoon hunters from June 1983 through December 1984 was required of each officer. When two or more officers working together as a unit encountered hunting parties, one member of the unit was designated to report those contacts to avoid duplication. Specifically recorded were: date and county of contact, number in hunting party, number of hunters found in violation, description of violation, and number of illegally taken raccoons recovered.

Completed survey forms were sent monthly to the central office for tabulation. Results were compiled to determine monthly and regional totals.

All violations related to hunters found to be illegally possessing a weapon or actually found killing or attempting to kill a raccoon illegally were grouped as "taking or attempting to take." Other violation categories included hunting without a license, trespassing, and exceeding the legal limit. A category for other type of violations also was created.

To differentiate illegal activities occurring during dog training season and shake-out season from those during the harvest season, totals for each period were calculated. Shake-out season dates surveyed occurred from 22 October through 16 November 1983, and 22 October through 14 November 1984. Harvest season analysis covered both periods from 17 November 1983 through 31 January 1984, and 15 November through 31 December 1984. The remaining dates represented the dog training period. In all instances, 1983 and 1984 data for similar months during each season type were combined if available.

Results

While in the field from June 1983 through December 1984, Kentucky's conservation officers reported contacting 5,692 raccoon hunters among 2,031 hunting parties. On the average, 58% of all officers reported some monthly raccoon hunter contact. Rate of contact ranged highest during October at 83% and lowest for December at 38%. All rates were derived from the sum of 1983 and 1984 totals for similar months.

The total number of raccoon hunters, the rate of total violations, and the rate of hunters taking or attempting to take raccoons illegally during this study were highly variable between months (Table 1). Values for all 3 parameters during any month were greatest in October. December provided the fewest number of hunters checked. The lowest percentage of raccoon hunters found in violation occurred during December while no incidence of illegal taking or attempting to take were discovered during the month of January.

Throughout this investigation, 22% of raccoon hunters contacted were cited for violation of 1 or more fish and wildlife regulations. Of those citations incurred, 72% were by persons illegally taking or attempting to take raccoons and 23% were those hunting without a license. Trespassing, exceeding legal limits and other types of violations occurred at rates of 4.3%, 0.6%, and 0.4%, respectively.

One of every 6 raccoon hunters checked during this 19-month investigation was cited for taking or attempting to take raccoons illegally. The significance of this rate is somewhat diluted by the inclusion of contacts made during the legal harvest season. While examining each season individually (Table 2), the greatest rate of

Table 1. Occurrence of violation among Kentucky raccoon hunters from June 1983–December 1984

Month	<i>N</i> Contacted	% in Violation	% Taking or Attempting to Take Raccoons Illegally
January	119	15.97	0
February	178	27.53	17.42
March	261	14.91	7.28
April	251	25.10	17.93
May	178	21.91	12.92
June ^a	457	21.23	14.44
July ^a	605	20.33	14.05
August ^a	849	25.32	19.08
September ^a	935	17.54	12.51
October ^a	1,282	28.78	23.95
November ^a	400	16.50	12.00
December ^a	177	11.30	1.13
TOTAL	5,692	22.19	15.90

^a1983 and 1984 monthly totals are combined for similar months from June through December.

Table 2. Raccoon law violation rates by season type

Season Type	N Hunters Contacted	% Hunters in Violation	% Hunters Taking or Attempting to Take Illegally	N Illegally Harvested Raccoons Recovered
Dog training	4,570	23.04	16.95	75
Shake-out	629	24.00	19.23	19
Furbearer	493	11.97	1.83	11
TOTAL	5,692	22.19	15.90	105

violation was found to occur during the raccoon shake-out season. One of every 4 raccoon hunters contacted during that period in 1983 and 1984 was cited for some regulation infraction. Eighty percent of those violations involved persons caught taking or attempting to take raccoons illegally. Rates of violation during the dog training period were shown to average slightly less than that during the shake-out season. As was expected, the frequency of raccoon hunter violations was lowest during the legal furbearer harvest segment.

The recovery of illegally harvested raccoons by officers also varied seasonally. Officers confiscated 105 raccoons. The recovery rate of known illegally killed raccoons during the shake-out period was 1 per 30 raccoon hunters contacted. Recovery rates for illegally taken raccoons during the furbearer harvest season was 1 per 45 hunters, while 1 raccoon per 61 hunters checked during the dog training season was known to have been taken illegally.

Violation rates during this investigation were found to differ across the 3 major regions of Kentucky (Fig. 1). Regional differences in the percentage of all raccoon hunters found in violation (Table 3) were highest in the central zone and lowest in

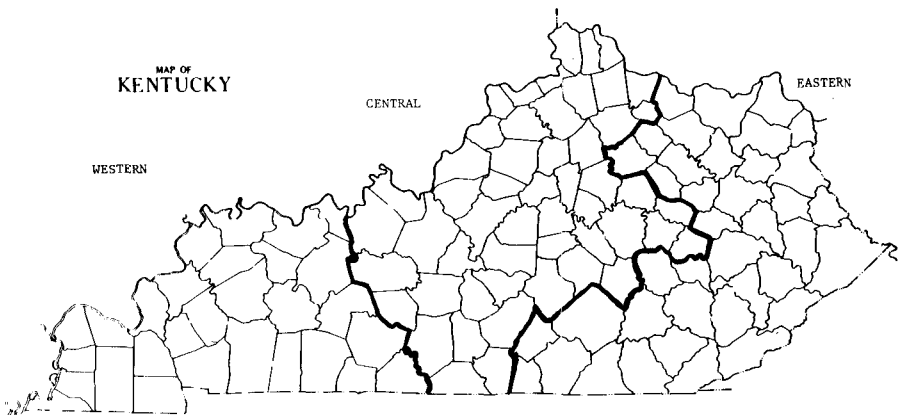


Figure 1. Three regions for data tabulation for Kentucky's Raccoon hunting violation study.

Table 3. Occurrence of raccoon law violations by region

Division	N Hunting Parties Contacted	N Hunters Contacted	% of Hunters in Violation	% of Hunters Taking or Attempting to Take Illegally
Western	223	540	23.51	19.07
Central	819	2,315	24.79	18.09
Eastern	989	2,837	19.80	13.50

Table 4. Percent of total raccoon hunters and illegal raccoon hunters contacted by day of week

	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Total
% Hunters contacted	8.37	6.98	7.18	10.85	11.39	26.35	28.88	100
% Illegal hunters contacted	9.84	5.53	7.77	10.88	10.36	24.87	30.74	100

the east. The percentage of hunters found taking or attempting to take raccoons illegally was greatest in western Kentucky at 19% and lowest in the east at 13%. The significance of the differences is untested.

Examination of the occurrence of raccoon hunter violations by day of the week (Table 4) indicated that, while 55% of raccoon hunter contacts occurred on Friday and Saturday, 56% of all violations were found also to occur during those days. Similarly, parallel results occurred for other days of the week. As the frequency of hunter contact by officers steadily increased from Monday through Saturday a correspondingly equal daily rate of violation among hunters was discovered.

Discussion

The results of this study continue to support the high degree of illegal activity associated with raccoon hunting in Kentucky as determined in an earlier study. Statewide, 1 of every 4 raccoon hunters checked from June 1983 through December 1984 was cited for violation of a fish and wildlife regulation.

Regional analysis of violation rates (Table 3) varied among the western, central and eastern zones but this investigation showed no evidence of the higher rate of violation within the eastern region as reported by Wright (1977). In fact, violation rates during this study for eastern Kentucky were the lowest of all 3 regions and were roughly half the rates for the same period during the 1977 study.

It was determined that a slight reduction has occurred in the percentage of hunter violations classified as taking or attempting to take raccoons illegally. The statewide rate in March through October 1977 was 78%. For an adequate comparison, the percentage of violations for taking or attempting to take during March through October 1984 was 74%.

Though there is only a slight difference in this overall violation rate between study periods, there is a more notable difference regionally within and between studies. During both studies, the rates for hunters taking or attempting to take were greater for the combined regions of western and central than in the eastern portion of Kentucky (Table 5). No data are available for other violation categories in 1977. However, data accumulated during this study indicate the difference in rates of taking or attempting to take between western, central and eastern regions was due to the effects of an increased occurrence of hunting without a license violations in eastern Kentucky.

Reasons for actual changes in violation rates collected between studies can only be a matter of speculation. Possible error or biases in collection of data may affect results, however, survey techniques were simple and basically identical. Implications that officers disproportionately reported contacts with illegal hunters seem unfounded since 78% of reported contacts were made with sportsmen who apparently abided by the law.

Two other possible explanations for differences in violation rates could be actual reduction in violation occurrences or increased difficulty in locating illegal hunters. Some conservation officers consider violation rates conservative because of the difficulty of actually locating hunters in the act of violation.

The number of raccoons recovered by officers as a result of contacts with illegal hunters was understandably low. Contacts with 905 illegal hunters resulted in 105 known illegally harvested raccoons. Difficulty in recovering illegally killed raccoons is even greater than apprehending illegal hunters. Officers frequently hear hunters shoot during the non-harvest season, presumably at raccoons, yet the impending contact with those hunters yields no raccoon and often no weapons.

Raccoons were recovered during dog training season and shake-out season from 10% and 16% respectively, of hunters cited for taking or attempting to take raccoons illegally. The only incidences of hunters cited for taking raccoons illegally during the furbearer season were for exceeding legal limits and hunting with the aid of a boat.

Monthly contacts with raccoon hunters and associated violation rates occurred somewhat unpredictably. Though hunter contacts rose monthly from May to Oc-

Table 5. Comparison of raccoon law violation rates in Kentucky during 1977 and 1983-84

Region	Percent Found in Violation		Percent Found Taking or Attempting to Take Raccoons Illegally	
	1983-84 ^a	1977	1983-84 ^a	1977
Western & Central (combined)	25.38	30.21	19.61	27.04
Eastern	20.64	40.01	14.58	29.05
Statewide	23.01	36.16	17.10	28.26

^aA segment of the 1983-84 study from March through October to allow comparisons of identical frame of time.

tober, violation rates behaved correspondingly each month with the exception of September. In both calendar year segments of this study September produced lower violation rates than did the month immediately preceding or following. March had the lowest rate of violation of any non-harvest season month. Though it is believed that a slight decline in illegal activity takes place during March and September, no adequate explanation is available for this occurrence.

The month of greatest violation frequency and rate was found in all cases to be October. Likewise, the period for 22 October up to the furbearer season on mid-November, collectively known as the shake-out season, is the period of greatest violation occurrence annually. The author feels that the slightly higher violation rates are inherent of both the shake-out season and the fact that this period immediately precedes the furbearer season. Some hunters use the shake-out season as a period to train or re-acquaint the hounds to raccoon hunting just prior to the furbearer season. To those hunters who run dogs all year, there may be added temptation and competition among hunters to take raccoons. It is also much easier and safer for hunters to shoot a raccoon from a tree rather than to climb and shake it out.

Violation rates during dog training season were found to be just slightly lower than those of shake-out season (Table 2). As one might expect, during furbearer season when it is legal to shoot or shake out raccoons, the frequency of raccoon hunter violations was approximately half that of the two previously mentioned periods. Nevertheless, nearly 12% of all raccoon hunters checked during the legal taking season were cited. The majority of these involved hunting without a license or trespassing.

Encounters with illegal raccoon hunters were not found to vary greatly in proportion to the number of total hunters contacted per day of the week (Table 4). As frequency of contacts with hunters increased from Monday to Saturday, violation rates likewise increased. Statewide, there was no evidence of increased violation rates for certain days of the week.

The number of raccoon hunters checked per day of week (Table 4) or per month (Table 1) was not directly indicative of attempted contacts by officers nor of raccoon hunter effort. As well, there were no means in this study to determine the degree of effort among officers to contact raccoon hunters.

In spite of the intensity of pursuit on raccoon populations in Kentucky, all indications are that the statewide population level remains stable (Edwards 1985). Even though regional population level data are not available, there is a definite opinion among raccoon hunting clubs that raccoon population levels are inadequate. While this study provides an indication of violation rate levels, the significance of such data upon the population levels of raccoons still remains unanswered. Most certainly in areas where raccoon habitat quality is poorest, the effects of the continuous illegal harvest effort evidenced by this study are limiting the opportunity for legal methods of raccoon chasing and harvest.

The following are offered as a summary of this study:

1. 22% of the 5,692 raccoon hunters contacted from June 1983 through December 1984 were cited for violation of some fish and wildlife regulation.

2. 16% of all hunters contacted were cited for illegally taking or attempting to take raccoons.
3. October was the month of greatest hunter contacts and violations.
4. 10% of the raccoon hunters cited for taking or attempting to take raccoons illegally outside the furbearer season was found in possession of an illegally taken raccoon.
5. The percentage of raccoon hunters found in violation during shake-out, dog training, and furbearer seasons were 24%, 23% and 12%, respectively.
6. Statewide, there appears to be little difference in rates of violation among raccoon hunters between days of the week.
7. The current degree of illegal hunting by Kentucky raccoon hunters is suspected to be a major factor in preventing the increase of raccoon populations in regions of the state.

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