

BLACK ROCK FOREST 2010 DEER HARVEST REPORT

THE SEASON

November 20 to December 12

The harvest produced 61 kills.

Bow Season --	3 Deer	2 Buck	1 Antlerless
Rifle Season --	58 Deer	26 Bucks	32 Antlerless
Muzzleloader season --	0 Deer	0 Bucks	0 Antlerless

	<u>HUNTERS</u>	<u>VISITS</u>	<u>(VEHICLES)</u>	<u>BUCKS</u>	<u>TOTAL</u>
10 Year Average	172	567	419	16%	<u>Bucks and Antlerless</u> 27%
Range (Hi-Low)	208-140	695-460	510-223	21% - 8%	39% - 21%
2010	185	564	400	15%	33%

PERMITS AND LICENSES FILLED

<u>Type</u>	<u>Number Harvested</u>
Big Game	
Rifle	21
Bow	3
Muzzleloader	0
Deer Management Unit Permit	14
Deer Management Assistance Program	<u>23</u>
	61

<u>HUNTING PRESSURE AND SUCCESS BY ZONE</u>				
<u>ZONE</u>	<u>ACRES</u>	<u>HUNTER VISITS</u>	<u>BUCKS</u>	<u>DOES</u>
I	450	53	3	1
II	520	87	3	9
III	450	43	7	2
IV	460	128	7	11
V	400	47	5	2
VI	500	60	1	3
VII	150	30	0	0
VIII	330	81	3	3
MINERAL SPRINGS	120	29	1	0
SANCTUARY	220	6	0	0
TOTAL	3600	564	30	31

BLACK ROCK FOREST
2010 DEER HARVEST REPORT

Summary

	<u>2008</u>	<u>2009</u>	<u>2010</u>
Acorns	Low	Fair	Bumper
Overwinter Deer Density	21 dpm ↓	17 dpm ↓	14 – 16.8 dpm ↑
Average Fawn Weight	47 lbs. ↓	51 lbs. ↑	55 lbs. ↑
Yearling ABD	14.7 mm ↓	14.4 mm ↓	16.6 mm ↑
Yearling Buck Take	17 Deer	6 Deer ↓	14 Deer ↑

An increase in herd population appears imminent. The winter of 2010 appears to be the low in the population cycle of Black Rock deer. The rate of recovery will be interesting indeed, with the continued implementation of the Deer Management Assistance Program.

↓↑ - Indicates relation to previous year

THE DEER

YEARLING MALES

YEAR	TOTAL YEARLINGS											ANTLER POINTS	(mm)	(lbs.)	% OF LEGAL BUCK TAKE
		SPK	3	4	5	6	7	8	sub legal	UK	BEAM DIAMETER		BODY WEIGHT (dressed)		
2000 - 2009															
TOTAL	117	50	9	24	11	8	0	0	11	4					
AVERAGE	12	-----PER YEAR-----													48%
RANGE (hi - low)	17 - 5	-----PER DEER-----										3.1	15.5	87	
		-----PER YEAR-----										4.5 - 2.3	17.7 - 14.0	91 - 75	57% - 29%
2010	14	2	2	4	3	0	1	0	2	0		4	16.6	93	54%

2 1/2 YEAR OLD MALES

YEAR	TOTAL 2 1/2 years											ANTLER POINTS	(mm)	(lbs.)	% OF LEGAL BUCK TAKE
		SPK	3	4	5	6	7	8	9	10	UK		BEAM DIAMETER	BODY WEIGHT (dressed)	
2000 - 2009															
TOTAL	75	5	3	19	6	22	11	8	0	0	1				
AVERAGE	8	-----PER YEAR-----													32%
RANGE (hi - low)	11 - 3	-----PER DEER-----										5.5	21.5	106	
		-----PER YEAR-----										6.3 - 4.9	23.6 - 20.0	113 - 95	44% - 8%
2010	8	1	0	1	1	0	2	2	1	0	0	6.2	21.7	103	31%

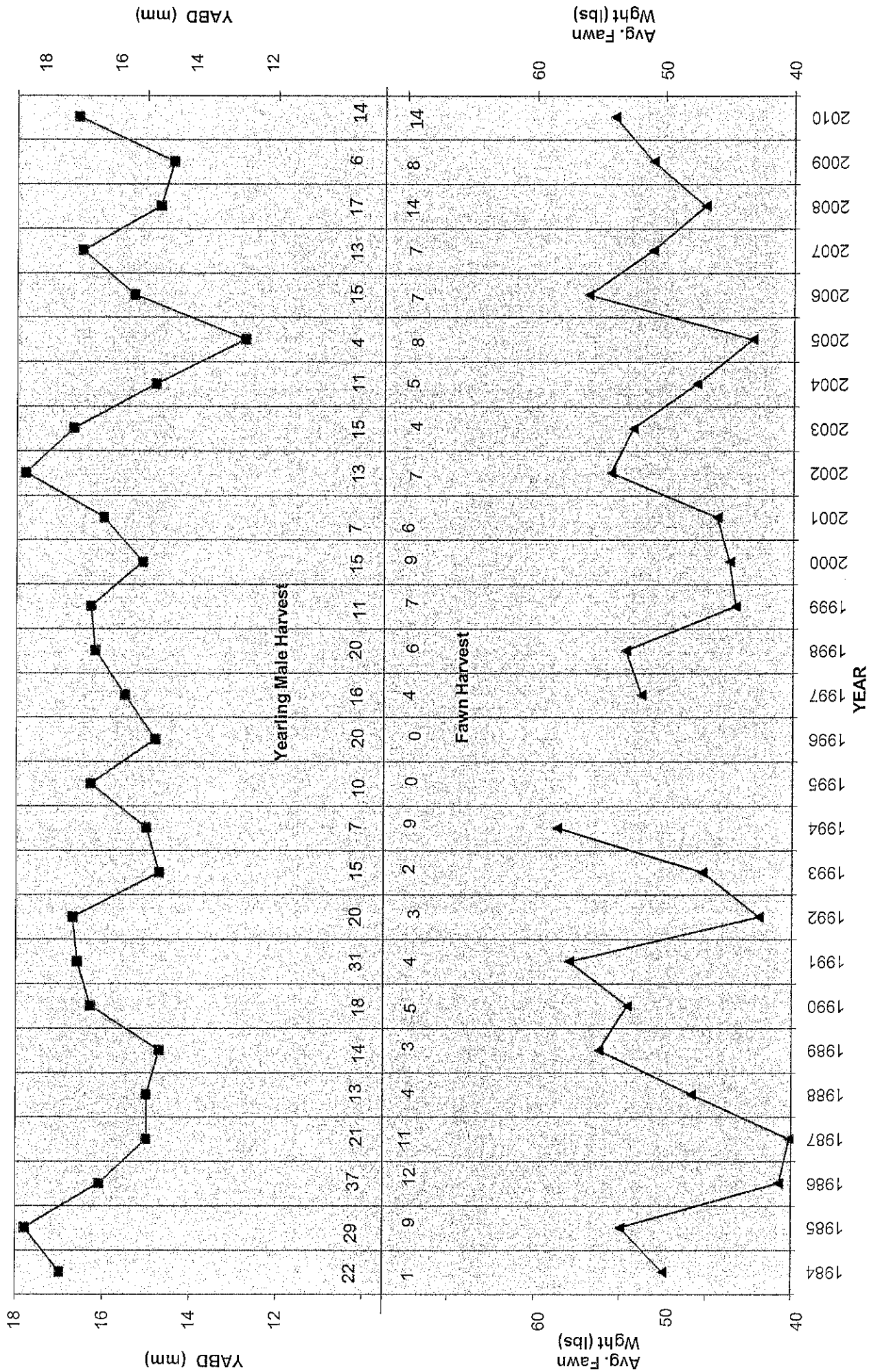
3 1/2 + 4 1/2 YEAR OLD MALES

YEAR	TOTAL 3 1/2 years											ANTLER POINTS	(mm)	(lbs.)	% OF LEGAL BUCK TAKE
		SPK	3	4	5	6	7	8	9	10	UK		BEAM DIAMETER	BODY WEIGHT (dressed)	
2000 - 2009															
TOTAL	53	0	0	4	4	8	12	21	1	2	1				
AVERAGE	5	-----PER YEAR-----													20%
RANGE (hi - low)	14 - 0	-----PER DEER-----										7	25.6	121	
		-----PER YEAR-----										10.0 - 5.0	28.6 - 21.7	135 - 109	36% - 0%
2010	4	0	0	0	0	0	2	2	0	0	0	7.5	29.2	132	15%

ANTLERLESS

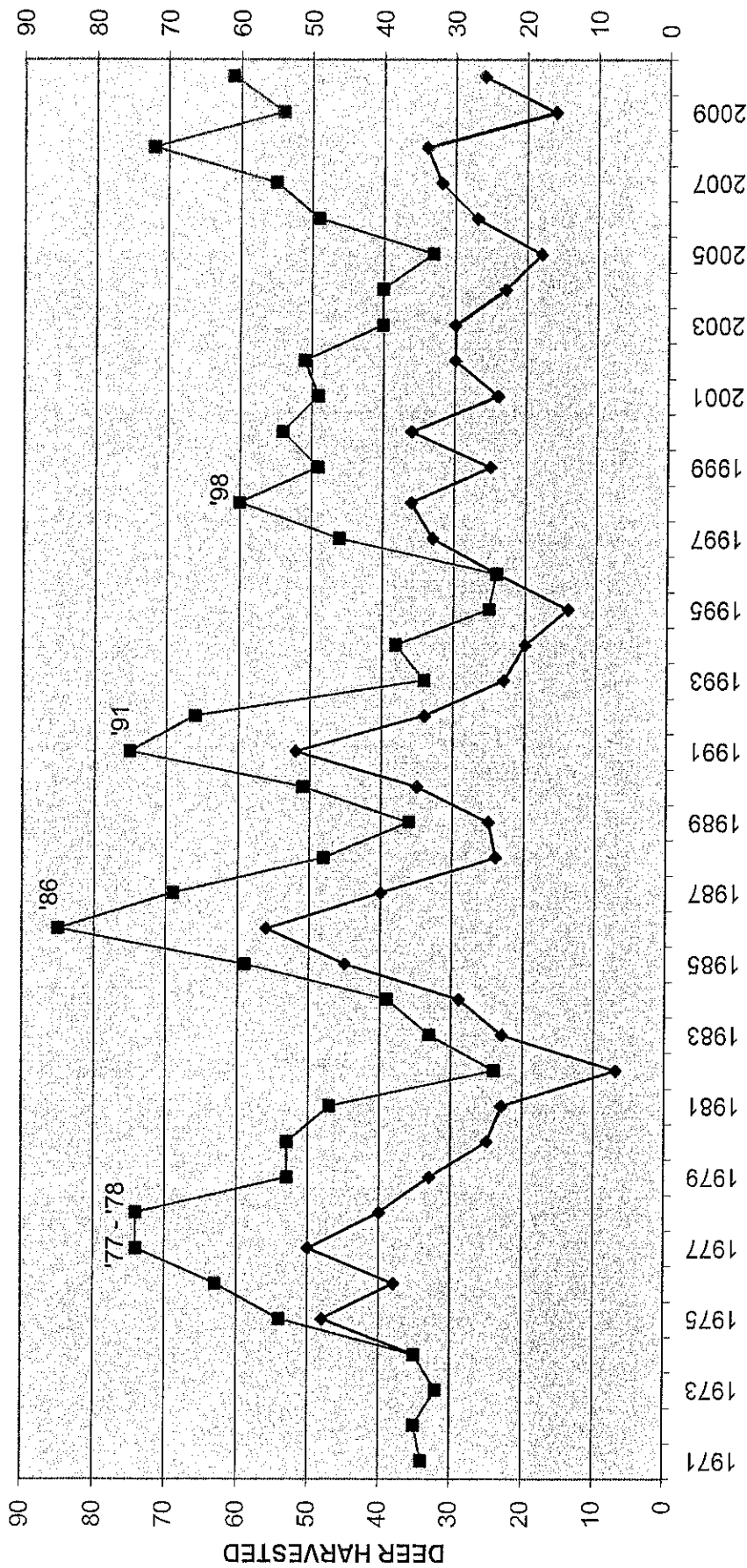
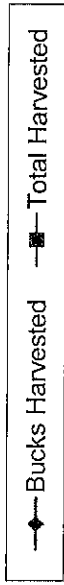
AGE CLASS	Total	MALES					FEMALES									
		BB	SUB LEGAL	Fawn	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	10.5	Unknown	% 3.5+	
Number Harvested	37	4	2	10	2	5	6	4	1	1	0	2	0	0	40%	
Avg. Dressed Weight		56	108	54	80	88	91	102	82	104	0	82	0	0		

POPULATION TREND



Legend:
 - YABD (mm) (line with square markers)
 - Avg. Fawn Weight (lbs) (line with triangle markers)

BUCK HARVEST VS TOTAL HARVEST 1971 - 2010



1981 - Gypsy Moth Defoliation 90%

1986 - Gypsy Moth Defoliation 70%

1992 - No Mast

1993 - March 13 - 14 Blizzard

1997 - 108" Snow

1999 - Drought, No Mast

2000 - Poor Mast

2001 - 81" Snow

2003 - No Mast, 90" Snow

2004 - Woolly Adelgid Infestation - Hemlock Mortality over 50%

2005 - Poor Mast

2008 - Dec. 12 Ice Storm

2008 - Low Mast

2010 - Bumper Mast Crop

DEER HARVEST

1970 - 2010

DATE	BUCK	DOES	TOTAL HARVEST
1970	24	0	24
1971	34	0	34
1972	35	0	35
1973	32	0	32
1974	35	0	35
1975	48	6	54
1976	38	25	63
1977	50	24	74
1978	40	34	74
1979	33	20	53
1980	25	28	53
1981	23	24	47
1982	7	17	24
1983	23	10	33
1984	29	10	39
1985	45	14	59
1986	56	29	85
1987	40	29	69
1988	24	24	48
1989	25	11	36
1990	35	16	51
1991	52	23	75
1992	34	32	66
1993	23	11	34
1994	20	18	38
1995	14	11	25
1996	24	0	24
1997	33	13	46
1998	36	24	60
1999	25	24	49
2000	36	18	54
2001	28	21	49
2002	30	21	51
2003	30	10	40
2004	23	17	40
2005	19	14	33
2006	27	22	49
2007	32	23	55
2008	34	38	72
2009	20	34	54
2010	30	31	61

BLACK ROCK FOREST ACORN REPORT - 2010

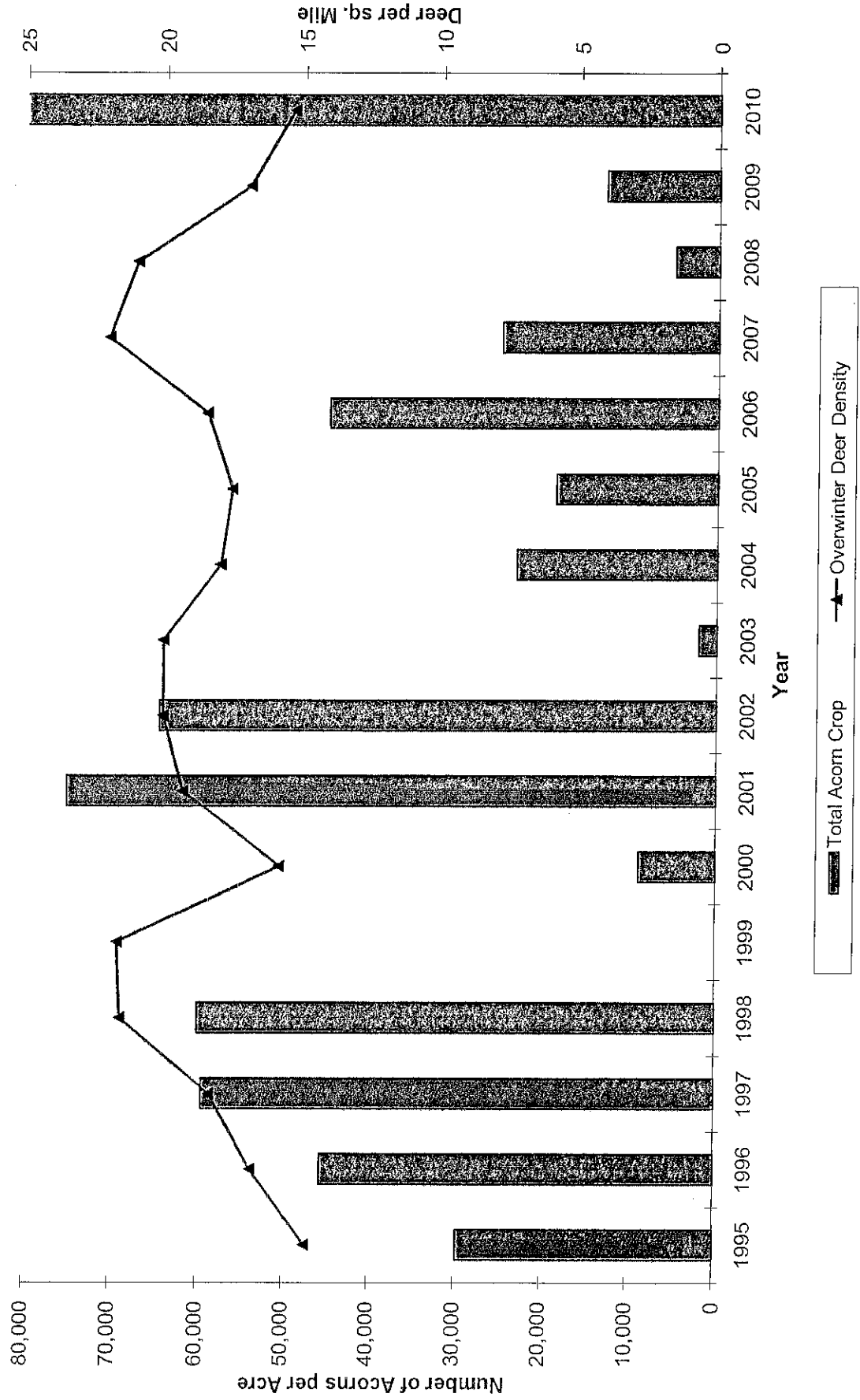
	Red Oak	Chestnut Oak	White Oak	Total
Acorns per acre	83,695	44,822	29,535	158,052
% Sound acorns (float test)	56%	98%	90%	
Sound acorns per acre	46,869	43,925	26,581	117,375
% of trees producing acorns	64%	60%	55%	63%
Average number of acorns per pound	93	85	151	
Pounds per acre	504	517	176	1,197

The largest acorn crop in recent history has fallen upon the region. To consider how remarkable this bumper crop is, a look at forest trees the past two years proves interesting. On December 12, 2008 a severe ice storm damaged or knocked down many forest trees. Breaking of large limbs left the forest canopy with many injuries. The next year (2009) many damaged trees shifted into survival mode by sprouting new growth near the points of injury, others could not. With so much energy going to tree health, little energy was left for an acorn crop in 2009. Surprisingly in 2010, trees may have demonstrated their greatest survival strategy, producing seed. 2010 will go down in history as one of the greatest acorn producing years on record.

John Brady
Forest Manager

NOTE: The task of measuring such a large crop of acorns can be overwhelming. The help of 3rd and 4th graders from Lee Road and Willow Avenue Elementary schools, collecting, floating, counting and weighing so many acorns was greatly appreciated. Thank you.

Acorn Crop and Overwinter Deer Density



BLACK ROCK FOREST SNOW FALL

December 1, 2009 -- March 31, 2010

DECEMBER
24.0"

JANUARY
5.0"

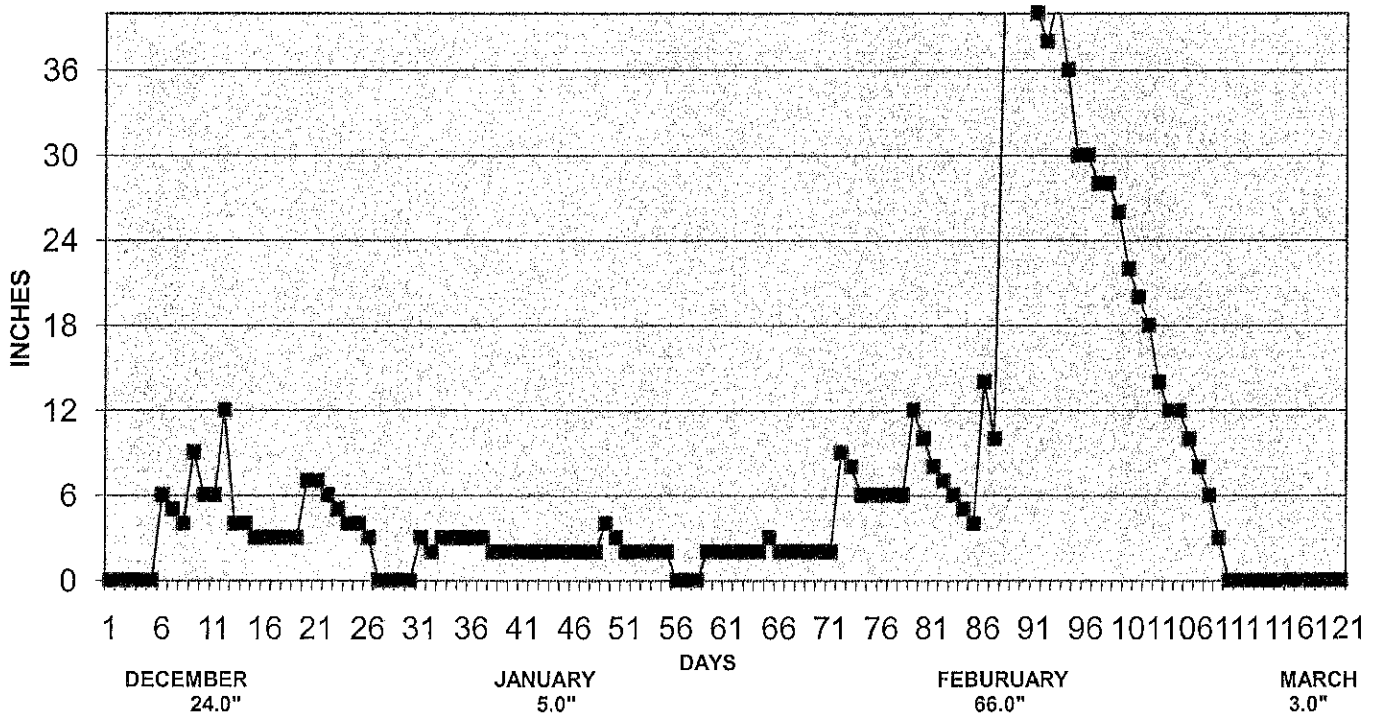
FEBRUARY
66.0"

MARCH
3.0"

TOTAL – 98.0 INCHES

SNOWPACK DEPTH

DECEMBER 01, 2009 -- MARCH 31, 2010
98.0 Inches Snow



Snow Events

15 snow events
 First Snow – Dec. 6, 2009
 Last snow – Mar. 03, 2010
 4 Events < 2"
 6 Event 6"+
 1 Events 12"+
 Largest Snow Event – Feb. 26, 2010 (38")

Snow Pack

97 days snow cover
 51 Continuous days
 43 Days 6"+
 21 Days 12"+
 15 Days 18"+
 12 Days 24"+
 7 Days 36"+

WINTER DEER TRACKING INDEX

YEAR	Tracking Events	Snowfall (inches)	Distance # of Deer (miles)	# of Deer/Mile	# Of Groups	Deer per Group	Min. Overwinter Deer Density (Deer per sq. mi.)
1995	5	18	37.1	4.9	56	3.2	14.8
**1996	5	109	40.1	6.6	86	3.1	16.8
1997	6	50	37.8	6.4	83	2.9	18.3
1998	5	26.5	37.3	8.7	98	3.3	21.5
1999	6	29.5	41.8	7.8	87	3.7	21.6
2000	8	32	85.1	4	144	2.4	15.8
2001	10	81	86.5	3.6	118	2.6	19.3
2002	2	22	28.8	7.8	67	3	20.0
2003	Due to early heavy snowfall, prolonged snowpack and low deer movement, tracking census was suspended.						
2004	6	71	92.3	3.2	113	2.6	18.0
2005	7	80	76.1	3.4	95	2.8	17.6
2006	10	53	80.6	4.0	137	2.5	18.5
2007	6	40.5	43	7.5	92	3.5	22.0
2008	5	48	54.5	5.1	93	3.0	20.6
2009	5	50	30.4	3.0	36	2.5	17.0
2010	9	98	100.4	3.7	144	2.6	14.0 - 16.8

% OF TOTAL

GROUP	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1 DEER	9	14	10	13	1	24	24	11	11	21	20	26	10	16	28	26
2 DEER	28	18	30	19	22	35	37	14	14	27	27	49	18	21	14	50
3 DEER	34	28	19	25	28	28	33	21	21	26	25	35	22	30	42	35
4 DEER	11	11	15	21	24	8	13	12	12	13	14	18	17	12	8	21
5 DEER	7	10	4	12	13	2	8	3	3	8	7	6	14	12	8	7
6 DEER	11	5	5	8	12	3	3	7	7	4	6	3	11	8	0	5
Deer/Mile	4.9	6.6	6.4	8.7	7.8	3.8	3.6	7	7	3.2	3.4	4	7.5	5.1	3	3.7
Avg. Deer/Group	3.2	3.1	2.9	3.3	3.7	2.4	2.6	3	3	2.6	2.8	2.5	3.5	3	2.5	2.6
Buck Take (1.5 yrs. +)	14	24	30	33	21	30	24	25	25	27	20	16	27	30	16	26
TOTAL TAKE	25	24	47	58	48	50	49	51	40	40	33	49	55	72	54	61

**SEE "1995-96 WINTER SEVERITY REPORT"

1984-2010 HARVEST DATA: FAWNS

YEAR	TOTAL FAWN HARVESTED	TOTAL ANTLERLESS TAKE (INCLUDES BB) (AND SUBLEGALS)	FAWNS AS % OF ANTLERLESS HARVEST	MALE		FEMALE	
				TOTAL HARVESTED	AVG DRESSED* WEIGHT (LBS)	TOTAL HARVESTED	AVG DRESSED WEIGHT (LBS)
1984	1	10	10%	0		1	50
1985	9	20	45%	6	56	3	48
1986	12	37	32%	8	45	4	33
1987	11	36	31%	7	38	4	44
1988	4	25	16%	1	44	3	49
1989	3	14	21%	3	55	0	0
1990	5	19	26%	3	56	2	48
1991	4	26	15%	3	59	1	52
1992	3	33	9%	1	48	2	40
1993	2	12	16%	1	46	1	48
1994	9	22	40%	4	65	5	53
1995	0	11	0%	0			
1996							
1997	4	16	25%	3	53	1	48
1998	6	25	24%	3	55	3	51
1999	7	28	25%	4	45	3	43
2000	9	24	37%	6	45	3	46
2001	6	25	24%	4	48	2	41
2002	7	26	27%	5	54	2	54
2003	4	13	31%	3	55	1	44
2004	5	25	20%	3	53	2	39
2005	8	18	44%	3	46	5	42
2006	7	23	30%	5	60	2	54
2007	7	25	28%	2	51	5	51
2008	14	42	33%	4	49	10	46
2009	8	38	21%	4	49	4	53
2010	14	35	40%	4	56	10	54
TOTALS	169	628	27%	90		79	

* DRESSED WEIGHT - Weight of animal with all internal body organs removed.
(Live weight calculator = dressed weight x 1.25)

1995 - 2010 WHITE-TAILED DEER HARVEST REPORT

YEARLING MALES

YEAR	TOTAL MALES	ANTLER POINT CLASS										AVG. PTS.	AVG BEAM D/A. (MM)	AVERAGE WT. (LBS)	FREQ. %		
		<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>LEGAL</u>	SUB						
1995	10	6	0	2	1	1	0	0	0	0	0	0	0	3.1	16.3	91	72
1996	20	11	6	2	1	0	0	0	0	0	0	0	0	2.6	14.8	88	83
1997	16	8	3	3	1	0	0	0	0	0	0	0	0	2.8	15.5	87	53
1998	20	9	2	5	1	2	0	1	0	0	0	0	0	3.5	16.2	88	60
1999	11	3	1	7	0	0	0	0	0	0	0	0	0	3.4	16.3	89	52
2000	15	4	3	6	1	0	0	0	0	0	0	1	1	3.2	15.1	84	50
2001	7	5	0	1	0	0	0	0	0	0	0	1	1	2.3	16.0	90	29
2002	13	6	1	3	2	0	0	0	0	0	0	1	1	3.1	17.7	88	52
2003	15	5	1	1	2	5	0	0	0	0	0	0	0	4.5	16.7	90	55
2004	11	4	0	1	1	0	0	0	0	0	0	5	5	2.8	14.8	80	55
2005	5	2	0	2	0	0	0	0	0	0	0	1	1	3.0	14.0	75	31
2006	15	7	1	2	3	1	0	0	0	0	0	0	0	3.2	15.3	89	56
2007	13	6	2	2	1	2	0	0	0	0	0	0	0	3.3	16.5	91	43
2008	17	9	1	4	0	0	0	0	0	0	0	1	1	2.6	14.7	91	57
2009	6	2	0	2	1	0	0	0	0	0	0	1	1	3.4	14.4	88	37
2010	14	2	2	4	3	0	1	0	0	0	0	2	2	4.0	16.6	93	54

2 1/2 YEAR OLD MALES

YEAR	TOTAL MALES	ANTLER POINT CLASS										AVG. PTS.	AVG BEAM DIA. (MM)	AVERAGE WT. (LBS)	FREQ. %		
		<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>LEGAL</u>	SUB						
1995	2	0	1	0	0	0	0	0	0	0	0	0	0	5.5	22.0	118	14
1996	2	0	0	1	1	0	0	0	0	0	0	0	0	4.5	21.5	119	8
1997	11	2	0	1	0	3	2	3	0	0	0	0	0	5.8	21.4	109	37
1998	8	0	0	1	2	1	2	2	0	0	0	0	0	6.3	23.1	115	24
1999	6	0	0	1	0	1	2	0	0	0	0	0	0	6.0	22.5	111	29
2000	11	0	0	3	1	6	0	1	0	0	0	0	0	5.5	20.7	106	37
2001	10	1	0	2	1	4	2	0	0	0	0	0	0	5.7	20.0	95	41
2002	3	0	0	0	1	2	0	0	0	0	0	0	0	5.7	21.7	103	12
2003	4	0	0	1	0	0	3	0	0	0	0	0	0	6.3	22.8	105	15
2004	9	1	0	3	0	3	2	0	0	0	0	0	0	5.1	20.9	106	45
2005	7	2	0	1	0	0	1	2	0	0	0	0	0	5.2	20.2	108	44
2006	7	1	0	0	3	1	0	2	0	0	0	0	0	5.6	23.6	111	26
2007	11	0	1	4	0	3	1	2	0	0	0	0	0	5.6	22.4	104	37
2008	7	0	1	4	0	0	1	1	0	0	0	0	0	4.9	20.7	107	23
2009	6	0	1	1	0	3	1	0	0	0	0	0	0	5.3	21.6	113	37
2010	8	1	0	1	1	0	2	2	1	0	0	0	0	6.2	21.7	103	31



Black Rock Forest Consortium

American Museum of Natural History • Barnard College • The Browning School • The Calhoun School • Central Park Conservancy
Columbia University • Cornwall Central School District • The Dalton School • Frederick Douglass Academy
The Hewitt School • Hunter College • Marine Biological Laboratory -The Ecosystems Center • Metropolitan Montessori School
New York City Department of Parks & Recreation • New York-New Jersey Trail Conference • New York University
Newburgh Enlarged City School District • The School at Columbia University • The Spence School
Storm King School • Trevor Day School • Urban Assembly for Applied Math and Science

2010 Village of Cornwall-on-Hudson Deer Harvest

The second year of the Village of Cornwall-on-Hudson deer herd reduction program harvested 35 deer, one more than the initial hunt of 2009. Bow hunters from the Black Rock Fish and Game Club safely and successfully culled 31 antlerless and four antlered white-tailed deer.

Ten of the antlerless were fawns (5 male – 5 female). Fawns provide a good indication of herd and range health for the past six months. Low fawn weights (eight out of 10 below 50 lbs.) and the harvest of two sub-legals (yearling bucks with underdeveloped antlers less than three inches) reveal probable feeding competition with adult deer due to range degradation and population abundance.

Nineteen adult does were harvested, thirteen being in the 2 ½ and 3 ½ year age classes. This sample of the live herd demonstrates excellent reproduction potential. All adult does inspected were of good health and appear to have produced young.

The four adult bucks taken were physically fit pertaining to body weight, but were slightly lacking in antler development.

Summary

The removal of nineteen adult does from the village population will prevent the increase of the herd by up to 35 young-of-the-year in spring 2011. This, coupled with the additional sixteen deer harvested totals 70 individuals that will be absent from the village deer herd in the spring of 2011.

The remaining deer herd, after the hunt, show very good potential for health and reproduction. Bumper acorn crops of the fall of 2010 will supplement their diet greatly. A large component of adult does in the 2 ½ - 4 ½ year old age class will provide a healthy new age class of fawns in the spring of 2011.

In Contrast

Black Rock Forest manages the forest herd by removing 40-50% of the autumn population. This creates a healthy bountiful herd while allowing forest regeneration.

In most years, rifle hunting at the forest removes the amount of deer comparable to the recruitment of young in the spring. Natural occurrences such as winter severity, drought and acorn crops drives the population's trends up or down. In recent years, with implementation of the DMAP (Deer Management Assistance Program) effective reduction of herd numbers to manageable densities are possible.

Population reduction in the village is in a very early stage. The means have been tested and are viable. To be successful, more deer will have to be harvested on an annual basis. If current population estimates are correct, the village harvest total is less than spring recruitment.

John Brady
Forest Manager of Black Rock Forest