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## The Barn Owl and Its Economic Value

BY WILLIAM L. FINLEY

PHOTOGRAPHS BY HERMAN T. BOHLMAN

THERE is not a tumble-down barn in the country that does not shelter good material for a naturalist's notebook. Take it all in all, the oldest shacks are the most productive. If there is a hole and a snug corner, some wren or bluebird has likely climbed in and built a home. If it be near town, some English sparrow has perhaps been living there all winter, and at the first indication of spring, has begun carrying in grass and sticks. Or, if the barn is real shaky and leaky, it may furnish a home for an owl.

The barn owl (*Strix pratincola*) is not hard to please when he needs a nesting place. He takes the steeple of a church, an old hollow sycamore along the creek or a cave in the mountain. I know of one pair that has lived for years in the tower of a court house. The town clock just below the nest must have been annoying at first during their day-sleep, but it was likely taken as a necessary disturbance, as we take the clang and rumble of the street-cars under our windows at night.

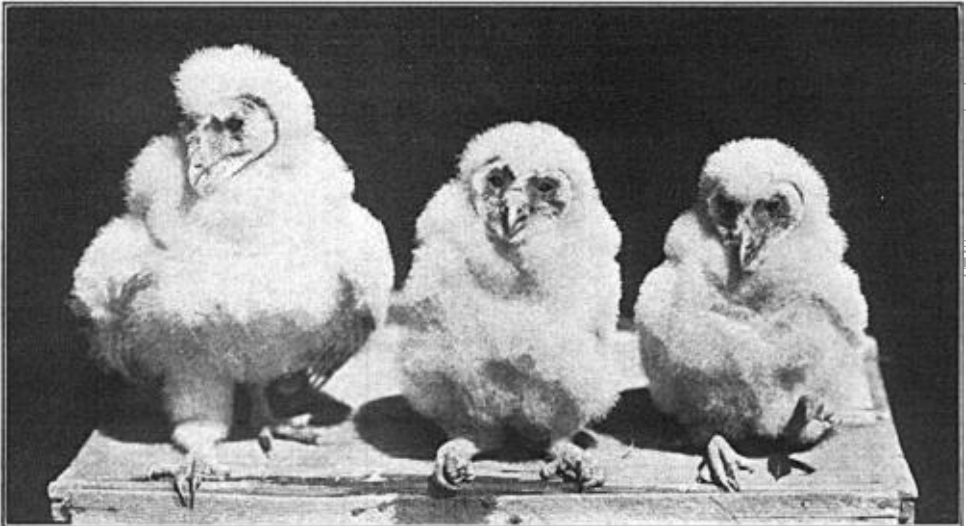
Years ago our nearest neighbor got a pair of pigeons, sawed two holes up in the corner of his barn and nailed up a soap box for them. The pigeons disappeared one day, and the next spring a pair of barn owls moved in. That was seven or eight years ago, but the old dusty box in the gable is still rented to the same pair. I have no doubt the tenants will remain as long as the barn lasts.

Our neighbor says his barn is worn out but resembles Mr. Burroughs' apple tree, which was not much good for apples but always bore a good crop of birds. The owl home is a valuable asset of the barn. The owner knows something of owls as well as fruit trees, for no other barn about the neighborhood shelters such a valuable family of birds, and he guards them as closely as he guards his cherries.

Now the barn owl is a queer looking tenant. No one is particularly fond of an owl. More than that, his actions are against him. It's natural that we haven't much sympathy for a fellow who is up and sneaking around all night, and sleeping thru the day. There is always some suspicion attached to a night-prowler,

whether he is a bird, man or beast. However, I have often watched the barn owl and studied his habits till I was satisfied he paid our neighbor more in one night than the pigeons, swallows and wrens did in a month. Not in singing; mercy no! Who ever heard of a song coming from a hooked bill? It was in real service about the farm, the service of a watchman or policeman, to rid the place of injurious rodents.

It was not an easy matter to picture these barn owls, situated as they were in the very peak of the old barn. The minute we approached the nest box, the old owl pitched headlong out of the hole and landed in a willow tree opposite. We had to climb a ladder and swing into the rafters to reach the nest. In such a place, we could hardly handle a camera. There was not even a loft to work from, so we secured a long ladder and nailed a couple of cross-pieces strong enough to hold a board. Crawling up in a stooped position, we took the back out of the nest box and arranged so it would drop down and show the interior or could be fastened up, at will.



BARN OWLS ABOUT 24 DAYS OLD

A month later, we climbed up in the gable end of the barn and pulled out three of the funniest, fuzziest monkey-faced little brats that it has ever been my privilege to set eyes upon. They blinked, snapped their bills and hissed like a boxful of snakes. We took them to the ground and doubled up in laughter at their queer antics. They bobbed and screwed around in more funny attitudes in a minute than any contortionist I ever saw.

We found them graded in size and height as carefully as a carpenter builds the steps of a stair case. They were such lumpy looking birds. It looked as if some amateur taxidermist had taken them in hand and rammed the cotton in, wad at a time with a stick, till he had the youngsters bulging out in knobs all over.

The eldest we called the colonel, but looking at him from a humanized standpoint, it seems to me he had been put together wrong, for his chest had slipped clear around on his back. At times he was a peaceable-looking citizen, but he was always wary and suspicious. He turned his back on the camera in disgust,

or sat in a soured state of silence, but one eye was always open and watching every movement we made.

We crept out one night and hid in a brush heap by the barn. It was not long before the scratching and soft hissing of the young owls told us their breakfast time had come. The curtain of the night had fallen. The day creatures were at rest. Suddenly a shadow flared across the dim-lit sky; there was a soundless sweeping of wings as the shadow winnowed back again. The young owls, by some unmistakable perception, knew of the approach of food, for there was a sudden outburst in the soap-box like the whistle of escaping steam. It was answered by an unearthly, rasping, witching screech. I thought of the time when we used to creep out in the dead of night and scare an old negro by dragging a chunk of resin along a cord attached to the top of an empty tin can. Again and again the shadow came and went. Then I crept into the barn, felt my way up and edged along the rafters to the hen-roosty old box. Silently I waited and listened to a nasal concert that was as pleasing as a cageful of musical snakes. The minute food was brought I flashed a match and saw one of the little "monkey-faces" tearing the head from the body of a young gopher.

The barn owl kills the largest gopher with ease and celerity, and with apparently little resistance on the part of the animal. With the sharp talons firmly fastened in the gopher's back and the wings spread, the owl will break the vertebræ of the animal's neck with a few hard blows of its beak. The head is most always devoured first, either because that is a favorite part or because the destruction of the head gives better assurance of the animal's death.

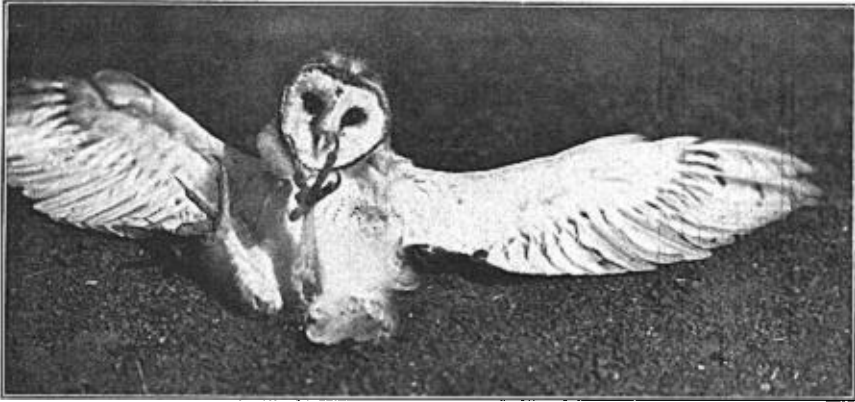
The next time we climbed the cob-webbed rafters to photograph the young owls, I cautiously thrust in my hand to pull out the nearest nestling. In a twinkling he fell flat on his back and clutched me with both claws. Of all the grips I ever felt, that was most like a needle-toothed steel trap. I felt the twinge of pain as the sharp talons sank into the flesh. I cringed and the grip tightened. The slightest movement was the signal for a tenser grasp. It was the clutch that fastens in the prey and never relaxes till the stillness of death follows. I hung to the



PORTRAIT OF HALF-GROWN BARN OWL, ABOUT 45 DAYS OLD  
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rafters and gritted my teeth till I could wedge in my thumb and pry the claws loose.

The young owls were hardly old enough to fly, but they could raise their wings and run like a cat for the darkest corner. We had never tried the camera on such a ferocious lot of birds. They knew the art of self-defence like a profess-



HALF-GROWN BARN OWL IN FIGHTING ATTITUDE

ional prize fighter. Approach one and he was on his guard. He would turn on his back in an inkling and throw up his claws. "Come on, I'm ready," he seemed to say; and we kept our distance. The oldest one had a villainous temper; he was as much opposed to having his picture taken as a superstitious Indian. Gen-



ADULT BARN OWL LEAVING NEST; TAKEN ON EXPOSURE OF ONE  
ONE-THOUSANDTH PART OF A SECOND

Copyright photo by H. T. Bohlman and Wm. L. Finley

erally he sat with his chin resting on his chest like a broken-down lawyer. Once when the photographer was least expecting it, he dropped on his trouser's leg as lightly as a feather, but with the strength and tenacity of a mad bull pup. The claws sank thru to bed rock and before they could be pried loose, they had drawn blood in three places.

It is well known to scientists that all birds of prey swallow a great deal of indigestible matter such as the fur and the bones of animals and the feathers of birds. After the nutritious portions have been absorbed, the rest of the mass is formed into pellets in the stomach and vomited up before a new supply of food is eaten. By the

examination of these pellets, found about the nest or under the roost, a scientist can get a perfect index to the character of the food that has been eaten. In addition to this, one generally finds in the nest the remains of creatures upon which the young birds have been feeding.

The owls as a family are the most beneficial of predaceous birds from the economic standpoint of the farmer. With few exceptions they are nocturnal. Their eyes and ears are remarkably developed and are keenest in the early hours of the night and morning. Many harmful rodents are most active in their search for food during the night, and the owls are the natural check for this multitude. The hawk hunts by day and the owl by night and the work of the one supplements that of the other.

A pair of barn owls occupied one of the towers of the Smithsonian Institution at Washington. When the young were half grown, the floor was strewn with pellets. An examination of two hundred of these showed a total of four hundred and fifty skulls. Four hundred and twelve of these were mice, twenty rats, twenty shrews, one mole and a vesper sparrow.

A family of young owls will number from three to seven birds. It is incredible what an amount of vermin a family of owls will consume. An old owl will capture as much or more food than a dozen cats in a night. The owlets are always hungry; they will eat their own weight in food every night and more if they could get it. A case is on record where a half grown owl was given all the mice it could eat. It swallowed eight in rapid succession. The ninth followed

all but the tail which for some time hung out of the bird's mouth. The rapid digestion of the Raptore is shown by the fact that in three hours the little glutton was ready for a second meal and swallowed four additional mice. If this is the performance of a single bird, the effect that a whole nestful of owls would have on the vermin of a community is self-evident.

I wondered at the changes in the owl faces as they grew older. When I first saw them in white down, I thought the face was that of a sheep, and then a monkey, and then I didn't know just what it resembled. The third time we visited the nest, each youngster had a face that surely looked like some old grand-



PORTRAIT OF FULLY GROWN BARN OWL  
Copyright photo by H. T. Bohlman and Wm. L. Finley

mother dressed in a night cap. Later on, when we saw them full grown, they got to be more owl like and dignified.

An owl spreads terror among the small ground folk as a ghost among negroes. It is the owl's shadow-silent wings, his sharp, sound-catching ear and his night-piercing eyes that make him the superior of the mouse, the mole, the gopher and the rat. He fans over the field with an ominous screech that sets a mouse scampering to his hole, but his ear has caught the foot-steps; those wings are swift; those steel trap claws are always ready; his drop is sure, his grip is death.

From an economic standpoint, it would be difficult to point out a more useful bird in any farming community. Like many other birds, the barn owl deserves the fullest protection, but man is often his worst enemy.

*Santa Monica, Cal.*

### The Percentage of Error in Bird Migration Records <sup>1</sup>

BY WITMER STONE

**I**N no branch of ornithology is it more difficult to obtain reliable data than in the study of bird migration.

It is seldom that we see the actual migration in progress, and then it is but a small fraction of the movement that comes under our observation and that often under abnormal conditions.

Consequently we are thrown back upon a comparison of the records of the occurrence, or the dates of arrival and departure of birds at various points, in any deductions that we may make as to the direction and rapidity of their migratory flights.

Without considering the possibility of error on the part of the observer there are many conditions which tend to impair the accuracy of such records, such as inability to be in the field every day during the migratory season, inability to cover the same amount of territory each day, and the recording by some observers of early stragglers which were not noted by others.

To obviate the last, suggestions have been made to record the arrival of the bulk of the species; but this at once admits the personal equation into the problem, and I find that nearly all observers differ in their interpretation of the bulk arrival, especially in the case of species which are subject to a constant increase in numbers from the first day that they are observed.

The average date of arrival based on several years' observation is more accurate as a basis of comparison, but even then there is a large probability of error.

Now most of the published tables of migration consist of the records of single observers at scattered points along the route of travel with generally large intervals between their stations.

Scarcity of competent observers made it practically impossible to secure a large number of migration records from a limited area; but the wonderful increase in the popular interest in bird study which we have recently witnessed has developed many able observers and renders the accumulation of this sort of data quite feasible.

It has been my privilege to study a series of local records of this sort kept at from 30 to 40 stations each year, all within 15 or 20 miles of Philadelphia, by a corps of observers organized by the Delaware Valley Ornithological Club.

These records are suggestive both in the apparent reduction of the percent-

<sup>1</sup> Read at the Twenty-third Congress of the A. O. U. in New York City, November, 1905.