

day the young were fed an average of 4.5 times per five-minute period — in other words about once per minute. That same day we counted 128 food-visits during one five-minute period at a section of the colony that had about one-third of the burrows.

At the larger colony (where I had counted 138 burrow entrances on 31 March) I counted 264 burrow-entrances at the end of June. Many of the 264 burrows were shallow. I know that at many burrows no young were reared.

I observed some Rough-winged Swallows using burrows dug by Bank Swallows during the previous year. In Michigan, Lunk (1962, Publ. Nuttall Ornith. Club No. 4, p. 132) found that Roughwings were "to a considerable extent dependent for nest sites upon the excavations of the Bank Swallows . . ." At both chat piles I saw Roughwings, and during the first part of April they were more common than Bank Swallows. The Roughwings nested in the highest and most isolated portions of the two chat piles, which made mist-netting particularly difficult. Our information on them is therefore limited.

We managed to band a total of 253 adult Bank Swallows, of which 102 were recaptured, and 118 young birds, only 18 of which we caught again.

BOX 486, R.R. 1, FAIRLAND, OKLAHOMA 74343, 9 AUGUST 1980.

## THE SWAINSON'S HAWK IN SOUTHWESTERN OKLAHOMA

BY JACK D. TYLER

During a recent 13-year period (1967-1979) my several students and I failed to find a single occupied nest of the Swainson's Hawk (*Buteo swainsoni*) anywhere in southwestern Oklahoma, this despite (a) the species' being fairly common throughout the area in summer and (b) our being afield widely and often. Sutton (1967, Oklahoma Birds, Univ. Oklahoma Press, Norman, p. 110) stated that *B. swainsoni* breeds throughout western Oklahoma, naming Comanche as a county in which nesting had been observed, though Tyler (1979, Birds of southwestern Oklahoma [and supplement], Stovall Mus. Sci. & Hist., Univ. Oklahoma, Contrib. 2, p. 17 and Contrib. 3, p. 12) cited only two breeding records for the whole of southwestern Oklahoma, one of a nest (30 feet up in a cottonwood along Cave Creek 2 miles west and 1 south of Reed, Greer County) at which J. D. Ligon collected one of two small chicks (UOMZ 4165) on 12 June 1960, the other of a nest (in a tree 3 miles west and 2½ south of Eldorado, Jackson County) at which one young bird fledged in the summer of 1974 (*vide* J. W. Tinsley).

In the spring of 1980, my students and I found a nest. On 1 May of that year, Edward Sands, his wife Phyllis, Michael Granger, and I happened to see a Swainson's Hawk perched in a mesquite tree about 6 miles east of Snyder, Kiowa County, Oklahoma. As we were watching it, the bird flew from its perch to a dead mesquite close by and, while still flying, broke off a slender branch which it carried to the top of an elm about 50 yards away. So dense was the elm's leafage that the hawk disappeared in it; but when I climbed up I found a loose platform of 30 to 40 pencil-sized twigs in a crotch about 20 feet above

ground. The rudimentary nest was directly above the bed of a little creek and well shaded by the eastern part of the tree's crown.

Granger and I returned to the nest at 1815 on 5 May. Mud in the creek bed showed that there had been recent rain. As I climbed the elm both hawks watched from mesquite trees about 200 yards away. About 15 sticks had been added to the nest, which appeared to be about one-third completed.

When I next visited the nest (at 2035 on 11 May) it held one egg. One of the hawks was at the nest, though I am not sure that it was brooding the egg. One green twig was in the nest.

On 12 May, Dale Mills checked the nest at 2015. It held one egg. Neither hawk was at the nest, but one of the pair was perched in a tree not far away.

On 14 May, Mills flushed a hawk from the nest, which now held two eggs, one of them freshly flecked with blood. Several leafy twigs were also in the nest. Assuming that the second egg had been laid on 13 or 14 May and that incubation had started on that date, I calculated that hatching would take place on 10 or 11 June, 28 days being the "usual" incubation period according to Bent (1937, Life histories of North American birds of prey, Part I, Bull. U.S. Natl. Mus. No. 167, p. 226).

I last visited the nest on 15 June. It held two eggs. Neither transmitted light or made a "sloshing" sound when shaken. But no hawk was to be seen in the vicinity. The nest apparently had been deserted.

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## GENERAL NOTES

**Anhinga in Tulsa County, Oklahoma.** — On the morning of 18 May 1980, Bruce Reynolds and his wife Anne reported that they had briefly seen a bird that they thought to be an Anhinga (*Anhinga anhinga*) in the North Woods unit of the Mary K. Oxley Nature Center in Tulsa, Tulsa County, northeastern Oklahoma. The Reynoldses and the staff of the Nature Center looked for the bird during the next several weeks, but without success.

On 11 June 1980, Jeff Webster, a summer employee at the Nature Center, observed an Anhinga in this same area. It was perched in a tree that bordered a long pond, part of an old oxbow of Bird Creek. Jeff notified Eileen Docekal, Nature Center Naturalist, and summer employees Neal Muirhead, Terri Bruner, and Bernadette Brown, who found the Anhinga within minutes and followed it to a tall dead tree at the edge of a sewer line right-of-way just south of the pond. Here, in full sun, it remained for about two minutes before flying off to the southwest.

On 14 June 1980, a group from the Tulsa Audubon Society had good looks at an Anhinga at the oxbow pond. In the group were Gary Lee and his wife Ellen, John Dickerson and his wife Lynn, Alice Hensy, *et al.*

On the morning of 28 June, Neal Muirhead and I were checking the area when we saw a male Anhinga fly from north to south across the oxbow at a