

THE OLDSQUAW IN OKLAHOMA

BY JACK D. TYLER

The Oldsquaw (*Clangula hyemalis*) is a sea duck that breeds along arctic coasts of both eastern and western hemispheres. In North America it ranges south in winter to Washington state on the Pacific coast and to North Carolina on the Atlantic; rarely does it reach the Gulf Coast. Inland, it winters regularly in large flocks on the Great Lakes and irregularly on large bodies of water south and west to Texas and Colorado (AOU Check-list, 1957, p. 87; Bent, 1925, U.S. Natl. Mus. Bull. 130, Pt. 2, p. 49). Fall migration begins between August and October when large flocks congregate in Hudson Strait. The earliest migrants reach New England in late October, but the majority not until late fall or early winter (Bent, *op. cit.*, p. 47).

Nice (1931, *The birds of Oklahoma*, Rev. ed., Publ. Univ. Oklahoma Biol. Surv. 3, No. 1) did not list the Oldsquaw for Oklahoma. Sutton, who called it a "transient and winter visitant recorded from November 5 to April 8" (Sutton, 1967, *Oklahoma birds*, Univ. Oklahoma Press, Norman, p. 80), subsequently widened the span of dates to "October 29 to April 8, exceptionally to April 12, 15" (Sutton, 1974, *A check-list of Oklahoma birds*, Stovall Mus. Sci. & Hist., Univ. Oklahoma, p. 8). Sutton's Summary of Records indicates that the



OLDSQUAW

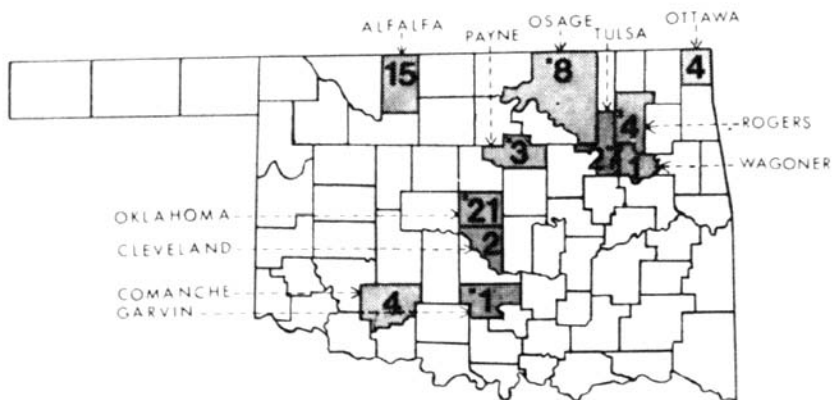
*A short-tailed drake, probably an immature bird molting into its first winter plumage, photographed by Jerry Sisler at Lake Yahola, Mohawk Park, Tulsa, Oklahoma on 25 January 1980.*

species was first recorded in the state on 26 December 1936, when H. S. Davis, Barbara Tenney, and J. Schwabe observed a hen in Mohawk Park, Tulsa, Tulsa County (1937, *Bird-Lore* 39: 64). Between that date and 26 December 1980, at least 90 Oldsquaws have been recorded by way of 42 observations in 11 Oklahoma counties. The species has been seen in each of the following periods: 1936, 1939, 1940, 1943, 1945, 1949-51, 1953-55, 1960-62, 1964, 1967-78, 1980. Most sightings have been of one or two (up to five) birds. Twosomes believed to be pairs were reported only twice (5 November, 24 December).

#### HISTORICAL SUMMARY

**1936-45:** During this period there were five sightings of the Oldsquaw in Oklahoma, each of a single bird. Two of the five were believed to be females, and one a short-tailed drake. The sightings were in Tulsa (three), Payne, and Oklahoma counties, one in "fall," the rest between late December and 17 January.

**1949-55:** On 5 November 1949, two Oldsquaws, believed to be a paired drake and hen, were observed in Comanche County. Between that date and 8 April 1950, a total of seven more were seen, one each in Wagoner, Tulsa, Payne, and Oklahoma counties, three in Alfalfa County. Three birds arrived from the north in November, the rest between 11 December and 26 February. The February bird, seen repeatedly in Tulsa's Mohawk Park, lingered until 8 April 1950 (1950, *Audubon Field Notes* 4: 208, 249). A hen at Lake Hefner in Oklahoma City was seen by many observers between 30 January and 4 April 1954 (1954, *Audubon Field Notes* 8: 260). A hen (OAMC 455) was collected at



#### OKLAHOMA OLDSQUAW SIGHTINGS

*Most Oldsquaws sighted in Oklahoma have been on large impoundments. The only river sightings have been along the Salt Fork of the Arkansas just below the Salt Plains Reservoir dam. Very few drakes in full winter plumage have been seen, but four were long-tailed.*

Lake Carl Blackwell in Payne County on 16 November 1955 (1956, Audubon Field Notes 10: 35).

**1960-69:** Fifty-four Oldsquaws were observed (16 sightings in six counties) between 29 October and 28 March during this decade. In Tulsa County, 21 birds were counted during three sightings, one flock of 16 being observed by several persons on Lake Yahola in Mohawk Park on 12 January 1961 (1961, Audubon Field Notes 15: 341). On 1 December 1960, a flock of 12 "hens or henlike birds" was observed in the middle of Lake Overholser in Oklahoma City (1961, Audubon Field Notes 15: 54). Two more sightings were in Oklahoma County, four were at the Salt Plains National Wildlife Refuge in Alfalfa County, four were at Hulah Reservoir in Osage County, one was in Payne County, and one (of four birds) was on Grand Lake in Ottawa County, the last on 28 March 1964 (1964, Audubon Field Notes 18: 367). Thirty-three birds were reported simply as Oldsquaws, 17 were called females or female-like, and four were thought to be males, though only one of these had long middle tail feathers. Two birds that appeared to be a pair were noted at Tulsa on 24 December 1960 (1961, Audubon Field Notes 15: 341). Four early observations were made between 29 October and 30 November, while 11 were between 1 December and 23 February. Three to five birds were seen repeatedly on the Salt Fork of the Arkansas River just below the Salt Plains Reservoir dam from 2 January to 27 March 1968. No specimen is known to have been taken within the decade.

**1970-80:** The 22 birds seen in eight counties during this span of years included nine drakes, three of them with long middle rectrices. Three sightings were in Oklahoma County, two each in Alfalfa, Comanche, Osage, and Tulsa counties, and one each in Cleveland, Garvin and Rogers counties. Five specimens were collected: mounted female (UOMZ 7308) at Hulah Reservoir, Osage County, on 31 December 1970; female (UOMZ 7392) at Wiley Post Lake, 2 miles north of Maysville, Garvin County, on 10 December 1972 (1973, Amer. Birds 27: 634); mounted short-tailed drake in changing feather (UOMZ 7519) at Hulah Reservoir on 15 December 1973; and two short-tailed drakes in changing feather (UOMZ 7520, 7521) at Lake Hefner, Oklahoma County, on 9 March 1974.

#### PLUMAGE

Of the 90 birds sighted, 48 were called simply Oldsquaws, without any guessing as to sex, 27 were thought to be females or female-like, 12 were short-tailed males thought to be in their first year, and four (only) were males with long middle tail feathers.

Whether or not *Clangula hyemalis* is indeed "one of the few ducks in the world to assume a distinctly nuptial plumage" (Bent, *op. cit.*, p. 41); whether or not it is without a "real eclipse plumage" (Bent, *op. cit.*, p. 42); and whether or not it has "no regular eclipse molt, as have most other ducks" (Kortright, 1942, The ducks, geese and swans of North America, Amer. Wildlife Inst., Washington D.C., p. 285), the drake of the species is notable for wearing, when fully

adult, a boldly patterned winter plumage that some authors call a courtship plumage, and a more somber, less boldly patterned plumage in summer. Attempting to place short-tailed winter birds as to sex and age, especially when they are molting, is well nigh impossible in the field and guessing may not yield meaningful results. The fact that only four long-tailed drakes have been seen and only three short-tailed drakes collected supports belief that most Oldsquaws that visit Oklahoma are females. Many fully adult drakes that winter on the Great Lakes wear a high plumage most of the season. Females, both old and young, and some drakes apparently avoid the rigors of winter by moving to more southern latitudes.

#### DISCUSSION

Oklahoma sightings of the Oldsquaw between 1936 and 1980 span the period between 29 October (Osage County) and 15 April (Comanche County). Only two of the 42 records clearly indicate overwintering: (1) a single bird seen repeatedly at Public Service Lake near Lawton from 11 December 1973 to 15 April 1974; and (2) one to five birds seen repeatedly on the Salt Fork of the Arkansas River just below the Salt Plains Reservoir dam from 2 January to 27 March 1968. Arrival here from the north occurs principally in late fall and early winter (29 October to 20 December) but southward migration appears to peak between latter December and 18 January. Return to the breeding ground probably proceeds in leisurely fashion, for the tundra ponds and far northern ocean may be frozen shut until the end of May and the species depends on open water for its food supply.

Almost half of the 90 Oldsquaws reported (44 in 18 observations) were seen in the northeastern part of the state. In central Oklahoma (including Payne County) 13 reports totalled 27 birds, and in the western part of the state 11 sightings yielded 19. Birders in Tulsa County reported 27 Oldsquaws, in Oklahoma County 21, in Alfalfa County 15, in Osage County eight. The largest centers of human population, the most active bird clubs, and some of the state's largest lakes are in these counties. The 15 birds reported from Alfalfa County were all observed at the Salt Plains National Wildlife Refuge, a mecca for migratory waterfowl and also for bird students.

Most Oldsquaws in Oklahoma have been seen on large lakes constructed by man within the past 50 years. A few adventuresome birds at first, then others, probably began to winter farther and farther south, taking advantage of the habitat and food provided by these new bodies of water. Consequently, Oklahoma and other states in the Southern Great Plains now lie on the southern edge of the Oldsquaw's wintering range.

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#### GENERAL NOTES

**Breeding of Hooded Merganser in Alfalfa County, Oklahoma.**—On 21 May 1981 I spent the morning checking the water-level of ponds on the Salt Plains National Wildlife Refuge in Alfalfa County, north-central Oklahoma.

At about 1130, just after walking across the dams of Headquarters Pond and Upper Dog Pond, both of which are near the refuge's headquarters buildings, I stopped to check the water-level control structures. To my surprise a duck of some sort, accompanied by eight small chicks, swam out from the vegetation right in front of me.

The mother bird flapped noisily off toward the east side of the pond, leaving her bewildered brood within only 15 or 20 feet of me. Thinking that they must be baby Wood Ducks (*Aix sponsa*), since I had put several Wood Duck nest boxes up near the two ponds, I did not pay much attention to them until, using my binocular, I noticed that they had very narrow bills. About that time the mother bird swam back to her brood and I instantly saw that she was a Hooded Merganser (*Lophodytes cucullatus*).

Knowing that the breeding of the Hooded Merganser had not been recorded for the refuge, I hurried to headquarters to tell Ronald S. Sullivan of my finding. He promptly asked John A. Kirk to obtain a camera and return with me to the spot at which I had seen the birds. Though we hastened back to the control structure, we could not find the birds anywhere. Nor have I seen any of the brood since 21 May. About the end of May I did see a hen Hooded Merganser at Headquarters Pond, but have no way of knowing that she was the very bird I had seen on 21 May. She could, and did, fly well.

The above reports the second nesting of the Hooded Merganser in Oklahoma. On 8 May 1977, at the Kerr Reservoir in Sequoyah County, far-eastern Oklahoma, J. L. Norman, J. S. Tomer, and J. Sisler observed a hen Hooded Merganser and seven chicks at close range (Norman, 1977, Bull. Oklahoma Orn. Soc. 10: 22-23).—Philip C. Clover, R.R. Box 51, Nash, Oklahoma 73761, 22 July 1981.

**Comment on Mississippi Kite specimens collected by S.W. Woodhouse in Indian Territory.**—In his scholarly paper on the ornithological work of Samuel W. Woodhouse in Indian Territory in 1849 and 1850, Tomer (1974, Bull. Oklahoma Orn. Soc. 7: 17-54) reported on that early investigator's findings, giving us clear glimpses of the avifauna of the Southern Great Plains as it existed almost a century and a half ago. Of special value to me was what Woodhouse had to say about the Mississippi Kite (*Ictinia mississippiensis*), a species on whose "recent history and status" John C. Ogden and I have published at length (Parker and Ogden, 1979, Amer. Birds 33: 119-129).

Of the "134 bird specimens of 46 species" believed to have been collected in Indian Territory by Woodhouse (Tomer, *op. cit.*, p. 51), three (Academy of Natural Sciences of Philadelphia Nos. 2033, 2034, and 33244) were reported by Tomer (*op. cit.*, Table 1) to be Mississippi Kites, though No. 33244, at bottom of Fig. 4 (Tomer, *op. cit.*, p. 24), is not a Mississippi Kite and could not have been collected in "Indian Territory" (see below.) The adult Mississippi Kite that Tomer saw and photographed — see top of Fig. 4 (Tomer, *op. cit.*, p. 24) — was

labeled 2033 (2035); it was not in his Table 1 and now has the official ANSP No. 2035. Why two specimens were given the ANSP No. 2033 is unknown, but official No. 2033 is a female yearling bird that Tomer listed in his Table 1 but neither saw nor photographed. Its original label is so stained that the writing on it is illegible, but the other, Academy, tag indicates collection on the Red Fork of the Arkansas River in 1850. All of this boils down to the fact that there are four *Ictinia* specimens, rather than three, in the Woodhouse collection at the Academy; more about this later.

There are three readily recognizable plumages of the Mississippi Kite (Bent, 1937, Bull. U.S. Natl. Mus. 167, Pt. 1, pp. 66-67; Sutton, 1944, Wilson Bull. 56: 4-5; Eisenmann, 1963, Auk 80: 76-77; Parker, 1974, Ph.D. Dissertation, Univ. Kansas, Lawrence). Adults two or more years old have gray heads and bodies, all-black tails, and sometimes small patches of rufous at the bases of the primaries. Typical fledglings show the cryptic brown, gray, black, and white juvenal plumage of most young falconiform birds. Based on my own extensive field observation, and as described in Bent (1937, *loc. cit.*, but in contradiction to Brown and Amadon, 1968, Eagles, hawks and falcons of the world, McGraw-Hill, N.Y., p. 256), Mississippi Kites molt from juvenal into adult plumage beginning some time after their fall departure and continuing into the next summer. Yearlings arriving on the nesting ground in April-May show different combinations of adult and juvenal body plumage, but almost all have at least completely adult-plumaged head, back, and breast and still carry some barred wing linings, remiges and rectrices of the juvenal plumage. The replacement of their first flight feathers begins during their first summer back on the breeding ground.

Tomer's information about the Woodhouse specimens at the Academy was helpfully compiled by the Academy staff (Tomer, pers. comm.). The list was apparently taken only from the catalog, and indicated that the Woodhouse collection contained one kite in each of the three above-described plumages. However, when I examined all *Ictinia* specimens from the Academy, I discovered the discrepancy between Tomer's summary and the specimens actually present there. Figure 4 in Tomer (*op. cit.*, p. 24) shows, from top to bottom, an adult male collected on the Arkansas River (now official ANSP No. 2035); a juvenile collected in 1850 on the Red Fork of the Arkansas River (ANSP No. 2034); and what looks like a yearling *I. mississippiensis* but is in fact the adult *I. plumbea* (ANSP 33244) with boldly barred tail and extensive areas of rufous in the primaries. The rufous patches are far more extensive than in *mississippiensis* (see Sutton, 1944, *loc. cit.*, and Eisenmann, 1963, *loc. cit.*), and the barred rectrices are clearly part of the adult feather coat. The Plumbeous Kite specimen carries three tags. The oldest, in ink, reads "N. 10. Macho" with a pencil inscription of "Bolivia?". The Academy tag reads "I. plumbea, male, S.W. Woodhouse, M.D., May 1850, Ft. Gibson." Use of the Spanish word *macho* indicates that someone aside from Woodhouse must surely have written the original label.

Woodhouse collected a Mississippi Kite on 23 June 1849 somewhere near his camp on the Verdigris River. Tomer felt that this was almost certainly the juvenal-plumaged specimen (ANSP No. 2034). However, this is contradicted by that specimen's collection locality which was given as the Red Fork, Arkansas River (Cimarron River), far west of the Verdigris. Tomer indicated that this specimen had no date, but its tag shows "1850."

Rarely in my study of the Mississippi Kite (Parker, 1974, unpublished data) have I seen hatching of the one or two eggs before mid-June, and fledging rarely occurs before 25 July. It would be almost impossible for a juvenile to be flying on 23 June. Woodhouse's Verdigris River specimen of June 23 could not, therefore, have been the fledgling kite, though it could easily have been collected in 1850 when the expedition was along the Cimarron in late July and early August. Because the yearling kite specimen (ANSP No. 2033) not shown in Tomer's Fig. 4 was clearly labeled "1850, Red Fork, Arkansas River" it also is obviously not the 23 June 1849 specimen. I believe the specimen collected in 23 June 1849 was official ANSP 2035, the adult Mississippi Kite, label undated and with locality given only as "Arkansas River." Woodhouse's identification of this specimen as *I. plumbea* is a reflection of the early taxonomic designation of the Mississippi Kite as *I. plumbea* (Tomer, pers. comm.). Alternately, Woodhouse's 23 June specimen might not have survived, which is apparently the situation with a Swallow-tailed Kite (*Elanoides forficatus*) specimen (Tomer, *op. cit.*, p. 30).

The origin of specimen ANSP No. 33244, the adult Plumbeous Kite, remains unclear. No other kite specimens in the Academy collection carry collection numbers or other label data that hint at the source of ANSP No. 33244. If the bird had actually been collected by Woodhouse, it would probably represent the first record for *I. plumbea* in the United States. It is far more likely that it was collected somewhere within the normal range of *I. plumbea*, later mislabeled, and erroneously attributed to Woodhouse. — James W. Parker, *Biology Dept., University of Maine, Farmington, Maine 04938, 15 June 1981.*

**Another Merlin specimen from Payne County, Oklahoma.** — Several times during the fall of 1980, my Aunt Pauline (Mrs. Emil Kastl) observed "a small hawk" trying to catch a House Sparrow (*Passer domesticus*) on the Kastl farm about 6 miles southeast of Stillwater, Payne County, north-central Oklahoma. When the hawk had attacked them, the sparrows had usually flown from the house toward a pole barn about 150 feet away into one end of which a large tractor had been partially backed.

On 24 December, Mrs. Kastl found a dead Merlin (*Falco columbarius*) on the ground close to the pole barn. On the tractor's dusty window was a clear spot to which clung feathers of the Merlin's throat and breast, evidence that the little falcon had killed itself flying into the glass. No one could be certain, of course, that it was the very hawk that had been seen about the farmyard earlier that season, but Mrs. Kastl, who knows the American Kestrel (*F. sparverius*) well, was sure that the "small hawk" had not been that species.

George M. Sutton, who prepared the Merlin as a study skin (immature female, UOMZ 16753), found it to be surprisingly thin (weight 207.2 grams; wingspread 609 millimeters). Its stomach was empty. In Sutton's opinion, it represents the western subspecies *F. columbarius richardsonii*, a pale form that migrates through (and winters in) Oklahoma fairly regularly. Among the brown-toned feathers of the specimen's upperparts are scattered gray ones, evidence of protracted molt into adult plumage.—Patricia L. Muzny, 1209 Southwest 47th St., Oklahoma City, Oklahoma 73109, 20 February 1981.

**American Woodcock in Beckham County, Oklahoma.**—At mid-morning on 3 November 1980 (clear day, temperature 43°F), I was called upon to identify a "long-billed" bird that was walking about in front of the Elk City Community Hospital where I work. I expected to see a Common Snipe (*Capella gallinago*), but as the chunky, short-legged bird ventured out into bright sunlight from beneath a juniper, I noticed its large head with eyes set near the top, the richly patterned coloration of its back, and the buffiness of its underparts. Unmistakably, the bird was an American Woodcock (*Philohela minor*), the first I had ever seen. Two other people and I followed it about the hospital grounds for several minutes. As it walked along, we noticed that it tried occasionally, and without much success, to probe in the hard ground for food. Lori Purcell took several photographs from a distance of fifteen feet, but these did not turn out well. Not until Lori was walking back toward us did the woodcock flush, rising straight up and over the one-story hospital building and disappearing to the west. None of us heard the "whirring" sound of its wings.

*Philohela minor* has not heretofore been recorded in Beckham County. Sutton (1974, A checklist of Oklahoma Birds, Stovall Mus. Sci. & Hist., Univ. Oklahoma, p. 14) stated that the species occurs "westward exceptionally to Harper, Roger Mills, and Greer counties." The height of migration is believed to take place from about 15 October to 20 November and from near 10 March to 20 April (Sutton, 1967, Oklahoma birds, Univ. Oklahoma Press, Norman, p. 181). Tyler (1979, Birds of southwestern Oklahoma and Supplement, Contrib. Stovall Mus. No. 2 (p. 22) and No. 3 (p. 19), Univ. Oklahoma, Norman) listed four records for fall and seven for winter: five were for Comanche County, two for Stephens County, and one each for Caddo, Greer, Grady and Kiowa counties.

Since this sighting I have learned that *Philohela minor* has been seen irregularly during fall migration in Wheeler County, Texas, immediately west of Beckham County, Oklahoma (*vide* Dick DeArment, Texas Parks and Wildlife Department). — Ina S. Brown, 106 Sunset, Elk City, Oklahoma 73644.

**Do Screech Owls prey on Bobwhites?** On 21 November 1980 a man named Darrell Burns found a Screech Owl (*Otus asio*) crippled or dead 3 miles west of Stella, Cleveland County, central Oklahoma — presumably along the all-weather road that runs through that area. I do not know Mr. Burns or where he lives, but I feel sure that he did not shoot the owl, for when I prepared the specimen (male, UOMZ 16756) I found not the slightest trace of bullet- or



shot-wound. The bird was extremely thin, though hardly emaciated (weight 132 grams). Its stomach was packed with the feathers, skin, some flesh, but no bones of a Bobwhite (*Colinus virginianus*). The feathers were chiefly at the stomach's upper end in a wad ready for ejection as a pellet.

Concluding (on the basis of what has just been said) that Screech Owls sometimes prey on Bobwhites would obviously be a mistake, for what this owl ate might well itself have been a victim of road traffic. And I suspect that the owl, too, was killed by road traffic.—George M. Sutton, 818 W. Brooks St., Norman, Oklahoma 73069, 6 February 1981.

**Snowy Owl again in central Oklahoma.**—Shortly after noon on 7 January 1981, at a prairie dog colony in the northwestern part of Oklahoma City, Oklahoma County, central Oklahoma, I saw a Snowy Owl (*Nyctea scandiaca*). The big white bird was a real surprise, for the weather had been unseasonably mild week after week. There had been only one snowfall all winter, a slight one.

Between about 1300 and dark I visited the dogtown several times. On each visit I watched the owl, whose plumage was somewhat marked with dark gray. The conspicuous bird spent most of its time on the ground, though occasionally it perched on a fencepost. When flying it usually kept low. Never did I see it hovering, as if looking for prey. At about 1800 it chased and almost caught a flying meadowlark (*Sturnella* sp.). Twice, while flying over a plowed field, its claws snatched at a low-growing tuft of vegetation, but I did not see it carrying or eating anything. On my last visit I had a camera with me. I took several photographs of the owl.

While obtaining permission to enter the dogtown for photographs, I talked with William Rawson, who had leased the area and was living nearby. He informed me that he had seen the white owl during the preceding week. One evening the bird had flown near his house, where some two dozen chickens were loose in the yard. The Rawson house stands about a hundred yards from the dogtown.

On 8 January J. Brooks Parkhill and his wife Thula watched the owl for some time. They did not see it capture or eat prey. That afternoon the Parkhills, Henry Walter, and Neil Garrison observed it not far from the prairie dogs, several of which were running about. No one saw a Burrowing Owl (*Athene cunicularia*), a species that had been seen at the dogtown from time to time during the summer of 1980 and one that the big owl might have considered prey.

Several persons looked for the Snowy Owl on 9 and 10 January, and sporadically thereafter, but no one saw it again—John S. Shackford, Route 1, Box 125, Oklahoma City, Oklahoma 73111, 8 February 1981.

**Late nesting of Western Kingbird in Oklahoma.**—On the evening of 10 August 1979, in the camping area of Black Mesa State Park in Cimarron County, far western Oklahoma, I noticed a single Western Kingbird (*Tyrannus verticalis*) attending a nest about 15 feet up in a hackberry tree. The following

morning the person whose campmobile was parked near the nest-tree allowed me to stand on his vehicle, from which vantage point I could look into the nest without trouble. The nest contained one young bird whose rectrices were still visibly sheathed at the base, so I surmised that it had hatched about 1 August and that egg-laying had taken place "12, 13, or 14 days" earlier (see Bent, 1942, U.S. Natl. Mus. Bull. 179, p. 62).

According to Sutton (1967, Oklahoma birds, Univ. Oklahoma Press, Norman, p. 330), the latest date on record for the nesting of *Tyrannus verticalis* in Oklahoma is 26 July. On that date in 1963, J. L. Cracraft observed a brood of recently fledged young in Alfalfa County, north-central Oklahoma. I estimate that the young bird that I saw in Cimarron County would have fledged about 18 days later than 26 July.—Joseph A. Grzybowski, *Oklahoma Dept. Wildl. Cons.*, 1801 N. Lincoln, Oklahoma City, Oklahoma 73105, 29 July 1981.

**Blue Jay killed by Fox Squirrel.**—My house stands in an unmanicured native-plant thicket of blackjack oak, persimmon, hackberry, and plum a mile west of the Cheyenne-Arapaho Indian Agency in Canadian County, central Oklahoma. Near the house, securely fastened between two blackjacks and about 6½ feet up, is a feeder filled with a mixture of cracked corn, sorghum, and wheat. Some of this mixture I scatter on the ground near the feeder.

Just after sunup (about 0700) on 17 February 1981, as I was watching through a window, I saw that one of the half dozen Fox Squirrels (*Sciurus niger*) that regularly visit the feeder had already arrived. It was on the ground not far from the base of the nearer of the oaks that support the feeder. It promptly chased off a second squirrel that appeared on the scene. As it resumed feeding, a company of five Blue Jays (*Cyanocitta cristata*) flew in, alighted in a group about 6 feet from it, and started picking up the grain. It paid no attention to them as they moved forward until the nearest was only about 2 feet away. Now, quick as a flash, it jumped on the jay, grasping it firmly, apparently with both feet and teeth. The impression created was that the squirrel had wrapped itself around the bird. Feathers flew as the captive struggled. The other jays, voicing anger or alarm, flew about excitedly. In about two seconds the captured jay broke loose, but I could tell that it had been badly hurt. Beating its wings feebly, it flew about 6 feet and fell to the ground. Again the squirrel hit it, this time without holding on. The jay fluttered another 15 feet and fell on its back. Attacking the third time, the squirrel must have bit savagely, for when it moved off, the jay was dead.

By this time many jays, Cardinals (*Cardinalis cardinalis*), Harris's Sparrows (*Zonotrichia querula*), Carolina Chickadees (*Parus carolinensis*), and other birds had gathered, all of them scolding noisily. The squirrel climbed a tree nearby, looked down toward the dead jay, and flicked its tail excitedly. Presently it left, but the company of birds lingered for a full half hour.

Necropsy revealed that the jay was a female. The squirrel's incisors had penetrated both sides of the lower back, cutting through the kidneys and renal artery. I found no other major wounds. The squirrel's sudden attack must have

shocked the jay badly, for as a rule the jays and squirrels fed together amicably.—George B. Wint, *Route 3, Box 121, El Reno, Oklahoma 73036, 13 March 1981.*

**Fledging of Carolina Chickadee brood.** — On 17 April 1980, in my yard in a residential part of Norman, Cleveland County, central Oklahoma, I happened to see a Carolina Chickadee (*Parus carolinensis*) enter a natural cavity about 11 feet from the ground in a blackjack oak not far from the house. Without enlarging the cavity's entrance at all, I could see that it held a nest in which there were four small chicks. Interested in learning how long the brood would remain in the nest, I observed them each morning and each evening until 22 April, then several times daily until 26 April.

On 26 April we had both wind and rain, the air temperature being about 50° F. at noon. I inspected the nest at approximately 30-minute intervals from daybreak until the rain stopped at about 1400. At that time the parent chickadees were exceedingly active and vociferous. Presently I saw one of the young birds at the cavity's entrance. Almost at once it flew rapidly off in a straight line. One of the brood had, I believe, already left without my seeing it. Within minutes two more young ones also left the cavity. One of these I captured, for I wanted to ascertain just how long its wing and tail feathers were. The specimen proved to be a male (UOMZ 16240). Its wing (all primaries and secondaries somewhat sheathed at base) measured 49 mm., its tail (rectrices much sheathed at base) 31 mm. The brood had "fledged", to be sure; they could fly well; but they had left the nest well before their flight feathers were fully developed.—William R. Johnson, *2701 Hollywood St., Norman, Oklahoma 73069, 9 March 1981.*

FROM THE EDITOR: The March, 1981 issue of the *Bulletin* (Vol. 14, No. 1) is incorrectly paginated. To correct this error, affix small squares of paper with the right page numbers over the incorrect ones. The index in this issue is based on the *corrected* page numbers. There should be no number on the first page.—Jack D. Tyler.

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