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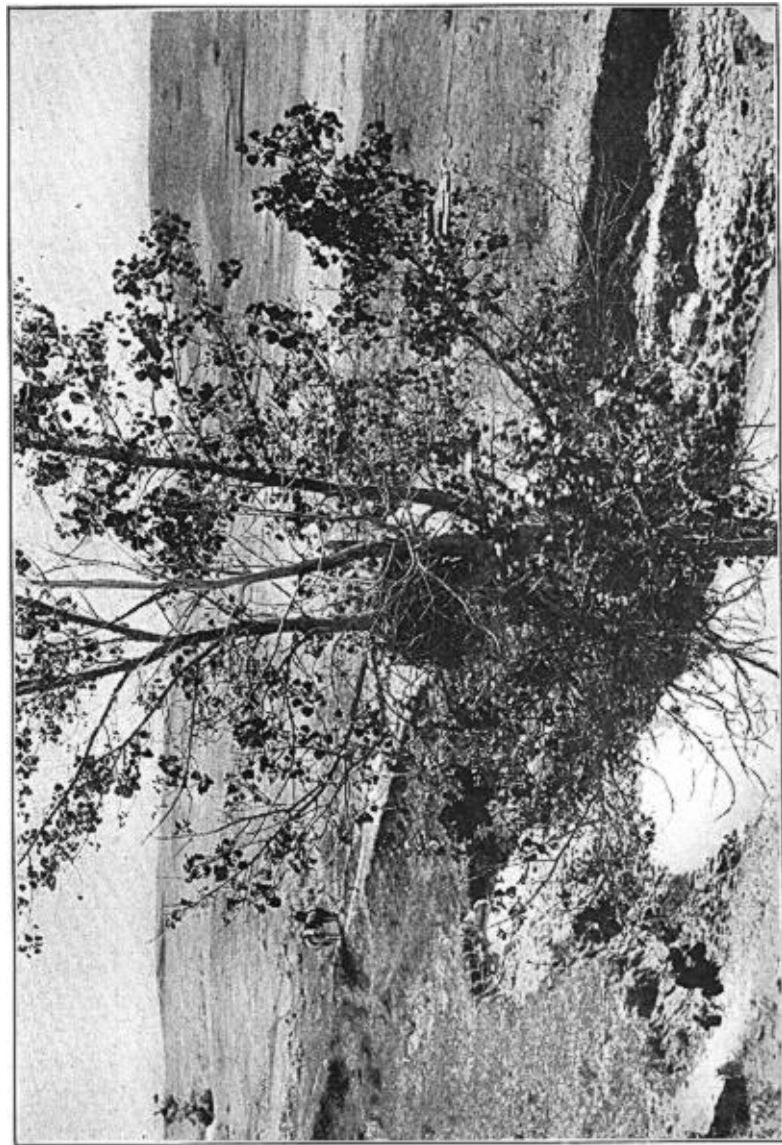
No. 2

NOTES ON SWAINSON'S HAWK (*BUTEO SWAINSONI*) IN MONTANA.

BY E. S. CAMERON.

I. NESTING.

SOME twelve years ago Swainson's Hawk, or the Common American Buzzard, was one of the commonest birds breeding in eastern Montana, but has, since then, been greatly reduced in numbers. At the period mentioned, despite incessant persecution, half a dozen inhabited nests might easily be found during any year in my own neighborhood alone; but at the present time the numerous unoccupied nests in the white ash and cottonwood trees, to which their dead or disheartened owners have never returned, bear pathetic testimony to the gradual disappearance of this hawk as a nesting species. Swainson's Buzzard is locally called 'Hen Hawk,' yet the term is a complete misnomer, for in my twenty-three years' experience with the bird I have never observed it to take poultry of any kind, nor have I obtained the slightest evidence that it ever does so. However, if you give a dog a bad name you may hang him, and the unfortunate buzzard, being credited with the misdeeds of the Prairie Falcon, Goshawk, or Harrier, is in a like case. Here, at all events, the parent birds are shot and the young ruthlessly stoned on sight. As I have already stated in 'The Auk' (Vol. XXV, p. 468) Swainson's Hawk is often most indiscreet in its choice of a building site, selecting a low tree by the roadside,



NEST OF SWAINSON'S HAWK (*Buteo swainsoni*).

or within a fenced pasture, for its nest, which thus becomes forthwith the cynosure of hostile eyes. My own study of buzzards in their haunts has from this cause been considerably hindered — sometimes abruptly terminated for the time being — by the destruction of the eggs or young of the very birds I wished to keep under observation.

Swainson's Hawk, when seen flying in the distance, resembles a small Golden Eagle, and there are not a few attributes which are common to both species. Among the latter may be mentioned the facts that both pair for life, both shade their young from the hot sun, and both possess a sense of ornamentation which leads them to decorate their nests. The above characteristics are quite probably shared by all members of the sub-genus *Buteo*, but the further fact remains that neither the Golden Eagle nor Swainson's Hawk ever seems to drink water — at least in captivity —, and this exceptional peculiarity suggests a close affinity between them. Like all buzzards, Swainson's Hawk has a lazy, apathetic temperament, usually preying upon the humblest quarry, and permitting unprovoked attacks upon itself by small and weak tormentors. On occasions, however, when hunger presses, or its eyrie is menaced, the bird can display unexpected dash and ferocity. In May, 1905, a Swainson's Hawk that nested by the Yellowstone near the Terry ferryboat crossing, became so bold as to swoop at the passers-by. A prominent flockmaster, owner of the land, was much annoyed by the bird's threatened assaults, and instructed the ferryman to shoot the assailant. Hearing of this, I interceded successfully with the latter, and secured his co-operation to protect the hawks: but we were unable to save their three eggs from a meddling shepherd, who removed and ate them. In the Lake District of Cumberland, England, during the summer of 1910, a Common Buzzard (*Buteo buteo*) which differs but little from *B. swainsoni*, also made frequent attacks upon visitors to its haunt. A correspondent of 'Country Life' for June 25, 1910, contributed an account of his experience, describing how he had to take refuge successively under a tree and behind a wall to avoid the "tremendous swoops" of the bird.

As the present article is very long, I forbear to give a detailed description of the remarkable buzzard flocks which occur at the

migration periods. Those interested can find a full account in 'The Auk' (Vol. XXIV, p. 262) of a buzzard invasion which I witnessed on the Powder River, numbering nearly 2000 birds, probably the largest aggregation of these hawks ever recorded. Since the above event, which happened in April 1890, other observers, as well as myself, have seen many smaller flocks of varying numbers, while a small party of only seven birds was observed by me on Sept. 27, 1911; but it may be hoped that the decrease in size of the Montana migration does not afford a true indication of the rate at which this species is diminishing. The earliest date at which I have noted the spring arrival of a Swainson's Hawk was March 14, 1911, and the latest fall lingerer was observed on November 25, 1910.

The nests of *B. swainsoni* are made entirely of sticks, or of sticks combined with other materials, such as sage-brush, wild-rose brambles, and cottonwood or cedar twigs. There may be an elaborate lining of green weeds, or quantities of wool — perhaps only a scanty layer of grass. Some birds line their nests with fresh leaves, which are renewed at intervals, but, in my experience, this does not occur until after the full clutch of eggs has been laid. The parent birds roll back the eggs and replace them on the leaves, which is not a difficult feat, as many nests are almost flat. As the hawk apparently mates for life, the nest, which is very strongly put together, increases in size with the yearly repairs. In my own experience I have known disused nests to be practically intact after a period of seven or eight years. Since 1889, I have seen a great many occupied nests, but only kept notes of fourteen. Of these six were in ash trees, six in cottonwoods, one in a low cedar, and one in a wind-swept pine-top. This last, on a dominant scaur of the pine hills, was the most picturesque of all, but could not, of course, endure long without renewal, and is the only nest I have seen thus exposed.¹ The number of eggs in seven nests was three, in a couple of others two only: one nest was deserted after a single white egg had been laid, and of four the contents were not examined as I did not climb to them. Two fledglings seen in the tree do not necessarily indicate two eggs, as in about half the clutches of three

¹ A photograph of this country was reproduced in 'The Auk,' Vol. XXV, 1908, p. 251.

eggs one is infertile, and may be found in a perfectly intact state after the young are flown. The color of the eggs is variable, but in all sets of three that I have seen, one egg has been entirely white. In a single instance, two of the three eggs were unmarked, greenish white. Some of the other eggs in the eight nests were blotched with chestnut or umber brown, the remainder being merely flecked with scattered dots of these colors. I never found but one heavily marked egg, and that had the whole ground of its upper half almost completely obscured by umber brown. The first part of June is the usual time to find Swainson's Hawk sitting on eggs, but that depends largely on the weather. I have seen an early incubating bird on May 7, and a late one on June 27. The time of incubation is about twenty-five days, but as with the Marsh Hawk, Hoot Owl, etc., the young are often hatched at intervals, so that the eldest may be full-fledged while the youngest is in the fluffy stage. The cock bird will occasionally sit upon the eggs, and I have twice flushed him from them; but, in my experience, such action is unusual, as the male is generally absent foraging for the female. There are recorded instances of Swainson's Hawk occupying the deserted nests of other birds, but all the pairs which I observed built their own nests, and declined to appropriate old nests of their own species. In one case, where a pair were shot at the nest, a second pair built another nest exactly above the first in a succeeding year. This appeared to me to be a curious coincidence, and it was a no less curious sight to see the two great nests, one above the other, in a small ash tree. If bereft of all their eggs, or nestlings, the discouraged hawks desert that nest forever; but, when deprived of the eggs only, they construct a new abode in which the female lays again. Early in May, 1906, a shepherd robbed a Buzzard's nest in a cottonwood of the three eggs, and the Hawks built a new one in a similar nearby tree. On June 1 the pertinacious hen-bird again sat upon three eggs, which were subsequently unmolested. In this respect these hawks differ from a pair of Golden Eagles, which will never forsake an established eyrie save upon the death of one of them.

Of the fourteen nests which I have kept under observation at different times, not one received such close attention as a nest built early in June, 1908, in a distant ranch pasture. This was not

due to my occasional visits, but to the fact that during the whole summer a boy herded a large bunch of horses outside the fence — a part of which had been taken down to enable the animals to come to water. In a cottonwood tree, directly above the water, the buzzards had placed their nest, and in ordinary circumstances would have enjoyed a welcome shade. As it happened, however, this particular tree had been blighted by the unprecedented blizzard of May 20, and remained almost leafless till August, when to my great surprise it was again covered with foliage. Until this happened the buzzard family suffered terribly from the sun's rays, and convincing testimony was afforded of the parents' devotion in shading their offspring. The nest was made entirely of cottonwood sticks, lined with grass roots. With characteristic indiscretion the birds had chosen a decidedly perilous situation, as the herd-boy above mentioned passed directly by the nesting tree, often with a companion, four times a day, besides spending nearly all his time in its immediate vicinity. He naïvely informed me that, before I discovered the nest, he had frequently stoned the incubating Hawk, but without causing her to forsake her eggs. She began to lay about June 14, sat on three typical eggs — two of them brown marked, one pure white but infertile — and on July 9, two nestlings were hatched. A fortnight later, black feathers appeared amidst their white down, and by the end of July they were full feathered except for their downy heads. The young birds as soon as they were able, sat about in the branches, but returned to the nest at night, and also on hot days, during which the parents shaded them. The presence of my wife and self beneath the low tree, or our loud talking, made no difference to the mother's solicitude for their comfort. In my experience the female Swainson's Hawk is one of the boldest and tamest birds at the nest, in marked contradistinction to her timid partner, which can seldom be observed at close range in the breeding season. The nestlings have enormous appetites, and consume more in proportion to their size than any other raptorial bird which I have studied or kept in confinement. When hungry they set up a piercing kitten-like cry until they are supplied with food.

In 1909, the same boy herded the horses, and exactly the same conditions prevailed for the hawks, which commenced nesting

operation earlier than in 1908. On May 15, I watched the cock bird trampling down material in the nest, and soon his mate came to his assistance. After a time, disturbed by my presence, the pair took wing to an almost invisible height, crossing and re-crossing each other in circles. The female began to lay on May 24, and I observed her deposit her third and last egg on May 26. After sitting hard for about twenty minutes, she stood on the nest edge, spread her wings, and gently glided off. Aided by the high wind, she soared in ascending gyrations until lost to view. I now had a good opportunity to examine the nest, which was much enlarged by the addition of cottonwood and choke-cherry sticks. It was thickly lined inside with cottonwood bark, which falls off in great layers from dead trees. The hawks could easily obtain the soft, fibrous, interior strips, and it was this substance that I had seen both birds arranging in the nest. The latter was also adorned at one end with a bunch of green weeds after the fashion of the Golden Eagle. In color two eggs were unmarked greenish white, but the third egg had a large yellowish brown blotch. The immense nest was out of all proportion to the eggs which were placed in one corner. On June 3, the eggs reposed in exactly the same position upon a thick layer of green cottonwood leaves. I cannot leave this part of the subject without referring to the persecution of this hawk by Kingbirds (*Tyrannus tyrannus*) which frequently nest in close proximity to the site chosen by it. In one instance during 1899, a pair of Kingbirds had built their nest in some choke cherries immediately below that of the hawk, which was in an ash tree growing amidst them. Yet another Swainson's hawk, nesting close by, was so unfortunate as to have a pair of Sparrow Hawks (*Falco sparverius phalæna*) domiciled alongside. Neither of the Swainson Hawks could flap out of the nesting tree without being immediately attacked by one or other of these aggressive birds — sometimes by all of them together. In this connection it is interesting to read the following, as quoted from Capt. Charles E. Bendire by Dr. A. K. Fisher,¹ "Lieut. Benson writes me that, after the Arkansas Kingbirds (*Tyrannus verticalis*) began to build, he invariably found one of their nests in any tree that

¹ Hawks and Owls of the United States, p. 73.

contained a Swainson's Hawk's nest. In one case a pair of these birds had placed their nest directly under and but eight or nine inches from that of the hawk." Judging from my own observation, whenever these unlucky hawks left their nests they would be remorselessly harried by the intrepid Arkansas Kingbirds. I have seen one of the latter strike down a young Sparrow Hawk on the wing, which I took home and kept until it had recovered. The buzzard's peculiar flight upon catching the wind gives these small tormentors their opportunity, as she mounts in slow graceful spirals until a mere speck in the blue. When his mate was sitting, I have seen a male Kingbird (*Tyrannus tyrannus*) alight on the hawk's back and be carried round for several seconds, while he vented his rage by pecking at her. No matter how high the hawk might soar, the small aggressor would keep above her, renewing his attacks at intervals until both were lost to view. The hawk responded to each assault by merely giving four sluggish, downward flaps after which she would sail on motionless wings as before. These measured, floating gyrations, with wide expanded wings and tail, induced Forster to call the Common Buzzard of Europe *spiralis*, as pointed out by Seebohm.¹ My brother-in-law once informed me that he had seen a Swainson's Hawk strike in midair an aggressive Kingbird which had thereupon fallen dead to the ground. At the time this seemed to me an incredible assertion, and I supposed he had mistaken the species of hawk; but since witnessing the bunting flight, described later, I am inclined to believe it.

It was my desire to keep these young buzzards of 1909, in confinement and make observations upon them, more especially as regards the spring moult. Accordingly on August 6, I rode to the tree for the purpose of capturing them, but when I was ascending it, they both took wing. The female fledgling flew some distance down the creek, but fortunately the day was too calm for her to rise again from the long grass, and the less active male fluttered into a deep water hole. While I was engaged in capturing and securing the two fledglings in a sack, their distressed mother appeared on the scene, swooped towards me, or hovered above,

¹ British Birds, Vol. 1, p. 121.

uttering long-drawn tremulous mews. When I rode away, bearing her offspring, she followed at a great height. On the morrow we coaxed the young buzzards to sit on the branch of a tree for photographic purposes. An example was then afforded, if it were needed, of the difference made by wind to a bird's flying powers. The strong wind which arose enabled the female to fly clear away, nor could she be recaptured, even on horseback, as she rose easily from the level. I regretted having disregarded my wife's advice to anchor the Hawk by a pair of jesses; which, although rendering her portrait less effective, would have at least prevented her escape. She was presumably rejoined by her mother, who had been seen floating above the ranch. The male made no attempt to emulate his sister, for although hatched at the same time, she surpassed him in development by a week — a parallel case to that of young Golden Eagles. As observed in this instance, the female buzzard acquired the power of flight in twenty-eight days, and the male only after thirty-five days.

The remaining young buzzard was kept in the barn and soon became exceedingly tame. His varied bill of fare consisted of grasshoppers, beef, mice, small birds which the cat happened to catch and frogs. The last he greatly preferred to any other food, and, upon my entering the barn with a frog, flew eagerly to snatch it from my hand without giving me time to shut the door. So voracious was the bird's appetite that he would account for six large frogs at a meal, and was often compelled to disgorge those which he had swallowed whole to avoid being choked. I have known him to devour an entire rattlesnake at one time. The buzzard's manner of feeding is to fly into a corner with his prey, which he conceals from outside curiosity by presenting his back and spreading his wings and tail over it. At the same time he so completely ruffles his feathers that their white bases on the head and neck cause the parts to appear mostly white, and he screams defiantly if approached. In spite of all this precaution, however, as soon as he had finished his meal he would fly to me for a further supply, when he would repeat his antics as before. The above appears to be a characteristic habit of all eagles and buzzards which become tame in captivity, although I have never observed it in wild, nor in freshly caught birds. The buzzard ejects castings

from the mice, birds, and frogs in twenty-four hours after consuming them, but never drinks water — a peculiarity which he shares with captive Golden Eagles as above mentioned.

The young buzzard's cry differed according to his age. When he was quite young it resembled a kitten as stated, but by the end of August, when he was seven weeks old, it became loud and shrill like the scream of a sea-gull, though more piercing. At two months old he developed a musical cry, the appealing tone of which never failed to create a deep impression upon all who heard it. It consisted of four notes insistently repeated like $\bar{E} \bar{U}$, $\bar{E} \bar{U}$, the second \bar{E} being a half tone lower than the first, and may be described as long sustained wails followed by short staccato notes. While these four notes are difficult to express in words they could be easily reproduced upon the violin, and are not unlike the plaintive but shriller tones of the British Lapwing (*Vanellus vanellus*) when hovering over its breeding grounds. The buzzard commenced this lament whenever my wife or I were present, and continued it as long as either remained with him. The ornithologist Coues did not fail to notice it, and writing of two captive birds remarks: "Both this and the younger one before him had a peculiarly plaintive whistle to signify hunger or a sense of loneliness, a note that was almost musical in intonation."¹

As all the Hawk's wants were supplied, we considered that this must be a baby cry to express recognition of friends and appreciation of their company. This piteous cry only lasted for a month, as on October 5, before the buzzard was quite three months old, he became entirely silent, moped, and fasted for six days in succession. His despondent mood lasted for five weeks, and only once in all that time would the Hawk come to me for food, although he occasionally ate what was brought to him. He seemed quite indifferent to the society of a young Ferruginous Rough-leg (*Archibuteo ferrugineus*) which was confined with him. Here was indeed a change in the former screaming, voracious bird, which, if at liberty, flew boldly to me and clung to my clothing when I appeared with meat. He now shrank into himself, ceased all friendly overtures, and watched his companion feed unmoved. Not until November

¹ Birds of the Northwest, p. 358.

12th did he regain his high spirits and enormous appetite. I, of course, attributed the change to the migration impulse, but although the dejected buzzard escaped during this period he allowed me to retake him after three short flights. From three months old onwards his ordinary call was a very soft low whistle, nor did he ever scream except when pretending to guard his food.

During the winter the buzzard was kept in the house in a large cage, as I thought the barn would be too cold for him. The bird had engaging ways, and when anxious for food, which would be taken either by day or night, descended from his perch to that corner of his cage nearest the kitchen, where he stood whistling softly until supplied. Every evening at sundown he became restless for a few moments, flapped his wings, and made efforts to fly, which is, I believe, a characteristic of most cage birds at roosting time. In sleeping it was quite exceptional for him to put his head under his wing. On calm fine days the buzzard was liberated for out-door exercise but seemed afraid of wandering too far from home. Until he was a year old he had never been known to fly further than about two hundred yards, and only once into a tree when frightened by a dog. In 1909, I noticed the first appearance of Swainson's Hawk on March 28, and on March 30, my tame bird again became subject to a fit of depression.

(To be continued.)