

John C. Braly spent his boyhood days in San Diego, California. At that time he used to roam the fields and canyons because he became interested in birds. He became acquainted with A. M. Shields, who is one of nature's leading ecologists. He started collecting bird eggs. Like many other naturalists, this was the beginning of a life-long interest in the study of bird life.

When Mr. Braly came to Oregon, he entered the automobile business and for many years his time was devoted to this and not to the study of natural history. Some ten or twelve years ago, he retired from the automobile business and devoted his time to bird study. He moved from Portland over to the beach resort town of Depoe Bay on the Oregon Coast. He has made one of the finest private collections of birds, bird nests, and eggs. To take proper care of this collection, he built a private museum, which has developed into one of the best show places in Oregon.

The Braly museum of natural history is the only one of its kind in Oregon which was built on a sound scientific basis. The nests and eggs, beautifully mounted birds and mammals, and other natural history subjects, were carefully prepared with full data regarding every specimen.

One of the leading attractions of this collection is some of the birds like passenger pidgeon, which is now extinct. In addition to the splendid collection of Oregon wild-



life species, there are also birds that live in the Arctic seas and the tundras of Alaska south to California and Texas. Some of the birds are plain in color, others have most beautiful plumage, and there is great variety in the different kinds of nests. The size of birds from humming birds to eagles is also attractive. Practically all the species represented in Oregon are in his collection, while there is also another beautiful exhibit in a glass case of tropical birds, which have such delicately colored feathers. Some of these are gorgeously plumed birds of paradise and other very rare species.

In addition to the size and color of the birds, there is such a great variety and size in many of the birds' nests and eggs.

Large and small mammals, mounted by expert taxidermists, are also represented in this collection. Any visitor has a chance to see the well prepared specimens of flying squirrels, the tiny wandering shrew, foxes, bobcats, as well as big game species.

The Braly museum of natural history is the best and most attractive exhibit of Oregon wildlife in existence today. It is not only a lure to tourists and many residents, but it is sought by those who want to gain a better knowledge of Oregon and educate children more in the love of our outdoors.

The leading organization in Oregon relating to bird life is the Oregon Audubon Society, which for nearly forty years has been engaged not only in the better protection of bird life,



but in educating many people in the different wildlife species that inhabit our farms, forests, and coast line. The establishment of both state and federal reservations has been one of the objects, and it was the Pittock family that allotted a number of acres in the canyon beyond McCleay Park for a bird reservation. Additional acres were purchased, and this is not only an area where birds are protected, but where all lovers of the out-of-doors will have a good chance to study and get acquainted with bird life.

One of the leading needs which is found in many of the main cities of the United States is a natural history museum for the interest and benefit of children and older people. About forty years ago <sup>Cal. L. S. Hawkins</sup> started collecting many outdoor specimens, and a museum was started in the City Hall. This was built up until his death, and then, through the lack of needed space, this plan was abandoned, and since then Portland has never had a natural history museum. This matter has often been discussed, and many people were in favor of rebuilding this, but there was both the lack of space and money to plan for such a building. While there has been no collections made from the public standpoint, yet private individuals like Mr. Braly, Mr. Stanley Jewett and others, have continued for many years to collect specimens.

The plan of the Oregon Audubon Society is now to get the cooperation of public and private schools, also the city and state, to arrange for a valuable public museum in Portland. Inasmuch as it is more difficult to maintain the

Brady collection over at the Coast, on account of the damper winter conditions, arrangements have been made to transfer this collection to Portland, so it will be more of an attraction to a much larger number of people.

For many years, the city has maintained a public zoo in Washington Park.. While different kinds of wild birds and mammals that are kept in captivity attract many people, a natural history museum is of great advantage from an educational standpoint.

While the natural parks throughout the United States are carefully protecting the wild creatures that live in those areas, they have also found it necessary to establish museums so that all visitors may get better acquainted, not only with natural history, but with geology and all forms of plant life.



## MUSEUM OF NATURAL HISTORY

The museums that have been established throughout the world are devoted to science, learning, and fine arts. The first was the Alexandrian Museum, founded about 280 B. C.

The first museum of any real value <sup>in this country</sup> was <sup>the</sup> United States National Museum, a development of the Smithsonian Institution in Washington. An Englishman by the name of James Smithson in 1826 bequeathed the reservation of his estate of \$541,380 to the United States of America, and later, in 1846, the Smithsonian Institution was founded.

Many excellent museums of natural history and science have been established since in many parts of the United States. One of the largest is the American Museum of Natural History in New York City. Some, like the Smithsonian Institution, have been created as a permanent memorial to those who have allotted the funds so as to erect a building and assemble the needed collections for the interest and benefit of children and older people.

~~For~~ <sup>ago</sup> many years there <sup>grew</sup> ~~has grown~~ up an interest <sup>by</sup> in various people of Portland to establish a natural history museum. Nearly forty years ago Colonel L. L. Hawkins began persuading those collectors who had various kinds of outdoor specimens to exhibit these in the City Hall. ~~Since~~ <sup>Since</sup> anything of this kind requires either money to employ workers, ~~or like~~ the time devoted <sup>by someone as</sup> by Mr. Hawkins <sup>did</sup>, because of his interest in the project. After this museum was well established, as the size

of Portland grew, there was a lack of needed space, so gradually the collections were returned to the owners, and the plan for <sup>a</sup> ~~the~~ museum died.

<sup>But for</sup> During the past thirty years <sup>the main urge/need has</sup> ~~there has been a growing~~ <sup>been</sup> ~~interest~~ in the minds of many people <sup>to eventually</sup> ~~in favor of creating a~~ <sup>kept</sup> ~~permanent natural history museum.~~ <sup>Create</sup> ~~It has been discussed by~~ <sup>alive</sup> individuals and organizations, but up to the present time sufficient funds have never been allotted, although some valuable collections have been built up by private individuals.



## OUR STRANGEST AND RAREST QUAIL

by

Irene Finley

On a Sunday morning we took a walk in the high pine barrens of Arizona. The trees stood straight and slim with cones and needles of a year gone by at their feet. Bunches of yellow-green mistletoe hung among the darker green of the dwarfed oaks and junipers. Some of this pretty parasite seems to be always with the trees. Here and there spring underbrush of young shrubs was bulging with new life, and in the bare places the sun fell soft and warm. There was a sweet smell of balsam and the mountains in the air. A hushed vacuum of stillness pressed upon one. Even the birds were quiet and shy. A flicker hanging up-side-down on a tree trunk seemed almost embarrassed at the echo of his drumming in the big still room.

As we trudged along in the Sunday peace, it became quite warm, and dropping over a ridge we looked down on a little green gorge that gave the impression of an oasis in all this dryness. There must be water down there. All at once we became thirsty and started down, and didn't stop until we were standing at the edge of a little stream running through the green. And we saw something else. Not only the brook was rippling, but there was a swaying among the grass and undergrowth moving down the canyon, and it was not caused by a breeze. The air was dead still. Then soft shadows began to move up the hillside, winding in and out between the shrubs like pale veils - and were gone. The quail had been down to the stream to drink also.

More than once we had met the quail folk thus, always shy and silent in departing, <sup>and</sup> the flock had given this feeling of elusiveness. And most frequently we had found them near water, for the quail, like man, must have water. They must even make their nests not too far from water so that the frail quaillets may reach it soon after they are hatched. Then will they be able to follow their parents off into the dry hot places, scampering



here and there like sprites hunting seeds and insects or digging for small lily bulbs, of which they are very fond.

The habitats of the quail species account for their striking differences in plumage. And perhaps the most striking quail of the Southwest is the dumpy little Mearns (*Cyrtonyx montezumae mearnsi*) or "fool quail" with his camouflaged "wall-paper pattern" coat. He straggles through the hilly pine regions of central Arizona, southern New Mexico, and central Texas. His face is grotesquely streaked in black and white like an Indian's at a war dance, his crest a soft fawn with a dash of black, his back pale brown with black and white stripes, wings with black spots, sides heavily figured with guinea-hen polkadots bordering a wide central band of velvety dark brown running from chin to tail - an intriguing oriental pattern. His mate is dressed in softer and less dramatic tones with a pinkish-brown head and no stripes, back mottled in black, brown and lavender streaked with white, under parts light cinnamon with a lavender sheen, breast and sides streaked and speckled. Imagine the brown-fronted Mearns on the pale sandy treeless desert or the wide open cactus stretches where the blue scaled quail melts into the landscape. But in the mixed grassy valleys and rocky ravines Mearns is a picture painted on his own splotchy wall. Here he vanishes before your eyes.

His habit of lying close and taking flight only when about to be stepped on has brought him the name of "fool quail", and by this means he hides to the last minute his conspicuous dark vest. When a Mearns senses discovery, he quickens his pace, compresses his plumage, and lifts his head high, spreading out his crest in a half mushroom.

Of the several striking quail of the Southwest, this bird seems to depend for his safety on his protective coloration more than any other. One observer recalls seeing one of these birds squatted on a log near the trail that a pack-train was following. So well did the colors of his back and sides blend with his surroundings that some fifteen pack mules and horsemen passed without seeing or disturbing him.

One of the principal articles of the Mearns' diet is lily bulbs, prob-



ably *Cyperus*, according to Vernon Bailey. They also hunt acorns and pinyon nuts, and in addition seeds and spines of prickly pear, acacia, seeds of legumes and spurge, laurel berries, and such insects as weevils, caterpillars, crickets, and grasshoppers.

Unlike the Gambel and scaled quails, the Mearns does not gather in large flocks. Though well distributed, the birds are nowhere abundant. Though Stokley Ligon, who is an authority on the quails of the South, has estimated that there are usually about six in a bunch, though they range from two to twelve. Food, character of breeding season, and deep winter snows probably combine to reduce them at times to the verge of extermination. A variety of natural enemies also affect their numbers, the Cooper hawk being considered their worst enemy and destroyer of broods. Predatory animals also hound their tracks such as skunks, bobcats, and foxes.

Only one species of quail was a natural inhabitant of the eastern states, the bob-white, the "farmer's friend." Now he is common over great portions of the country. In the Southwest beside the Mearns quail, there are two others commonly seen in large flocks, the scaled quail (also called blue quail and cotton-top), and the Gambel quail. The Gambel loves the quail brush and creosote, the hot mesquite valleys and slopes, the palo verde thickets and prickly pear patches. It is most at home about small farms, in alfalfa fields, and sometimes nests in vineyards. Old and young may be seen by hundreds in the valleys and sandy places. But none are so shy and elusive as the little Mearns that lives in the high humid regions, - the Mearns, those rare whispering spirits of the pine barrens.



Mearns

On a Sunday morning we took a walk in the high pine barrens of Arizona. The trees stood straight and slim with cones and needles of a year gone by at their feet. Bunches of yellow-green southern mistletoe hung among the darker green of the ~~dwarfed oaks & junipers~~ <sup>pinos.</sup> Some of this pretty parasite seems to be always with the trees. Here and there spring underbrush of young shrubs was bulging with new life, and in the bare spaces the sun fell ~~down~~ soft and warm. There was a sweet smell of balsam and the mountains ~~in~~ the air, and a hushed vacuum of stillness pressed upon one. Even the birds were quiet and shy. A flicker hanging up-and-down on a tree trunk seemed almost embarrassed at the echo of his drumming in the big still room.

As we ~~meandered~~ <sup>trudged</sup> along in the Sunday peace, it became quite warm, and dropping over a ridge we looked down on a little green gorge that gave the impression of a flowing oasis in all the dryness. All at once we became thirsty and started down, rattling a loose rock here and there, and didn't stop until we were standing at the edge of a little stream running ~~down~~ through the green. And then we saw something else. Not only the brook was rippling, but there was a swaying among the grass and undergrowth moving down the canyon, and it was not a breeze. The air was dead still. Then soft <sup>dim</sup> ~~pale~~ shadows <sup>began to move</sup> floated up the hillside, <sup>winding</sup> in and out like pale veils- and were gone. The quail, ~~these whispering spirits of the woods~~, had been down to the stream to drink also.

More than once we had met the quail folk thus, and always shy and silent in departing, the flock had given this impression of shadowy elusiveness. And most frequently we had met them near water, for quail, like man, must have water. They must even make their nests not too far from water so that the frail quaillets may reach it soon after they are hatched. Then will they be able to follow their parents off into the dry hot places, scampering here and there <sup>like sprites</sup> hunting seeds and insects or digging for small lily bulbs, <sup>of which they are very fond.</sup> ~~stopping to rest in the shade, these little whispering spirits of the forest.~~

The habitats of the quail species account for their striking differences in plumage. And perhaps the most striking quail of the Southwest is the dumpy little Mearns or "fool quail" with his camouflaged "wall-paper pattern" coat. <sup>He</sup> ~~that~~ straggles



through the hilly pine regions of central Arizona, southern New Mexico, and central Texas. His face is grotesquely streaked in black and white like an Indian's at a war dance, his crest ~~is~~ a soft fawn with a dash of black, his back ~~is~~ pale brown with black and white stripes, under parts medium dark brown and black, wings with black spots, and sides like long panels <sup>marked by</sup> with white spots. His mate is dressed in softer and less dramatic tones with a pinkish-brown head and no stripes, back mottled in black, brown and lavender streaked with white, under parts light cinnamon with a lavender touch, breast and sides speckled and streaked. Imagine the brown-fronted Mearns on the sand colored treeless desert or the wide open cactus stretches where the pale <sup>blue</sup> ~~mauve~~ scaled quail melts into the landscape. But in the mixed grassy valleys and rocky ravines <sup>Mearns</sup> ~~he~~ is a picture painted on his own splotchy wall. Here he vanishes before your eyes.

His habit of lying close and taking flight only when about to be stepped on has brought him the name of "fool quail", and by this means he hides to the last minute his conspicuous dark vest. When a Mearns senses discovery, he quickens his pace, compresses his plumage, <sup>and</sup> lifts his head high, spreading out his crest in a half mushroom. Of the several striking quail of the Southwest, the Mearns seems to depend for his safety on his protective coloration more than any other. An instance is recalled by one observer where one of these birds squatted on a log near the trail that a pack train was following. So well did the colors of his back and sides blend with his surroundings that some fifteen pack mules and horsemen passed without seeing ~~him~~ or disturbing him. Many birds knowingly depend upon "freezing" as much ~~as possible~~ or more than melting into their background.

One of the principal articles of the Mearns' diet is lily bulbs, probably Cyperus, according to Vernon Bailey. They also hunt acorns and pinyon nuts, and in addition seeds and spines of prickly pear, acacia, seeds of legumes and spurge, grass blades, berries of mountain laurel, arbutus and cedar, and such insects as weevils, caterpillars, bugs, crickets, and grasshoppers. Mr. Bailey started a pair of these birds at an altitude of about 8000 feet where they had been scratching under pine trees. In the freshly scratched ground he found a "quantity of membranaceous shells of a little bulb and several of the bulbs." He ate one of these and found it good- starchy, juicy, crisp, and of a nutty flavor. The quail had dug two



two or three inches deep in the hard ground and seemed to find plenty of bulbs.

Mr. Bailey found none by digging in new ground, nor did he find the plant which bore them.

Unlike the Gambel quail <sup>and scaled</sup>, the Mearns does not gather in large flocks. Though well distributed, the birds are nowhere abundant. J. Stokley Ligon, who is an authority on the quails of the Southwest, has estimated that there are usually about six in a bunch, though they range from two to twelve. He says that food, character of breeding season, and deep winter snows probably combine at times to reduce them to the verge of extermination over great areas. A variety of natural enemies also affect their abundance, the Cooper hawk being considered <sup>their</sup> ~~its~~ worst enemy and responsible for ~~the~~ <sup>small</sup> ~~destruction of the~~ <sup>broods</sup> ~~cover~~ reared. But the predatory animals are also important factors in ~~its~~ <sup>their</sup> existence. One year in the center of the Mearns' distribution in the Black Range in New Mexico, while the quail were protected by the rank vegetation of a good season, they were also profiting by four years of active trapping of skunks, bobcats, and foxes. One trapper had a record of forty-five foxes in four nights, and forty-one bobcats in a year.

One other situation is affecting upland game birds. Since the game commissions in the West are making every effort to propagate and release birds like the China pheasant so that the sportsmen will have more to hunt, the records show that many of our native game birds like grouse and quail have been decreasing in numbers. Very little has been done in raising and releasing these birds to off-set the loss. The only chance of conserving them is to close the hunting season or set aside certain parts of the different states as reservations where the grouse and quail live.

Only one species of quail was a natural inhabitant of the eastern states, the bob-white, which has now been introduced and become the "farmer's friend" in the greater <sup>In the Southwest he is represented by the Texas bob-white.</sup> portion of the country. <sup>^</sup> Beside the Mearns quail, there are two others commonly found and seen in large flocks ~~in the Southwest~~, the well-named scaled quail (also called blue quail and cotton top), and the Gambel quail. The handsome Gambel, locally but incorrectly called California quail, may <sup>but lighter in tones,</sup> be met in the Lower Sonoran Zone in quail <sup>(more range added)</sup> brush and creosote, and in hot mesquite valleys or brushy slopes, in palo verde thickets and among patches of prickly pear. It is not generally found so far from water as the scaled quail, which eats more juicy insect food, but at times both are seen in the



same landscape. It seems most at home in inhabited regions about small farms, in the alfalfa fields, and sometimes nests in vineyards. Old and young may be seen by hundreds in the valleys and sandy places. <sup>P</sup>The natural food of the scaled or blue quail and its tameness about houses show how important it will become to the agricultur-  
alist in the development of the country if properly protected and encouraged to take an active part in keeping down weed and insect pests on cultivated land. <sup>this</sup> These birds may be seen loitering around the ranch house and perching on the brush woodpile like domestic fowl. This quail whose life is spent in the strong sunlight of the arid cactus, mesquite, and greasewood valleys is the palest of its family, its bluish tones presenting a striking contrast to the dark <sup>ones</sup> ~~tones~~ of the Mearns <sup>that lives</sup> ~~and quail living~~ in humid, forested regions, - the Mearns, these rare whispering spirits of the pine barrens.



Out—  
A June morning in a sunny sycamore canyon above Oracle, Arizona. Standing in the chaparral on a high, dry hill and looking down, that gash of vivid green below gave the impression of a flowing oasis in a desert. And so it was. Just looking at it after tramping over the hot sand in a glaring sun eased the squint wrinkles in one's face and relaxed tired muscles. But even more, to the eyes and throat it was like a long cool drink.

But that drink wasn't close enough. We tumbled down the hot hill rattling a loose rock here and there and didn't stop until we reached the bottom of the steep narrow ravine and were standing under great <sup>sprawling</sup> spreading sycamores, their ~~big~~ trunks white with a design of pock marks, their high tops masses of fluffy spring-green leaves ~~that~~ like young elephant ears. And all about our feet and as far as we could see down the canyon <sup>grew</sup> wild columbines, glowing yellow under the trees, and spreading down to the edges of a tiny stream, rippling and running over its rocks. We drank it in, then hurried down to wade in and really drink. And then we saw something else. Not only the brook was rippling, but there was ~~was~~ a swaying ~~movement~~ among <sup>and the undergrowth</sup> pale the columbines <sup>moving</sup> down the canyon. Then soft <sup>pale</sup> shadows floated up the hillside, weaving in and out like veils— and were gone. The quail had been down to the stream to drink also.

More than once we had met the quail folk down here, and closer at hand, and always shy and silent in departing, ~~xxxxx~~ the flock had given this impression of shadowy elusiveness. And most frequently we had met them near water, for quail like man must have water. They must even make their nests not too far from water so that the frail quaillets may reach it soon after they are hatched. Then will they be able to follow their parents up into the high hot sands, scampering here and there hunting seeds and insects, stopping to rest under the scant shade of thorny cactus plants while the heat waves shimmer and dance across the wide spaces. Or if they are the ones who live higher up among the pine barrens, they scuttle up under the sparse trees and dig for small lily bulbs.

The habitats of the quail species accounts for their striking differences in plumage. And perhaps the most striking quail in the Southwest is the dumpy or "fool quail" little Mearns, with his camouflaged "wall-paper pattern" coat that ~~xxxxx~~ straggles



Birds are about as individual in their home lives and nest building as people are, and finding their nests is another item of time and ingenuity. Some build their homes about the dooryard where they are easily seen and watched. Others hide them which takes more than keen eyes and patience to <sup>locate</sup> find. Others build them in plain sight, but construct them so cunningly and of materials so like their surroundings that they are invisible while in plain sight.

The common dooryard robin is perhaps one of the most perverse birds to watch through a nesting period and get a series of good pictures. For a number of years one or more robins have built their mud and straw nests in the ivy covering a pergola at our home. With crowds of people sitting about at tea or ~~at~~ <sup>talking a mother</sup> luncheon, she came and went to her nest ~~and was feeding~~ to feed and care for her young, but if one set up a camera and focused its eye on her, she flashed out in a noisy temper and seemed possessed to spoil any attempts for a picture. Another mother robin tried for two seasons to build her nest closer yet to human beings. She built it in the bracket of the heavy supports of the loggia where people had to pass under it in going and coming. The mess she made on the porch and her household duties were sometimes disconcerting.

In contrast to this bird character, that sprite of the sunshine and the flowers, the hummingbird, is one of the most satisfying birds to work with, - if you can find her nest. <sup>THE RUFUS</sup> This ~~hummer~~ <sup>hummer</sup> breeds in ~~western North America~~ from the higher mountains of southern California and Arizona north to Alaska. The nest is built of mosses, lichens, and <sup>bits of</sup> bark and so placed in ferns, bushes, and vines that one can be close enough to touch it and not see it. But the hummer that builds her nest with a prize camouflage is the Anna. In the live oaks of the Los Angeles region, <sup>in California,</sup> ~~which is the~~ <sup>a</sup> convention place of both migrants and home builders, we have ~~many times~~ <sup>among the hummers,</sup> spent many hours and days hunting hummers. The nest is a tiny cup covered with bits of dull moss and lichens and is <sup>of</sup> fastened to an old oak limb with webs. It ~~looks like~~ is a mere knob that becomes a very part of the limb and very hard to see. When once found, the mother hummer is a good sport about intruders with cameras, and sits quietly or feeds her young by that unique method of regurgitation, which looks like a sword-swallowing stunt.



The vireo<sup>20</sup> is another shining example of good nature in her home. She builds a neat round basket nest and hangs it on the under side of a limb and sheltering leaves. If one approaches quietly and shows no noise or haste, he may watch the <sup>dainty, big-eyed</sup> mother on her nest and then reach up carefully and tender her a fat worm. She will reach out and take it gratefully. When the children arrive in the nest, one may <sup>gently</sup> take them out and hold them in the hand. The mother arriving home will take a look at the ~~empty~~ bed and seeing it empty, will soon find the nestlings if they are held up close. If she has food in her bill, she will proceed to perch on ~~xx~~ a finger and feed them. The only drawback to good pictures of a vireo home is that the ~~mother~~ bird builds usually in the shade of the deep woods where the light is ~~xxxx~~ dim.

#### ~~Almost any region~~

Many regions have tractable bird subjects for the photographer. The brilliant flowering cactus gardens of Arizona in May and June furnish prize pictures and life histories of such birds as the verdin, the cactus wren, the desert sparrow, the gnatcatcher, and others. True, it takes perseverance, patience and long days in the blistering sun. But it is worth it.



Another orphan that came to live at our house was a mallard duckling. He was a bedraggled little waif, a tailless Tom-thumb. Into the old apple-box he went with the reading-light mother to warm him. This had to be adjusted just right, for too much heat will kill an infant as quickly as too much cold. ~~But~~ in reviving any chilled ~~xxxxx~~ bird, warmth is more important than food. Most people who are anxious to save a small creature stuff bread crumbs or other food down its throat, when in reality the only thing that will save him is to wrap him in a cloth and put him in a warm place. A young bird will eat when he has overcome his fear of strange surroundings and becomes normally hungry. <sup>The younger he is, the sooner it works.</sup> The ~~xx~~ <sup>things,</sup> treatment of all young ~~animals~~ human or animal, is somewhat the same, depending upon size and kind.

Our police dog never lost his suriosity and wonderment about this mite in feathers that had found its way to our hearth. Almost any time one could find the dog peering into the box. He seemed surprised that the bird showed no fear of him or respect, as it even pecked his nose when it wasn't picking up crumbs of hard-boiled egg or snipping lettuce. For months he saw the duckling grow from an insignificant puff of down into a plump, sleek mallard with a glossy green head, bright wing feathers and provoking curls at his tail that wiggled in friendship.

When spring came, the dog and duck wandered over the lawns together, slopping about in the mild rain. Everywhere the dog went the duck was sure to go, and it was plain to be seen by those who had followed the strange situation that the dog was getting fed-up with the set-up that his feathered friend had wished upon him. Only the gardner furnished him a little respite. Seeing the man digging around a bush and turning up the wet soil, the duck would waddle over and almost thrust his bill ~~xxxxx~~ under the shovel to dabble for angleworms. This and many other instances of birds and animals raised by hand furnished ~~xxxxxxxxxxxx~~ large series of pictures and much enlightenment about the wild folk that could not have been obtained in the fields and forests.