

ON THE BEHAVIOR OF AMERICAN  
KESTRELS NESTING IN TOWN

BY GEORGE M. SUTTON AND JACK D. TYLER

For some years after Sutton had moved to Norman, central Oklahoma, in 1952, he saw the American Kestrel (*Falco sparverius*) often enough in summer on the University of Oklahoma campus to convince him that it was nesting thereabouts. Not, however, until 19 June 1960 did he obtain proof that it was doing so. On that date David Spradling found a male eyas kestrel, badly crippled, on the ground back of one of the old buildings facing the North Oval. The eyas could neither stand nor grasp a perch. Though well feathered, it was not by any means old enough to fly. It was stub-tailed and much natal down clung to the plumage of its head. Sutton looked in vain for a parent bird flying to or from the ledge or crevice from which the young bird had fallen. To this day he cannot say where the eyrie was, though he knows of one nook in which pigeons have nested regularly.



AMERICAN KESTREL

*Male carrying plucked prey to nest hole on University of Oklahoma campus.  
Photographed by Stephen Sisney of The Norman Transcript on 1 June 1979.*

On 1 May 1979, as Tyler was walking across the campus, he happened to see a kestrel, followed by a milling swarm of Chimney Swifts (*Chaetura pelagica*), flying toward an old, three-storied dwelling (formerly occupied by the Acacia Fraternity) at the corner of Elm and Cruce streets. There, instead of alighting on the roof, it entered a hole in a gable just below the ridgepole. The hole, which was roughly circular, might have been drilled by a Common Flicker (*Colaptes auratus*), a species known to winter regularly, and to nest occasionally, on the campus.

Sutton, informed of what Tyler had seen, looked daily for kestrels as he walked to and from the campus, though he did not visit the house at the corner of Elm and Cruce until 25 May. On that date he watched the nest hole for about an hour in the late afternoon. He saw no kestrel, either adult or young, during that period. Convinced that the birds had been nesting there, he suspected that the brood had fledged.

The following evening (26 May), after watching the nest hole from about 1830 to 1900, he spied a bird that he decided could be nothing but a kestrel (he was without a binocular) perched atop the eleven-story Physical Sciences Building (PSB) across Elm Street to the east. In plain sight, though inconspicuous because so far away, the bird remained at that one spot for almost an hour (1900 to 1950).

At 1951 a second kestrel flew in at housetop level from the northeast carrying in one foot a plucked small bird, almost certainly a full-grown House Sparrow (*Passer domesticus*). This kestrel, the male, flew toward, then past, the nest hole, alighted on a utility wire above Cruce Street, perched there for about three minutes, and made off southward, still carrying its prey.

At 2000, a kestrel again flew in with prey from the northeast, wheeled sharply as it headed for the nest hole, popped in without the slightest pause, and came right out. Immediately thereafter so much happened that Sutton was not sure which parent had taken the prey in, for even as that bird had flounced upward and alighted directly above the nest hole, its mate had appeared, alighted close to it, given it something, possibly an insect, and flown off. The recipient, after nibbling at what it held in its foot, flew off in the opposite direction. Presently both birds were visible high in air, making their way to the top of the PSB, where they alighted not far apart.

At 2040 that same evening, the male flew in from the southwest straight to the nest hole, propped himself with widespread tail as he looked in, and flew off without entering. By 2100 the light was fading. At 2110 the last of the Chimney Swifts circled overhead. About that time the two kestrels left the PSB, flying off in opposite directions. After a further wait of 15 minutes, Sutton decided that neither parent would be spending the night at the nest.

Sutton was impressed by three facts about what he had observed: 1. Not a sound had either parent kestrel made while coming and going. Sutton had fully expected one or both to dive at him, crying *killce* in a shrill voice. They did not seem to be in the least perturbed by his presence, nor by the passing of innumerable other persons, cars, dogs, cats, etc. 2. Not once did a Chimney Swift go out of its way to dive at either of the kestrels. 3. Though the kestrel eyases must have been old enough to tear up prey — the parents' visits invariably were brief — none of them ever looked out of the nest hole.

At noon on the following day (27 May), both parent kestrels were moving about near the nest hole, alighting on the ridge pole above it, at the edge of the roof close by, or in a big mimosa whose branches extended over part of the roof. Sutton, not knowing when the eggs had hatched, suspected that the oldest of the brood had left the nest, but as he walked about the building and adjacent parking lot, searching carefully for a fledgling, the adult kestrels paid little attention to him.

At 1530 that day, Sutton returned for a two-hour watch period, again finding the adult kestrels not far from the nest hole, the female in the mimosa only a few yards away, the male perching a few feet from the ground on a sign-board across the street to the south. Neither bird cried out or dived at him. Presently both flew to the top of the PSB, where they perched not far apart.

At 1540, both birds flew to the ridgepole above the nest hole, the male with a small prey item, some or all of which he gave to the female, then flew off. The female nibbled at (possibly ate) what she held in one foot, then also flew off — without entering the hole. At 1600 she returned, entered the hole, came out after a very brief stay, and flew off. At 1635 both parents alighted on the ridgepole directly above the nest, neither with prey, then flew to the top of the PSB.

At 1650 a flicker alighted at the edge of the roof only a few feet from the nest hole. Down came the male kestrel at breathtaking speed, barely missing the flicker, which dropped straight to the ground on half-spread wings. Presently it flew up, quite uninjured, alighted again at the edge of the roof — but at considerable distance from the nest hole — and again was dived at by the male kestrel, a little less fiercely this time. As it flew off, neither kestrel pursued it.

On 28 May (sky overcast; intermittent light rain), Sutton observed the kestrels from 0900 to 0915, when the pair perched continuously not far apart atop the PSB, and from 1330 to 1345, when only the male (atop the PSB) was in sight all the time. At 1330 (rain had stopped) both birds were atop the PSB. At 1331 the female flew off southward. At 1340 she returned with small, "longish looking" prey — possibly a frog or lizard — which she took straight to the nest unaccompanied by her mate. She was at the nest a full minute. When she came out she returned to the roof of the PSB, alighting not far from the male.

That evening Sutton and Tyler observed the pair from 1845 to 2002. At 1845 only the female — atop the PSB as usual — was in sight. At 1858 she flew rapidly southward to meet the incoming, prey-bearing male. After circling briefly with him, she returned to the roof, receiving from him there an unplucked bird that appeared to be larger than a House Sparrow. Carrying this (apparently in one foot), she flew to a favored spot at the roof's southwest corner, and plucked it.

At 1903, while the female kestrel was busy plucking, a flicker alighted not far from the kestrel nest. The male kestrel swooped, driving the flicker to shelter in a tree across the street, then returned to the top of the PSB. At 1909 the female carried the plucked prey down to the nest. There, presumably tearing up unusually large prey, she remained for seven minutes — a long stay. When she returned to the PSB roof, her mate was no longer there.

At 1934 the female kestrel flew from the PSB roof down to the top of the Rupel Jones Theatre, a low structure just north of the PSB. Here her mate, whose return the observers had not witnessed, gave her prey, another small bird. After carrying this to the roof of the PSB she plucked with more vigor than usual, and flew down with it to the nest. There, instead of going in, she clung at the entrance, supported by her widespread tail.

What occurred at this moment (1936) was noteworthy: for the first time since their observations had started, Sutton and Tyler heard a twittering cry — this not from either parent bird, however, but from the nest. It was the call of at least one hungry eyas.

At 1939 the male kestrel flew eastward from the PSB roof. He was out of sight until 1942, at which moment he flew directly over the observers, headed west. At 1947, a sprinkling rain started. Although neither Sutton nor Tyler witnessed the female's departure from the nest, they both saw her at 1948 — once more atop the PSB. At 1951 she flew to the parking area just north of the building in which the nest was, perhaps in pursuit of prey. The observers left the campus at 2002, at which time it was raining fairly hard.

When observations began at 1855 on 29 May (sunny, with some clouds), the kestrel pair were perched about 50 feet apart on the PSB roof. At 1856 they copulated there. At 1858 the male departed southwestward. At 1916 he returned, carrying an unplucked, medium-sized, long-tailed bird, possibly a Mockingbird (*Mimus polyglottos*). The female accepted this, flew with it to a "plucking spot" at the roof's southwest corner, and plucked vigorously. At 1919 she flew up, carrying the prey in one foot, circled the roof, returned to the plucking spot, and resumed work. At 1922 she flew with the prey to the north edge of the roof, alighted briefly near the male, then dropped swiftly down on set wings to the nest. At 1934, while she was still at the nest, her mate flew off. A moment later she emerged from the nest hole, gave perfunctory chase to a passing flicker, and returned to the PSB roof. At 1948, two well-feathered eyases were clearly visible just inside the nest hole.

On 30 May observations continued from 0927 to 1003 (Sutton and Tyler) and from 1610 to 1715 (Sutton, Tyler, and Warren D. Harden). At 0927 both kestrels were atop the PSB. At 0933 the male flew off southward, returning at 0953 with a small bird, which he gave to the female, who took it to the northwest corner of the roof for plucking. At 0955 — to the astonishment of the observers — a Mockingbird appeared above the roof, alighted on an antenna, and lunged twice at the female kestrel, almost hitting her. The kestrel, obviously annoyed, flew up with the prey, circled the roof twice, alighted at the

southwest corner, and resumed her plucking despite the threats of the mocker. At 1001 she flew to the nest with the plucked prey, staying there less than a minute.

At 1610 the kestrel pair were atop the PSB, the female plucking a small bird at the southwest corner. At 1615 she took this to the nest, apparently shoving it in, without entering the hole. At 1618 the pair copulated on the roof of the PSB (Harden). From 1640 to 1700 all three observers, assisted by campus police, went to the PSB roof, found there scattered remains of several House Sparrows (flight feathers, feet, and parts of heads chiefly), of a small lizard, and of a half-grown Killdeer (*Charadrius vociferus*). The observers were fully aware of the possibility that the Killdeer had been caught not by a kestrel but by some other raptorial bird.

Observations continued on 31 May from 0750 to 0753 (Sutton), from 1145 to 1305 (Sutton and Tyler), from 1535 to 1655 (Sutton), from about 1600 to 1700 (Harden and Stephen Sisney, a *Norman Transcript* photographer), and from 1700 to 1800 (Harden). From 0750 to 0753 neither parent bird was in sight anywhere, but later that day there was much activity and the two eyases were clearly visible from time to time just inside the nest entrance. At 1202 a Mockingbird again visited the PSB roof, this time lunging at the male kestrel, who ducked when attacked but made not the slightest attempt to fight back. When not attacking, the mocker ran nimbly along the roof's west edge, high on its long legs with tail held up and wagging from side to side. Late that afternoon Harden twice saw one of the kestrels stoop toward the parking area just north of the building in which the nest was, as if intent on catching prey. On each occasion a Starling (*Sturnus vulgaris*), shrieking excitedly, flew round the building even as the kestrel, without prey, returned to the roof of the PSB.

From 1 to 3 June Sutton continued to see two eyases at the nest hole. At 1441 on 1 June he saw one of the old birds catch (and eat?) an insect high in air. From about 1700 to 1800 that afternoon Stephen Sisney watched one of the kestrels as it plucked prey on the roof of the Rupel Jones Theatre. His classic photo of the male carrying prey to the nest was taken at about 1730. On 3 June (a very warm day), the eyases remained almost continuously just inside the nest entrance with mouths wide open, panting. One eyas probably left the nest on the evening of 3 June or before 0750 on 4 June. On 5 and 6 June, Sutton never saw more than one eyas at the nest hole. The last time he saw an eyas at the nest was between showers on 6 June at about 1930.

On 8 June (at about 0730) Sutton watched both parent kestrels flying back and forth above a low part of the PSB, obviously agitated. Neither of them dived at him or called *killee*. The fledged young ones were surely somewhere close by, but nowhere in sight. At 0740 one of the parent birds dived suddenly at and caught a passing House Sparrow. Had Sutton succeeded in keeping this parent bird in sight, he surely would have found one or both of the young birds.

On the evening of 9 June, Mervin R. Barnes, of the university faculty, saw both of the young kestrels perched not far apart on a telephone wire just south of the nest hole. The parent birds were in plain sight atop the PSB at the time.

On the evening of 10 June Sutton saw the two young birds, fluffed out comfortably and still a little short-tailed, perched not far apart at the south edge of the roof of the Rupel Jones Theatre. The parent birds were at the north edge of the PSB roof at the time. After 10 June he did not see any kestrel that he knew to be a young one, though he continued for a week or so to see one or more kestrels flying about the campus.

#### CONCLUSIONS

During the latter part of the fledging period at this American Kestrel nest, the male parent appeared to do most of the hunting, the female most of the plucking of prey. Repeatedly the authors saw the male bringing prey to the female, who accepted it while perched at or near one of her plucking stations. Never did they see him passing prey to her while both were flying, or dropping it to her from the air. On three occasions they saw him taking plucked prey to the nest, but never did they see him actually plucking it. They repeatedly saw the female plucking prey, but never did they see her passing plucked prey to her mate, so plucked prey carried by him could have been plucked by him at his own plucking station (or stations) quite apart from those used by the female.

So much has been said about the American Kestrel's eating of grasshoppers, mice, etc. that the authors were genuinely surprised by the fact that prey brought to the two

eyases was almost exclusively small birds. Most of these were House Sparrows, an abundant and fecund species at the very height of its reproductive season in late May and early June. One prey item might have been a Mockingbird, but no Mockingbird remains were among those found by the authors on the PSB roof.

The utter silence of the parent birds throughout the whole observation period was noteworthy. Perhaps they had become so thoroughly accustomed to urbanized man that they were not disturbed by his comings and goings.

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## AMERICAN KESTREL POSSIBLY TWO-BROODED IN CENTRAL OKLAHOMA

BY ELIZABETH A. BLACK

The American Kestrel (*Falco sparverius*) is believed to be "one brooded" in Oklahoma (Sutton, 1967, Oklahoma birds, Univ. Oklahoma Press, Norman, p. 127). In the summer of 1979, however, two broods were reared at a nest in downtown Oklahoma City, central Oklahoma. The first of these (three young) left the nest on or about 17 June, the second (four young) in mid-September. Whether the same female produced all seven young is conjectural, for neither of the old birds was banded or color-marked; but departure of the two broods was witnessed by Ernest Craig, who has been watching the comings and goings of the kestrels from his window on the fourth floor of an office building at the corner of Fourth and Broadway since the spring of 1971. Year after year the nest has been just outside this window in a cavity at the top of a concrete column about 45 feet from the ground. The cavity's entrance, about 6 inches wide and 4 high, faces west, but it is shaded from the afternoon sun by part of the column's ornate capital. To the best of Mr. Craig's knowledge, this is the first time two broods have been reared in one season at this nest.

Examining the nest has been next to impossible, so no one knows how many eggs were laid in 1979. One bird of the first brood was a male, but the sex of that male's two siblings was not ascertained. All four of the second brood were males. Departure from the nest may have been a bit premature for both broods, since each of the young birds was seen to "crash-land" on the street or sidewalk below the nest. So incapable of flight were the four of the second brood that they were caught and turned over to me, one by one, respectively on the 7th, 10th, 11th, and 12th of September. When I first handled them, they were short-winged and short-tailed. On 30 September, when I released all four in the wild, they flew strongly.

Summer after summer, from mid-February to mid-June, Ernest Craig and others in his office have watched the parent kestrels coming and going. Broods have, as a rule, numbered three or four young. From 1971 to 1976, the female parent was recognizable as an individual, for one of her legs was deformed. Departure of the young from the nest has usually been before mid-morning. Never has the whole brood left at the same time. So poorly have the young ones flown on their first flight that only one or two of them have managed to reach an open field across the street. Most of them have