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BALD EAGLE NESTING ACTIVITY IN KANSAS - 1996

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INTRODUCTION

Four documented Bald Eagle (*Haliaeetus leucocephalus*) nests in Kansas successfully fledged nine juvenile eagles in 1996. This was an increase from 1995 when five eaglets were fledged from three nests (Watkins et. al. 1996), but did not exceed the 1994 record when 12 eagles were fledged from five nesting territories (Watkins et. al., 1994). Two active 1996 nests were destroyed by inclement weather and one was abandoned after several weeks of incubation. Since documentation of the first Bald Eagle nest in 1989, 48 eaglets have been fledged (Table 1).

TABLE 1. Bald Eagle Nests In Kansas, 1989 to 1996.

NEST LOCATION	NUMBER OF EAGLETS FLEDGED								
	1989	1990	1991	1992	1993	1994	1995	1996	TOTAL
Clinton Lake	2	3	3	3	3	3	2	3	22
Hodgeman County	--	1	2	2	2	3	0 ^(a)	0 ^(a)	10
Hillsdale Lake	--	--	--	--	1	2	2	2	7
Perry Lake	--	--	--	--	--	2	0 ^(b)	2	4
Wolk Creek Lake	--	--	--	--	--	2	1	2	5
Stafford County	--	--	--	--	--	--	0 ^(b)	0 ^(b)	0
Kanopolis Lake	--	--	--	--	--	--	--	0 ^(b)	0
TOTAL	2	4	5	5	6	12	5	9	48

(a) A pair of eagles were present in the nesting territory, but no incubation behavior was observed.

(b) Nest destroyed by storm while adults were displaying incubation behavior.

METHODS

Periodic observations of known nesting territories began in January. When eagle activity increased around the nest site, monitoring efforts also intensified. As critical nesting events approached, weekly visits, where possible, were increased to daily observations. Beginning incubation dates were established by observing eagles setting low and tight on the nest, switching of incubation duties and/or rolling eggs. Hatch dates were determined by adult brooding postures, the observation of feeding behavior, and/or chick defecation's leaving the nest. Fledging dates were established when juveniles were observed to be absent from the nest, flying, or perched in adjacent trees. All dates are assumed to be plus or minus 2 days.

RESULTS

CLINTON LAKE, nest site number one - In 1989, a pair of Bald Eagles established the first documented successful nest in Kansas (Schwilling et. al. 1989). A pair of eagles has returned to use the nest every year (Watkins et. al. 1996). In 1996, the eagles, including the previously captured male with purple visual

TABLE 2. Bald Eagle Nesting Data, 1996.

EAGLE NESTING CHRONOLOGY AND BANDING DATA	CLINTON LAKE	PERRY LAKE	HILLSDALE LAKE	Wolf Creek Lake
Incubation behavior begins	Feb. 15	March 08	Feb. 21	March 10
Eggs Hatch	March 28	April 17	April 01	April 23
Days of observed incubation behavior	42	40	40	44
Date eaglets fledged	June 12	June 29	June 13	June 17
No. of young fledged	3	2	2	2
Fledgling age (days)	76	73	73	85
Banding dates	May 15	--	--	May 20
No. of eaglets banded	3	--	--	2
Purple visual identification bands used	2K, 2M, 2N	--	--	2P, 2R

identification band E, began displaying incubation behavior on 15 February, approximately 17 days later than 1995. The eggs hatched on or about 28 March (Table 2). The two male eaglets and one female eaglet were banded by the U.S. Fish and Wildlife Service on 15 May with purple visual identification bands 2K, 2M and 2N. The juveniles fledged on 12 June.

The adults have fledged 3 young annually during 6 of their 8 nesting seasons and 2 young annually during the other two years. A total of 22 eaglets have been fledged from the nest over the past 8 years. The average number of young fledged annually is 2.8, compared to the national average of 1.6 (Stalmaster 1987).

CLINTON LAKE, nest site number two - In 1995, a pair of Bald Eagles were observed around a nest in the Wakarusa arm of Clinton Lake. One adult had an orange patagial tag on its right wing and a light blue patagial tag on its left wing, but no identifying numbers were observed. The eagle was released between 1988 and 1990 as part of the Missouri Department of Conservation's Bald Eagle reintroduction program (Watkins et. al. 1996). A pair of eagles, including a bird with an orange patagial tag on its right wing and a light blue patagial tag on its left wing returned in 1996. They remained in the area for several months and displayed incubation behavior for approximately 14 days before abandoning the nesting attempt.

HODGEMAN COUNTY - The Hodgeman County nest was unsuccessful again in 1996. The nesting territory had fledged 10 eaglets between 1990 and 1994, but the nest was destroyed by inclement weather at the end of the 1994 nesting season. In 1995, a pair of Bald Eagles constructed a new nest in the territory but did not produce any young (ibid). A pair of eagles returned to the nesting territory in the spring of 1996 but no incubation behavior was observed.

HILLSDALE LAKE - The same pair of eagles returned to the Hillsdale nest for the fourth year. Both adults were individually identified by leg bands. The male had a purple visual identification band B and was fledged from the Clinton Lake nest site in 1989. The female had a white visual identification band E-27 and was hatched from Eufaula Lake, Oklahoma in 1990 (Mulhern et. al. 1994). They began displaying incubation behavior on 21 February and the eggs hatched on or about 1 April (Table 2). The two juveniles fledged on 13 June. The adults have fledged 7 young since 1993.

The nest, which was used every year since 1993, was partially destroyed by inclement weather during September 1996. A pair of eagles was observed carrying sticks during October and November, but the old nest was not refurbished and a new nest has not been located.

PERRY LAKE - A pair of Bald Eagles including a male with purple visual identification band A, which originally fledged from the first Clinton Lake nest site in 1989, returned to the nesting territory in 1996. The pair began displaying incubation

behavior on 8 March in the highest of two nests they had constructed in the same tree. This was one of four nests the pair constructed in the summer and fall of 1995 after their nest was destroyed during spring incubation (Watkins et. al. 1996). The 2 eaglets hatched on or about 17 April (Table 2). The nest tree could not be climbed safely and the young were not banded. The adults were spotted periodically throughout the summer at Perry Lake. The pair has fledged 4 juveniles from the nesting territory since 1994.

WOLF CREEK - A pair of Bald Eagles remained in the vicinity of the Wolf Creek Lake through 1995 and into the 1996 nesting season. The pair began incubating during the second week of March, 1996 and 2 eaglets hatched in late April (Table 2). The 2 male eaglets were fitted with purple visual identification bands 2P and 2R on 20 May. The juveniles fledged on 17 July. The pair has fledged 5 young since 1994. In 1996, the Wolf Creek eagles used the second nest constructed in their nesting territory and from which they fledged young in 1995. The original nest from which they fledged 2 juveniles in 1994, was used by a pair of great horned owls in the spring of 1996.

STAFFORD COUNTY - For a third consecutive year, a pair of Bald Eagles returned to a nest site along the North Fork of the Ninescaw River. In 1994, the nesting attempt was abandoned after approximately two weeks. In 1995, a pair of eagles exhibited incubation behavior for approximately 35 days before the nest was destroyed by a severe storm (ibid). A pair of eagles returned in 1996 and refurbished the damaged nest. They displayed incubation behavior for several weeks before the nest was again destroyed by inclement weather.

KANOPOLIS LAKE - A pair of Bald Eagles constructed a nest in a dead Cottonwood (*Populus deltoides*) tree several meters landward of the normal lake elevation at Kanopolis Lake, Ellsworth County. The pair exhibited incubation behavior for approximately 30 days before the nest tree was snapped in half by a severe storm. The storm occurred while the lake level was several feet above normal pool. The nest and its contents were lost in the lake.

ACKNOWLEDGMENTS

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Great Horned Owls (*Bubo virginianus*) Successful Nesting in Flower Pot in Northeast Kansas - In late March 1996, Mrs. Irene Morris, resident of a retirement center in Lawrence, notified me that she had a Great Horned Owl nesting on her third story apartment deck. More surprising was the fact that the owl was nesting in a plastic flower pot on the floor of the deck. The only nesting material was com-

mercial planting substrate from the previously summer. The pot was about half full and was 14 inches in diameter, 9 inches at the base, and 12.5 inches deep. No feathers lined the nest. Two eggs were in the nest. The exact laying date for the first egg was not known, but the second egg was laid on 28 February.

The deck was open except for a layer of lattice work along the base. The owl could enter the nest both on the north and east exposures of the deck. Mrs. Morris observed the first owlet on the early morning of 29 March. During the early morning of 31 March, the second owlet hatched 32 days after incubation began. Later that afternoon, after the adult left the nest, the nest was examined and the only additional insulation in the nest was two wide patches of fur from a freshly killed Eastern cottontail (*Sylvilagus floridanus*).

On the evening of 9 April, a TrailMaster infrared sensor and video recording system were placed on the opposite end of the deck from the nest. A special red filtered TrailMaster light source was used at the site. A 12 volt car battery powered the light. The sensor recorded owl movement at the nest and activated the camcorder. Since the camcorder also recorded times, the exact intervals that the adult owls visited the nest were recorded. I recorded the activity at the nest for several evenings. However, the recording system was not used for more than 48 hours in any one time.

From the videotaping, it was obvious that two owls fed the young. The smaller owl of the pair was likely a male and the larger owl the female. The smaller owl also had a more distinctive white throat patch. Through analyses of the film and observations at the nest, the following were fed to the young: Eastern wood rat (*Neotoma floridana*), Eastern cottontail (*Sylvilagus floridanus*), muskrat (*Ondatra zibethicus*), hispid cotton rat (*Sigmodon hispidus*), Red-winged Blackbird (*Agelaius phoeniceus*), several song birds, a snake, and either a small fish or large tadpole.

On 23 April, Dr. Roger Boyd, biology professor at Baker University, banded the owlets. At least 60 people attended the event. By early that evening, the adult owls were back at the nest.

On 14 May about 4:00 a.m., Mrs. Morris saw the older owlet fly from the deck. The owlet was 46 days old when it fledged. The owlet had been out of the nest and exercising on the deck since 25 April. By the end of May, the other owlet had left the deck. It was thought that the second owlet could have fledged earlier. The owlet was hiding, during the daylight hours, behind an air conditioner on the deck.

The entire deck outdoor carpet had to be replaced because of the mess resulting from the nesting owls. Mrs. Morris has not indicated whether or not the flower pot will be replaced on the deck next winter.

Appreciation is extended to Mrs. Irene Morris and Mrs. Rita Haugh of Lawrence for their encouragement and assistance with the nesting reports and their willingness to participate in the study. I thank Dr. Roger Boyd for the banding of the owlets. Anna Allen and Bunny Martell were helpful in the placement of the sensor equipment. The staff and residences of Brandon Woods Retirement Center are to be commended for their cooperation and security with the project. Ken Highfill, 921 W. 28th St. Terrace, Lawrence, KS 66046

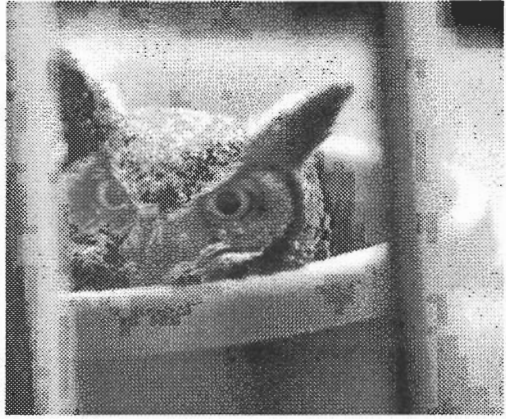


Figure 1. - Video of adult on nest.