

RECENT BALD EAGLE NEST RECORDS IN OKLAHOMA

by M. ALAN JENKINS AND STEVE K. SHERROD

Lish and Sherrod (1986) reviewed the nesting history of the Bald Eagle (*Haliaeetus leucocephalus*) in Oklahoma through 1985. From 1985 to 1991, 90 nestling eagles were released by the George M. Sutton Avian Research Center (GMSARC) in eastern Oklahoma as part of a larger project to restore breeding populations in the southeastern United States (Simons et al. 1988). Numbers and locations of Bald Eagle release sites during each year were as follows: Sequoyah National Wildlife Refuge, Sequoyah County: 1985 (5), 1986 (11), 1987 (4), 1988 (11), 1989 (0), 1990 (15); Skiatook Reservoir, Osage County: 1990 (16); Canadian River, Hughes County: 1990 (15); and Fountainhead State Park, McIntosh County: 1990 (13).

Bald Eagles may become sexually mature as early as three years of age, but do not normally breed until they are at least four. The earliest probable year that birds released in Oklahoma would have been capable of breeding was 1989. In that year an unmated 1985-released male eagle built a nest in a dead tree not far from the release tower at Sequoyah National Wildlife Refuge. Because of the small number of eagles hacked into the wild during the earlier years of the restoration project, and high (but normal) first year mortality, the population of nesting eagles is expected to increase slowly before stabilizing. Table 1 is model representing the potential growth and productivity of the Oklahoma population resulting from the numbers of eagles released as given above.

OKLAHOMA BALD EAGLE NESTS



Fig. 1: One of five Bald Eagle nests near Eufaula Lake dam in Pittsburg County, Oklahoma, this one located on south shore of Canadian River below the dam. Fig. 2: Winter nest at Copan Lake in Washington County, 23 December, 1992. It dwarfs a Great Blue Heron (*Ardea herodias*) standing inside. Photos taken by M. Alan Jenkins

Table 1. Population Growth Model of Bald Eagles Released in Oklahoma.¹

YEAR	NO. EAGLES RELEASED	NO. BREEDING ADULTS	NO. SUCCESSFUL NESTS
1985	5	0.0	0.0
1986	11	0.0	0.0
1987	4	0.0	0.0
1988	11	0.0	0.0
1989	0	0.8	0.4
1990	59	5.1	2.6
1991	0	6.2	3.1
1992	0	10.0	5.0
1993	0	9.2	4.6
1994	0	33.1	16.5

¹The model is deterministic (trends not influenced by chance), and is based on the number of eagles released in Oklahoma by the GMSARC restoration project. It assumes no initial breeding pairs, a first year eagle survival rate of 55% of released eagles, subsequent mean annual survival rate of 90%, an age of first successful breeding of 5 years, and a mean annual fledging success rate of 1.1 young per nest.

It predicts, based on mortality and productivity rate assumptions thought to be normal for Bald Eagles, that Oklahoma should have about five successful nests in 1993 and should reach the recovery plan goal of 10 pairs (USFWS 1984) by 1994 when the large cohort released in 1990 becomes adult. This model shows only one possible trend in eagle numbers. Other factors not accounted for may exert considerable influence on the size and dynamics of the population. For example, initial pairs are not necessarily productive in their first attempts, since both are inexperienced breeders.

Although there have been no systematic surveys for nesting Bald Eagles in Oklahoma, some recent nests have come to our attention. This paper reviews the data known to us regarding Bald Eagle breeding in Oklahoma since 1985.

We use the following terminology, as defined by Postupalsky (1974) in referring to the reproductive status of eagle nests: 1) occupied nest: tended by a pair of eagles; 2) active nest: at least one egg has been laid therein; and 3) productive nest: fledged at least 1 young. Additionally, we recognize a type of occupied nest constructed by pairs of wintering eagles, probably of northern origin, then abandoned after spring migration. We term this a "winter nest." We believe that these nests are built to maintain pair bonds and perhaps to strengthen the winter territory. Although on occasion these northern birds may remain in Oklahoma and reproduce, we speculate that they usually construct another nest after migrating to their breeding ground farther north. Rarely are winter nests active or productive, and most are occupied for but a season. However, not all inactive, non-productive nests are built in winter. More research on winter nests is needed to clarify their possible functions.

Recent Oklahoma Bald Eagle nests known to us and pertinent details follow (dates of origin parenthesized):

Harkey's Island, 6.5 miles SSE of Vian, Sequoyah County (unknown). Thought to be a winter nest, disappeared in 1992, rebuilt and active in 1993, but failed (refuge personnel).

Moody Landing, 5 miles SSW of Vian, Sequoyah County (1991). A winter nest, disappeared in 1992 (refuge personnel).

Oolagah, 3 miles SE of Oolagah, Rogers County (unknown). Dilapidated and unoccupied in 1990, probably a winter nest (Jim Moreland).

Kaw City, 5 miles W of Shidler, Osage County (1991). Occupied in 1992, but disturbed by nearby plowing. Active in 1993, failed (Betsy Stewart, Judy Lorg and Ron Folks).

Caney River, 4 miles NNW of Copan, Washington County (1991). Occupied by adult pair in 1991, unoccupied in 1992 and 1993; apparently a winter nest (Charles A. Roberts and Ray DeMent).

Guthrie, 2.5 miles N of Guthrie, Logan County (1991). Occupied in 1991 and 1992. One member of pair immature in 1991. Nest had fallen out of the tree by 1993, no replacement nest was found (Pat Ratliff).

Moxley Ranch, 15 miles SW of Ardmore, Love County (ca. 1987). Two alternate nests, reported to have produced two young in 1991, but none in 1992 or 1993 (Larry Forsythe and Jontie Aldrich).

East Bressie, 8.5 miles SE of Marland, Noble County (ca. 1985). Fledged two young in 1991, three in 1992 and two in 1993 (Betsy Stewart, Judy Lorg and Ron Folks).

Eufala Dam, 13 to 14 miles E of Eufala in Haskell and Muskogee counties (unknown). Four alternate nests in this group, none productive for certain; however, we only became aware of them in 1992. Two nest appear to be quite old. In 1993 one nest was missing, a new one was constructed nearby. A third nest may have held young, but this was not verified (Mike Dumford).

Stidham, 10 miles NW of Eufala, McIntosh County (1992). Occupied in 1992 when adults defended against human intruders; possibly active, but was not productive. In 1993 a second alternative nest was found nearby, neither nest productive (Stuart Woods).

Briartown, 6 miles NW of Stigler in Muskogee County (1992). Occupied in 1992, but productive status unknown. Produced one young in 1993 (Stuart Woods).

Sequoyah National Wildlife Refuge, 5.5 and 6 miles SW of Vian in Sequoyah and Haskell counties (1989). One nest (Sandtown Bottom) built in 1989 by GMSARC-released male eagle A-03 near the hack tower. In 1990 he paired with A-48, and they built a new nest nearby, which was occupied in 1991, 1992 and 1993. Observations of 24-hour incubation behavior by U. S. Fish and Wildlife Service personnel in 1992 and 1993 led them to believe that this nest held an unknown number of eggs which apparently did not hatch.

Tamaha, 7.5 miles SSW of Vian in Haskell County (1990). The first successful nest of GMSARC-released eagles in Oklahoma, it fledged two young in 1991, but was subsequently blown out of the tree. A new one was built nearby in 1992, but no young produced that year or in 1993 (Hutchie Weeks and Ron McGuire).

Of these nests, the Sequoyah National Wildlife Refuge, Harkey's Island and

Tamaha nests are known to have been occupied by eagles released by GMSARC. Adults at the East Bressie nest were not banded, and probably were not released by GMSARC. Adults at other nests have not been observed closely enough to determine whether or not they were banded.

With resumption of Bald Eagle nesting in Oklahoma, the status of this species should be changed to "permanent resident" in the eastern part of the state. Summer sightings there should not be considered as worthy of new state records, but merely as uncommon.

We acknowledge the help and support of the many people and agencies whose help made this study possible. Our gratitude extends to GMSARC employees Gary A. Cress, Donald H. Wolfe, Jr., and Patty Alexander; Oklahoma Department of Wildlife Conservation personnel Ron Folks and Hutchie Weeks; U. S. Army Corps of Engineers employees Mike Dumford and Ken Williams; U. S. Fish and Wildlife Service personnel Ron Sullivan, Craig Heflebower, Bernice Jackson, Laura Hill and Jontie Aldrich; Dr. Stuart Woods, Biology Department, Connors State College; landowners Ron McGuire, Forrest W. Goad and Pat Ratliff; and especially to concerned eagle observers Betsy Stewart, Judy Lorg, Larry Forsythe, Charles A. Roberts, Ray DeMent and Jim Moreland. We also thank Dr. Jack Tyler, Cameron University, for reviewing and improving our manuscript.

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GEORGE M. SUTTON AVIAN RESEARCH CENTER, P.O. BOX 2007, BARTLESVILLE, OKLAHOMA 74005. 2 DECEMBER 1992.

GENERAL NOTES

Sora impaled on barbed wire fence.—While driving between roadside nest study plots in tallgrass prairie country approximately 3 miles south of Foraker, Osage County, Oklahoma, on 21 May 1992, my crew (Mark E. Weaver, Greg C. S. Um, Bob L. Williams and Brian K. Muzny) and I discovered a bird hanging from the top strand of a barbed wire fence. Suspecting that it had been placed there by a Loggerhead Shrike (*Lanius ludovicianus*), we stopped to investigate. Impaled through the carpal region of the left wing, probably the result of a collision with the fence, was a Sora (*Porzana carolina*). The unfortunate bird had been dead for perhaps a day, and was still in fairly good condition. This discovery prompted me to investigate other accounts of fence-related avian injuries.

Undoubtedly, bird-fence collisions occur much more frequently than the few

published records would indicate. Some birds that collide with fences might fall off, others may fly a short distance after impact and never be found. The ones that do become impaled or entangled are vulnerable to predators. Additionally, naturalists are rarely in the right place at the right time to observe such incidents. For example, I found written accounts of nine owls (mostly Great Horned Owls [*Bubo virginianus*]) that had been impaled on barbed wire fences (Anderson 1977; Edeburn 1973; Fitzner 1975; McCarthy 1973; Knight et al. 1980) but a local rehabilitator, Bertta Snell, told me of receiving at least 25 raptors (Great Horned Owls, Barred Owls [*Strix varia*], and Red-tailed Hawks [*Buteo jamaicensis*]) during the past ten years that had been caught in fences. Allen and Ramirez (1990), Braun et al. (1978), Cornwell and Hochbaum (1971), Knight et al. (1980), and Siegfried (1972) all reported cases of other birds caught on fences, but only Knight et al. (1980) listed the Sora. Melinda Droege also discovered a Sora stuck on a barbed wire fence near Bartlesville, Washington County, Oklahoma, on 22 April 1987 (*pers. comm.*) And on 19 October 1984, Jack D. Tyler and his students found a juvenile Sora impaled through the patagium of the right wing on a fence at a marshy place 5.5 miles east of Rio Hondo, Cameron County, Texas. It had been dead for an estimated two days and had dried out (*pers. comm.*).

Grzybowski et al. (1992) gave the spring migration dates of this species from 9 April through 20 May in northeast Oklahoma, therefore both of the Oklahoma casualties reported herein were probably spring migrants, unfamiliar with local terrain and obstacles. Both were also discovered soon after rains and high winds.

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—Donald H. Wolfe, *George M. Sutton Avian Research Center, P.O. Box 2007, Bartlesville, Oklahoma 74005, 18 March, 1993.*

Another Crested Caracara at Salt Plains National Wildlife Refuge.—On 24 September 1990, a hot sunny day, I was driving west on Highway 11 in the Salt Plains National Wildlife Refuge in Alfalfa County, Oklahoma, about ¼ mile west of the west channel of the Salt Fork River, when I flushed two or three Turkey Vultures (*Cathartes aura*) from a carcass. Simultaneously, another large, dark falconiform bird flew across the highway. Instinctively, I sensed something different about it. As I watched, it flew to one of the few trees in an area of open, brushy rangeland. I trained my 20 × 45 spotting telescope on the bird and got a good look. With the aid of a field guide, I easily identified it as a Crested Caracara (*Polyborus plancus*). I then walked close enough to view it clearly through binoculars.

I again saw probably this same bird on 1 October, not far from where my initial sighting had been. During the interim, several refuge visitors had mentioned to the office receptionist that they, too, had identified a caracara, but none of their names were recorded.

There are only two other sight records for Oklahoma. A caracara was observed 7 miles west of Ada in Pontotoc County in the spring of 1944 by M. P. Hatchett (Sutton, G. M., 1967, *Oklahoma birds*, Univ. Oklahoma Press, Norman, p. 123) and on 7 February 1965, a caracara was “observed closely” near Enid in Garfield County by Florel Helema and Ellen Carroll (Baumgartner, F. M. 1965, *Aud. Field Notes* 19:396). About 35 miles south of the Oklahoma state line, in Collin County Texas, Herbert and Polly Keating and Elizabeth Hayes watched a caracara as it soared high above them on 30 August 1974 (Keating, P, 1974, *Bull. Oklahoma Ornithol. Soc.* 8:27-28).

Polyborus plancus is a tropical and subtropical species that is a resident in “...central and southern Florida... southern Arizona... central and southern Texas...” and is “...casual north to central New Mexico and Oklahoma...” (American Ornithologists’ Union, 1983, *Check-list of North American birds*, 6th ed., pp. 122-123). It should be looked for in open country, particularly in more arid sections of western Oklahoma, and probably will be associating with vultures.—Harold Beierman, *Assistant Refuge Manager, Salt Plains National Wildlife Refuge, Route 1, Box 76, Jet, Oklahoma 73749, 15 June, 1991.*

Late nesting of White-breasted Nuthatch in northeastern Oklahoma.—On 31 July 1990, while walking south of my house along Hogshooter Creek, Washington County, Oklahoma, I observed a female White-breasted Nuthatch (*Sitta carolinensis*) feeding a recent (?) fledgling in a large sycamore tree. Two other young birds were clinging to the bark and begging for food. I could hear but not see another nuthatch, presumably the male, higher up in the same tree. Recalling that I had watched courtship displays in January, and having seen nuthatches carrying nesting material in March, I thought that this date was extraordinarily late for fledglings. A search of the literature not only confirmed this suspicion, but also raised other questions about the breeding ecology of this species.

Many general sources (Bent, 1948; C. Harrison, 1978; H. Harrison, 1975; Johnsgard, 1979) agree that *S. carolinensis* nests during March or April throughout most of the contiguous United States. Its five to nine eggs are incubated for 12 days following one-week periods each of courtship and nest construction. The nestlings are tended for 12 more days, and adults feed the young birds for another two

weeks after they fledge. Authorities concur that White-breasted Nuthatches are one-brooded except for Ehrlich (1988) who stated: "1? brood."

My late sighting would indicate a second (or third?) brood, allowing a minimum of 52 days from beginning of courtship to fledging of young. Possibly the fledglings I saw on 31 July resulted from a renesting after a first or second attempt failed. Sutton (1967) cited A. J. B. Kirn as considering 10 March the "usual time of nest-building . . . found full sets of eggs March 21-30 in Washington County. Earliest date for young out of nest April 29 in Osage County."

Considering the total time required for all phases of the nesting cycle given above (± 52 days), the 31 July nesting would have been initiated on or about 23 June, which is late if the first nest was begun around 10 March. In his extensive studies of White-breasted Nuthatches both wild and captive, Kilham (1968, 1972), not once mentioned renesting or a second brood.

On 3 August I returned to the large sycamore and saw and heard a young nuthatch food begging. Though I watched for over 10 minutes, no adult brought food. Shortly thereafter, the fledgling disappeared.

I witnessed more nuthatch interaction at my backyard feed, located approximately 1/3 mile north of the big sycamore, on 24 August. A male bird picked up a sunflower seed and carried it to a begging, wing-fluttering female or immature nuthatch (by now the two were indistinguishable) in a nearby hackberry tree, fed it, returned to the feeder, procured another seed, then flew off to the north. The other bird immediately came in and took a seed, but disappeared from view in the opposite direction.

On 30 August I watched as the male fed another (?) female/immature nuthatch a sunflower seed in a walnut tree in my backyard. They then bill-tapped and stayed together on the trunk for about two minutes. There was no wing fluttering or begging. The female(?) went up the tree while the male picked up another seed and retreated to the south. After getting her own seed, the female(?) followed. On 5 September, I again observed, for the last time, a male nuthatch feed another bird.

There is no way to be certain that these nuthatches were part of the 31 July family. Atypical White-breasted Nuthatch territory covers approximately 35 to 40 acres (Terres, 1980). It is altogether possible that territories lay both north and south of my house. Nuthatches stay together as a family for most of the first year, during which time there is much family bonding and interaction before they finally break up into a loose autumn flock (Terres, 1980).

It will never be known whether or not the young nuthatches I saw being fed on 31 July were progeny from a late renesting or were part of a second brood. The significance of this note is to exhort bird students to carefully and accurately record observations of even common species of birds, and not to presume that the answers to all their queries are known to science. Do White-breasted Nuthatches ever produce second broods? The question is, as yet, unanswered.

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—Melinda M. Droege, Rt. 1, Box 516 AA, Bartlesville, Oklahoma 74006, 31 October, 1990.

Pine Grosbeak in Tulsa County, Oklahoma.—On 7 November 1992, while walking along the Wildlife Study Area Trail at the Oxley Nature Center in Tulsa, Tulsa County, Oklahoma, I discovered a single Pine Grosbeak (*Pinicola enucleator*) actively feeding on the seed of a gumweed (*Grindelia* sp.) about two feet above ground. Under sunny skies and calm winds, I was able to approach to within 15 feet and watch the bird for about 10 minutes through my 10 × 40 binocular. The temperature was approximately 55°F. This chunky, nearly robin-sized bird was predominantly slate gray but its tail was blackish. The dark wings showed white wingbars and some white feather edging, and the forehead and crown were ochreous. Except for some intermixed gray feathers, the rump was also ochreous. Noticeable was the thick dark bill with its strongly curved culmen. Plumage coloration indicated that this bird was either a female or a young male.

Pine Grosbeaks are described as "casual or sporadic" winter visitants to Oklahoma (American Ornithologists' Union, 1983, Check-list of North American birds, 6th ed., Washington, D.C.) and have been recorded on seven previous occasions (Baumgartner, F.M., and A.M. Baumgartner, 1992, Oklahoma bird life, Univ. Oklahoma Press, Norman).

Sightings are recorded from Cimarron, Cleveland, Grant, Oklahoma, Texas and Tulsa counties. Four of these were in April and May and three were in December and January. This is the only November record for Oklahoma and is the third for Tulsa County.—Dan L. Reinking, George M. Sutton Avian Research Center, P.O.Box 2007, Bartlesville, Oklahoma 74005, 10 November, 1992.

THE BULLETIN, the official organ of the Oklahoma Ornithological Society, is published quarterly in March, June, September, and December, at Norman, Oklahoma. Subscription is by membership in the OOS: \$5 student, \$7.50 regular, \$10 family, \$15 or more sustaining, per year. Life membership \$125. Treasurer, Jeffrey A. Cox, P.O. Box 27081, Tulsa, OK 74149. Editor, Jack D. Tyler, Department of Biology, Cameron University, Lawton, Oklahoma 73505, Associate Editors, John S. Shackford, 6008A NW Expressway, Oklahoma City, Oklahoma 73132, and Melinda Droege, Rt. 1, Box 516AA, Bartlesville, Oklahoma 74006. Questions regarding subscription, replacement copies, back issues or payment of dues should be directed to: Mickle Duggan, OOS Membership/Circulation Chairman, P.O. Box 65, Ada, Oklahoma 74821-0065. ISSN 0474-0750.