

FIRST NESTING RECORD OF BLACK-NECKED STILTS FOR OKLAHOMA

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JOHN KEY AND ESTHER KEY

In the United States, the Black-necked Stilt (*Himantopus mexicanus*) winters coastally from central California, the Gulf Coast and southern Florida, southward. It breeds along both coasts and the Gulf of Mexico and inland as close to Oklahoma as New Mexico, Kansas, and the Texas panhandle (AOU, 1983). It has bred "occasionally" near Clayton in the northeastern corner of New Mexico (Hubbard, 1978); rarely at two central Kansas refuges (Thompson and Ely, 1989); and in Randall County, Texas, just south of Amarillo (Texas Ornithological Society, 1984). For Oklahoma, there is one old record, with specimen, during the breeding season: "not known to have bred, though said to have been common along the Red River in 'old Greer County' in July, 1901" (Sutton, 1974). Otherwise this species has been recorded only during migration, and then rarely (see Davis, 1985 for summary of dates). Remarkably, nests were discovered at two different locations in Oklahoma during the summer of 1993.

NESTING IN ALFALFA COUNTY

Beginning in mid-May 1993, Koenen, who was studying the nesting biology of Snowy Plovers (*Charadrius alexandrinus*), Least Terns (*Sterna antillarum*), and American Avocets (*Recurvirostre americana*), began to observe up to three Black-necked Stilts associating with several avocets along Clay Creek on the Salt Plains National Wildlife Refuge in Alfalfa County, northwestern Oklahoma. The vivid contrast between their black upperparts and white breasts, together with their bright pink legs, made them easy to identify.



Fig. 1. Adult feeding near nest in southeast Garfield County, Oklahoma. Note the striking black and white plumage and long pink legs. Fig. 2. Adult on nest at the Garfield County site (not same bird as in Fig. 1). Both photos taken 8 July 1993 by Mitchell Oliphant.



Fig. 3. First documented Black-necked Stilt nesting in Oklahoma. The nest, at Great Salt Plains National Wildlife Refuge in Alfalfa County, contains three eggs and a recently-hatched young. **Fig. 4.** Chick from nest in Fig. 3. Note lack of well-defined dark loreal stripe on face characteristic of American Avocet chicks. Both photos taken by Marcus Koenen on 2 July 1993.

By 22 June, all three stilts began to participate in nest defense behavior, including broken wing displays and distress calls. Toward the end of the month, Koenen had located two nests that he suspected belonged to the stilts, but because avocet nests are virtually identical, he could not be certain. The dark green eggs, too, are similar, but those of stilts average slightly smaller and have darker blotches. Measurements of the eggs in one nest (41.3 x 30.0; 41.8 x 29.8; 41.1 x 29.0; and 41.3 x 29.7 mm) were closest in size to those expected for stilts (Harrison 1979). Unfortunately, the second nest was washed away by a rainstorm in late June before its eggs could be measured, but they appeared to be smaller than others nearby that had previously been identified as avocet eggs.

Koenen flushed an adult stilt from the first nest on 25 June. It held four eggs and he checked its progress every three to four days thereafter. The first chick hatched on 2 July, at which time the other three eggs were pipped; when he held them to his ear, he could hear faint chirping noises. Two days later, the nest was empty and devoid of shell fragments; there were no obvious signs of predation. The adults, presumably to defend one or more chicks, continued to exhibit distress displays in the vicinity. However, Koenen saw no chicks after 2 July.

The adult stilts were last seen in the area on 6 July. A rainstorm on the morning of 7 July delivered 4.11 cm (1.6 in.) of rain and flooded the areas near Clay Creek previously used by the stilts. The old birds were absent after this date. Since any chicks would have been only five days old and still flightless when the flooding occurred, they probably drowned. Quite incredible, however, is the fact that any of the stilt eggs hatched at all, because not one of the 20 avocet nests monitored in that vicinity was successful. In fact, only three avocet chicks appeared in the Clay Creek area during the entire summer.

Frequent heavy rains devastated many plover and tern nests on the salt flats during the summer of 1993. Because of the nearly level, expansive nature of the flats, sheet flooding usually occurs after only one or two centimeters of rainfall. During such episodes, many eggs are washed out of nests and others become submerged. Management techniques to decrease the number of nest failures due to sheet flooding in the future are now under consideration.

NESTING IN GARFIELD COUNTY

At the same time that stilts were nesting on the Salt Plains Refuge, others were doing so 40 miles to the southeast at a marshy spot 8 miles west and 5 miles north of Hennessey in Garfield County. There, on 1 July 1993, John R. Key noted that an intermittent wetland near a blacktop road was inundated for the first time in several years. Extending over about four hectares (10 acres), this flooded lowland supported a plant association typified by reeds, cattails, and sedges. Along with the numerous egrets he saw feeding there, Key also saw several somewhat smaller black and white birds wading in the shallows. Once he noticed the pink color of their extremely long legs, he knew that they were stilts. The six adults present seemed to associate as three pairs, often bobbing their heads up and down while feeding. Before he left, Key took several photographs. Upon returning home, he told his wife Esther of his discovery. Immediately, she placed this information on the Oklahoma City Rare Bird Alert, a recorded telephone message of recent unusual bird sightings. A few days later, John returned to the marsh and watched as several of the stilts engaged in courtship displays.

Mitchell Oliphant of Oklahoma City could find only five adult birds there on 8 July. However, one of them was sitting on a nest of loosely piled sticks and grass a few meters west of a nearby north-south lease road. He took pictures of this bird at close range and of another feeding nearby.

Word of the nesting stilts spread rapidly. On 10 July, Bob Funston from Oklahoma City photographed five adults and two chicks at the marsh. By this time, Deloris Isted of Tulsa had placed the sighting on the statewide Oklahoma Ornithological Society Rare Bird Alert. She later visited the site and met the owners of the property, Mr. and Mrs. Monty Bullis of Waukomis. They were intrigued that their strange birds were evoking so much interest throughout the state.

On 12 July, John Key found a stilt on the same nest which Oliphant had observed four days earlier. On 15 July, he saw three small chicks about three inches high; on 19 July, two widely separated broods, each of three chicks and all about five to six inches tall; and on 21 July, an adult stilt sitting on a grassy nest with four eggs just north of the east-west blacktop road.

Jeffrey and Tina Webster visited the site on 23 July, counted 12 Black-necked Stilts, including five chicks, and took several photographs. The nest near the blacktop road, when next examined by John Key on 29 July, held two broken eggs and two that were intact.

On 31 July, John and Dorothy Newell accompanied the Keys back to the marsh. Four adult stilts attempted to distract the visitors, who counted only three chicks, each about nine inches high. Water in the marsh was rapidly evaporating and concern for the chicks' future was great. Because the nest had been abandoned, its eggs were subsequently collected by Esther Key for deposit in the Oklahoma Museum of Natural History at the University of Oklahoma in Norman.

John Key drove to the now dry marsh during a rainstorm on 3 August. Although he found no stilts at the marsh, he saw five adults and three large juveniles of various sizes at one of two ponds across the road in a wheat field. If other chicks had been present and were less than half adult size, the tall wheat would have obscured them. The adult stilts appeared to be skirmishing with some avocet chicks, which were nearly their size.

At the same pond on 8 August, Oliphant discovered only one adult stilt, accompanied by two nearly grown chicks. He presumed that the other stilts had already left the area.

Three days later, the marsh was completely dry, the ponds across the road were rapidly disappearing, and John Key could find no stilts. But on 25 August, as he drove along State Highway 51 about 6 miles west of Hennessey, and some 7 miles southeast of the nest site, he spotted a stilt in a small flooded field. When he stopped to investigate further, Key counted four additional stilts. All of these birds were adults and were still present on the following day. By 31 August, however, both the water in this marsh and the birds had disappeared.

SUMMARY

Except for the record in 1901 mentioned above, previous Oklahoma sightings of Black-necked Stilts were known only during periods of expected migration and breeding had not been documented (Sutton 1967; Davis 1985; Baumgartner and Baumgartner 1992). During the summer of 1993, however, at least three adult stilts in Alfalfa County and seven others in Garfield County produced a minimum of seven young birds. This represents a significant extension of the species' known inland nesting range. The Oklahoma sites are approximately 230 miles east of Clayton, New Mexico, and about 130 miles south of Quivira National Waterfowl Refuge, Kansas.

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404 LIFE SCIENCES WEST, OKLAHOMA STATE UNIVERSITY, STILLWATER, OKLAHOMA 74078; 3116 N. VIRGINIA, OKLAHOMA CITY, OKLAHOMA 73118; AND P.O. BOX 291, PIEDMONT, OKLAHOMA 73078, 22 OCTOBER 1993.

How often do Brown Thrashers nest on the ground in Oklahoma?—In regard to nest site selection by the Brown Thrasher (*Toxostoma rufum*), Bent (1948, *Life histories of North American nuthatches, wrens, thrashers, and their allies*, *Bull. U. S. Natl. Mus.* No. 195, pp. 356-357) stated that "... ground nests are common in New England" and that half of those in southeastern Massachusetts recorded in his field notes had been built on the ground. He also noted that 10 of 23 nests in the Boston

area of extreme eastern Massachusetts were ground nests (F. H. Kennard field notes). But information at hand led Bent to assert that "throughout the western and southern portions of its range [the Brown Thrasher] . . . very seldom builds its nest upon the ground . . ." For example, Dawson (1903) found that in Ohio, five species of dense, low-growing woody plants were preferred nest-sites, with brush-heaps and fence corners used occasionally, whereas the ground was last choice. In Iowa, Currier (1904) reported ground nests as "very unusual" and in Illinois, Dubois (field notes) found only one of 19 nests on the ground "under a large, cattle-eaten bush in a pasture" (Bent 1948). Farther south in Tennessee, Erwin (1935) did not find a single ground nest among 59 he studied, but Todd (field notes) discovered one among 109 nests (Bent 1948). One exception was in Minnesota, where Currier (1904) reported that of "several" nests, all were placed on the ground.

Even in the Southwest, the Brown Thrasher will, on rare occasions, build a ground nest. Oberholser (1974) implied as much when he wrote that it will nest ". . . even on ground . . ." in Texas. No ground nests have been reported from Arkansas (James and Neal, 1986) or Colorado (Bailey and Niedrach, 1965). Thompson and Ely (1992) stated for Kansas that "In some areas ground nesting is common," but failed to specify in which areas or how often this has occurred.

In Oklahoma, only one other ground nest has apparently ever been recorded. In Cleveland County, sometime between 1919 and 1929, Nice (1931) discovered one among 87 that she studied. Every nest found in the same county from 1952 to 1965 was above-ground, as were all observed at the University of Oklahoma Biological Station in Marshall County in 1951, 1954, 1957 and 1959 (Sutton, 1967).

On 29 May 1993, as I was preparing to leave Watson's Crossing, a low-water passage on the Cimarron River 8 miles east of Kenton in Cimarron County, far western Oklahoma, I noticed a Brown Thrasher wing-flashing from atop a fallen five-foot limb lying beneath a cottonwood tree. Closer observation revealed two thrashers, both obviously agitated, their attention focused toward the limb. This behavior I had witnessed before and not far away. On 18 June 1983, a pair of Curve-billed Thrashers (*T. curvirostre*) gave similar displays at their nest in a cholla cactus south of Kenton after a large western coachwhip snake (*Masticophis flagellum*) had devoured their eggs (Tyler, 1986). Therefore, I was not entirely surprised when, as I approached, a 4½-foot coachwhip slithered away from beneath the limb. Nestled within the branches, the thrashers' empty nest was sunk into the earth about an inch. I captured the snake, which regurgitated two crushed thrasher eggs, both containing well-developed embryos. The next day I returned with John S. Shackford, who photographed the abandoned nest (photos on file in Cameron University Museum of Zoology). Not long thereafter, Ernie Wilson and I spied a large coachwhip near a pile of branches about 300 yards east of the predated nest. Perched atop this brushpile was a Brown Thrasher, food in bill.

Of interest is that this is apparently only the second Brown Thrasher ground-nest known for Oklahoma, and one of very few recorded in the western states. Why, then, do these thrashers nest regularly on the ground in New England, but almost never in the western and southern parts of the United States? During a five-day sojourn in the Kenton area from 27-31 May, 1993, Shackford and I randomly encountered at least five other large coachwhips that were hunting at various hours of the day. Our daily searches for birds were made within a 12-mile radius

of Black Mesa State Park, which lies 6 miles southwest of Watson's Crossing.

Large, terrestrial snakes known or suspected to prey on eggs, at least occasionally, include the racers (*Coluber constrictor* and subspp.), bullsnakes (*Pituophis* spp.), coachwhips (*Masticophis* spp.), kingsnakes (*Lampropeltis* spp.) and ratsnakes (*Elaphe* spp.). None of these reptiles occurs as far north and east as Massachusetts except *Elaphe o. obsoleta*, the black rat snake, and the northern black racer (*Coluber c. constrictor*; Conant 1975). However, the former species barely reaches the southwestern corner of Massachusetts, and for the latter, neither Wright and Wright (1957) nor Ditmars (1939) listed eggs in the usual diet.

One subspecies or other of all the snakes listed above ranges into the southwestern states. The threat of predation by one or more of these active, diurnal serpents would seem to play a major role in precluding ground nesting by birds adaptable enough to utilize available above-ground sites; i.e., this is one way that ground nests would be selected against. Ortenberger (1928) emphasized a predilection by *Masticophis* for bird's eggs. The foregoing observations would certainly seem to corroborate this in the Black Mesa country of Oklahoma.

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First breeding record and summer records for the White-eyed Vireo in the Wichita Mountains, Oklahoma.—White-eyed Vireos (*Vireo griseus*) have been observed commonly in the eastern third of Oklahoma, but only sparingly west to Alfalfa, Caddo and Comanche counties (Sutton, G. M., 1967, Oklahoma birds, Univ. Oklahoma Press, Norman, p. 475). Along the Red River and counties in northcentral Texas, breeding has been reported (or assumed) west to Wilbarger, Cooke and Tarrant counties with additional summer records for Clay and Denton counties (More, R. L., and J. K. Strecker, 1929, The summer birds of Wilbarger County, Texas, *Contrib. Baylor Univ. Mus.* 20:16; Oberholser, H. C., 1974, The bird life of Texas, Univ. Texas Press, Austin, p. 702).

Jean Graber saw very few White-eyed Vireos in Caddo County during her studies in 1955, but located a nest with four eggs near Cogar on 10 June (Sutton 1967, *loc. cit.*). The only published White-eyed Vireo record known for Comanche County was of a likely migrant observed 14-16 April 1973 in Lawton by Janet M. McGee (1973, *Am. Birds* 17:790). However, the fall dates of 16-20 September given by J. D. Tyler (1979, Birds of southwestern Oklahoma, *Contrib. Stovall Mus.* No. 2, Univ. Oklahoma, p. 41) coincided with those for a singing male observed 16-22 September 1972 in Lawton by Janet M. and Louis E. McGee (pers. comm.). In addition, single birds have been observed in Lawton during April four additional years between 1974 and 1991 (McGees, unpubl. data; Tyler, pers. comm.), all apparent migrants. Breeding has been suspected in Stephens County (Tyler 1979, *loc. cit.*). However, only one observation has heretofore been reported for any part of the Wichita Mountains, that of a male noted 14 April 1983 on Fort Sill, 2 mi. southeast of Medicine Park, by Jon Andrew (*vide*, Tyler).

While investigating the population ecology of the Black-capped Vireo (*V. atricapillus*) in the Wichita Mountains Wildlife Refuge and Fort Sill Military Reservation from 1986-1991, I encountered a number of White-eyed Vireos. On 28 June 1988, I heard a male singing on Fort Sill along Medicine Creek at Four Mile Crossing. In May and June 1989, a pair apparently summered on the refuge along the upper reaches of Quanah Parker Lake, but no nests or young were observed. Vicki Byre discovered a singing male, possibly a migrant, on 1 May 1991 on the south slope of Hobbs Canyon in the North Mountain Wilderness Area. All birds were observed in the most densely vegetated scrub and woodland areas along drainages.

On the afternoon of 26 July 1991, while hiking with Jeffrey Parrish through tall oak woods along Headquarters Creek just west of the Sunset Picnic Area of the refuge, I heard the weak but characteristic location note of a young vireo about 15 m off the trail. Locating the bird, I assumed that it was a Black-capped Vireo in apparent juvenile plumage. The eyes were dark, and there were no signs of incoming molt into first-winter feather. Two pale wing bars could easily be seen, and the tail was full-length. I also noted the poorly contrasting, dingy pale spectacles around the eyes on the dull, pale gray head. The underparts were dingy whitish gray, duller than that of most Black-capped Vireos, with a slight buff overtone to the sides.

Because this vireo was almost 1.2 km from each of two known Black-capped Vireo territories that Parrish and I were monitoring, I pondered the origin of this young bird. However, as I helped Parrish locate it, an adult White-eyed in worn plumage and heavy molt appeared and fed the eagerly soliciting young. The adult was silent. Despite its ragged appearance, we could discern its yellow lores and

spectacles and the white eye. The foraging adult occasionally fed the fledgling, which remained near it.

I had initially thought that the young bird's location call was not exactly right for a Black-capped Vireo. In listening more intently, I discerned that its call note (characterized as a simple "eeeh") was subtly lower pitched and less crisp than that of a juvenile Black-capped Vireo, with which I was very familiar. After about 10 minutes of observing these birds, we moved on.

While the plumages of first-winter and juvenile White-eyed Vireos are quite similar (Dwight, J., Jr., 1900, The sequences of plumages and moults of the passerine birds of New York, *Ann. New York Acad. Sci.* 13:240), the dull underparts indicate that the young observed was in juvenal plumage. In first-winter plumage, the flanks of White-eyed Vireos are prominently washed with yellow. Many, but apparently not all, in juvenal plumage show a tint of yellow or yellow-buff on the sides and lores. The yellow was not prominently featured on the young bird we observed, possibly a sign that it was a female. In addition, its persistent soliciting behavior, continuous calling, and limited foraging effort were indicative of a young bird.

Two pairs of Black-capped Vireos in this portion of the refuge were parasitized by Brown-headed Cowbirds (*Molothrus ater*), and one pair actually fledged cowbird young on Elk Mountain (Parrish, pers. obs.). A Red-eyed Vireo (*V. olivaceus*) observed in heavy molt on 30 July 1991 in the Sunset Picnic Area also fed a fledged cowbird. The White-eyed Vireo reported here may have escaped such victimization, although its partner may at that moment have been attending a young cowbird elsewhere. In addition, this late potential fledging date suggests that earlier nesting attempts might have failed, perhaps because of depredation, but possibly also because of parasitism and subsequent abandonment of the nest.

Addendum: Several additional observations of White-eyed Vireos were made during 1992 and 1993 in areas of the Wichitas we regularly visited. Mike Stake heard a male on the refuge at the southeast base of Mount Lauramac on 1 May 1992. During the afternoon of 3 June 1992, I heard a male several times in a draw just north of Mount Sherman on Fort Sill. On 31 July 1992, near this draw's confluence with Blue Beaver Creek, I heard, captured, banded and photographed this or another male which had already molted into fresh basic plumage. On 22 July 1993, I observed an unbanded male at this latter locality, and it or another vireo sang from a location only slightly downstream on 29 August 1993. None was observed here earlier in the season.

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