

# White-tailed Deer Age Report

## from the

# 2016 Deer Harvest

The Vermont Fish and Wildlife Department has made a concerted effort, beginning in 2015, to increase the amount of age data collected from harvested bucks. This is part of the ongoing Comprehensive Deer Management Evaluation, which will continue through the 2017 deer hunting seasons. During this time, the Department will continue to review current deer management strategies. Additional data on deer ages and antler development will help evaluate concerns related to the antler point restriction and allow for comparisons among different regions of the state.

This report summarizes the results of cementum aging conducted on 4,600 white-tailed deer harvested during the 2016 youth and rifle seasons in Vermont. Harvest age structure, body weight, and antler size can vary from year to year; therefore, it is not appropriate to draw conclusions from these data alone. This summary is presented, without interpretation, for informational purposes. Lists of individual deer ages by wildlife management unit (WMU) and town are provided in Appendix A.

### Cementum Aging

Deer ages in this report were obtained via cementum aging performed by Matson's Laboratory, LLC, Manhattan, MT. This technique involves sectioning the root of the deer's central incisor, staining it, and counting the annual growth rings (just like the growth rings in a tree). The rings are laid down in the winter, and therefore tend to be more distinct in animals from northern regions of North America. Matson's reported accuracy for northern white-tailed deer is 95%. When deer are aged incorrectly, nearly all will be within one year of their actual age. Human error does occasionally occur, and teeth may get mixed up, but we believe this is also rare.

### Youth Season

Youth season is an important data collection period because youth hunters may harvest any deer regardless of sex, age, or antler characteristics. Therefore, this season provides biological information on the entire deer population, not just legal-antlered bucks. The Department operated 25 biological reporting stations during the youth season and examined a total of 578 deer (39% of the youth season harvest). This included 225 adult does, 244 antlered bucks, and 109 fawns. Yearlings accounted for 71% of the antlered bucks examined, while 24% were 2 years old and 5% were 3 years old or older (Figure 1). Adult does tend to live much longer than bucks due primarily to lower hunting pressure, and that is reflected in the adult female age structure (Figure 2). The oldest doe was 17 years old and was harvested in the town of Barton.

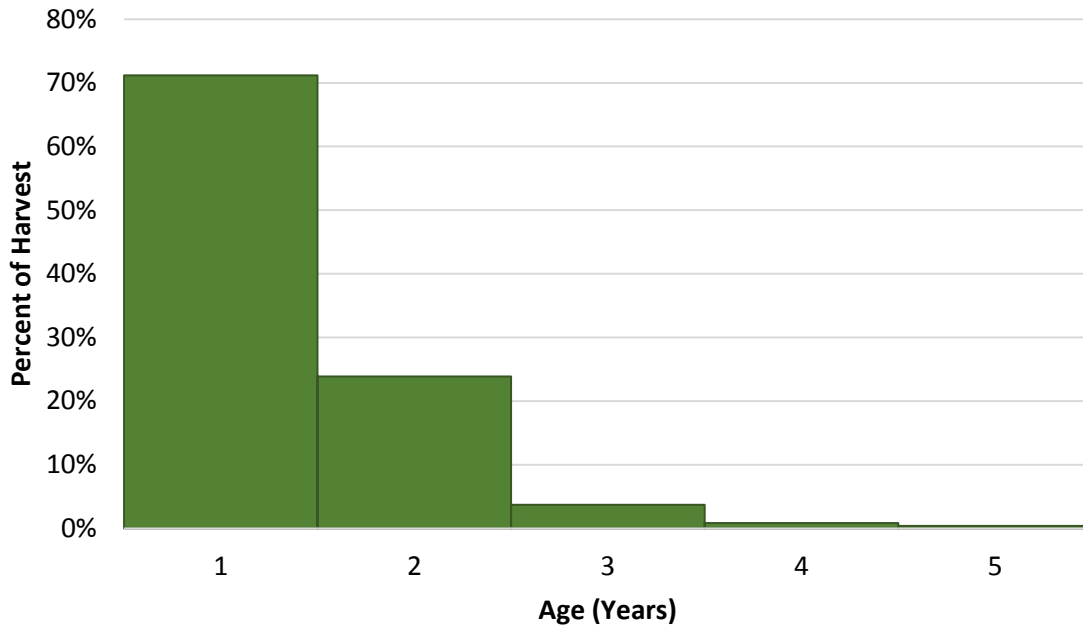


Figure 1. Age composition of the adult buck harvest during the youth season. Data are from 243 deer examined by Department staff at biological reporting stations.

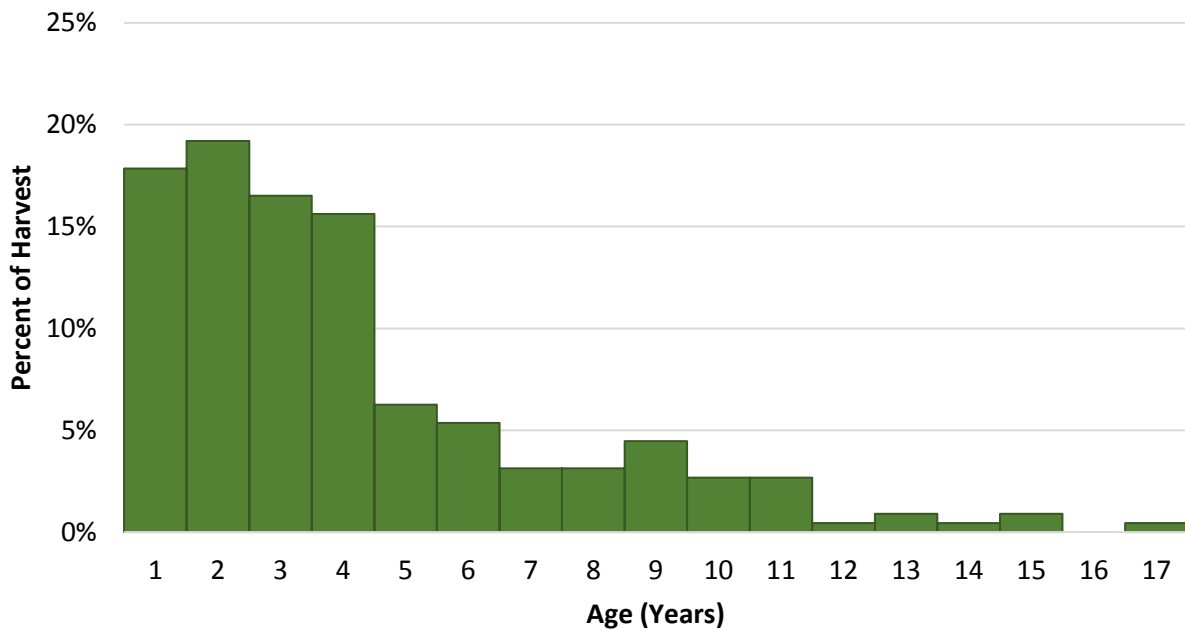


Figure 2. Age composition of the adult doe harvest during the youth season. Data are from 224 deer examined by Department staff at biological reporting stations.

## Rifle Season

The Department operated 23 biological reporting stations during the opening weekend of rifle season and examined 1,271 antlered bucks (16% of the rifle harvest). The Department also asked all successful rifle season hunters to provide a tooth from their deer. This effort resulted in an additional 2,769 teeth, representing about 36% of the rifle harvest and 43% of the deer that weren't examined by biologists. In total, the Department was able to obtain accurate ages for 3,904 bucks harvested during the rifle season (50% of the rifle season harvest; some teeth were broken and could not be aged).

### Age Composition of the Harvest

The antler point restriction protects most yearlings and some 2-year old bucks from harvest, so this age distribution is not representative of the deer population. It does, however, provide good information on the ages of deer that most hunters can legally harvest. Statewide, 34% of the rifle season harvest consisted of yearlings, 46% were 2 years old, 13% were 3 years old, and 7% were 4 years old or older (Figure 3). The oldest bucks were 12 years old and were harvested in the towns of Brownington and Brattleboro. These were the oldest bucks ever documented in Vermont. Harvest age composition did vary among WMUs (Table 1). A list of individual deer ages by wildlife management unit (WMU) and town is provided in Appendix A.

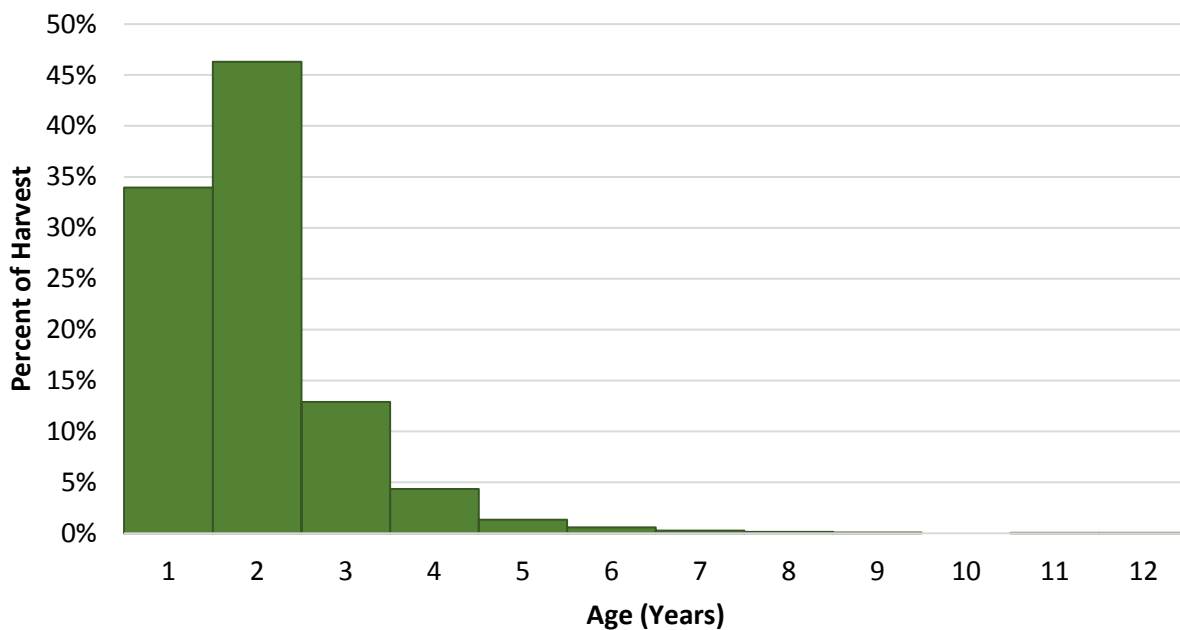


Figure 3. Age composition of the rifle season harvest. Data are from deer examined by Department staff at biological reporting stations and teeth submitted by hunters ( $n = 3,904$ ).

Table 1. Age composition of the rifle season harvest by Wildlife Management Unit.

WMU	Sample Size <sup>1</sup>		Age			
	n	(%)	1	2	3	≥4
A	50	(41%)	64%	28%	8%	0%
B	340	(36%)	32%	54%	11%	4%
C	125	(37%)	30%	47%	15%	7%
D1	328	(60%)	35%	44%	14%	6%
D2	159	(53%)	41%	38%	14%	8%
E1	95	(77%)	37%	29%	13%	21%
E2	36	(52%)	39%	22%	11%	28%
F1	139	(59%)	45%	46%	7%	2%
F2	163	(61%)	41%	48%	9%	2%
G	106	(42%)	22%	50%	14%	14%
H	207	(51%)	28%	44%	20%	9%
I	119	(47%)	26%	45%	19%	10%
J1	311	(63%)	31%	50%	11%	9%
J2	311	(43%)	32%	50%	12%	7%
K	361	(56%)	23%	59%	14%	3%
L	57	(24%)	25%	46%	23%	7%
M	87	(38%)	34%	43%	14%	9%
N	364	(66%)	38%	45%	12%	5%
O	282	(53%)	45%	40%	10%	5%
P	154	(62%)	36%	40%	14%	10%
Q	110	(48%)	33%	45%	15%	8%
<b>STATE</b>	<b>3904</b>	<b>(50%)</b>	<b>34%</b>	<b>46%</b>	<b>13%</b>	<b>7%</b>

<sup>1</sup> Sample size shows the number of deer that were aged by cementum annuli analysis and the percentage of the total rifle season harvest in that WMU.

### Body Size and Antler Development

Body weight increased until 6 years old, when it peaked at around 190 pounds (field dressed; Figure 4). However, there was considerable variation within age classes. For example, body weight of 2-year-olds ranged from 89 pounds to 215 pounds. Number of antler points followed a similar pattern to body weight, increasing steadily until age 3 and leveling off after age 4 at 8 points (Figure 5). Again, there was considerable variation within each age class.

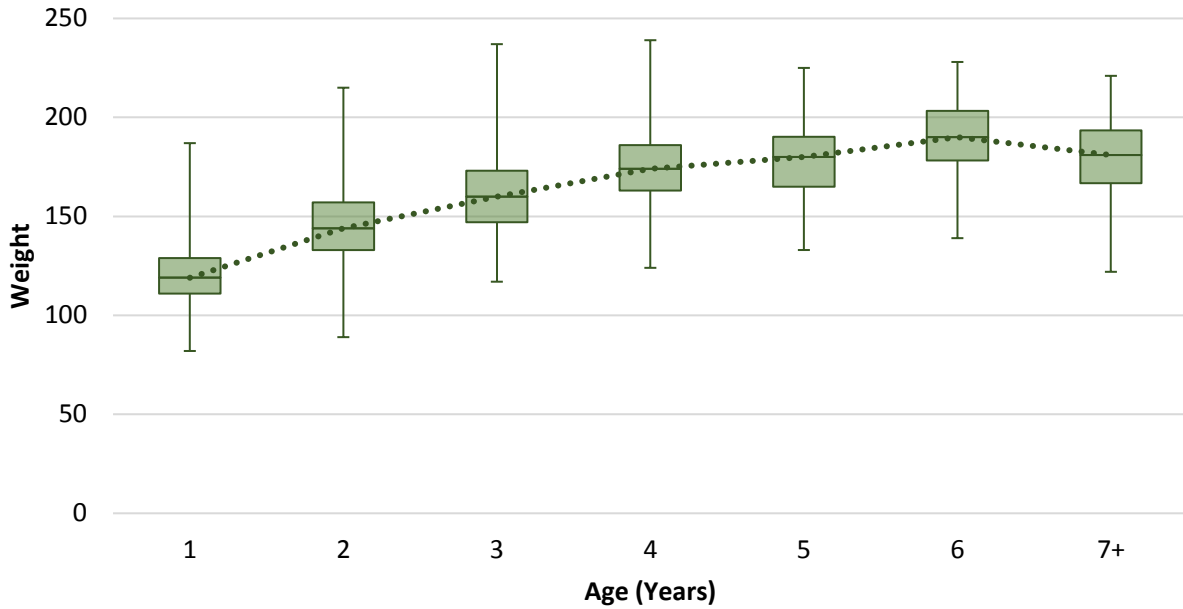


Figure 4. Field-dressed body weight of adult bucks harvested during the 2016 youth and rifle seasons. Data for 1 and 2-year-old deer are from youth season only because many deer in these age classes are not legal during the rifle season. The dotted line represents the median body weight for each age class, boxes show the middle 50% of deer, and the “whiskers” show the minimum and maximum weights.

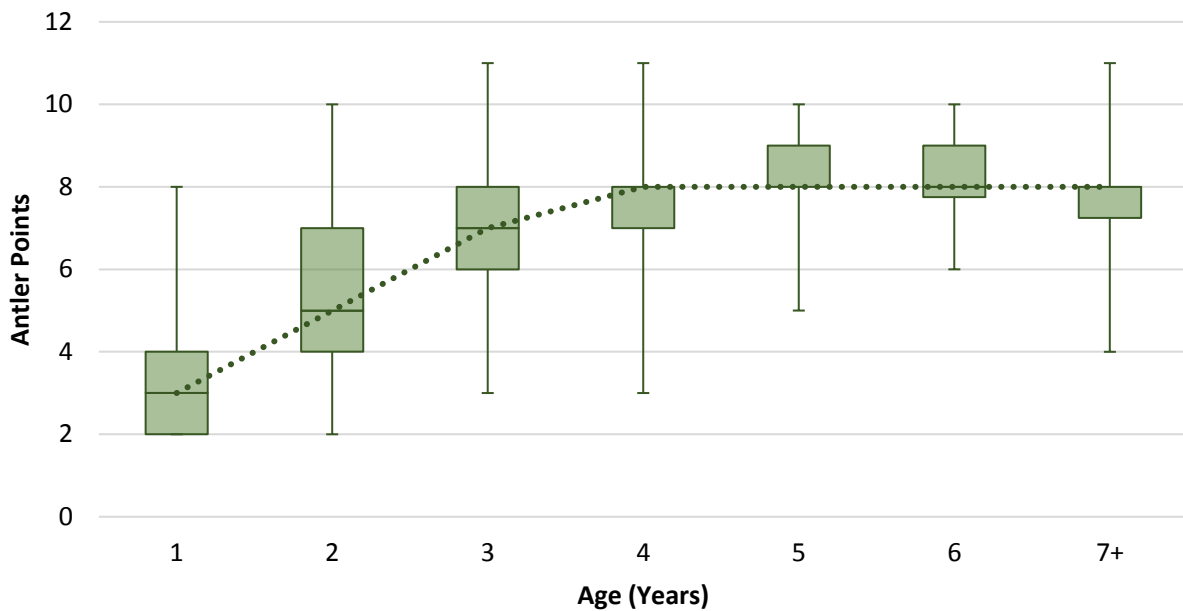


Figure 5. Total antler points on adult bucks harvested during the 2016 youth and rifle seasons. Data for 1 and 2-year-old deer are from youth season only because many deer in these age classes are not legal during the rifle season. The dotted line represents the median antler points for each age class, boxes show the middle 50% of deer, and the “whiskers” show the minimum and maximum number of points.