

# BIRD THAT FIGHTS BURROWING PESTS

**T**HIS splendid bird is undoubtedly the most powerful hawk met with in Montana, where it is usually called eagle, and its carrying power is remarkable, as the sequel will show. It does no harm, but, on the contrary, wages unceasing warfare against such pests as prairie dogs, gophers and meadow mice, and should, therefore, be universally protected; nevertheless it has unfortunately become very scarce, excepting in one or two favored localities, where it is strictly preserved. Although a good deal has been written about the ferruginous rough-leg (*Archibuteo ferrugineus*), I am not aware that it has, hitherto, been studied or photographed at the nest. Last summer Mr. W. R. Felton kept four nests of this hawk under observation for me, and visited them whenever his work allowed him time, writes E. S. Cameron in *Country Life*. These four nests were within a radius of four miles from Mr. Felton's headquarters at the Square Butte ranch in Chouteau county, and others were reported seven miles away. Besides the above, Mr. Felton found four disused, but well preserved, eyries—two of them within a quarter of a mile of an occupied nest. All eight nests were placed upon rocky ledges or points. They were constructed of the same materials, which consisted of sage brush and greasewood sticks, with some soapweed intermixed, and lined with dry cow dung. As will be seen from the measurements, the loose pile of sticks made the new nests remarkably high, but they settled considerably before the young had flown. A brief history of one of these nests condensed from Mr. Felton's notes is as follows: The nest was only two miles north of the Square Butte ranch, easily visible from there through powerful binoculars, and was visited almost every day. This particu-



ON THE LOOK-OUT

rough-leg, with nestlings in the white cliffs, was gyrating low over the buildings, but neither the gentlemen nor the cat took particular notice of this familiar sight. Both men were, however, suddenly startled by a loud whirring noise, when to their intense surprise they saw that the hawk had lifted the now bewildered and struggling cat from her couch on the posts and was slowly bearing her aloft. It seemed at first to the astonished spectators as though the hawk would actually succeed in disposing of this troublesome quarry, since it continued to rise easily with its burden to a height of about 25 feet. By this time, however, the fully-aroused victim was stirred to a desperate effort, and it became clear that the audacious hawk had "bitten off more than it could chew." In Mr. Sullivan's words, the tabby "twisted round, gave a terrible splutter and scream, and clawed the hawk with a vengeance." The latter, flapping wildly, at once relaxed its grip, while pussy, nothing loth, withdrew her claws, fell to the ground and dashed under the posts. Numerous downy feathers floating gently to the ground convinced the onlookers that the chagrined hawk had none the best of the encounter. Temporarily tired of cats, it now soared to a great height, and returned with empty talons to the "chalk cliffs." The cat in question was a very small one, and Montana cats are notably thin in summer; but, allowing for these facts, the victim must have weighed six pounds at least. Nevertheless, Mr. Sullivan feels sure that had the cat behaved like the rabbit for which she was mistaken, the hawk would successfully have conveyed the quarry to its eyrie in the rocks. As the nest was two miles distant this would seem an extraordinary feat, and presumably transcend any hitherto published records of the kind. I quite admit that under favorable conditions of wind the female hawk might transport a five or six-pound jackrabbit to the eyrie; but that any cat-lifting hawk should ever surpass what this one achieved seems to me improbable. The dexterous application of the cat's raking claws would not fail to prevent it as in the above remarkable instance. Where a rabbit succumbs to the shock and the hawk's constricting grip, the agile and wiry feline, on the other hand, is stimulated to offer a desperate resistance, and, like Mr. Sullivan's protegee, is little the worse for the encounter. It cannot be told whether the hawk was mistrustful of rabbits after this event, but the cat became so suspicious of a flying object that she would race for the wood pile if Mr. Sullivan threw his hat into the air.

YOUNG BIRD AFTER LEAVING NEST

Fisher, "Hawks and Owls of the United States," page 175, it undoubtedly beat off its assailant without difficulty. So far as I have observed in eastern Montana, the ferruginous rough-leg feeds chiefly upon prairie dogs and meadow mice, though not averse to snakes. In my opinion it never takes frogs. Like golden eagles, these hawks often hunt amicably in pairs, and then appear to be more courageous, attacking mammals as large as jackrabbits. Mr. Felton made many valuable observations on the food habits of these

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THE NESTLING'S CROUCHED LOW

lar nest was picturesquely situated on a rocky point of the "Chalk Cliffs" northeast of the geologically famous "Square Butte," which, despite its modest name, is an immense rock constituting an isolated spur of the Highwood mountains, 2,600 feet above the prairie. In reality the so-called "Chalk Cliffs" consist of an outcrop of white sandstone, chiefly in the center of a range of grass-covered hills whose green summits rise in strong contrast above the white corrugated rocks. This sandstone stratum has been worn into a series of perpendicular cliffs, pure white above, but stained light brown below by lignitic matter, and projecting spurs are carved into fantastic pinnacles and mounds. One promontory in particular is a regular saw-tooth ridge. The nest here shown is poised upon the apex of a pillar which terminates a knife-blade projection 3,575 feet high, and suggests in some photographs the prow of a ship. As there is a sheer vertical descent on three sides, and the surface of the connecting ridge suddenly breaks off, leaving a wide fissure in the rock between it and the nest, it is a task of no small difficulty to reach the latter and one best suited to a sailor or a cat. It can only be accomplished by approaching the eyrie from above, and then crawling along the ledge, when, by dropping into and crossing the gap (which is well shown in the photograph), the nest can be attained. Mr. Felton, making light of the danger, climbed frequently to the nest, and made numerous exposures with a small camera at the range of a few feet. The nest was four feet in height and three and a half feet in diameter, and was higher than any Montana eyries of the golden eagle known to me, which species has also nested in the "Chalk Cliffs." (In his recently published "History of the Birds of Colorado," Mr. W. L. Sclater mentions a golden eagle's nest which measured "six feet in diameter and nine feet high.") The hawks carried green alfalfa to the nest for decorative purposes, and Mr. Felton noticed a fresh supply there on three separate occasions. When found on May 18 the eyrie contained three newly hatched young, but only two reached maturity, as one of the nestlings disappeared on July 9 when fifty-two days old. Mr. Felton conjectured that it had been blown out of the nest by a violent thunderstorm, but the two stronger birds might have ejected their weaker brother. In any event, the outcast would soon have been picked up by some four-footed or winged marauder. The two remaining fledglings permanently left their nest on July 25, when about nine weeks old. While watching at this nest, at two o'clock one afternoon, Mr. Felton observed a great horned owl flying along the cliff face in an easterly direction. The owl passed close to the nestlings, when one of the soaring hawks, presumably the female, was seen to swoop at and strike the interloper, which thereupon dived obliquely to the ground. The hawk made two more dashes at the sitting owl, and a short squabble ensued each time between the birds; but when Mr. Felton reached the place, the owl was nowhere to be seen, and the hawk had returned to her nestlings. As the great horned owl is a powerful and ferocious bird, which even attacks and eats large hawks (see

hawks during the nesting season, and discovered the fact, new to science, that they prey upon birds as well as on mammals. Over the whole course of his observations until the young birds had flown, prairie dogs were found largely to exceed all other diet; but until the nestlings were about two weeks old, their food consisted partly of meadowlarks (*Sturnella neglecta*). While very little food was found in the nest, taking into consideration the frequent visits paid to it, there were seen altogether nine prairie dogs, one cotton-tail rabbit, two bull snakes (one 31 inches long) and some remains of sharp-tailed grouse and meadowlarks. On two separate occasions, while Mr. Felton kept watch near the eyrie, the wary female frequently passed and repassed overhead with a meadowlark in her talons, as subsequently identified. The bill of fare at all four eyries was similar, and meadowlarks, as demonstrated by their down and feathers, were provided for the nestlings. The following interesting collection of remnants was seen at one nest: Four prairie dog skulls, the skeletons of two bull snakes (one of them being very large), the leg of a sharp-tailed grouse, the wing and scapulars of a magpie and the primaries of a meadowlark. Grouse and magpie remains were not found until July 17 and 21, and were proved by the feathers to belong to young birds. To the best of my knowledge, this species never attempts to take poultry of any kind, and my own observations are strongly confirmed by Mr. W. P. Sullivan, for 16 years manager of Mr. Milner's beautiful Square Butte ranch, where these hawks have always been protected on account of the numerous gophers (*Thomomys*) which they destroy. As above narrated, several pair breed annually upon the ranch, and are constantly flying around the buildings, yet no chickens have ever been molested. Mr. Sullivan, who is a close observer of nature, considers that, after the young can fly in the fall, these hawks subsist chiefly upon gophers, and he has described to me their methods of capturing them as follows: "I have watched the hawks often through glasses in our alfalfa field after the first crop has been taken off. The pocket gophers get pretty busy tunneling, and pushing all the loose damp earth up in piles on the surface. The hawks fly slowly over the field until they discover a fresh pile of damp earth. Here they will alight softly, and wait for the gopher to push close to the surface. They will then spread their wings and, rising a few feet in the air, come down stiff-legged into the loose earth, when the gopher is transfixed and brought out. I have seen them eat the gopher where caught, and at other times carry it away." In the summer of 1903 about an acre of ground at the Square Butte ranch was covered with piles of building material, such as lumber, posts and heavy shed timbers, which had been collected there the previous year. Numbers of cotton-tail rabbits lived under these piles, and provided an occasional meal, both for the hawks and for the ranch cat, which was a female tabby. On a certain day Mr. Milner (owner of the ranch) happened to be engaged in conversation with Mr. Sullivan near a pile of posts, upon which the cat was basking in the sun with one eye open for a chance rabbit, as usual. A ferruginous

## VIOLETS AND ROSES OF VELVET RIBBONS ALWAYS GOOD FORM

**A** CORSAGE bouquet, worn in front and just above the waist line, is a lovely finish for almost any toilette. For the street a bunch of violets is always in good taste, providing it is not too large. Fortunate recipients of orchids may wear them anywhere, and a rose could never look anything but all right.

Violets and roses are made of velvet ribbons and are valued permanent possessions of the good dresser. Orchids are made so wonderfully true to life that one must be close to them to detect the difference. They are triumphs of the art of flower manufacturers.

These dress accessories, the woman of ample means takes as a matter of course. They are really more needed by those who buy few dresses and make them serve many purposes. An attractive set of furs and such finishing touches as are shown in the illustration given here, will make the plainest tailor-made very dressy looking.

The rose is made of velvet ribbon about two and a quarter inches wide.



It requires a yard and a quarter to make a rose if the petals are not double. This is cut into lengths of two and a half inches each, or a little more. Each petal is gathered at the bottom and turned back at the upper edges. The edges are tacked into place with invisible stitches.

The stems at the center from a millinery rose, core fastened at one end of a heavy silk covered wire, which is to be wired for the stem. The petals are placed about this center and tacked to the stem with silk thread.

Millinery rose foliage in velvet is mounted with the rose and the stem is

finally wound with narrow velvet ribbon in green.

A bolt of baby ribbon in velvet and in a violet color will be required to make the bunch of violets. Each flower is simulated by a double pair of loops, each a half to three-quarters of an inch deep. Spool wire, covered with green silk, is wound about the middle of the tiny bow which simulates the blossom. It holds the loops in place and provides the stem. When the entire bolt has been made up, the blossoms are massed together in a bunch and the stems wound and covered with tinfoil. Millinery leaves may be added or fine maidenhair fern before the tinfoil is placed. Quite often the stems are tied with a short length of the ribbon used in making the blossoms. **JULIA BOTTOMLEY.**

### Traveler's Kimono.

One feels a hesitancy about appearing before strangers in a kimono of any description; but ofttimes, especially in a sleeping car, such an appearance is unavoidable.

It is surprising how much more comfortable and how much less inconspicuous one feels in a kimono or negligee of subdued colors, and it is only the experienced traveler or the woman of wretched taste and ill breeding who will persist in floating up and down the car aisle or hotel hall in a kimono of conspicuous brightness. A professional woman who finds it necessary to travel back and forth over the country many times a year said she is sure of attracting no more attention in her kimono than she would if fully gowned. The kimono in question was of very dark blue china silk, smocked across the back and front to give it fullness, and the full sleeves were shirred into straight cuffs at the wrists.

### New Mirror.

At last a woman may have both hands free to fix her back hair, as she looks into a mirror. This is made possible now by the invention of a mirror which can be held in the mouth, thus reflecting the back of the head from the main mirror of the bureau.

This new mirror is quite broad, so as to give a good general view sideways, and, being fixed on a curved bar, stands well out from the face. At the bottom of the curved bar is the "bite," not too large for dainty mouths and covered with batting, so as to be easily held. A number of thick envelopes just fitting over the "bite" come with the mirror.

### New Hosiery.

Leading the winter fashions in hosiery are the flesh-hued silk stockings which exactly resemble theatrical "fishings" and always startle the observer who first sees them worn with low-cut slippers and Greek angle strappings in black satin, embroidered with seed pearls or tiny rhinestones. If these stockings seem too outre for the woman of old-fashioned prejudices, she may wear her evening gown matching silk hosiery, embroidered with gold or silver pearls.

## Furs in Midwinter Millinery.



## A Thoughtful Wife

"Where's my new meerschaum pipe?" asked Mr. Cumso, after dinner. "I thought I left it on the mantel, back of the clock, when I quit smoking last night."

"Didn't I hear you say that it would take a long time to color that pipe, dear?" asked Mrs. Cumso. "It is quite likely you did. The operation can not be performed all at once. But where is the pipe?"

"You know how anxious I am to save you all the work I can, dear?"

"Yes, just like the precious little woman you are; but what has that to do with the pipe?"

"Just this, love. I got to worrying over the long time it would take you to get it colored, and I wondered if I couldn't help you a bit."

"What! You don't mean to say you have been smoking the pipe yourself?"

"Oh, no! But a poor tramp came to the house this morning. He was smoking the forlornest little bit of a pipe, and—"

"Go on!" commanded Mr. Cumso in a constrained voice, trying to keep calm. "You have made him a present of my meerschaum, I suppose?"

"Oh, no! Your little wife isn't quite so foolish as all that."

"Then what has the tramp to do with the pipe?"

"Don't be impatient, dear, and I'll tell you. I remembered what you said about the long time it would take you to color it, and so I asked the man if he would smoke it all day for a dollar. He said no; that a dollar and a quarter was the lowest he could do it for. So I told him I'd pay him that. He's out in the back yard now, working hard; and he really seems to enjoy it. Yet some people say that tramps can't be induced to work. But where are you going, love? Not downtown early, are you? Now I wonder what's made that man so cross?" she added, as her husband slammed the door.—Puck

**P**RACTICALLY good sense lends its own attraction to the prevailing styles in millinery for midwinter. The fabrics used in the body of hats are warm looking and actually comfortable. With black velvet far in the lead, we have plushes, velours, clipped beavers, duvetine and brocaded fabrics, equally comfortable looking and equally fashionable.

Turbans and small close-fitting shapes are supreme. Soft crowns, amounting to a cap over the head, are almost universal, so that with the combination of fashionable shapes and fashionable fabrics entirely in harmony the hat shapes for midwinter leave nothing to be desired.

There are few shapes made entirely of fur. In millinery, as in coats, furs are employed more generally as a trimming. Bands and borders are used, and some very interesting novelties in fur trimmings have appeared, which indicate that we shall see furs employed in new forms during the remainder of the cold weather.

Two hats pictured here are fine examples of the prevailing styles. One of them has a rolling brim of black velvet and a soft crown of Crepe Georgette. A band of white fur rolls over the brim edge, outlining it and framing the face prettily. A pair of loops of velvet, wired to support them, has the effect of a wing trimming at the back and provides all the decoration necessary. There is a narrow

band of velvet about the crown at its base.

The combination of white fur with black velvet is very smart. Only a good quality in velvet will produce the best effect in combination with fur.

The second picture shows a beautiful combination in gray and black with touches of white. The shape is simply a large soft cap with a little wiring about the face. The crown is of duvetine, with which the entire shape is first covered. There is a band of civet cat fur about the edge, showing only the black fur.

A pair of novel quills, poked toward the back provide the trimming. They are made of three quills fused together, a light gray with a black and a third small quill in gray tipped with white. At the base of these quills there is a small mounting of black and white fur finished with a silver ornament.

The brims of turbans are covered with the short haired furs, like broad-tail, oftener than with shaggy furs. Very smart small hats, with narrow brims, have borders of fur in which the fur projects in a fringe beyond the edge. On these and on close fitting turbans of fur, tall standing trimmings of fancy ostrich are the favorite of all trimmings. But made for the same purpose are innumerable fancy feathers in the prettiest and most unusual forms. **JULIA BOTTOMLEY.**