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The Golden Eagle

BY WILLIAM L. FINLEY

WITH PHOTOGRAPHS BY HERMAN T. BOHLMAN

THE Golden Eagle (*Aquila chrysaetos*) was formerly found east of the Mississippi, as well as west, but it does not now frequent the more settled portions of the country. An isolated pair may still live in the wildest regions of New England or northern New York, or a few may still have their homes in the mountains of the two Virginias, Kentucky, Tennessee, Georgia or the Carolinas. The bird is not now common anywhere, but is yet found in small numbers in the mountainous regions of the West, especially in portions of California. In the Rocky Mountains the golden eagle often builds its nest on inaccessible cliffs, but in California and Oregon its favorite nesting sites are the pines, oaks and sycamores of the deep canyons or rugged slopes.

We hunted for several years for the aerie of a golden eagle before we found one in a position where we could use our cameras to get a good series of photographs. With the help of Mr. Charles R. Keyes we were finally successful in our search. On the morning of March 25, 1904, we boarded a south-bound train from San Francisco and landed in a fertile, hilly district. With our cameras strapped to our backs, we wheeled rapidly over the first few miles of road, but we soon had to pile our bicycles in the brush and push on a-foot. As we ascended out of the cultivated district the road came to an end and we had to follow cow trails. Further up we reached the highest shoulder of the range and found the surface rocky and broken. There was scarcely any vegetation on the ridge beside a scraggly growth of poison oak and chaparral. We stood and gazed at the wide stretch of valley. Far below, and reaching inland from the lower end of San Francisco bay, the rib-

bon-like sloughs wound in and out, reaching far back like the tentacles of a huge octopus.

At the very top of the range the mountain breaks abruptly off into the head of a big canyon. This is the native haunt of the golden eagle. A large sycamore tree is rooted in the bed of a little stream. Four good-sized trunks rise from the



AERIE OF GOLDEN EAGLE, SHOWING PHOTOGRAPHER AT WORK

giant roots. To the branch bending toward the valley, above the steep, rocky slope, the eagles had carried a small cart-load of limbs and sticks and worked them into the forks where they branched, horizontally. It was a platform five feet across, not carelessly put together, but each stick woven in to add strength to the whole structure, as the stones are built into a castle.

Climbing one of the other trees, the photographer put up a tiny platform in the top-most branches, where the camera was fastened and aimed downward at the aerie twenty feet away. Nor was it an easy matter to photograph in the top limbs of that sycamore, where an ill-judged movement might land camera and all in the bed of the canyon. But for six different trips, extending over a period of two months and a half, we took pictures from this position and other nearby limbs.

Our work at the eagles' nest illustrates well the necessity of a good series of lenses when one is photographing in the tree tops. The camera was fastened in a



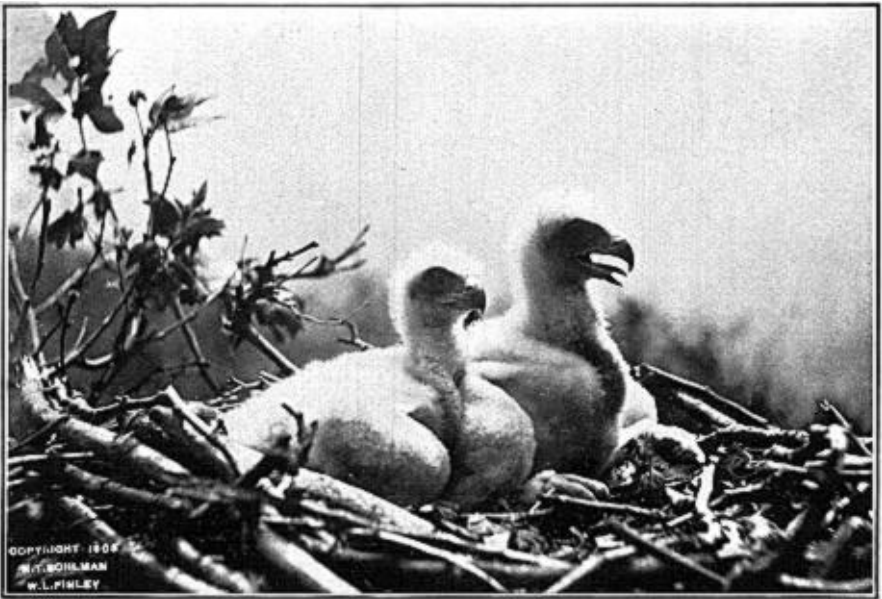
NEST AND EGGS OF THE GOLDEN EAGLE

crotch in the adjoining tree, where it could not be moved forward or back. By adjusting the wide-angle lens, we could get a view of the nest and surrounding limbs, and at the same time have a depth of focus that showed the outline of the valley lying miles below. By the use of the regular lens, the nest was brought nearer the camera, and still the sweep of the rocky sides of the canyon was retained. The single rear lens gave a different picture, narrowed down to the outer end of the large limb containing the nest. Our telephoto lens had the power of

bringing the nest as close as we cared to photograph it, covering the full size of a 5x7 plate and giving a clear definition of the eggs and the lining of the nest.

The golden eagles are undoubtedly mated for life. The same aerie was used year after year. During the month of February the nest was re-carpeted with small twigs and dry leaves, for the eaglets of the preceding summer had worn it down to a rough platform of large sticks. A hollow of this soft material was made in the middle for the eggs, and a branch of green laurel was added. Later on when I removed this branch of evergreen it was replaced by another piece apparently wrenched from the living tree by the eagle. When this second piece had dried, still another branch of green was brought. This badge of green seems to be as essential in the eagles' home as the sacred Lares at the Roman fireside.

The question is often asked as to whether the old eagles showed fight while we were about the nest. The moment you speak of climbing to an eagle's aerie the average person gets an idea of a harrowing picture of the photographer hang-



AWAKENING INSTINCT: THE EAGLETS 25 DAYS OLD

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ing to the edge of a cliff, or the top of a tree, with the old eagles clawing out pound chunks at every swoop! Few eagles possess the mad ferocity pictured and magnified by sensational story writers. It would be interesting to know of an authentic case where the golden eagle showed fight at its nest. When we first scrambled over the boulders of the canyon up toward the nest, I saw the old eagle slip quietly from her eggs and skim out over the mountain top. Each time we visited the spot the parents disappeared and stayed away as long as we cared to hold possession.

On April 12, eighteen days after we secured the picture of the eggs, we made our second trip to the aerie. The mother, instead of leaving her young when we were half a mile down the canyon, as she did when the nest contained eggs, crouched flat down, while we climbed the mountain side above the tree and looked at her through the field-glass. But she slid off and sailed away soon after, when

we started to climb the tree. The eggs had hatched, but the eaglets were small and weak, only about nine days old.

Exactly sixteen days after our second visit to the eagle's nest, we were in the big sycamore again. By that time, April 28, the eaglets had grown from the size of an egg to the size of an ordinary chicken, but they had not begun to change from the color of snowy white. The fledglings resented our company when we climbed into the nest and planted the camera right beside them. At that time they were not strong enough to offer effective resistance; they could not help being imposed upon. They endured silently, laying up wrath for the days of strength when they could strike a blow that would bring the blood.

The growth of the eaglets was very slow. Fifteen days after our last visit, on May 13 we found that the stiff, black feathers were beginning to push their way through the thick coat of white down, and the young eagles took on a mottled appearance.

We concluded that the golden eagle is a valuable inhabitant of any cattle



A SAVAGE GREETING: 40 DAYS OLD

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range or farming community. His food consists almost entirely of the ground squirrels that are so abundant thru the California hills. On our second trip, when we looked into the nest, we found the remains of the bodies of four squirrels lying on its rim. At each visit we examined the food remains and the pellets about the nest, and we are sure that a very large proportion of the eagles' food-supply consisted of squirrels. The hills in many places were perforated with their burrows and the eagles seemed to have regular watch-towers on the high rocks about, from which they swooped down on their quarry. If it were not for the birds of prey about these hilly districts, some of the places would surely be overrun with harmful rodents.

I am satisfied that this family of eagles regularly consumed an average of six ground squirrels a day during the period of nesting, and, very likely, more than that. Those young, growing eagles required a fair amount of nourishment each day for about three months, and they were well supplied, to say nothing of what

the old birds consumed. But even this low estimate would mean the destruction of 540 squirrels along the hillsides in about three months' time. What would be the total if we estimated the killing for the entire year? For this is the permanent home of the eagles. Then were we to consider all the other families of hawks and owls that nest along the hills and canyons we might get some idea of the economic importance to man of these birds of prey.

After our fourth trip to the aerie of the eagle we again waited for fifteen days; the last trip was made on June 4. The hillsides had lost the color of green. The sun had baked the pasture-land into granite hardness. Every blade of grass was burned dry and crisp, making the steep slopes almost too slippery for foothold. The heat of the sun's rays had erased every drop of water in the long series of side canyons through which we had to pass. With our heavy cameras on our backs, we struggled slowly up the rugged slopes, slipping and perspiring, our tongues parched with thirst. At dusk we ate our supper and gladly stretched under a tree for the night, a mile down the canyon from the eagles.

When the first gray light of the morning crept down the western slope of the ridge the king and his wide-winged mate soared out over the shadow of the sleeping world. The nestlings were almost fully grown. They stirred about and kept a hungry look-out from the nest edge, and from the great limb perch, for the parents.

I cannot imagine a touch of humor in the life of the eagle. There was a pair of blue jays that nested near the eagles, and I imagine they came sneaking around at times when the parents were not at home, just to see what was going on. One day I was sitting on the edge of the nest with my feet dangling over, when one of the curious jays came up from behind. He didn't notice me till he alighted, squawking, close by. His squawking-valve closed short off with a squeak of surprise; he threw up his wings in horror and dropped over backwards. The blue jay himself might have enjoyed the sight, had the joke not been on him. I enjoyed it hugely, but it was all Greek to the eagles. Everything to them is serious. Life seems a cruel, harsh reality; it is blood from birth to death.

The eaglets revolted at the sight of a human being. They opened their mouths in defiance when we first looked over the nest edge, nor were they one whit less ferocious for all our visits. They submitted to us as a caged lion endures his keeper. Each had a savage spirit that could no more be curbed by human hand than could the structure of the cere'd bill and the massive talons be changed. After almost three months of human interference, the royal pair of birds left their birthplace, never again to be touched alive by the hand of man.

We made a careful study of the nesting habits of a lazuli bunting to serve as a comparison between the small seed-eating birds and the largest birds of prey. The dates give an idea of what a variation there is in the period of growth and development of birds.

We found the bunting building its nest, and watched it closely. The home was lined, completed and contained three eggs on June 24th. On July 6th the eggs hatched, and the young were able to leave the nest July 16th. In other words, it took four weeks for these birds to build a nest and start their brood of young into the world.

How does the eagle compare with this finch? The two eggs, shell-marked with brown, were laid the first week in March, just as the sycamore was beginning to bud. The period of incubation lasted almost a month, for the eggs were not hatched till about April 3. The eaglets were covered with white down for

fully a month, during which they grew from the egg to the size and weight of a large hen. The first week in May, black pin-feathers began to push up thru the down, first appearing on the wings and back. Week after week the stiff black feathers grew, but they came slowly, covering the back, wings, head and neck, until, by the first week in June, the eaglets were fairly well clothed, except a



THE TWINS AT THE AGE OF 55 DAYS

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small white shirt-front. But the wings and feet were still weak. It required over three weeks longer for the wing feathers to gain strength and for the feet to grow powerful enough for the birds to handle their heavy bodies. So where the finch required four weeks to rear a family, it took the eagle a good four months.

Portland Oregon.