



IN-SERVICE NOTE
2002 AERIAL ELK SURVEY
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Introduction – An annual aerial elk survey was initiated in 1991 to gain more information on the status and distribution of Arkansas' elk herd. Survey objectives were to: 1) obtain reliable information on elk distribution; 2) obtain data on bull/cow and calf/cow ratios; and 3) obtain a minimum population estimate. The survey was again conducted in 2002.

Methods – A Hughes 269B two-man helicopter was used for the survey. The survey area and procedures in 2002 were the same as in 2001.

Results (all elk survey areas) – A total of 242 elk were observed. Antlered bulls totaled 45 (14 spikes, 31 branched) with antlerless elk totaling 197 (147 cows and 50 calves). The bull/cow ratio was 31 bulls per 100 cows and the calf/cow ratio was 34 calves per 100 cows. The largest elk group observed included 52 animals and the average group size for 15 elk groups observed was 16.1. Survey data suggests that the elk herd along the Buffalo River corridor is somewhat stable; however data indicates a decrease in the population found on private land in elk hunt zone A.

Results (original BNR corridor) – The original Buffalo National River (BNR) corridor survey (includes the Gene Rush Wildlife Management Area (GRWMA)) was initiated on February 14 and completed on March 5. A total of 226 elk was observed including 90 (40%) in section one (Boxley Valley to Pruitt), 94 (42%) in section two (Pruitt to Cane Branch) and 42 (18%) in section three (Cane Branch to highway 65 bridge). One hundred and ninety-one elk were observed during the BNR corridor flight with 35 elk spotted during National Park Service (NPS) property boundary flights (all on private land). Thirty-four elk were spotted during boundary flights in 2001.

Antlered bulls totaled 45 (14 spikes, 31 branched) with antlerless elk totaling 181 (133 cows, 48 calves). This compares to 34 antlered and 163 antlerless in 2001. Branch antlered bulls totaled 31 which is 6 more than the number (25) observed in 2001 and 7 less than the number observed in 2000 (38). Spike bulls observed increased by 5 (56%). Total bulls observed in 2002 increased by 11 (32%) from the number observed in 2001 (34). Antlerless elk observed increased by 11% (18) from the 2001 level. The increase occurred in numbers of cows (2%) and calves (50%) observed. The bull/cow ratio was 34 bulls per 100 cows which is considerably higher than the ratio observed in 2001 (26:100) and 2000 (34:100), but lower than in 1999 (56:100) and 1998 (46:100). The calf/cow ratio was 36 calves per 100 cows, which was higher than in 2001 (24:100) and 2000 (33:100), but lower than in 1999 (47:100), 1998 (39:100) and 1997 (39:100). Bull/cow and calf/cow ratios observed in 2002 were below the minimum target ratio of 40 bulls/100 cows and 40 calves/100 cows established in the current elk management plan.

A total of 12 elk groups were observed which ranged in size from one to 52. The average elk group size was 18.8 which is higher than the average in 2001 (15.2), 2000 (10.6), 1999 (15.3), 1998 (10.9) and 1997 (10.5). Most elk were observed in open habitat (hay fields, pastures, old fields). Fifty-six (56) elk were observed on the GRWMA which is an increase of 12 (27%) from the number (44) observed in 2001. Only twelve elk were observed on the area in 1999. Elk use has increased substantially on GRWMA on a year-round basis as habitat improvements are paying big dividends for elk and other wildlife.

All identified bulls carried both antlers with the exception of one bull that had cast one antler. This was a lone bull in poor condition and appeared to be sick. Only eight (26%) of 31 branch antlered bulls were classed as large mature breeding bulls (6X6 or better, dark heavy antlers, large body size). In 2001, only seven (28%) of 25 branch antlered bulls were classed as large mature breeding bulls. In 2000, seven (18%) of 38 branch antlered bulls were classed as large mature breeding bulls.

The aerial elk count was the third highest on record since initiation in 1991. The number of elk observed increased by 29 from 2001 but was 17 below the number counted in 2000 and 3 below the number counted in 1999. Compared to 2001, more elk were seen in section one (20 more), section two (3 more), and section three (6 more). One sick elk was

observed in Boxley Valley. Two radio-tagged cows were observed in Boxley Valley close to the original capture sites. No dead elk were observed.

Results (additional elk surveys) An additional aerial survey of private land in southwest Boone and southeast Carroll Counties resulted in an observation of three elk groups totaling 16 elk (14 cows and two calves). A higher number of elk were observed in 2001 (29 elk in six groups). No sick elk were observed. Nuisance elk complaints have decreased in the area since limited hunting was initiated in 1998. Data indicates that the population has decreased.

From 1994-2001 an additional area of Ozark National Forest (ONF) and private land was surveyed along the Richland Creek drainage south of the NPS border. The area was surveyed again in 2002 and no elk were observed. The BNR corridor from Gilbert to Highway 14 was surveyed with no elk observed. The public and NPS staff in this section of the BNR corridor report occasional elk sightings; however, numbers of elk appear to be very low.

Results (deer and turkey sightings) During the survey, sightings of deer, wild turkey and other wildlife are recorded. A total of 227 deer and 350 turkeys were observed during the original BNR corridor survey. This compares to 40 deer and 168 turkey observed in 2001. In 2000, 58 deer and 98 turkeys were observed. In 1999, a year of poor mast production, 359 deer and 723 turkeys were observed. Eight bald eagles and one coyote were also observed. An additional 128 deer and 99 turkeys were observed on private land in southwest Boone and southeast Carroll Counties. This compares to 30 deer and 24 turkey seen in 2001, 35 deer and 18 turkey seen in 2000 and 99 deer and 160 turkeys seen in 1999.

HELICOPTER ELK COUNTS, 1991-2002

Buffalo River Corridor							Private Land (Boone & Carroll Counties)						
Year	Antlered Bulls	Cows	Calves	Total	Bull/Co w Ratio	Calf/Co w Ratio	Antlered Bulls	Cows	Calves	Total	Bull/Co w Ratio	Calf/Co w Ratio	Grand Total
1991	18	41	17	76	44	42	No survey						76
1992	35	78	31	144	45	40	No survey						144
1993	35	63	32	130	56	51	3	7	2	12	43	29	142
1994	30	78	32	140	39	41	0	0	0	0	--	--	140
1995	49	82	28	159	60	34	1	1	0	2	--	--	161
1996	46	90	45	181	51	50	3	14	6	23	21	43	204
1997	41	99	39	179	41	39	6	10	6	22	60	60	201
1998	46	100	39	185	46	39	7	21	12	40	33	57	225
1999	63	113	53	229	56	47	7	22	11	40	32	50	269
2000	49	146	48	243	34	33	7	25	10	42	28	40	285
2001	34	131	32	197	26	24	5	20	4	29	25	20	226
2002	45	133	48	226	34	36	0	14	2	16	--	14	242

