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injurious species are more frequent in the birds than the useful kinds." It is gratifying to learn this, as the Starling has been introduced into America, and in time may possibly become numerous enough to be of economic importance.

Mr. Gilmour makes the following happy summation of the status of the three birds whose food habits he has investigated. "Of the Pigeon it may be said that he is an unmitigated scoundrel; of the Rook that he is a cunning rogue; but of the Starling we can say with truth that he is our natural friend, by habit and by instinct."

SOME NOTES ON THE NESTING HABITS OF THE WHITE-TAILED KITE.

BY CHESTER BARLOW.

THE White-tailed Kite (*Elanus leucurus*) is perhaps as common in certain portions of California as anywhere throughout its breeding range, and it is resident in Santa Clara County, where the genial climate and almost perennial sunshine are conducive to an abundant food supply. Santa Clara County lies south of the San Francisco Bay region, and its northern boundary is the lower shore of San Francisco Bay. The northern portion of the county consists of the 'lowlands,' which support, in many places, a luxuriant growth of willow. Toward the ranges which surround the valley there are magnificent fields of live oaks and white oaks, which have attained in many places a grand perfection. Considerable of this country is given to farming, and here the trees have been spared. Approaching the foot-hills, and all through the valley from San Jose southward, especially along the water courses, the sycamore and white oak are most commonly met with, and afford the *Buteo* tribe many available and secure nesting sites. Thus it will be seen that certain portions of Santa Clara County are peculiarly attractive to raptorial birds as breed-

ing grounds, and the White-tailed Kite is found scattered in pairs at suitable locations throughout the county.

It has been my pleasure to spend considerable time during the past few years in observing the nesting habits of several pairs of Kites, distributed at various points throughout the county, and the results tend to show considerable individuality in the respective pairs of birds. The White-tailed Kite being of unquestionable benefit, is deserving of the fullest protection, and in one locality at least I know that its usefulness is appreciated by the farmers. Its principal food in this section consists of small rodents, such as gophers, field mice and wood rats, lizards and probably in season a few grasshoppers. Mr. Henry W. Carriger, of Sonoma, Cal., who has had considerable experience with this bird, writes me of finding a freshly-killed ground squirrel lodged in a tree beneath a nest, and which had undoubtedly been captured by one of the Kites. This is probably larger game than they attack as a rule.

With the gradual settling up of the country there is no doubt but that this bird is becoming rarer each year. They are essentially birds of the valley and are rarely seen in the foothills and mountains. One pair which I have known for years and which had never failed to nest in a particular growth of live oaks each year, was missed from its accustomed haunts the past spring and could not be located anywhere in the vicinity. A wood choppers' camp had been erected in the grove and the Kites, in their gentle and unsuspecting nature, had probably fallen prey to the gun of some misguided wood chopper.

Their flight is even and graceful, often quite rapid but lacking the dash of the true Falcons. In hunting in the early morning hours both birds often go together, and they may frequently be seen hovering motionless in air, much after the manner of the Sparrow Hawk. The principal note consists of a low, plaintive, musical whistle, quite pleasing to the ear, and which is uttered both when the bird is at rest on some tree top and occasionally while it is on the wing in the vicinity of its nest.

With few exceptions I have found this Kite nesting in level or slightly rolling country where the live oak is abundant. A pair of these birds will take up their abode in a favored location

where they will remain for years, zealously guarding their domain against intruders, and nesting from year to year within a small radius, sometimes in the same tree. If their first laying of eggs be taken they will, as a rule, construct a new nest and lay a second time, and only in one instance did I find the same nest used twice in the same season.

My experience with the White-tailed Kite dates back to 1887, when a pair of birds were found in a secluded live oak pasture. They were commonly known as 'White Hawks' and it was not until several years later that I succeeded in finding my first nest. These birds frequented the same locality each year until the past season when they had disappeared, having probably been shot as mentioned. Having found several of their old nests at different times I visited the locality on April 19, 1894, having previously seen the birds among the trees. Most of the oaks averaged twenty-five to thirty feet in height and were easily accessible. After a short search a nest was discovered in the extreme top-most branch of a live oak, twenty-five feet from the ground. The nest was composed of small oak sticks and was lined with dry stubble and a little Spanish moss, and measured about one foot across. It contained three eggs, which were fresh and had evidently been deserted, as a cobweb had formed over a portion of the nest. The eggs were slightly faded from exposure to the sun, and the birds did not put in an appearance. I did not again visit the locality during the season of 1894.

Early in the season of 1895, when budding trees and bright foliage heralded an early spring, my thoughts went back to the Kites of the previous year, and though March had ushered in a cold, rainy spell, on the 17th I visited the country to ascertain if the Kites had returned to their former haunts. The day was a dark one, threatening rain, and a strange quiet pervaded the grove, in contrast to the usual varied chorus of small birds. Neither of the Kites could be seen, so I searched for the tree in which they had built the previous year, and from which I had removed the nest. My surprise was complete when a new nest was discovered built on the exact site of the former one, in the highest available crotch of the tree. From the nest one could see in all directions over the fields, and still the nest itself was securely

hidden in the leafy top of the oak, and only to be seen on close inspection from the ground beneath. At this date, March 17, the nest contained four eggs, which were warm and very slightly incubated. The parent bird was not seen until I had left the tree, and had doubtless been enjoying her morning exercise. The nest, which is a typical one, measured twelve inches across, with a depression in the center of perhaps three inches, and was composed of small dead twigs from the live oak, and lined with fine straw stubble, from the field near by. The four eggs constituting this set are of an unusual type, three of them being marked chiefly about the ends, while the fourth is streaked lengthwise more heavily than the average egg.

I did not visit the locality again until April 5, when both birds were observed sitting quietly in the top of one of the tallest trees, this time some distance from their former nest. I, however, repaired to the nest and found it to contain three eggs, it being evident that the set was not complete. On the 9th five eggs had been laid and the female quietly left the nest when I was half-way up the tree. The same nest had been used in which the first set had been laid, and the birds had added no new lining. The parent birds showed little concern, remaining quietly at a distance and giving expression to an occasional 'whistle'. The time which had elapsed between the taking of the first set of four eggs and the completion of the second set of five was twenty-three days. It seems unusual that the second laying should have consisted of five eggs, and the set itself exhibits extreme variation in coloration, the specimen with the buff ground color and dark markings being perhaps the oddest of all. The white egg and the bright reddish specimen were laid last. The eggs of this set average somewhat larger than the first laying of four eggs. The three sets of eggs to which we have thus far referred are the production of one pair of birds during the seasons of 1894 and 1895, and will, I think, if the normal types from each set be compared, show a similarity, in that the markings tend toward the ends of the eggs as a rule. Before disposing of this pair of Kites I will say that I did not visit them again during 1895, but early this year while looking over the ground I discovered another nest in a small oak, which had been used, and which leads me to believe that the birds laid a

third time and successfully reared their brood. This year the birds had disappeared, and were not located in the surrounding country, so it is evident that they had been shot after inhabiting the locality for at least ten years.

On March 24, 1895, I met my second pair of birds in a region similar to the last and where I had somewhat expected a pair might be nesting. When incubation has well begun the female is difficult to flush, and the male seems to make himself as inconspicuous as possible, so one might at times pass through a locality inhabited by the Kites and not suspect their presence. On the day in question, while walking among the trees I chanced to see a Kite flying toward a cloister of oaks half a mile distant and followed it. The bird, presumably the male, was perched on a lofty white oak, the highest in the field, where he sat quietly. Suspecting the female had a nest near by I began a careful search of the neighboring oaks and after twenty minutes' work located the nest twenty feet up in a small live oak tree. The female did not leave the nest until I had almost reached it, when she flew to a near-by tree and was joined by the male. The male began a gallant attack in defense of the nest, swooping down on me at intervals in a furious manner, being occasionally reinforced by the female, while both snapped their beaks, much after the manner of young Owls. The nest was unusually large, having evidently been used more than once. It was lined with long dry grass, and similar in other respects to the average nest. It contained five heavily-marked eggs of the usual dark type, in which incubation was far advanced, three of the eggs being slightly pipped. From the stage of incubation it is likely that the nest was constructed late in February and the eggs laid soon after. The eggs of this set average 1.80×1.31 . The clutch is now in the collection of Mr. John W. Mailliard.

This pair of birds after being robbed removed to a locality half a mile away, where they soon began to construct a new nest in a small oak, twenty feet from the ground. One of the birds was observed to alight in the top of a tree, where it broke off a twig from among some dead limbs, when it flew back to the newly begun nest and deposited it. Finally the nest was completed and four eggs were laid. These I collected on April 15, the female leaving

the nest on my approach. The eggs of this set average smaller than those of the first laying of the same birds, and one specimen is particularly bright in coloration. The parent bird attacked me as in the first instance, but soon gave up the battle and alighted near by. This set is now in the collection of Mr. C. W. Crandall.

This spring I was interested to see if these birds would prove as early breeders as in 1895, so on March 10, 1896, I visited their domain and found that the last year's nest had been added to and freshly lined, and four eggs deposited. The nest was twenty feet from the ground. Incubation was fully one-third advanced, which corresponded approximately as to date with the laying of the former season. The birds showed the same aggressive spirit, which in itself seems a trait amply sufficient to distinguish this particular pair. This set of eggs is also in Mr. Crandall's collection.

The Kites now repaired to their location of the previous year, where they built a new nest in a scraggly live oak twenty-five feet from the ground, and which contained four eggs on March 29. The set was not collected. Nineteen days had been required to build a new nest and deposit a set of four eggs, while in 1895 twenty-two days were occupied in performing the same duties. This pair of birds have never used a nest the second time during the same season. I fully expect to find them amid their familiar surroundings next spring, and judging from the occurrence of white eggs in their layings, I consider that they have occupied the present locality for many years.

On April 13, 1895, a third pair of Kites were found occupying a grove of trees in a grainfield, where there was a plentiful food supply. Their uneasy actions indicated a nest in the vicinity, and careful search revealed an old one in the top of a tall oak. It contained numerous dried-up pellets, which are found in nests in which a brood has been reared, and which are no doubt ejected by the young after being fed. The new nest was found a short distance away, thirty-five feet up in a live oak, and smaller than the average in size. It was lined with dry stubble, a small quantity of Spanish moss and a few feathers from the parent bird. Four eggs constituted the set, three being one-half advanced in incubation while the fourth was infertile. The eggs were quite

round in shape. Both birds remained perched on a white oak a short distance away, and showed little concern.

This year I did not visit these birds until March 29, when a short search brought one and then both birds to view. They flew about uneasily, uttering their plaintive whistle, while I looked for the nest. Presently it was found in the extreme top of a slender oak, thirty-five feet from the ground, and contained four eggs which were fresh. The nest was 18 inches in diameter and lined with long, dry grass. Two of the eggs of this set are of the bright coloration. The eggs of this pair of Kites are considerably rounder than any others I have taken. The set is now in the collection of the U. S. National Museum.

During the early spring of the present year my collecting trips took me through the hills to a great degree and here I found a pair of Kites located in a most picturesque spot. On February 23, the birds were observed in a cañon, giving chase to a Western Red-tailed Hawk, which had evidently trespassed upon their territory, after which they slowly flew back and perched on a fence on the hillside. On March 8, the nest was found containing two eggs. Both birds were near but showed little anxiety when I climbed to the nest. On March 14, I again visited the nest, this time during a shower, and both birds were very quiet. The male was doing look-out duty on a favorite post of a fence bordering the cañon, while the female was on the nest. She left when I began to climb the tree and joined her mate. The nest held four eggs, which are quite round in shape, and two of them are of the handsome reddish coloration. The nest was fifteen inches across and six inches thick, with quite a depression in the center, as was necessary, for the nest was 50 feet from the ground in the topmost branch and subject to high winds which swept up the cañon. The birds flew high overhead, uttering their plaintive whistle but making no attack. The nest was beautifully situated, being in the top of a high oak which was covered with streamers of Spanish moss, and the view down the cañon was unusually picturesque.

The birds were observed at different points for three weeks when they finally began a new nest in a small scraggly oak near the head of the cañon. When not at work on the nest both birds would sit for long intervals on a dead tree near by, without mak-

ing a sound. On April 12, the nest held its first egg, and both birds were near by. A week later when I visited the cañon, neither of the Kites could be found, and the nest contained naught but a few fragments of shell. The destruction of the eggs was probably accomplished by a ground squirrel, after which the birds deserted the locality.

REPORT OF THE A. O. U. COMMITTEE ON PROTECTION OF NORTH AMERICAN BIRDS.

YOUR Committee feel that the work done for the protection of birds during the year 1896 has been amply rewarded, and that the results obtained in the various channels of labor have been commensurate with the efforts made. The brief outline of results given below will, we think, be of interest to the members of the Union, and will also be an incentive to an increased activity on the part of the various bodies and individuals who are interested in this most important and necessary work.

MASSACHUSETTS.

Mr. Geo. H. Mackay, of the Committee, reports as follows :

“I have to report for the district coming under my jurisdiction that there is substantial evidence to prove that the enforcement of all protective laws has been a good and wise investment. Two visits to Muskeget Island during the summer gave evidence of the beneficial results of protection, for it is doubtful if in the history of the Massachusetts Terns they have ever been so abundant as during 1896. They have enjoyed a season of unmolested quiet ; no eggs have been taken, and only eight birds were shot. The results to be appreciated should be seen. I regret to be compelled to add that the unsettled conditions between the town of Nantucket and the owners of Muskeget, referred to in 1895, still exist, making the work of protection a peculiarly difficult one. The majority of the Selectmen of the town do not oppose