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BIRDS and NATURE

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IN NATURAL COLORS

FORTY ILLUSTRATIONS BY COLOR PHOTOGRAPHY

A GUIDE IN THE STUDY OF NATURE

VOLUME II



EDITED BY WILLIAM KERR HIGLEY

CHICAGO

A. W. MUMFORD AND COMPANY, PUBLISHERS

378 Wabash Avenue

1905

BIRDS AND NATURE

IN NATURE

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BIRDS AND NATURE

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BIRDS AND NATURE.

ILLUSTRATED BY COLOR PHOTOGRAPHY.

ONE GLIMPSE.

(A June-tide Joy-song.)

Oh, pray, what means a day like this?
A day that dawned all red and gold and dew—
A day whose morning hours were steps that led
To all the splendor of the throne of Noon;
Each step more filled with sweets and song and sun
Than that beneath it!
And such a Noon!
Ah!——

Throb, throb, went the heart of the world,
And “dance, dance,” was the lilt of the breezes,
“Come, come with your natures unfurled,
And list, list to the siren who teases!
June! Noon! It’s the hub of the year,
And sweet, sweet is the rose and the clover!
Joy! Joy and her subjects are here—
Oh, haste, haste, e’er the pleasure is over!

’Twas such a Noon—
And, ah, the hours that led from dawn to dusk!
What notes the songsters tried! What odors rose!
And how the pictures in the cloudland ways
Changed on and on till Day grew tired and crossed
The western threshold!

* * * * *

’Twas more than just a day (“one little day”)—
It might have been a year of some fair clime,
Where naught but beauty reigns—but, ah! ’twas more!
One glimpse it was of what *this* world can be
Through God and Goodness.

—JAC LOWELL.

THE MOCKINGBIRD.

(*Mimus polyglottos.*)

Then from a neighboring thicket the Mockingbird, wildest of singers,
Swinging aloft on a willow spray that hung o'er the water,
Shook from his little throat such floods of delirious music
That the whole air, and the woods, and the waves, seemed silent to listen.
— Henry Wadsworth Longfellow, "Evangeline."

Some one has said, "He who has not heard the wild singing of the Mockingbird has missed one of the richest treats that Nature has in her wonderfully rich storehouse." He sings in the morning, at midday, in the evening and often through the night whenever the light of the moon causes the darkness to wane. "Listen to him when the world is hushed, when the air is heavy with the rich fragrance of orange blossoms and the dewy leaves glisten in the moonlight, and if his song does not thrill you, then confess yourself deaf to Nature's voices."

Many connoisseurs of bird songs have declared that our Mockingbird is the chief of the avian songsters of the world, not even excepting the world renowned nightingale. Dr. R. W. Shufeldt has said: "I believe, were he successfully introduced into those countries where the nightingale flourishes, that princely performer might some day wince as he was obliged to listen to his own most powerful strains poured forth with all their native purity by this king of feathered mockers." But comparisons are odious. Both the Mockingbird and the nightingale are wonderful songsters and the former is the chief of American song birds. It is, however, as a mimic that he has no equal. In this power he leads all birds and has no peer. No bird notes seem beyond his compass. He can perfectly imitate them all, from the screech of the hawk to the soft and restful notes of the wood thrush or the exquisitely sweet song of the hermit thrush. But this is not all that the Mockingbird can do in the way of mimicry. He is also a ventriloquist. Mr. Dawson in "The Birds of Ohio" speaks of a most inter-

esting captive specimen. This bird would perfectly imitate the crowing of a bantam rooster at a distance of about two blocks. "Having always heard the rooster at a distance, the Mocker reproduced the sound in exactly the same way, with the ventriloquistic effort manifestly resulting." This bird also reproduced the songs and cries of seventeen common birds in the course of a quarter of an hour, and Mr. Dawson says: "His torrent of borrowed songs was continually changing like a kaleidoscope. I timed him once, and the tune was changed eighty-seven times in seven minutes. Of these I was able to recognize only fifty-eight as they flew—that of the robin appearing twenty-two times." While many Mockingbirds have a wonderful power of mimicry and an exceptional memory, there are many others which sing no notes excepting those of their own song. The very best mockers are very far from common. While many Mockingbirds may copy perfectly the notes of the songs of other birds, a few "impart an artistic interpretative quality, which enables them easily to surpass their models."

The musical talent of the Mockingbirds is by no means confined to mimicry of other birds' songs. They have notes of their own which are rich and varied. They are rapidly delivered with much sweetness and energy. They seem to enjoy their own voices for their song is accompanied by a sort of ecstatic movement of the wings, tail and body.

The Mockingbird is a favorite not only because of his own beautiful song, his powers of imitation, and his pretty ways and elegant form, but also because he loves the society of man and will



MOCKINGBIRD.
(*Mimus polyglottos*).
 $\frac{2}{3}$ Life-size.

build his home near that of man. He is always animated and all his motions are rapid and graceful.

It is to be regretted that the range of this beautiful bird and renowned songster does not cover a much wider territory. Its breeding range extends from northern New Jersey (rarely Massachusetts) and southern Illinois, southward to the limits of its range in Mexico. It has been observed in a very few instances as far north, in the interior, as Chicago. While its distribution does not include even the larger part of the United States the Mockingbird has been called our national song-bird. It enjoys public life and will often make its home in our parks and gardens and sometimes in the more quiet streets of our towns.

Its nest is constructed with twigs, weed stalks, strips of bark, and sometimes rags and other trash are found available. It is lined with fine rootlets, cotton, feathers and other soft substances that may be near at hand. The nest is seldom placed at any great elevation above the ground and may be found in undergrowths, in the lower levels in thickets, in orchard trees and other trees, and in bushes where the birds feel that they are reasonably protected. In the more southern portion of their nesting range, orange, cedar and water oak trees are commonly selected. They have

been known to nest in the vines and shrubbery near houses.

The Mockingbirds are devoted parents and ably defend their eggs and young. Worms, grasshoppers and other adult insects and their larvæ, form their food during the summer. At other times, they largely feed upon wild berries, such as the juniper, holly, sumach, sour-gum and many other varieties.

"Their presence is a benediction to a farmyard, both for the excellent music they discourse, and for the spirited defense which the male makes against hawks and other intruders." They have been known to attack and kill black snakes which were seeking their eggs and young. Then, too, they are useful, if for no other reason, because their happy spirit and enchanting song cheers the spirit of man when, after a day of labor, he spends his evening hours in rest and listens to the rich and varied melody of their music. Of their song, Mr. Longfellow has said in verse:

Plaintive at first were the tones and sad; then
soaring to madness
Seemed they to follow or guide the revel of
frenzied Bacchantes.
Single notes were then heard, in sorrowful,
low lamentation;
Till, having gathered them all, he flung them
abroad in derision,
As when, after a storm, a gust of wind through
the tree-tops
Shakes down the rattling rain in a crystal
shower on the branches.

ON THE COPLEY ROAD.

To have the eyes that see, the ears that hear,
To feel the wild free wind against the face,
To meet it on the eager, springing foot
That puts the miles behind; to be at one
With earth and growing things and blowing cloud,
O sweet, brave life!

—CHARLES LOGIE RICHARDSON.

AN AUNT JANE STORY.

FLOWERS.

"We have gathered a basket of flowers, Aunt Jane. Do come out to the summer house and tell us all about them," called Birdie in her most coaxing tones.

"Very well. I'll be with you in a few minutes," was the prompt response.

"Spring Beauties and Violets in abundance," she said, taking up the basket and seating herself in their midst in less than five minutes after she was called.

"How we wished you were with us," said Alice. "It was such fun picking the flowers."

"Of course you know," Aunt Jane began, "that the Spring Beauty has a bulbous root which contains the nourishment that enables it to blossom at the first call of spring. Such flowers do not wait to develop thick, velvety corollas, or to manufacture gorgeous colors, but instead of doing this, they spread forth petals which seem delicate as foam and which are dyed in dainty shades of blue, pink or cream, or else forego all color and appear in pure white.

"Did you not notice how the leaves of the Spring Beauty pierce the cold ground like spears and stand as guards beside the fragile, white flowers, whose crimson lines of color give a pink hue to the corolla, so that when seen from a distance, a large, thickly set bed of them resembles a fall of pink snow?"

"We said when we gathered them that it had 'snowed' Spring Beauties," said Alice. "The grass was simply pink with them, there were so many."

"Yet, on close inspection, a diversity of color is seen. Some of the blossoms are quite pink, others almost white; still others striped in lines of white and crimson, while a few in an odd freak have donned a parti-colored dress, half white and half red.

"The Spring Beauty is no child of the shade. It arrives before the sugar

maple has had time to hang out its myriad golden bells, and when the fairies of the spring have only just commenced their task of climbing the trees to set a green cap on every twig."

"Is it called Spring's Beauty because it comes so early, Auntie?"

"Perhaps so. The poets have neglected the Beauty when writing their tributes to the flowers. This fact is doubtless owing to its name, which for poetical purposes is an unfortunate one, as a compound word is somewhat ungraceful in rhyme. Its botanical name, *Claytonia virginica* is derived from the name of a botanist."

"Here is the Violet," said John, picking out a fine specimen. "I am sure it is well named."

"Yes, its color gives it a very appropriate and pretty name. This flower belongs to a large family numbering several hundred species. It is not, however, a true cosmopolitan, as it avoids extremes of heat and cold, having its habitat chiefly in the temperate regions. Still its area is an immense one."

"That is so," said John, "for I read about Jephson finding some common, blue Violets on the Mountains of the Moon. He gave them to Emin Pasha to classify."

"The Violet," she continued, "is not only a widely dispersed flower, as you have found, but it is also a very old one, and possessed of classical dignity in being mentioned by Homer and Virgil. There are two traditions as to how it came by its Greek name, 'Ion.' When 'Io' was transformed by Jupiter into a heifer she fed on Violets. Or the name may be due to the nymphs of Iona, who first presented chaplets of these flowers as an offering to the father of the gods."

"Didn't Proserpine give the Violet its dark hue?" asked Alice.

"Yes; and Athens used the Violet as

a badge, and her orators were accustomed to address the people as 'Athenians crowned with Violets.' Indeed so much was the Violet beloved that a gold one was the prize at the floral games. A Greek prayer over the departed gives the Violet as the first flower mentioned—'May many flowers grow on the newly made tomb, the Violet, marjoram, narcissus, and around them all roses grow.' The love of flowers, especially of these sweet firstlings of the spring, seems to have been always deeply rooted in human nature. Violet, like children's eyes, heavy with sleep, have a kind of human interest."

"But the poets intimate that the Violet hangs her head out of sheer modesty, don't they, Auntie?" said Madge.

"They do, but when modern scientists wrote her biography it was found that she had utilitarian reasons for her dejected attitude. The violet is an insect-loving flower, having perfume in some cases and color attractions—the blue color which Grant Allen says belongs to only the most advanced flowers. It hangs its head on its slender stem in order that the rain may not come near the honey stored in the spur of the largest petal, and also the better to allow the pollen dust to fall into the queer little receptacle prepared for it by the orange-tipped anthers in the middle of the flower. When the bee in quest of honey touches the thin, broad tip of the style of the stigma the anthers are shaken apart and the dry pollen falls upon the insect. The bee is hairy, and the pollen grains are rough, so many of them are retained and thus the Violet becomes fertilized through insect agency, for the bee carries the pollen to another flower and leaves it there; but this process I have explained to you before. Now have you any questions to ask before we take up another flower?"

"Yes," said John. "Why is the Dog-toothed Violet so unlike the blue Violet with its spur?"

"Because it is a Violet only in name. It is really a lily, with a root shaped like a dog's tooth. The blossom hangs its head and sways in the wind as a Violet does, hence its common appellation. The petals are dotted with yellow,

and the mottled leaves are almost as pretty as the flower. You have already learned how difficult it is to transplant, as the bulbs grow too deep for your knives. The stems are tender and easily broken."

"Tell us about the Anemone, please," the little girls pleaded. "Here is a beautiful one."

"In France the Anemone is called the Pasque-flower. It is also named Trinity flower because three of its leaflets combine to form a leaf."

"Isn't there a fable about its name?" Edith inquired.

"Yes. A pretty story is told as to the origin of the Anemone which ascribes it to the tears of Venus as she wept for the slain Adonis. The name is a Greek word meaning 'wind' flower. The delicate leaves are easily disturbed by the wind and it is often found growing on windy heights. The poet says:

Coy Anemone ne'er uncloses
Her lips until blown on by the wind.

"There is a variety in Colorado three times as large as this one. It is lavender in color and comes into bloom so early in the spring that it takes the precaution to wear a warm silk or fur wrap as a protection against the cold. When the plant is sufficiently strong to do without it, the fur coat is dropped."

"The little darling!" cried Madge, "how I would like to find one all wrapped in its fur coat."

"A curious characteristic of the Anemone is that it is one of nature's barometers, as it indicates the approach of night or a storm by curling its petals, or sepals, rather, as the petals in this flower are aborted or absent."

"I remember," said John, "that you once told us the Clovers were all weather guides."

"Yes," said Howard, "and we took a lamp and went out to see the leaves of the White Clover go to sleep."

"You told us about the subterranean Clover, too," chimed in Madge, "and it works as if it had 'sense' or 'reason,' you said. When it blossoms it holds up its head for the bee to visit; and when it is fertilized it turns it down again; and develops fingers with which it

opens the soil and plants its own seed in the ground. I always think of that whenever I see the Clovers."

"Well done, Madge. You are developing an excellent memory."

"Here is a Dandelion. Tell us about it."

"That would take an hour at least, for it is one of the most remarkable of the early flowers with a history worth knowing."

"Then give us a little story about the Daisy. It is a late flower, but I like it, and the Aster and the Goldenrod too," said Edith.

"Yes, they are fall flowers, but the Daisy seems to belong to all the seasons. It is a pretty little wheel, with a gold hub and spokes of silver, the 'constellated flower' that never sets—

'The rose is but a summer queen,
The daisy never dies.'

"It not only lives within doors, but is perennial, and so hardy that it has been found blooming in winter. It belongs to the great composite family. There are several varieties. In the West the plant grows tall and coarse, but the flower is small and delicate; while in the East the Daisies grow near the ground, and are much larger, resembling their cultivated sister, the Marguerite, of the florist."

"I can make Daisy chains and tell your fortune with a Daisy," interrupted Bird.

"We will not stop for that now, but Alice may quote something from the poets about the Daisy if she can."

"Chaucer calls it the 'eye of day'; Burns' Daisy was a 'wee, crimson-tipped flower'; and Wordsworth called it a 'demure nun,' if I remember rightly."

"True, though the Daisy is so common you must not think it a plebeian flower, for it is both aesthetic and aris-

tocratic. Its inner florets are bell-shaped and exclusive, yet it makes a happy compromise by having the outer rays split down, to the great delight of the honey-loving bee. Wordsworth thought the Daisy the flower so genial in its influence and apt to imbue the mind with a love of simple pleasures. He rejoiced that it was man's favorite as well as nature's."

"Edith has written some lines about a flower just because we told her she *couldn't*," said John, in a roguish way. "Now, Aunt Jane, please coax her to read them to us, won't you?"

Aunt Jane looked at Edith, smiled, and said: "Won't you oblige us, dear?" Whereupon Edith finished reading the following just as the tea bell called to supper:

OUR NATIONAL FLOWER.

Sir Aster stood by Goldenrod,
And sought his love to tell;
At first by many a pleasing nod,
At length in words as well.

Said he to her, in accents bold,
"We're made to live together;
For you are clad in robes of gold,
And I in purple feather.

"We complement each other well;
It is the work of fate;
Always together we should dwell
In most harmonious state.

"My pedigree of long ago
Wise science says is true;
My amethystine rays, I know,
Were perfected for you."

"Do you not know," said Goldenrod,
"I am the Nation's flower?
There's not my peer above the sod;
Lone grandeur's now my dower,

"And you must find another mate.
'Tis sad, but we must part.
Henceforth affairs of gravest state
Must occupy my heart."

BELLE PAXSON DRURY.



THE BLACK-CROWNED NIGHT HERON.

(*Nycticorax nycticorax naevius.*)

The range of this interesting and peculiar Heron extends over the temperate and tropical portions of America from Ontario and Manitoba, southward to Chili and the Falkland Islands. It breeds northward to the limits of its range and winters from the Gulf States southward. It is commonly called the Qua-bird or the Squawk, because of its unmusical and decidedly unpleasant note, and its habits are not generally known by our northern students of bird-life. In certain localities in the Gulf States where the Night Herons nest among the flags of large swamps, they are more often seen and are better known. In other localities, especially in the northern portion of their range, they are very shy and retiring, nesting and roosting usually in the tallest trees in dense woods in swamps or near water courses. There they are far better known to the duck hunter than to the city-bred bird student.

The name *Nycticorax*, meaning night raven, was given to these birds because of their feeding by night and remaining quite inactive during the daylight hours. While walking homeward in the evening through the dark swamp woods of the Kankakee region in Indiana, the gloomy effect of night in the woods is heightened by the ghostly forms of these birds as they sail overhead uttering their guttural notes.

The Night Herons nest in large colonies and after sunset they may be regularly seen straggling to their feeding grounds. Though there is rarely more than a pair close together, there is a steady line of the birds coming toward and going from the nesting site of the colony, or heronry, as it is often called. On the Gulf Coast of Texas the nests of these Herons are built in the heavy growth of rushes among those of the little blue heron, the Louisiana heron, and the green heron. The nests of the Night Herons cannot be distinguished from the others, as they are all clumsy masses of old cane stalks and rushes

which are placed on the broken down tops of the standing cane stalks.

Mr. Wilson says regarding a heronry of Night Herons: "On entering the swamp, in the neighborhood of one of these breeding places, the noise of the old and the young would almost induce one to suppose that two or three hundred Indians were choking or throttling each other. The instant an intruder is discovered, the whole rise in the air in silence, and remove to the tops of the trees in another part of the woods, while parties of from eight to ten make occasional circuits over the spot, to see what is going on. When the young are able, they climb to the highest part of the trees, but, knowing their inability, do not attempt to fly. Though it is probable that these nocturnal birds do not see well during the day, yet their faculty of hearing must be exquisite, as it is almost impossible, with all the precautions one can use, to penetrate near their residence without being discovered."

The adult birds are colored as shown by our illustration, while the juvenile birds are quite unlike their parents and have a ground color of brownish which is mottled or spotted with white, and they also lack the long white plumes.

The Night Herons seem greatly attached to a locality where their ancestors have nested for years and it seems almost impossible to reduce their numbers even though hundreds are killed. They are very fond of the society of their fellows and many colonies contain several hundred pairs. Fish is by far the chief item of their menu. On the ground under a heronry, there is always more or less refuse in the form of the decomposing remains of fish and other animal food, such as frogs and mice. From this a stench is constantly arising which is a nuisance when they are located near a settlement. Probably for this reason rather than for any other cause, the Night Herons are hunted. Their plumage is certainly not used for hats and their flesh is not fit for food.

FRANK MORLEY WOODRUFF.

ODD SEA-CUCUMBERS.

THE HOLOTHUROIDEA.

It was my good fortune to study sea-life under a scientist famous in this branch of zoölogy, and among our studies was that of Holothurians or Sea-cucumbers. I had learned something of the odd creatures in the laboratory from prepared specimens, but had not seen a living animal until a day in late April when Professor K—— took a number of us for a biological picnic.

We went to an exceedingly rocky beach, where the stones—well carpeted with sea weeds and incrustated by barnacles—were in many places surrounded by tiny pools of water that had been left by the receding tide. And it was here that we found deep orange colored Sea-cucumbers. Their bodies were partly concealed in the wet sand, while their long necks and tentacle-wreathed heads were conspicuously exposed. When we touched one of them, however, it seemed literally to swallow itself. It turned its exposed members outside in, and head first down into the cavity of its body, and then it withdrew so far within its burrow that it was difficult to excavate it, so we called a boy with a spade to our assistance.

When the Holothurians were at length unearthed, we found that some did resemble the garden cucumber, while others had the form of a long-necked squash. The body of the animal was soft—it had neither skeleton nor shell—and it bent easily if not contracted by five powerful longitudinal muscles. When these were tense, however, the specimen became rigid, and the tough, leathery skin much wrinkled. Several Sea-cucumbers, which I placed in a pail of salt water began, after a time, to slowly protrude their engulfed portions, and at length each long, curved neck, with its circular head and waving tentacles, was fully exposed. These tenta-

cles, the organs of touch and smell, were branched; they were arranged in five groups, and their movements were controlled by an internal water system.

The feet of this species follow the five longitudinal muscles, and they are extended and withdrawn by means of this same water system.

I had read that a Cucumber will vomit forth a portion of its organs when it is angered or frightened, and that it will then live with no apparent inconvenience, while the discarded members are being renewed. None of my aquatic prisoners could be induced to perform thus; instead, each and every one would withdraw into itself when disturbed.

After we returned to the laboratory, the Professor showed us under the microscope, a bit of cuticle taken from a specimen, and we saw the minute, beautifully chiseled, calcareous plates or spicules distributed over its surface. These vary in pattern according to the species upon which they incrustate. Spicules are found in early geological rocks, and hence Holothurians must have existed long before man's time upon the earth.

The animals have no weapons of defense, but in some cases they escape detection by means of protective coloration. All have well developed digestive systems, and, like the earthworm, they eat debris and mud. Their reproduction is similar to that of other members of the Echinodermata. The genital aperture is near the tentacles, and here in the female the ova are exuded, and in the male the sperms. The eggs hatch into minute, free swimming auricularia, which are usually left to shift for themselves. The species *Cucumaria laevigata*, however, protects its young. It does this by gathering them into grooves on the sides of its body; the offspring of

Cucumaria crocea and of the Psolus ephippifer are equally well cared for on the mother's back. The Synapta whose habitat extends from Cape Cod to North Carolina, is viviparous. This is a slender, transparent Cucumber, some eighteen inches in length, and has twelve branching tentacles, but no feet. It can be found in the upper part of its burrow when the tide is out, and will go to pieces if kept for a few hours in confinement.

The Holothurians are widely distributed and common through shallow to very deep water where the abyssal forms have brilliant colors. One which I saw, a deep red variety, was as long as a man's arm. At another time we found a small white variety in such quantities on the Pacific coast, that we scooped them out by the peck. A fish inhabits the intestines of certain Cucum-

bers, and a parasite mollusk resides in others. Both animals, it would seem, prefer the safe seclusion of their hosts, to life in the open with its attendant dangers.

In China and some of the South Sea Islands the trepang of commerce is made by drying the *Holothuria edulis*. The food is greatly prized by the natives, but is too expensive for any but the wealthy. It occurred to some Americans that this delicacy could be manufactured from Holothurians of the American Pacific coast, and sold at a greatly reduced price, to Chinese living in this country. A company was formed and the industry started, but the foreigners declined to use the domestic article, for they said it lacked the right flavor, so the enterprise was abandoned at a considerable loss to its promoters.

ELLEN ROBERTSON MILLER.

TO A SONG-BIRD.

Sing, let thy heart-full joy, gushing, o'erflow it,
Heedless that none but June's warm heaven hears:
For thou could'st guess not to what eager ears
The kindly zephyr's gentle breath would blow it.
Nay, and though thou, uncrowned, may never know it,
Thy humble lay, that the dull listener cheers
Is the true lyric of the unending years:
A vagrant rhymer, man, and thou, the poet.

When long is hushed my song, and those who heard
Are deafened to the silence of the grave:—
Aye, even when the echoes last have stirred
That Wordsworth woke and Shelley set away,—
Blithe from the throat of many a happy bird
Shall swell the self-same notes of thy sweet stave.

—CHARLES ELMER JENNEY.

THE RING-BILLED GULL.

(*Larus delawarensis.*)

Oh, had I but thy wings when storms arise,
Gray spirit of the sea and of the shore!
When the wild waters round thee rave and roar,
Calm art thou 'neath the tumult of the skies.

—Lloyd Mifflin, "The Sea-Gull."

Mr. Burroughs says: "To strong, susceptible characters, the music of nature is not confined to sweet sounds." In another place he says that, "the wild crooning of the flocks of gulls, repeated, continued by the hour, swirling sharp and shrill, rising and falling like the wind in a storm, as they circle above the beach or dip to the dash of the waves,—are much more welcome in certain moods than any and all mere bird-melodies, in keeping as they are with the shaggy and untamed features of ocean and woods." Then, too, there is the poetry of motion in the graceful flight of the Gulls. Either flying, swimming, or resting upon the water a flock of these Gulls is a beautiful picture. The Ring-billed Gull and the American herring gull are the most common of the gulls of eastern North America. These two gulls resemble each other and are not easily distinguished unless they are seen in the same flock. The herring gull is the larger of the two, and the black ring upon the bill of the bird which we illustrate is a sufficiently marked characteristic to identify it. Both species often fly high in the air as if for no other purpose than the pleasure they find in the act. That such a supposition is an error is soon demonstrated when one of their number suddenly drops to the surface of the water to seize a morsel of food which its sharp eyes have discovered.

The Ring-billed Gulls range over North America at large, though they are more common in the interior. They breed from the northern tier of the United States, northward, and they winter from about the southern border of their breeding range southward to Cuba and Mexico. They nest in colonies con-

sisting of countless numbers, frequently so close together that they hardly seem to have wing-room. Regarding the nesting of these Gulls on an island about an acre in extent, in Devil's Lake, Dakota, an observer says: "I don't suppose you could lay down a two-foot rule anywhere without each end of it striking a nest. It was common to find the terns and Gulls breeding side by side. Most of the Gulls' nests were in the grass, while those of the terns were in the sand."

The nests of the Ring-billed Gulls vary with the localities in which they are built. They are usually made of a mass of grass or seaweeds when these materials are plentiful, but when these substances are not obtainable in large quantities the nests are very scantily supplied.

These Gulls may be considered among the scavengers which help to keep the shores of bodies of water free from putrifying organic matter. Their appetites seem almost insatiable and it is said that they will take any food, be it fresh or putrid, which is not too hard or too large for them to swallow. They are also very fond of fish which they are very expert at catching. They will follow schools of fish in rivers which they keenly watch, until a fish leaps from the water, in its efforts to catch an insect, when they quickly dart down and seize it. Inland these Gulls also feed upon insects which they catch either upon the wing or upon the ground. It is said that, in some localities, they destroy large numbers of grasshoppers. During the first few days of the life of the young, they are fed with partially digested food raised from the parents' crop. After that they are fed with the flesh of fish.



FROM THE NATIONAL GEOGRAPHIC

PIRELLA GÖTTSCHE LOWE

AMONG THE TREES.

THE BEECH.

It was a fine day in March and the whole earth seemed to be rejoicing that the icy bonds of winter were broken. Little by little the great God of Day had regained his strength, forcing the Ice King to yield step by step, until the snow had all disappeared from the hillside. The brook was swollen to twice its natural size and was hurrying to the river, which presented an unusual and ever-changing picture as the ice came hurrying by, sometimes bringing with it parts of fences, and even trees, which had been undermined and carried along by the resistless current.

Mabel stood on the bridge watching the wild, foaming rush of escaped waters in their headlong race to the sea; this was something of which she never tired in her childhood days, and now she felt the same fascination. Presently she heard the notes of bluebirds and robins, those feathered harbingers of spring, borne on the breeze to her from the hillside and she fancied they were calling her.

"It is indeed a long time since I have been there," she thought. "I'll go now and see how my friends the trees are. There was no chance to talk with them last winter; I've sat and gazed into the fire on long winter evenings, but no sprite came to talk to me. I'm sure if it had been grandmother's old-fashioned fireplace, filled with huge logs, I would have had a visitor."

How Mabel enjoyed the warm south breeze and the lingering caress of the sun on her face! All nature seemed to be alive today as she tripped merrily along.

Here's a lovely Beech with its smooth bark of soft greenish-gray, and—yes, there are letters cut on the trunk. I wonder who did that, and when! Beech Tree, talk to me, will you please? I'll sit here on this log and be ever so

attentive if you will," said Mabel, as she looked up at the tree. "Do you know, Beech Tree, that you are very pretty as you stand there devoid of your summer robes; your sinewy strength shows itself in every outline; you have a noble head, your branches are delicate and show an exquisite tracery against the clear, deep blue sky. There is a silvery sheen about your smaller branches and twigs. Have you snow or frost clinging to you yet? Shake it off," she said, laughing and shaking herself.

"No, fair maid; I have neither frost nor snow on me; my young branches always look like that in spring. If you notice, I have also some of last year's leaves on my older branches; now they tell of a time when we were evergreen. We still have some evergreen members, but they are all in the southern hemisphere, where they help to make the forests of Terra-del-Fuego, Patagonia, New Zealand and Australia beautiful all the year, by tossing their dark green branches in the summer's heat and winter's cold.

"We are an ancient family," came proudly from the tree; "remains of us are found in the cretaceous rocks of Dakota and the miocene of Alaska and California. Only three members of our family, however—the Beech, Chestnut and Chinquapin, flourish in this country."

"Oh, is the Chestnut a member of your family? How I do love the nuts of that tree! It is such fun to watch them burst open when roasting in the glowing coals! It's fun, too, to gather them after a good, sharp frost, when the prickly burs are well opened. Those great burs prick one's flesh like so many needles."

"Yes, the Chestnut is a member of our family, and there are some very famous Chestnut trees mentioned in his-

tory and tradition. There is one in England which is claimed to be more than eleven hundred years old; moreover, it is said to be the first tree planted in Great Britain. It stands in Lord Ducie's Park at Tortworth, and the following description appears in an old magazine in the early years of the last century: 'At Tortworth, in Gloucestershire, is a chestnut tree fifty-two feet around; it is proved to have stood there since 1150, and was then so remarkable that it was called The Great Chestnut of Tortworth. It fixes the boundary of a manor.' It is also stated that King John held a Parliament under its great spreading branches.

"Now that tree is a mere babe in size compared with the Chestnut of One Hundred Horses, which grows on Mount Etna. Strange, is it not, to think of chestnut trees growing on the side of a volcano! This particular one is believed to be formed of five shoots grown together; it measured two hundred feet in circumference and it gets its name from a story which states that once while travelling through the island, the Queen of Aragon was overtaken by a storm, when she and all her guard found shelter beneath its branches."

"I should think she would be afraid of being struck by lightning."

"Struck by lightning!" came in tones of surprise from the Beech. "Do you know it is claimed that lightning never strikes a Beech?"

"It is consoling to know that, but please tell me more about this giant member of your family."

"There is little more to tell—it is old and decayed, its heart is gone and its sides are broken; still it bears leaves and fruit. A little hut has been built in its empty heart for the use of the people who gather its nuts, which they grind into flour and make into all kinds of dainty dishes."

"I would rather enjoy those dishes, I think; certain it is there would be a spice of novelty about them which ought to make them appetizing. I wonder, Beech Tree, why so many people cut their names on your trunk. You are certainly good to retain them so long."

"We are the only tree which pos-

sesses a bark smooth enough to be easily cut, and that very peculiarity is the reason why we are called Beech or 'book tree.' We are often more faithful than those who carve the names. Do you remember the story of Paris, the handsome shepherd, who was chosen to present the prize apple to the goddess of beauty? He carved on a Beech tree the name of his girl friend, Ænone; as the tree grew the letters enlarged and the tree retained them, but the handsome Paris forgot his early love."

The birds were piping loudly, flitting hither and thither with bits of dead grass or wool, the frogs added their tuneful choruses to the delightful noises borne on the breeze; bright-eyed squirrels peeped at Mabel as they went scampering along; the sky was a clear, deep, beautiful blue, where great, fleecy clouds, like fairy ships, floated along, changing from deep gray to pearly white and glistening like molten silver in the glorious sunlight. The south wind, so full of hope and promise, blew gently; Mabel heard it as it passed, saw it play with the dead leaves; watched the trees toss their naked arms in greeting, and felt the full force of those exquisite words of I. Noble:

Nature speaks in language olden,
Speaks in tones that all may hear;
Tells of ages that were golden,
Tells of storm-nights dark and drear.

She has secrets in her keeping,
Secrets hid from you and me,
They have been for ages sleeping,
Stored in earth and air and sea.

In the streamlets you will hear them,
As they ripple o'er the stone,
In the forests you are near them,
Near them in the desert, lone.

Hear them in the tempest raging;
Hear them in the summer breeze;
See them in the seasons ageing;
See them in the spreading trees.

Every flower, it has its story;
Every stone its tale to tell;
Legends tint the sunset's glory,
History moulds the mollusk's shell.

A few of last year's dead leaves fell at Mabel's feet; she took one, and, fingering it gently, said:

"You like myself have a history. I

wonder what your aim in life was, and if you accomplished it?"

The branches above swayed in the breeze, and these words floated to Mabel's ears:

"In many places our leaves are gathered before they fall, and are made into mattresses. They have a pleasant smell and do not grow hard and musty like straw."

"I'd like such a mattress and a pillow of fir-needles. How delightful! I'd merely have to close my eyes, and the fragrant aroma and the delightful woody smell would waft me off to pleasant dreams. Tell me some legends connected with your family, will you, Beech Tree?"

"Well, here is a curious one. About a century ago there was found a very strange and wonderful Beech tree, which put on a dress of deep purple instead of the usual one. Cuttings were taken from it and planted; these followed their parent's strange mode of dress, and from it have sprung most of the Purple or Copper Beeches now cultivated. In a large wood near Zurich three more trees were found, and the popular legend in connection with them was that they marked the spot where five brothers had murdered one another. I suppose that you have read of the Maid of Orleans?"

"Joan of Arc? Oh, yes; and wept many tears over the terrible death of that beautiful young girl."

"One member of our family was closely connected with that wonderful child." The Tree grew silent, as if thinking of that time so long past; the warm sun rested lovingly on its glistening branches, the birds flew past and Mabel waited patiently. At last as though rousing from a reverie, these words came in deep and solemn tones: "The child Joan was deeply religious, and possessed of almost supernatural beauty. She was the daughter of a poor peasant and looked after the sheep; her home was in the village of Domremy, in France. The children of this village used to play beneath the wide-spreading branches of a Beech tree, which they would decorate with wreaths of flowers. Their childish minds peo-

pled this beloved tree with fairies, and delightful were the hours spent in dancing and singing around it; like most children they were very credulous and believed firmly in its mystical powers. Joan loved this tree, and she, like the others, believed that when one of them came to die, no matter in what strange land nor under what circumstances, their last dark moments would be softened and cheered by a vision of their beloved tree. What an unselfish life this girl of sixteen lived! When two years later victory was theirs and the Dauphin was made king, how unselfish was the reward which she asked! Simply that her native village, reduced to great straits, should be released from its burden of taxes! Poor little girl, what a noble life! what a terrible death!" The voice had sunk to a whisper, and the last words seemed but an echo. Mabel sat looking at the granite and marble shafts of the City of the Dead which could be seen through an opening in the trees. The breeze played with the dead leaves, and a sound soft and low fell upon her ears.

"Poets, too, have sung of us. Gray in his immortal elegy said:

'There at the foot of yonder nodding beech,
That wreaths its old fantastic roots so high,
His listless length at noontide he would stretch,
And pore upon the brook that babbled by.'

"Pliny, that ancient historian, states that not far from the city of Rome there was a hill clad and beautified by a grove of Beech trees, which were as even and round in the head as if they had been trimmed with gigantic shears. This grove was consecrated to the goddess Diana, and there was one tree of such surpassing beauty that Crispus, a celebrated orator, became very fond of it; he delighted to repose beneath its shade and would often embrace it and pour wine on its roots.

"Our wood is useful; bowls made of it never leak. The North American Indian knew this, and fashioned excellent bowls and ladles from us."

"You stand here among the maples, Beech Tree; did you know that there was a Beech wood just around the bend in the creek? Its shade is so refresh-

ing, cool and dark in summer, and in the fall it is delightful to search for nuts and hear the leaves rustling beneath one's feet. Tell me, Tree, if you can, why the nuts are sometimes called 'beech-mast'?"

"That is a name commonly used in some parts of England. Yes, I know there is a wood there; we often form entire woods, crowding the other trees out. We are a tree that succors, and we are very fond of our own brothers and sisters; then, too, our shade is so dense that other trees do not flourish near us; again, we are a hardy tree, and grow anywhere, from the lowlands bordering the waterways and covered with water every spring, to the steep mountain slopes. Squirrels love us because of the secluded spots we furnish them for nests, as well as for the abundant supply of food; but birds rarely, if ever, build in our branches, no doubt because of our thick shade—nor do insects bother us. Look at those leaves,"—he shook himself, and some of last year's leaves, sere and brown, fell near Mabel. "You will notice what short stems they have; that is why they bend and sway with the branches: they have no independent motion. Now this fact only adds to our beauty when clothed in our summer robes of dark green, for our foliage lies in great shelving masses."

"I think," said Mabel, who had been intently examining the leaf, "that your foliage in the fall cannot be tinged with any shade of purple or scarlet."

"Neither is it; we are a golden-yellow mass, touched with russet, just as though we had imprisoned in our foliage all the beautiful life-giving rays of the summer sun, and when the dark days and chill winds of autumn come, allow them to escape in a golden glory, and as they flutter one by one to the ground, leaving us with naked, upheld arms, the symmetrical beauty of our branches and twigs is more apparent.

"Did you know," continued the Tree, "that we furnished something more than nuts, which is agreeable to the palate? In fact, in some countries it is considered a dainty. Have you ever heard of 'truffles'?"

"No," said Mabel, as she sat erect and looked at the shapely young tree with keen interest. "What are they?"

"They are a fungus growth which forms about the roots of trees and especially about beech trees. They grow a few inches beneath the ground, never thrusting their dainty heads from out the mould which surrounds them on every side, never seeing the beautiful sunlight, the delicate wildflowers and green grass so near them. In England and Italy they are highly prized for their delicacy of flavor, which is somewhat akin to the mushroom."

"If they grow beneath the soil like that, how are they to be obtained?"

"That is a very curious and interesting bit of information. In England dogs and pigs are trained to hunt them, which is an easy matter, because of their strong smell, but some person must be near, or they will devour the dainty tit-bit as soon as it is unearthed. The Italians have trained their dogs more successfully, for they can be sent out alone and will bring the delicate morsel to the one who sent them."

The Tree ceased speaking, and Mabel sat watching the swollen waters of the creek, hurrying past to join the river. Spring was here once more, glad, beautiful spring, with its balmy airs, its bursting buds and springing grass, its feathered songsters and myriads of insect life. She felt glad that the long, cold winter was past, that the gladsome outdoor life had come again, and she looked forward to a summer of keen enjoyment. A gentle breeze played with the branches, and brought to her ears these words:

"St. Francis, that great and good man who believed that trees had souls, loved all the birds and beasts and trees. He called the larks his sisters, and desired the beasts to be well fed; the wolf, according to legendary lore, put his paw in his hand and promised to eat no more sheep; the birds were silent when he preached; a falcon awoke him at his hour of prayer. He overcame all by his love, his gentleness, and so, sweet maid, can you."

EVELYN SINGER.



THE LOGGERHEAD SHRIKE.

(*Lanius ludovicianus*.)

In the Loggerhead Shrike nature has produced a curious and puzzling combination of avian characteristics. The bill and head are of the falcon type, the mouth is ornamented with bristles like the flycatchers, the feet are those of the song birds and the food habits are those of the hawk. What wonder is it that ornithologists have been puzzled to know just where to place these strange creatures in the nomenclature of the birds.

The name of Butcher Bird is given to the Shrikes on account of their habit of impaling their prey upon thorns, a locality near a nest looking, as expressed by one writer, "like a butcher's rack filled with meat." They are probably compelled to resort to this method on account of the weakness of their feet, which do not enable them to hold their prey as do the powerful feet of birds of prey. The Loggerhead Shrike may be justly called a bird of prey, being, in fact, fully as predaceous as any of the hawks or owls. Its food is varied, ranging from insects to mammals, its larder including mice, sparrows, vireos, gnatcatchers, buntings, lizards, snakes, grasshoppers, beetles, wasps, spiders and caterpillars. All of these animals, including the insects, have been found impaled on thorns by this bird. Curiously enough, the majority of the impaled animals are never eaten by the Shrikes and they may remain thus impaled for many weeks or until they fall or rot off. It is evident from this observation that the Shrike kills more animals than it eats, and this leads to a consideration of the value of Butcher Birds. Investigations of the stomachs of these birds have shown that its beneficial qualities outweigh its injurious qualities four to one, and prove conclusively that it should be protected rather than persecuted.

The Loggerhead Shrike is very bold,

especially when pursuing its prey. Even the presence of man does not disturb it. Its persistency in chasing its prey is noteworthy; it will follow a small bird, as a sparrow, in and out of thick bushes, under shrubbery and over trees until the poor victim is fairly exhausted and captured, to be, perchance, impaled upon a thorn while the Shrike eats it at its leisure.

The method of impaling its prey is thus described by Mr. Benjamin Mortimer, in Bulletin Number Nine of the Division of Biological Survey of the United States Department of Agriculture: "In March, 1889, two instances of the Loggerhead Shrike's killing smaller birds came under my notice. In both cases the victim was a grasshopper sparrow, although birds of this species were few and scattered at that time, while the savanna sparrow was very abundant. The sparrows were impaled by the neck upon orange thorns and there were no wounds on any other part of the body. This bird (the Shrike) impales its prey not only when it wishes to preserve it, but also when it intends to devour it immediately, and the long slivers on fresh pine stumps are commonly selected for the purpose whenever they can be found. The bird flies to a stump with its victim, usually a beetle, and forces it upon a sliver, just behind the thorax, thus leaving a convenient place to stand and a convenient fork to hold the morsel while he breaks open the hard shell and eats the softer parts. The same stump is resorted to many times by the same bird, so that it is common to find quantities of the legs and wing cases of beetles about these curious dining tables."

The flight of the Loggerhead Shrike is very graceful and rapid, as described by one writer: "This bird is really beautiful, especially in its flight, which is low and straight forward, with rapid

strokes, showing the clear white and black of the wings and tail to fine advantage. The rapid wing motion seems almost to describe contiguous semi-circles of white and black at the sides of the moving bird and contrast finely with its clear, light colors." It may frequently be seen perched on some lofty elevation, sitting, as motionless as a statue, watching for its prey.

The range of the Loggerhead Shrike embraces the eastern part of the United States, westward to the Plains and from the Gulf of Mexico north to the Atlantic coast of New Jersey, and in the interior to the Great Lakes, Ontario, and east along the southern side of the St. Lawrence River to Maine. It winters from Missouri, southern Indiana and southern Illinois southward. It is a summer resident in central and northern Illinois and Indiana, and in the other states of this latitude within its range. In late April egg laying begins and by the fifteenth of May the nest may be filled with fledglings. The nest is usually placed in a low tree or in a bush, preferably a thorn bush, and is made of sticks, coarse grass, weeds, roots, pieces of bark, feathers, thread, wool, and in fact almost any objects which the bird fancies would help in its construction. The nest is not attractive, being large and ragged, the material composing it being loosely and irregularly put together. Four to seven dull white eggs spotted with light brown and lavender are laid, which measure about an inch by three-quarters of an inch. This Shrike is very prolific and is not at all discouraged if the first or even the sec-

ond nest is destroyed, for instances are known of its having laid three sets of eggs and built three nests before the young were hatched.

It has been commonly reported that young Shrikes are fed upon song birds, but the investigations of the United States Department of Agriculture do not sustain this report. Of six half-grown young examined three-fourths of their stomach contents was insect food, mostly grasshopper. Parts of a meadow mouse had also been fed to two of the young birds. So far as the stomach records show the Loggerhead Shrike does not feed its young on birds, but on insects, of which beetles, grasshoppers and bristly caterpillars form the chief supply.

The Loggerhead Shrike has no song, the male having only a loud call note during the breeding season. The female utters a squeaky alarm note when disturbed.

The Loggerhead Shrike is sometimes called the Butcher Bird, but that title more correctly belongs to its larger relative, the northern shrike. This latter species inhabits northern North America, breeding from Hudson Bay to the Arctic coast. In winter its range extends to Virginia, Kansas, Kentucky, Colorado, Arizona and California. The habits of the two species are similar. The generic name of *Lanius*, meaning butcher, was given to these birds on account of their habit of impaling their victims on thorns. The butcher bird has been known to commit cannibalism by eating its own species.

COLLINS THURBER.

THE CALIFORNIA PEPPER TREE.

To one whose early days have been spent in New England there is always, in the home-scene that memory brings before him, some dream-like vision of trees; the graceful sweep of elm branch-

es, or the glory of October maples, or the beauty of the apple-blossoms in May. During his sojourn in California he notices the contrasts and looks for the resemblances between the trees of

the West and of the East. Instead of apple-orchards here are orange-groves; instead of waving elms, the tall, close-reefed eucalyptus trees; for maples, round-topped umbrella trees; and in place of willows, California Peppers.

Orange, eucalyptus and umbrella trees may suffer from comparison with one's earlier friends of field and forest, but the Pepper Tree wins and holds one's admiration. Its graceful, pendulous branches, its drooping racemes of minute, white flowers, its bright red berries, its resinous fragrance, afford never-failing pleasure, and the mockingbirds give a voice to Nature's happiness, as they pour forth their melodies amid its branches.

The scientific name of the Pepper Tree is *Schinus molle*. It is also known as the Peruvian mastic tree. It is a native of Mexico and of South America, but it takes kindly to life in southern California. It grows as far north as the region about San Francisco Bay but it thrives best in the warm, inland valleys of the southern part of the state.

With the exception of the "blue gum," or *Eucalyptus globulus*, it is more extensively planted than any other shade tree. It grows rapidly, sows itself and endures drought well. Hence it was an especial blessing to the country in the early days when shade trees were few and systems of irrigation were much less effective than at present.

Its branches low, like the willow, and, when left to itself, sends out shoots from underground stems, and feathery branches from its trunk. But, like the willow, it will endure a great deal of pruning. It is often cut off several feet above ground; its branchlets and twigs are removed and nothing is left above the soil except the trunk and the stumps of branches; yet it soon takes a new lease of life and renews its youth, though it never quite regains the careless, unrestrained mood that it had when Nature was its only keeper. It becomes trim and proper and sedate, a well-bred tree for avenue and lawn, but still it retains much of its natural grace and all of its beauty of coloring.

It varies in height from twenty to fifty feet. Its evergreen leaves are nine or ten inches in length and are abruptly pinnate, with many pairs of narrow leaflets. The juice is milky and has an odor somewhat like turpentine. The leaflets contain numerous resin glands, and during a rain or heavy fog the bursting of these sacs fills the air with a balsamic fragrance.

The trees are dioecious. They begin to blossom in January or February, but in California plants have all seasons for their own and never need to be in a hurry about putting aside their flowers and maturing their fruit; and so, on the same tree, at the same time, there may be found the creamy blossoms, the half-ripened fruit in shades of green and of translucent gold, and the clusters of bright red berries.

The tree owes its name to the berries, which are of the size of pepper-corns. Underneath their bright covering there is a pulp, sweet and oily, and at its center is a hard seed. The first taste of the berry is not unpleasant, but it leaves in the mouth a final, pervading impression, lasting and yet indescribable; something like a combination of turpentine, pepper and honey. Mocking birds like the berries and chickens find them palatable, but the inquisitive tourist does not care to try them more than once. Sometimes bees forage among the flowers, but the honey made from Pepper Tree sweets leaves a disagreeable, stinging sensation in the throat.

Every plant has its enemies. One of the chief foes of the Pepper Tree is the black scale. This proves a menace to orange trees also, and hence thousands of old Pepper Trees have been cut down because of their proximity to orange orchards.

There are many beautiful avenues of Pepper Trees in Los Angeles and in other cities and towns of southern California. They offer welcome protection from the intense sunshine, and, with their choirs of happy songsters they afford delight to every sense except to that of taste.

ALICE M. DOWD.

THE BALTIMORE ORIOLE.

(*Icterus galbula.*)

There is a bird that comes and sings
In the Professor's garden-trees;
Upon the English oak he swings,
And tilts and tosses in the breeze.

I know his name, I know his note,
That so with rapture takes my soul;
Like flame the gold beneath his throat,
His glossy cape is black as coal.

—William Dean Howells, "The Song the Oriole Sings."

Of all the beautiful birds which frequent the more northern United States during the summer season none is more beautiful than the gaily plumaged Baltimore Oriole. It is not alone his brilliant plumage that attracts our attention, but also his entrancing song, his active ways, his happy nature and his love for the haunts of men. He seems more a bird of the tropics which has wandered from home. It is not so, however, for he is not "a stranger in a strange land," but finds suitable places in the shade and fruit trees of a northern clime where his mate may swing her pensile nest and rear their young.

When the fruit trees are radiant with blossoms the Baltimore comes to us from the South. He arrives about a week before his mate, she and her sisters traveling more leisurely and in flocks. While waiting for his mate and from the very morning of his arrival in the region of his summer home his sweet and ringing song comes to us from the trees of our dooryards and orchards. The fresh, green foliage forms a most perfect background for the flashing orange and brilliant black of the Baltimore's plumage, as he flies from branch to branch or restlessly and actively searches for insects among the young leaves and twigs. He sings as he works and, until the coming of the females he has some petty quarrels with his fellows.

From Ontario and Manitoba south-

ward through the United States and westward nearly to the Rocky Mountains the Baltimore Orioles are well known birds. The brilliant plumage of the male makes him easy of identification, but his mate is less well known. Her plumage is very plain and would hardly attract attention, yet she is a beautiful bird. The general color of her feathers is an orange olive and her head and back are indistinctly spotted and clouded with black. She always seems happy and contented and is not a mean songster. She, too, is the builder of their home, and she is a most wonderful architect. Mr. Lowell has spoken of the brilliant male as the "Winged flame of Spring," and says that his duty "is but to love, and fly, and sing." Mr. Chapman says: "There is reason to believe that he is not unaware of his own charms; indeed, we may almost suspect him of intentionally displaying them." The flashing of his plumage as he flies through the foliage has given him the names Firebird, Golden Oriole and Golden Robin.

The Orioles are quite late in arriving at their more northern summer homes, and they depart very early on their journey to their winter home in Central America. Before the last of August, all of these brilliant songsters have disappeared from the northern portion of their range. How well the lines of Mr. Lowell portray the vivacious nature of these useful birds, which are contented



BALTIMORE ORIOLE.
(*Icterus galbula*).
 $\frac{1}{2}$ Life-size.

only where there is a plenty of sunshine!

O happy life, to soar and sway
Above the life by mortals led,
Singing the merry months away,
Master, not slave of daily bread,
And, when the Autumn comes, to flee
Wherever sunshine beckons thee.

While the Baltimore Orioles beautify our home environment and entrance us with their song—music which seems to spring from “a gay and joyous heart”—much more can be said in their favor. While we know that these birds have excited the enmity of fruit-growers because of their fondness for grapes and other small fruits, often injuring, according to reports, more than they need for food, they should not be judged too harshly, for they perform a work of special importance to us. Mr. F. H. King, who has made a careful study of the economic relations of birds, says that the Orioles feed extensively upon leaf-rollers in the larval state. “These are a large and destructive group of moths. They infest nearly all our fruit trees, our strawberries and cranberries, as well as many of the trees of the forest. Those which do not infest the fruit protect themselves either by folding one side of a leaf over them, or by tying a number of leaves securely together, thus forming a strong house in which they feel secure, I fear, from the majority of birds. But the Oriole has learned their habits, and, with its strong bill, is able to demolish their houses and devour the inmates.” Mr. King also says: “I have seen a whole family of these birds working together in a grove devouring leaf-rollers, and making such a noise as to lead me to suspect at first that some large animal was stripping the leaves from the trees.” It is also said that the Orioles will break open the tender green pods of peas in order to feed upon the succulent seeds within, but it has been shown that they will feed upon the pea-weevil, and that they will open the pod in order to feed upon the grub in the young peas. It is also known that they will eat hairy caterpillars, so disliked by many other insect-eating birds, as well as the smooth ones, and they also enjoy a meal of tent-caterpillars, whose web-

like abodes are so conspicuous in our fruit trees. These caterpillars are not only defoliators, but early in the spring, when they are hatched, they feed upon the young opening buds. We can well spare to these birds the small amount of fruit that they may wish, in return for the insect pests which they destroy.

The wonderful hanging nests of the Baltimore Oriole are built in trees usually near the habitations of man. Lady Oriole, for it is she that builds, shows great architectural skill both in the selection of materials and in the construction of the nest. She learns, too, by experience, and her nests of later years show a much higher grade of workmanship than do those of her younger days. Either because of greater safety from the foes of birds, or because the Orioles love to be rocked by the gentle breezes, they usually hang their nests high above the ground and at the remote end of a drooping branch. It is this habit that has given them the name Hangbird. While they will build in nearly all kinds of trees and often in the willows bordering streams, they seem to prefer the elm, especially the large elm trees of roadsides and door-yards. The nest must be seen to fully appreciate the skill and genius of its builder. In its construction, various materials are used. Vegetable fibers, fine grasses, wool, strings, downy seeds, hairs, feathers and strips of cloth are the more common substances which are woven together to form the walls of these pouch or bag-like nests, which are securely fastened to the twigs. Before the people of the Old World settled in the wilds of this continent, the Orioles must have depended upon vegetable fibers, wool, hairs and feathers for their constructive materials. Then, as well as now, the words of Lowell’s verse would fittingly describe the habits of these birds:

Then from the honeysuckle gray
The Oriole with experienced quest,
Twitches the fibrous bark away,
The cordage of his hammock nest,
Cheering his labor with a note
Rich as the orange of his throat.

The poet Lowell seems to have used the pronoun *his* in a general sense, for

it is the mother bird who builds the nest, while her mate sings to her and, perhaps, "offers gratuitous and unheeded advice." Mr. Lowell continues:

High o'er the loud and dusty road
The soft gray cup in safety swings,
To brim ere August with its load
Of downy breasts and throbbing wings,
O'er which the friendly elm tree heaves
An emerald roof with sculptured leaves.

Frequently the Orioles show marked taste in their choice of building materials and weave a beautiful pouch of soft fibers and of a uniform color. These pensile cradles are softly lined and so deep that the eggs and young are often several inches below the opening. A pair of Orioles are very devoted to each other, and many observers believe that they remain mated through life. They seem to be greatly attached to a locality in which they have once built their home, and frequently they return for several seasons, either repairing and occupying the old nest or constructing another in the same vicinity.

When first the male Orioles arrive from their winter sojourn in warmer climes, they announce their presence by song. At this time their notes do not

have the mellow and passionate tone that they assume after the arrival of the females, but rather the notes are clear, loud and shrill. During the mating season, however, their notes are rich and full, and the mellow tones of their song are among the most captivating sounds in Nature. Its plaintive melody appeals to the sympathetic hearer. Mr. Silloway says: "There is a wonderful variation in the notes of the same individual. To the observant ornithologist with nice discrimination of hearing, the notes of any individual frequently heard are sufficient to distinguish it from others wandering in the same neighborhood, even as the voice is a clue to the identity of a human being." The lively Baltimore has a variety of songs and seems to have, to a certain extent at least, the power of imitation. Mr. Nuttall has said: "So various, in fact, are the individual phrases chanted by this restless bird that it is scarcely possible to fix on any characteristic notes by which he may be recognized; his singular, loud, and almost plaintive tone, and a fondness for harping long on the same string, are perhaps more peculiar than any particular syllables which he may be heard to utter."

A LITTLE GIRL'S DOVE STORY.

I was standing in our front yard where there are many trees.

I heard a clatter above my head, and looking up, I saw a dear little Dove. It looked as though it had been hurt, for it did not fly, but fell. It fell on my shoulder, and thus began the life of me and my pet together. I took it into the house, for it would not stay in the outer air.

This little pet had many likes and dislikes; for instance, although it was summer, he wanted to stay behind the kitchen stove. Every day at five o'clock it went

down into the cellar and did not come up until dinner time.

We also had a black cat which we called Smutty. Smutty would try to get the Dove's meat. The Dove would fly at him "with tooth and nail" and Smutty would retreat. The Dove always ate its meals when we did, and when it was in distress it always came to me. And so the winter passed. When summer came it began to go out into the fresh air.

One day when it was out, my little baby sister began to fret the Dove, and away it flew, far, far away, and never was seen again.

EMILY T. NELSON.

JUNE.

June, and the skies brimming over
With seas of the tenderest blue ;
June, and the bloom of the clover
Heavy with honey and dew ;
June, and the reeds and the rushes,
Slender and lithesome and long ;
June, and the larks and the thrushes
Singing their happiest song.

June, and the rose in her beauty
Making an eden again ;
June, and desire is duty
Crowning the wishes of men ;
June, in her leaves and her laces
Gladding the earth with her smile ;
June, and the gods and the graces
Dwelling with mortals awhile.

—NIXON WATERMAN.

A TRUE STORY, AS TOLD BY A LITTLE WOOD THRUSH.

Do you know what I look like? My head and back are cinnamon brown changing to olive at the tail, and my breast is white, with dark spots. The "House People" call our family very pretty birds, and I do not wonder, when I look at my mother, but of course my tail is not like hers, long and handsome, or my head such a nice shape. Perhaps when I grow up I will look like mother.

We lived in a lovely grove of tall oak trees, behind a yellow house where the family were all interested in us. A rustic summer house stood in the grove, and near it a swing where the "House People" often came. Our parents had built our nest of dry leaves, grass, and small roots, and there my little brother and I lived happily. Other bird families were living in the trees around, robins, yellow warblers, catbirds, orioles and woodpeckers, and even the sparrows seemed very friendly to us all.

Mother often said, when she came home from the little pool of water, which the "House People" kept for the birds to drink and bathe in, that the sparrows waited politely for their turn though she had always heard they were quarrelsome. One day mother, when bringing her bill full of insects for our dinner, told us she had seen a little girl with a great baby doll, standing with her aunt by the swing. They both stood very still and watched mother hop around the ground catching the bugs, and were so kind, she was not afraid to go quite near them.

When my brother and I grew large, father said it was time for us to leave the nest and learn to care for ourselves; so one beautiful morning we started, mother staying near us. My brother flew off, but I was not so strong, and I found myself on the ground near a bed of ferns in the grove, only able to hop. While wondering what to do, a

lady carrying a watering pot came towards me. She did not at first see me but cried "Oh!" when I hopped away, as if I had frightened her. I stopped and she sat down in the swing to watch me. Mother came soon, with dinner, while my brother flew to a low branch near, telling me not to be afraid. The lady said "Poor little bird, I fear the cat will get you. If you will let me pick you up, I will put you by your brother," and then she walked softly towards me, but I hopped away. When she left me, I found a pile of leaves near some boxes in a corner, but soon she returned with her mother, carrying a little berry basket. When they had hung it in a tree, they hunted everywhere for me, but I kept so still they could not find my hiding place, and the lady said, "We will have to wait for the mother bird to come with food for the little thrush, before we can find it." Mother never left me long alone, so they soon discovered me, and the elder lady, throwing her handkerchief over my back, picked me up and the first thing I knew, I was in the little basket which was lined with green leaves. But I was a silly little bird, and instead of waiting to see what it all meant, I jumped out on the ground, crying "peep, peep" so loud mother and father both came flying to me. Then the lady picked me up again, saying, "You foolish little bird, don't you know I only wished to put you where you will be safe," and she placed me in the basket leaving her handkerchief over me. I sat still a few minutes, then hearing mother's voice, out I hopped again. Three times the ladies put me back, and each time I foolishly jumped out, till at last they left me. I have forgotten to tell you, there was such a nice dog with them, named Brownie, who lay near watching us all, but keeping quiet because her mistress told her to lie still. Later I loved that dog, because

she chased away a black cat which came on the fence near me. All the afternoon I stayed in the pile of leaves, but towards night I again heard the lady coming quietly towards my hiding place. She seemed glad to see me, saying, "So you are there little bird? but you cannot be left all night, or the cat will get you," and she returned to the house. I wondered what would happen next and soon both ladies came again, bringing a deep basket (out of which I could not hop) and hung it on a tree. Of course I had hidden again, so they could not find me, and I heard them say, they must wait for me to peep. I was hungry and cold and soon called mother; and the next thing I knew I was in the lady's hand and was laid in the basket, which was lined with cotton and leaves. Again I was silly and tried to hop out, but could not, and they drew the basket higher and higher in the tree until I was safe from the cat. The younger lady said she would stay awhile and see if my mother found me. The night was cool and the soft cotton was comfortable, for I was tired, so I lay quietly until I heard mother's voice. I could see her through the cracks of the basket and called to her, but she could not at first find me. She hopped all over the ground, calling and listening and looking for me in every corner. Finally she followed my voice up the tree and came hopping out on the branch over my head, then onto the edge of the basket, so lightly it hardly moved with her weight, and then down she hopped beside me. How glad I was to cuddle under her wing! So this is the end of my story. I am living in the basket. Mother is taking care of me until I shall be strong enough to go out in the world alone, and every now and then the "House People" come softly to see if I am safe. Some day I will sing them my sweetest song of thanks.

M. R. B. CHASE.



SNOWY OWL.
(*Nyctea nyctea*).
 $\frac{1}{2}$ Life-size.

THE SNOWY OWL.

(*Nyctea nyctea*.)

This large and beautiful Owl has been called the "Spirit of boreal regions." Its range is circumpolar, and its summer home is in the Arctic regions of the Northern hemisphere, where its dense, white robe of feathers makes it almost invisible in a region of nearly perpetual snow. In the winter, when food becomes more scarce, these Owls migrate southward, some passing into the United States, a few even reaching South Carolina, Texas, California and Bermuda. While it is not probable that any large number migrate very far south of the arctic regions, there are instances when a large number have appeared along the Atlantic seaboard. Mr. Ruthven Dean reports that in the winter of 1876 and 1877 he knew of five hundred being seen, the larger number of which were shot, in New England alone. During the same season large numbers were also seen in other portions of the Eastern United States and in Ontario.

Regarding the home and food of these Owls, Major Bendire says: "The home of the Snowy Owl is on the immense moss and lichen covered tundras of the boreal regions, where it leads an easy existence and finds an abundant supply of food during the short Arctic summers. It hunts its prey at all hours and subsists principally on the lemming, and it is said to be always abundant wherever these mammals are found in any numbers. Small rodents are also caught, as well as ptarmigan, ducks and other waterfowl, and even the Arctic hare, an animal fully as heavy again as these Owls, is said to be successfully attacked and killed by them." It is evident that abundance of this species in any given locality depends entirely on the presence or absence of one of its favorite foods. They are exceedingly fond of arvicoline or field mice. Dr.

A. K. Fisher in his "Hawks and Owls of the United States" relates the following observations of Dr. Leonhard Stejneger regarding the Snowy Owl on Bering Island: "Prior to 1870 there were no mice, and very few Owls ever visited the island. About this date the house mouse was introduced from ships and the red-backed mouse in some unknown way. Twelve years afterwards he found the island swarming with mice and an abundance of resident Owls, affording a striking demonstration of the perfect workings of nature, for with the undue increase of any one species there occurs a corresponding increase of its natural enemies."

It is said that the Snowy Owl only seizes its prey when the latter is in motion. It is very fond of fish and is quite an expert at catching them. This it accomplishes by watching for fish that may be lurking in the crevices of a rock-bound coast and quickly seizing them with its talons. It is a diurnal bird of prey, but hunts much more actively in the early morning hours and at the approach of dusk. It is a bird endowed with rapid flight and it is said that it is able to capture ducks and grouse while they are on the wing. It also has the power of protracted and noiseless flight. Dr. Fisher says that the Snowy Owl is "naturally very gentle in disposition, and soon becomes tame in confinement. It has been taught to remain in the vicinity of its home and return to its master at the sound of a whistle."

The nest of this Owl is placed upon the ground on a slight elevation above the surrounding country. It seems hardly appropriate to dignify the home of this bird with the name of nest, for it is only a lining of a few feathers, a little moss or lichens placed in a shallow depression scratched out by the birds.

The parents are said to be very brave and fierce in the defense of their young. During the period of incubation the male stands guard and will attack any intruder. The male also procures food for the young, but it is given to them by the female.

Because of the fact that the Snowy Owls frequent regions where the pursuit of agriculture is not possible, they are of little economic value. However in their migration visits to Canada and the United States they must be of some service to the agriculturist, for they feed almost entirely upon the harmful rodents and only to a very limited extent upon the more useful birds. It is to be

regretted that this beautiful bird because of its snow white plumage, which is more or less barred or spotted with a dusky color, should have its life taken merely to satisfy a demand for ornamental purposes.

Of its notes Mr. Nuttall says: "His loud, hollow, barking growl, 'whowh, 'whowh, 'whowh, hah, hah, hah, hah, the latter syllables with the usual quivering sound of the Owls, and other more dismal cries, sound like the unearthly bark of Cerberus; and heard amidst a region of cheerless solitude, his lonely and terrific voice augments rather than relieves the horrors of the scene."

WHAT THE ORIOLES DID.

For several years a little colony of Orioles seem to have made the trees on my lawn their nesting places, and by little notation of things I am quite convinced that they have been visitors for several years. When nesting, I supply them with fiber, strings, and even narrow cotton rags, a foot or so long, and by the readiness they make use of these offerings, I am sure that they are oft returning neighbors. I have—with an opera glass—spent not a little time watching them build their nests, and am surprised to note the deftness, and skill they display in nest making from start to finish. While I can not prove it, in my own mind I am convinced that they improve in their nest building with the years, that the young birds are the builders of the less elaborate nests, and the older birds are the weavers of the deep pouch nests that are quilted and felted with such wonderful skill. I have a collection of Oriole nests and they run through the gamut of workmanship from the crude to the finest; a beautiful nest made entirely of horse

hair, felted to a point of perfection, that simply leaves its fashioning a mystery. Last summer a pair of Orioles began to build in an elm within thirty yards of the house, selecting the very lowest pendent bough for the nest. Promptly they made a visit to the array of strings, and material put out for them, and the nest grew rapidly. Manilla fibre they would not touch; cotton strings, and narrow brown short rags were thankfully received. Then the pair would fly away and be gone for quite a long time, once, an hour, returning laden with the fiber of milkweed which they felted into the walls of the nest, and then strings again would be acceptable. As the nest neared completion, the supports on one side gave way and the nest tipped away over—almost horizontally. This was surely a dilemma. For a whole day the birds flew from branch to branch and viewed the nest from every point. They sang little, but called to each other with rather subdued and low whistles. Could the nest be repaired, seemed to be their deep concern. The

next day I was called away a few hours, and on my return they had brought the nest up into position, and secured it with a new "guy." The opera glass revealed the restoration. They had taken a longish, but narrow rag, quilted it into the unsupported side of the nest, carried the end up and around a twig branch, nearly a foot away, brought it back and taken up slack

enough to bring the nest into place, then fastened it again and finally had made it doubly secure by the addition of a string deftly knotted to the same twig. Then the happy couple proceeded with their affairs as other birds do, and brought off their young without farther mishap. I now have the nest and branch with my other nests, and regard it as a fine piece of bird engineering.

JOHN GOULD.

THE MOCKINGBIRD.

Light-swaying on the topmost bough of all,
Discoursing to his listening mate and me,
In gossip tale, and rippling melody,
He holds us both contentedly in thrall.

Cheery, cheery, cheery! Deary, deary, deary!

Come here, come here, come here.

Sw—eet, sw—eet, sw—eet,

Deary, deary, deary! Cheery, cheery, cheery!

The purple bloomed alfalfa scents the air,
Refreshing breezes stir the cottonwood,
He swings and whistles in the merriest mood,
Finding his little world so bright and fair.

Deary, deary, deary! Cheery, cheery, cheery!

Bring it here, bring it here, bring it here!

Pretty, pretty, pretty! But cheap, cheap, cheap!

Why! Why! Why! Bring it here, bring it here, deary!

Now hear him wheedle! Hear him coax and tease,
With interludes of liveliest mimicry.

"Ha! I can beat your best and not half try!"—

He flings the taunt to every bird he sees.

Cheery, cheery, cheery! Deary, deary, deary—

Do come here, do come here, do come here!

Just a wee, wee, wee minute—just a minute.

Sw—eet, sw—eet, sw—eet! Deary, deary, deary!

—LULU WHEDON MITCHELL.

THE SCARLET Tanager.

(*Piranga erythromelas.*)

"High among the tree tops of the cool, green woods the Tanager sings through the summer days. Hidden by the network of leaves above us, we often pass him by; but once discovered he seems to illuminate the forest. We marvel at his color. He is like a Bird of Paradise in our northern landscape." These are the words of Florence Merriam, but they perfectly describe the thoughts of all who, visiting delightful woods, have had the pleasure of watching and hearing the dignified and brilliant Scarlet Tanager in his home, where his colors are emphasized by a background of rich green. His home is the woods and there he spends much of his time in the company of his mate. While she wears a more somber colored dress she is none the less beautiful. Above her plumage is olive-green and below it is a greenish yellow color, while the feathers of her wings and tail are dusky with an edging of olive-green. Her colors perfectly blend with the foliage and thus she is not readily seen while performing the duties of a mother bird. Both she and her mate are sedate birds and though interested in the movements of an intruder, they watch him in a quiet and dignified manner.

The range of this elegant bird is fortunately an extensive one, including the United States east of the Great Plains, and from Manitoba, Ontario and New Brunswick southward, through Central America to northern South America. Only the northern part of its range, however, is honored with its nests. From southern Illinois and Virginia northward to the limits of its range these homes are usually built in oak or hickory trees, generally twenty or more feet above the ground. Sometimes, however, the nests are placed in

smaller trees or shrubs at a height of from five to twenty feet above the ground. The nests are placed near the end of a horizontal branch and either saddled upon it or so placed as to be supported by the diverging twigs. The nests are loosely constructed of wiry grasses, twigs, strips of bark, weed stalks and similar materials and lined with vine tendrils, blossom stems and fine rootlets. While the walls are thin and the cavity is shallow, the Tanager's nest is not a frail structure, even though the materials are frequently so loosely interwoven that the eggs may be seen through the interstices of its bottom.

Though both the Tanager and his mate are easily identified by their colors, they may also be known by the characteristic call notes *chip-chirr* used by both birds. These notes are also uttered when the nest or young are disturbed, with marked emphasis. The males arrive at the site of their summer home a few days before their mates, and are sometimes seen in parties of four or five, forming a brilliant group. At no other time do the males associate together, for as soon as they are mated each devotes his time to his bird wife. Before the arrival of the females practically the only notes uttered by the male are those of the ordinary call. After their arrival a change takes place and the "loud, cheery, rhythmical carol" of this Redbird of the forest may be heard among the tree tops throughout the morning hours. While its song suggests that of the robin in its modulations, the notes are shriller and sharp-edged and uttered more hurriedly and "enunciated with a peculiar wavering style." The song, while varied and deliberate, is always uttered in a cheerful tone. While his mate attends to the duties of their home, he frequently visits



her with insects and berries, which form the food of the Tanagers. When not engaged in obtaining food for her, or later for their young, he mounts a favorite perch, not far from his nest, and there sings a sweet song to his patient mate upon the nest. They are a loving pair and together care for their young. The young males are colored like their mother and do not obtain the perfect

and brilliant plumage of the adult until at least the third year.

The words of Florence Merriam again seem appropriate: "Inside the green woods the Tanager spends the summer, flying down to visit his nest in the fresh young undergrowth or to bathe in the still forest pools, and hunting and singing in the tree tops high overhead."

THE STORY OF BOBBS, THE TANAGER.

Chip chur! Chip chur! The trees rang with his joyous guttural call, and here and there, flashing from oak to oak, shone the Scarlet Tanager like a splendid tropic flower in his vivid color. The rose tanagers were there also, beautiful, but less intense of hue, and their call-note was also guttural, though perhaps a little livelier, *Chic-o-pe* or *Chicky, chicky tuck!* They had arrived from the South a week earlier than their green and yellow or orange tinted mates, who start more leisurely on the long journey, and perhaps travel by shorter stages.

It is perfectly natural for birds that feed on insects and fruits, and love warmth, to go farther and farther away as winter draws near, and the world grows bare of food. But having found their summer—the Tanager finds his summer-land in South America—to leave it in the early spring, when the rainy season is filling the land with fruits and swarms of insects, and all the resident birds are beginning to weave their nests—to leave it for a long and perilous journey northward, where the land is still comparatively bare, is indeed, strange. No one has ever discovered the reason. It is one of the unguessed riddles that nature loves to give us now and then. It does not help us to say "Instinct," for instantly the question springs up: "Why have they such an instinct, or impulse from habit, grown

second nature?" If you study a migration you will find it very sensibly executed; not blindly at all, but as if from reason.

Little Francis viewed the newly arrived Tanager with his splendid coat with glistening eyes, and eagerly implored his father to give the bird a name.

The father laughed. "Why, he is in scarlet—a true Britisher; call him Bobbs, he's a fine fellow!"

"Bobbs" was easy for a small tongue, and Francis approved its note of familiar acquaintance.

To return to the history of Bobbs. When Bobbs had "moulted" or shed his winter plumage, and had come forth in shining scarlet and velvety black, he was restless. Perhaps in his small brain arose old memories of cool, shadowy, silent forests, where a bird might safely build his nest on a spreading oak bough. At any rate, with many a *Chip chur!* *Chip chur!* the comrades in scarlet began to gather in large flocks and on a spring day started northward, the vigorous males in advance, to give warning of any unknown peril blocking the way, and the females following a little later.

The little birds travel chiefly by night, but the larger ones by day, flying when the air is clear so high that they are invisible from the earth, swiftly, steadily, flying over land and water, and

pausing only for necessary food and rest until their goal is reached. A fog or long rains will interrupt their journeying, however, for they have a distinct and well known route northward, and consult the familiar landmarks as they travel, or perhaps I should say "water-marks," for they follow the course of large rivers. It is easy for them to see a river as they fly, and there is always a richer abundance of food near water.

A pleasant journey it had been, but from the time they reached Florida, their flocks had begun to separate. Some of the summer Tanagers stopped here, and in other Southern states for their summer nesting, until they reached New Jersey. Many of the Scarlet Tanagers found homes in Virginia and in New England, while others crossed the line into Manitoba and the great lonely forests of fir and pine. "Bobbs," the one that Francis had first noticed, chose to stay in the Virginia woods.

The good natured nurse often brought Francis to watch the beautiful bird.

At first he could hardly believe the sober green and yellow bird that one could hardly distinguish from the fresh leaves of yellowish green, was truly the mate of the scarlet and black creature that shone like flame in the tree-tops. Yet, oh, how he sang in joyous and jubilant rhythm when she arrived from the South! Francis had thought their heavy bills very ugly, but they were extremely useful, as he discovered when he saw them crushing the big, black tree beetles with their coats of mail. The Tanagers love fruits, especially the berries, but they are also great insect eaters.

It was the nurse who first saw the nest—a rather large and bulky affair on a horizontal oak bough about fifteen feet from the ground. Francis clapped his hands with joy, but noiselessly, for fear of disturbing the birds, when he beheld "Bobbs'" mate at work. Of fine twigs and weed stalks the outside walls were made, but the lining was more delicate, vine tendrils and blossom stems. When the home was finished and the four greenish-blue eggs, speckled with dark red, were laid, our

winged lover proved himself a faithful mate. He sang for his little wife as she brooded over the eggs, choosing a branch within sight, yet not so near as to betray the precious secret, and continually in the intervals between his joyous carolling and his bathing in the cool, dark pools under the shadow of thick trees, he would bring her fruit or insects.

It was a moment of great excitement when the young ones were not only out of the eggs, but ready to leave the nest. They were comical looking little fellows; their plumage was dull and they were like their mother, yet now and then a scarlet or a bright yellow feather appeared. It seemed to be a jolly time for the whole family when they hid in the green leaves and ate tree insects—especially shiny beetles—and not only gave "three cheers," but *chip churred, chip churred* all day long! Sometimes they reminded Francis of a baseball team shouting. They seemed very good-natured with other birds, while the summer Tanagers, for all their innocent looks, were constantly in a scrimmage.

Then a sad affliction befell "Bobbs." How it happened Francis never knew, but some one threw a stone and broke his wing. The nurse picked up the poor, frightened bird and brought him home with them and the young physician in the house, seeing the child's suffering over the wounded bird, tended him daily and brought food for him. A large cage was procured—many birds suffer from cages that are too small—and Francis, remembering his delight in water, gave him a fresh supply often.

The nurse coaxed Francis to walk in order that he might see how the mother and her brood were faring, and he soon began to enjoy his self-appointed guardianship. During August they grew so restless and roving he did not see them for days together, and once he caught them getting supper in a new way. They were actually catching insects in the air, darting straight up for several feet and coming back to the bough with their booty. Their sallies lacked the easy grace of a true flycatcher's circling flight.

"Bobbs'" wing did finely, yet towards September he drooped visibly. The young doctor picked up a feather on the floor of the cage.

"It's time for him to moult," he said. He must lose all these scarlet feathers and get a fall suit for his dangerous journey, and he likes best to stay far off in the woods when he does this, for he is not so strong or gay as usual. We must let him go."

So "Bobbs" was set free and for some weeks Francis did not see him. October came and the birds were on the move again, now, going southward. At sunset, on some days, Francis saw the tall trees full of birds, often a mixed flock, kingbirds, orioles, Tanagers and others. At first they would wheel from tree to tree in short flights, uttering joyous and excited cries. Then, as if at a signal, they would all rise together and fly out of sight, high overhead. At night, if the moonlight were dim or the air damp and hazy, so that the birds could not see their way clearly, they would fly nearer to the earth, and Francis could then hear their cries or twitterings, anxious, wistful, questioning; for birds, when uncertain, call to

one another continually, lest any should straggle from the flock and be lost. They know well that they are much safer when they travel in a compact band.

One morning there was a heavy fog, so heavy, indeed, and white, that it looked like a vast blanket wrapping the earth. Out of this suddenly familiar cries, guttural *Chip churs!* came to the ears of Francis. He saw with rapture a big flock of Tanagers, bewildered by the fog, alighting in the trees. He longed to know "Bobbs." But how could he recognize him? These were scarlet Tanagers no more, except in name. All were in various shades of dull green above and yellow below, but the yellow of the males was a shining gold and their wings glossy black. One of them flew on the balcony railing.

Francis, with beating heart, brought a handful of seed and held it in sight. The Tanager moved nearer—nearer—and at last ate from his hand. It was his own "Bobbs"!

But presently they all rose together and flew away, and Francis never saw "Bobbs" again.

ELLA F. MOSBY.

THE VEERY.

Thrillingly sweet at the close of day,
Out of the dusk and the gloom,
Softly muffled and far away
Under the dogwood's bloom,
Cometh the voice of a lonely bird
Chanting the song of the trees;
Solemnly, wierdly the air is stirred,
Trembles the twilight breeze.

Circle in circle the notes go 'round,
Clear as the tone of a bell;
Tinkling forth, like a liquid sound
Up from the depths of a well.
Moist and cool is the peaceful song,
Ringing the same sweet lay;
Not to a bird the light notes belong,
But to a wandering fay.

—CHARLES WASHBURN NICHOLS.

THE RUFFED GROUSE.

(*Bonasa umbellus*.)

When soft May breezes fan the early woods,
And with her magic wand the blue-ey'd spring
Quickens the swelling blossoms and the buds,
Then forth the russet partridge leads her brood,
While on the fallen tree-trunk drums her mate.

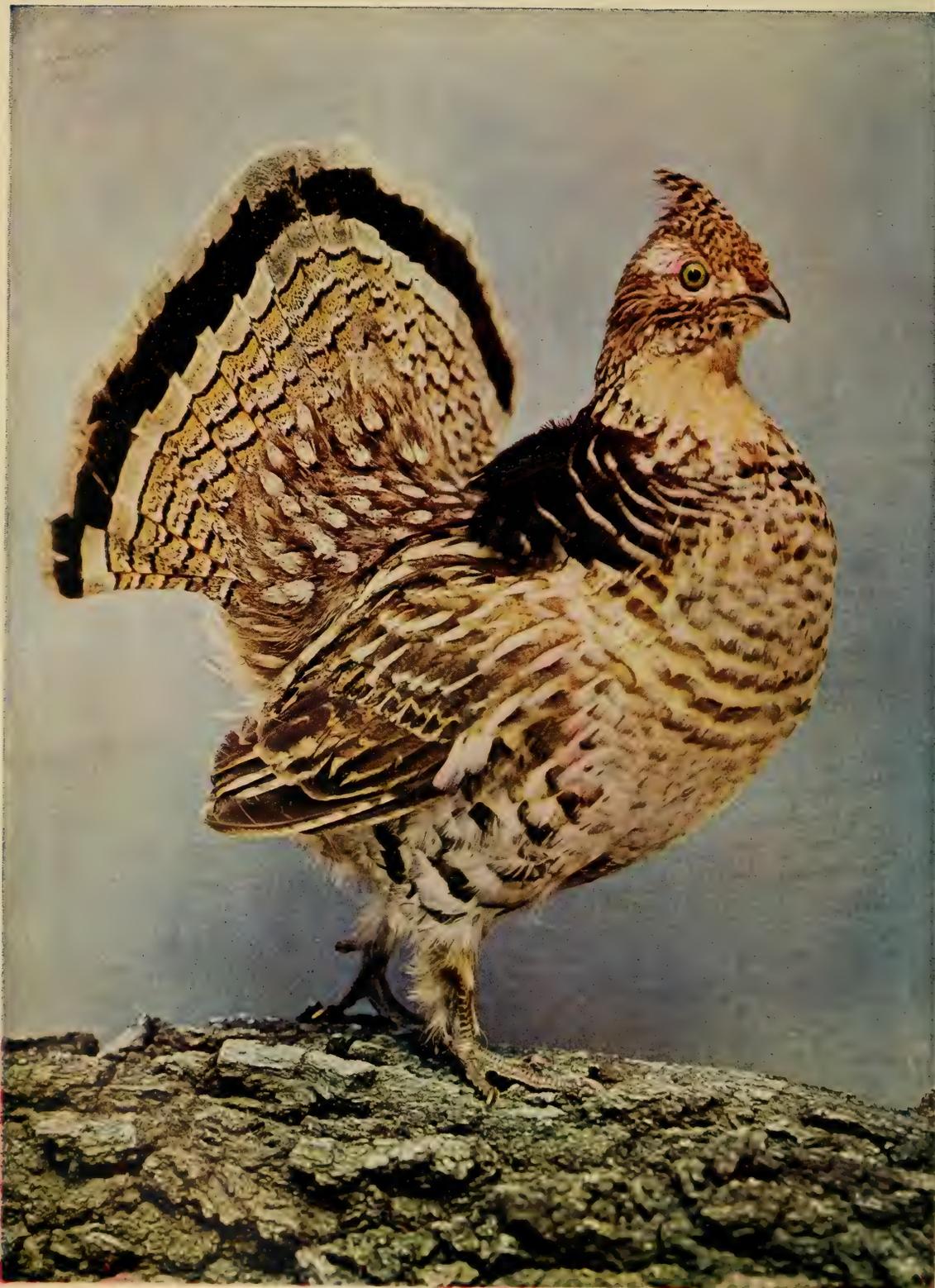
—Isaac McLellan, "Nature's Invitation."

While the Ruffed Grouse is called Partridge in eastern states, and Pheasant further west, and in the south, it is, after all, simply a grouse, for the partridge and pheasants are birds of the Old World. It may be considered a permanent though roving resident nearly throughout its range, which extends east of Minnesota, from southern Canada southward in the mountain regions to northern Georgia, Mississippi and Arkansas. It is called the Ruffed Grouse because of its neck ruff of long and broad, soft, glossy black feathers. This ruff is an excellent mark of identification, especially of the male bird. The ruff of the female is much smaller or may be wanting, and it is also of a duller color. While other grouse may have a neck appendage of feathers, none have the ruff of the bird which we illustrate. The interesting drumming of the Ruffed Grouse has been attributed to various causes and some of the earlier writers attributed it to a vocal effort. As the noise produced by the drumming resembled the bellowing of a bull, these birds were given the generic name *Bonasa*, from the Greek word *Bonason*, a bison. Its specific name *umbellus* refers to the umbrella-like ruff on its neck.

There are few sounds in nature that are more characteristic than that of the drumming of the Ruffed Grouse, yet it is a familiar sound to a comparatively few observers of bird-life. We quote the words of Mr. Ernest E. Thompson for there is no better description. He

says: "This loud tattoo begins with the measured thump of the big drum, then gradually changes and dies away in the rumble of the kettle-drum. It may be briefly presented thus: *Thump—thump—thump—thump, thump, thump; thump-rup rup rup rup r-r-r-r-r-r-r-r-r-r*. The sound is produced by the male bird beating the air with his wings as he stands firmly braced on some favorite low perch." It is the call of the male to the female. "An announcement that he is at the old rendezvous—a rendezvous that has perhaps served them for more than one season, and a place that in time becomes so fraught with delightful associations that even in autumn or winter the male, when he finds himself in the vicinity, can not resist the temptation to mount his wonted perch and vent his feelings in the rolling drum-beat that was in springtime his song of love."

While it is the belief of most of the ornithologists of the present day that the drumming sound is produced by the rapid beating of the air with the wings, there are, and have been, other theories as to the cause of the sound. Some say that the Grouse produces the sound by striking its wings together over its back; others say that it strikes the sides of its body and still others, among them most woodsmen, that it strikes the log upon which it is perched. Whatever the cause of the sounds, the wings are moved slowly at first and the speed is gradually increased until such rapid movement is obtained that the eye



RUFFED GROUSE.
(*Bonasa umbellus*).
♂ Life-size.

cannot follow the wings and there is a haze-like appearance where they should be.

The male Grouse cares but little for his mate after she begins the duties of incubation, and by some authorities he is believed to be polygamous. This idea, however, was doubted by Major Bendire. They have been seen in the company of several females and it is known that if they do not attract the notice of a female in one place they will seek another drumming site which may be either a fallen, mossy log, an old stump, a rock, or even a slight elevation of ground. Major Bendire believed that the drumming was performed as a sign of bodily vigor and to notify the female of his whereabouts. Sometimes a rival male appears and there is a royal "rough-and-tumble fight" which often results in the loss of feathers and the drawing of blood.

Deserted by her mate when the period of incubation is near at hand, the mother Grouse seeks a place to nest. She selects a secluded spot at the base of a tree, an old log, a rock, under the edge of a brush pile, in a fence corner or in the tangled underbrush near a stream. They are also known to nest on open ground where they would seem to be unprotected except by their protective colors. They have also been known to nest in hollow stumps. The nests are simply slight depressions scratched out of the ground, and it is usually well hidden. It is lined with dry grass, dead leaves, feathers, pine needles or other suitable materials that the immediate environment may furnish. The mother Grouse is a close sitter and seems to rely for protection on the colors of her plumage, which harmonizes perfectly with the colors of her surroundings. "Seated among last year's leaves, she looks all of a piece with the carpeting of the woods, and neither stirs a feather nor winks an eye, though you stand within two feet of her." Instances have been recorded where a person has stepped over the sitting bird without knowing it until she had flown off the nest behind him. No mother bird more jealously or courageously cares for her young than does the Ruffed Grouse. She

will feign injury and use various other tactics to draw the attention of an intruder from her young, which have quickly hidden on hearing her shrill squeal of warning. The young are able to run about just as soon as they issue from the shell. Her treatment of her young brood is very similar to that of the domestic hen. It is said that the father Grouse sometimes assists in the care of his young. As a rule, however, he stays away and does not join in the covey until in the fall, when the work of the mother is finished. She calls her downy brood with a cluck which is not unlike that of our domestic fowl, only that it is softer and more subdued. There are few sights more beautiful than a young Grouse family feeding upon the berries and insects which are found along some wood road, or taking a dust bath for the purpose of freeing themselves from the woodticks, bird lice, bot-worms and other parasitic pests. Suddenly surprise such a family and quickly the sharp alarm note of the mother will be heard and the little ones disappear, to reappear only when they hear her soft, reassuring cluck.

Until the young are old enough to roost in trees with the adults they sleep upon the ground beneath the wings of their mother.

The food of the Grouse in summer consists of insects, berries of various kinds, chiefly wild; and in the autumn of seeds and the foliage of plants, according to Dr. A. K. Fisher, that of "clover, strawberry, buttercup, wintergreen, and partridge berry predominating." In the winter they feed chiefly upon the buds of trees, preferring, as stated by Dr. Fisher, those of the apple, the ironwood, the black and white birches and the poplar.

Besides the habit of drumming this popular and noble game bird has other characteristics fully as interesting. Mr. Thompson says: "Its toes are provided during the winter with a curious fringe of strong, horny points which act as snow shoes. In the northern part of its range this bird commonly burrows into a snowdrift to pass the night during the season of intense cold, but in the summer and in the warmer region of

its range it roosts habitually among the thickets of evergreens."

The Ruffed Grouse has to contend with many enemies. Besides the sportsmen, who take very many during the open season, it suffers greatly during the breeding season from the attacks of four-footed enemies, such as cats, squirrels, weasels, foxes, minks, and to some extent from crows and a few of the hawks and owls. It is chiefly the eggs and young that are taken by these

enemies. Wet and cold seasons are also very destructive to the very young Grouse. However in spite of all the things with which these birds have to contend, Major Bendire and other observers believe that they are holding their own fairly well in nearly all parts of their range. They are naturally tame and unsuspecting and if encouraged to realize that they are protected they may become quite as much at home in man's environment as are the domestic fowls.

THE WILD ROSE.

Beyond the hazel copse,
My steps the wood-thrush's song beguiled,
To where the woodland slopes
Past bosky thickets, dark and wild,
On which the summer sun ne'er smiled.

There the Wild Roses blush,
And shed bewitching fragrance round;
Silent all, save the gush
Of bird song, Nature's sweetest sound,
Rambling through all the forest's bound.

Against the mass of green,
Like bursts of flame the Roses glow,
Becoming and serene,
As those who Love's sweet largess know,
And knowing, do on all bestow.

Glad is the morning wind!
His light feet o'er the meadows run,
Leaving sweet trace behind
Of odorous windrows which the sun
Brings back, when harvest is begun.

Thou fairest bud that blows,
Dainty all kith and kin above;
Nature's unzoned, Wild Rose—
The jewel of the quiring grove,
The very form and face of Love.

—EDWARD BAMFORD HEATON.

The beautiful is as useful as the useful.—Victor Hugo.

BIRDS AND NATURE

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May 1900

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BIRDS AND NATURE.

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THE CAT-BIRD.

The tufted gold of the sassafras,
And the gold of the spicewood-bush,
Bewilder the ways of the forest pass,
And brighten the underbrush:
The white-starred drifts of the wild-plum tree,
And the haw with its pearly plumes,
And the red-bud, misted rosily,
Dazzle the woodland glooms.

And I hear the song of the cat-bird wake
I' the boughs o' the gnarled wild-crab,
Or there where the snows of the dogwood shake,
That the silvery sunbeams stab:
And it seems to me that a magic lies
In the crystal sweet of its notes,
That a myriad blossoms open their eyes
As its strain above them floats.

I see the bluebell's blue unclose,
And the trillium's stainless white;
The bird-foot violet's purple and rose,
And the celandine like a light:
And I see the eyes of the bluet wink,
And the heads of the whitehearts nod;
And the baby mouths of the woodland-pink
And the sorrel salute the sod.

And this, me seems, does the cat-bird say,
As the blossoms crowd i' the sun:—
"Up, up! and out! oh, out and away!
Up, up! and out, each one!
Sweethearts! sweethearts! oh, sweet, sweet, sweet!
Come listen and hark to me!
The Spring, the Spring, with her fragrant feet,
Is passing this way! Oh, hark to the beat
Of her bee-like heart! Oh, sweet, sweet, sweet!
Come! open your eyes and see!
See, see, see!"

MADISON CAWEIN.

THE HERMIT THRUSH.

(*Turdus aonalaschkæ pallasi.*)

Among the perching birds, no family is better known or more thought of than that of the thrushes. With their bright colors, sprightly manners and cheerful song they are among the most welcome of the avian harbingers of spring. One of the most interesting species of this family is the Hermit Thrush. Its song is wonderfully sweet and seems to hold one in a strange fascination. Reverend J. H. Langille, in his charming little volume, "Our Birds in Their Haunts," thus describes the effect of the song of the Hermit Thrush upon him:

"The song begins with a note not unlike the vowel O, passing through several intervals of the musical scale in a smooth, upward slide, and in a tone of indescribable melodiousness, and continues in a shake which gradually softens into silence, thus giving a most pleasing diminuendo. Put into syllables it is well represented by Mr. Burrough's phrase, 'O-o-o-o, holy-holy-holy holy'; and I sometimes thought I heard it say, O-o-o-o, seraph, seraph, seraph, seraph. Again I could discover no suggestion of articulate language, but only that soul-language of pure melody, which speaks directly to the heart without the ruder incumbrance of speech. With short pauses, this dinuendo is repeated any number of times, but always on a different key and with a different modulation. Now it is on the main chords, now on the intermediates, and now on the most delicately chosen and inspiring chromatics. When pitched high, the shake is through a shorter interval, and in a weaker tone. The lower-toned modulations are always the sweetest. Sometimes the tones are so soft as to sound far away, though the bird is quite near; and again the notes are very penetrating, and may be heard for quite a distance, especially when aided by the enchanting echoes of tall, dense forests. The tone of the melody is neither of flute, nor

hautboy nor vox-humana, but something of inimitable sweetness, and never heard away from the fragrant arcades of the forest. 'Spiritual serenity,' or a refined, poetic, religious devotion, is indeed the sentiment of the song. He whose troubled spirit cannot be soothed or comforted, or whose religious feelings cannot be awakened by this song, in twilight, must lack the full sense of hearing, or that inner sense of the soul which catches nature's most significant voices."

Like the other members of the thrush family the Hermit Thrush may be seen during its migration on the ground searching for food. When disturbed it flies into a nearby tree and perches on a limb not far from the ground where it quietly and fearlessly eyes the intruder. If not molested it will again fly to the ground and continue its search for food, running about with a quick, graceful motion not unlike that of the robin. The favorite haunts of this Thrush are in the open woodlands, near the banks of streams and among the bushes which afford a ready and a safe retreat.

The food of the Hermit Thrush consists of ants, beetles, caterpillars and grasshoppers. In Bulletin Number 3, of the Illinois State Laboratory of Natural History, Professor S. A. Forbes records the following data: Eighty-four per cent of the food is insects, four per cent spiders and twelve per cent thousand-legs. The insect food was made up as follows: Ants, fifteen per cent; butterflies and caterpillars, nineteen per cent; beetles, thirty per cent; hemiptera or bugs, eight per cent; grasshoppers, eight per cent. From these data it will be seen that the Hermit Thrush is a very valuable bird and should be rigorously protected by farmers and agriculturists.

The Hermit Thrush winters in the South and arrives in the latitude of Chicago about the first week in April, and in



HERMIT THRUSH.
(*Turdus aonalaschkae pallasi*).
♂ Life-size.

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New England about the middle of April. It pursues its migration leisurely and does not arrive in its nesting region until about the middle of May. A few nest in the northern part of the United States, but the great majority choose their nesting site in the forests of Northern Maine and northward into Canada, in which localities only can its song be heard.

The Hermit Thrush builds its nest on or near the ground, in a secluded spot. It is large and made of leaves, grasses, mosses and pieces of bark, and is lined with finer pieces of the same material. Unlike the wood thrush it uses no mud in the construction of its nest. Writers seem to differ somewhat in describing the location of the nest, some stating that it is built in very low scrubby trees or bushes, quite near the ground, while others state that it is sunken into the ground among the plants or ferns of the forest. It is probable that the nesting site varies in different localities. Four eggs are laid, of a pale, greenish-blue color, which measure three-fifths by nine-tenths of an inch.

From its retiring habits the Hermit Thrush is more rarely seen than the

other members of the thrush family, as the wood thrush and Wilson's thrush, and for this reason it has received its name of "Hermit." It is known under a variety of names, the more noteworthy being Ground Swamp Robin, Swamp Angel, Ground Gleaner, Tree Topper and Seed Sower. It may be easily distinguished by its bright reddish or tawny tail, it being the only thrush with the tail brighter than the back.

The Hermit Thrush starts on its southward migration late in September and spends the winter in the Southern part of the United States, and as far north as Pennsylvania and Illinois. The range includes the Eastern part of the United States, from the Gulf Coast to the mouth of the St. Lawrence River and Manitoba. To the west and north, as far as the Arctic circle, the Hermit Thrush is represented by several varieties, the dwarf hermit thrush being found on the Pacific Coast and the Audubon's hermit thrush in the Rocky Mountain region. These varieties breed far to the north and winter in Mexico and Central America.

COLLINS THURBER.

THE HERMIT THRUSH.

The glory of the sunset sky
Fades into violet and gray
As from the wooded copse near by
A voice in music floats away.
It soars on wings of rapturous flight;
It trills with undertones of pain;
It languishes to reach the light,
Then mounts again.

It tells of all things fair to see,
Till wrong and sorrow seem in vain;
It breaths of all I long to be,
It whispers of immortal gain;
So silence falls, as fades the light
And deeper grows the purple shade,
While on the altar of the night
My heart is laid.

—EDITH WILLIS LINN.

AN AUNT JANE STORY.

CURIOUS PLANTS.—PART I.

"Oh, girls, come here," called Aunt Jane, from over the garden fence, to the children who were playing tennis on the lawn. "Do come here and see what a perfect treasure my friend has sent me."

"Pretty soon, Auntie; we are almost through the game," was the response.

A few moments later, both girls and boys were gathered in the grapevine arbor, around a flower-pot which contained the remarkable gift.

"It is *Drosera*, or *Sundew*," explained Aunt Jane. "I have been wanting to see a specimen of it ever since I learned it was so famous that its biography has been written, a poem composed in its honor, and its picture taken by various artists."

"Just sit down here in this garden-chair, Aunt Jane; we will all get into the hammocks and will keep ever so still while you tell us all about '*Sundew*,' and any other curious flower of your acquaintance," coaxed Alice, in her most persuasive tone, as she arranged the cushion, and drew Aunt Jane toward the chair.

"Children, I won't deceive you. I will confess at once that this wonderful new acquaintance of mine is very wicked."

"Wicked! Aunt Jane; will it poison you?"

"Oh, no, it won't hurt me, or you, either, but it has its victims nevertheless, and has acquired its fame in consequence of its moral obliquity."

"What can it have done! The reddish-leaved, odd-looking plant, does not seem to have a very villainous expression," said Alice, as she took another survey of *Drosera*.

"Look closely," said Aunt Jane, "at the round, flat leaves; they are covered with red glands, and these 'red-lipped' mouths are carnivorous."

"I thought animals were carnivorous, not flowers," said John. "Who ever heard of flowers eating flesh? They have no teeth."

"No; but the leaf of the *Drosera* secretes a glutinous substance, like honey, which attracts insects. When a leaf is touched, a tendril around the edge of it closes it up securely, and the helpless victim becomes food for the plant."

"The poet was quite right, then, in saying the leaf has 'mouths,'" observed Alice.

"Yes, poets are often happy in their choice of terms, which are descriptive of natural objects."

"Do tell us why *Drosera* is called '*Sundew*'?" Edith inquired.

"Because the clear fluid it exudes glitters like dewdrops. Naturalists have estimated that each leaf of *Drosera* averages two hundred drops of this secretion. It is a curious fact that '*Sundew*' will let go any other substance, such a strip or a stone, when it closes upon it; but an insect it holds fast and uses. As Johnnie seems to have some doubts upon the subject of carnivorous plants, I must tell him about '*Venus*' Fly Trap.'"

"Do," cried John; "you make flowers almost as interesting as wolves."

"Hear that boy comparing flowers and wolves!" cried Bird. "I should think he would know better."

"Well, now, why shouldn't I? Aunt Jane says that they 'eat things up,' and so do wolves. There is one point of resemblance, at least."

"You would never imagine," continued Aunt Jane, "such a gay, innocent-looking flower as '*Venus*' Fly Trap,' could ever be so cruel as to lure innocent flies by her beauty, and then shut her trap-door upon them and leisurely proceed to digest the little prisoners. Bot-

anists say that the digestion of this plant is so good that it can easily demolish several flies. The side-saddle flower, also called 'Pitcher Plant,' and 'Huntsman's Cup,' is another deceptive flower, for, along the wing of the pitcher, is a honey-baited pathway to the mouth, up which the little insect is lured to its fate. Bladderwort is provided with bladders, which have little doors opening inward. Aquatic insects bend in the free edge of this door and enter. The door closes at once and, to them, forever.

"Birthwort is not so cruel. She does not condemn her prisoners to death; neither does she imprison them for life. She has a cornucopia-like flower, the long tube of which is covered with downward-pointing hairs. Insects can go down the flowers, but the return is impossible, until the hairs are dried up, upon which the little captives make their escape."

"Aunt Jane, you talk about flowers as though they were people," said Howard. "I wonder if you can't find a few giants among them, in addition to the blood-thirsty villains you have been describing."

"Certainly," she responded. "I recall one now. It is said to be one yard in diameter, and sometimes weighs fifteen pounds. It has a cup which holds six quarts of water."

"What is its moral character?" John inquired. "Is it a slayer of the innocents, also?"

"Yes, but indirectly. It is the most disagreeable of flowers. I have never seen one myself, but it is described as resembling raw beefsteak. It has a carrion-like smell, which attracts flies, and they lay their eggs upon it, completely deceived as to its real nature. Of course, when the eggs hatch, the grubs die for lack of food. This very unpoetical flower is called 'Rafflesia arnoldi.'"

"The horrid old thing!" cried Madge. "I don't want one of them in my garden."

"Some of our sweetest flowers are fatal to animal life. It is thought that the Oleander kills insects, by the narcotic effect of its odor."

"What other curious flowers are there besides sanguinary ones?" Howard asked.

"The horned milk-weed kills insects by accidental detention, and not from any malicious purpose. If an insect happens to get its claw into the pollen sack before the pollen is ripe enough for distribution, the sack will not open to release it, and the poor little prisoner dies. But some plants, I am happy to say, are humanitarian, or, should I say, 'insectarian'? enough to protect insects from danger by ejecting the pollen on the approach of one of them, and then at once closing the entrance, and refusing it admittance. The benevolent flower, 'Martha,' of the tropics, is said to be thus careful of insect welfare. There is also a flower, in Java, with 'rooms to let' for the accommodation of insects. It is the 'Dischidia rafflesia,' and grows upon trees, without touching the ground. The flowers are fine, urn-shaped jars, and make capital lodgings for the ants, who seem delighted with such elegant tenement houses.

"'Grass of Parnassus' is another deceptive flower. At the base of its snowy petals, are little threads, which end in balls which look like drops of honey. Flies try to extract honey from them, and thus get covered with pollen, which they carry to other flowers. In the wonderful family of Orchids, there is a very naughty flower. It has a flap-cover to a cup, and this cup is filled with an intoxicating fluid, which makes the unfortunate insect drunk."

"How glad I am that you have mentioned Orchids," said Edith. "I want to know about them, for I was reading the other day, that some of them look like human faces, and others like insects and animals. Please tell us if you have ever seen one yourself."

"I am happy to say," Aunt Jane responded, "that I have seen one of the most remarkable specimens of the royal family of plants. In a park in San Francisco, I first saw 'The Flower of the Holy Ghost.' It was in full bloom, and represented a creamy white dove, nestled in a cup-shaped corolla. The wings

of the dove were expanded, the head and body perfect in shape, the eyes yellow, the tail fan-shaped, the bill slightly curved. It seemed as if it might be living, so perfect was its form."

"You should have put this 'flower-bird' on your list of curious birds, I think, although it is a very curious flower," said Howard. "But why do you call 'Orchids' the royal family?"

"Because they are so distinguished, so costly and aristocratic. Even the leaves of some varieties are more beautiful than flowers, being bronzed and velvety in texture, and spangled as with gold dust, while the seeds are marvellous in number and beauty. Darwin estimated that the common Orchid produces nearly 200,000 seeds as fine as mahogany sawdust. A glossy, silky tissue forms the

outer envelope of the tiny, egg-shaped seed in which the embryo lies like a grain of gold.

"Many difficulties attend 'Orchid hunting.' Sometimes lives are sacrificed in attempts to secure fine specimens. In tropical climates, the Orchids are often found growing upon the branches of very tall trees, which must either be climbed, or cut down, or a lasso used in order to secure the flowers."

"I mean to study botany, so when I travel I can be an 'Orchid-hunter,'" cried John, enthusiastically. "I shall not mind the dreadful climate, and I'm pretty good at tree-climbing already."

"Bring me a few Orchids," said Madge. "I would prefer them to the dreadful carnivorous flowers, if they are haughty aristocrats."

BELLE PAXSON DRURY.

THE RESCUE OF A SPARROW.

One afternoon my attention was attracted to the front gallery by a wild medley of sparrow voices, and wondering what could cause such excitement in bird life, I went out to inspect.

There I found our house cat standing very serenely switching her tail while over her, back and forth, darted two little sparrows. The little birds were in a desperate mood and their hysterical chirps indicated the wildest apprehension. They took no notice of my approach, and their cries translated from bird language clearly expressed the following:

"How dare you come here?" "Get away from here!" "You've no business here." "We don't want you." "Don't you understand?"

But Mistress Pussy had no mind to obey the bird's orders, and I myself feeling a keen sympathy for the little birds, called the cat into the house. Believing that the birds must have a nest, I made an examination, but found none.

A short time afterward I heard the same cries of distress from the sparrows, and went out again to investigate more thoroughly. The cat was on the ground this time and the birds were battling with increased vim. Again I looked into the bushes and was just about to pick up the cat when she sprang into a thick china bush and jumped down with a tiny birdling in her mouth.

"Let us save our darling from this cruel fate," came in agonized cries from the parent birds, and lending a hand to their frantic efforts, I succeeded in forcing the cat to drop the tiny creature just as she was going underneath the house. I could feel the rapid beats of its heart, but it had not been injured by Tabby's teeth. As soon as the parent birds saw their birdling in my hands they flew away. I thought it best to put the little thing up in a tree where it would await its parents' return, and soon afterwards I saw the happy family on a high branch.

NINA KING.



THE SONG SPARROW.

(*Melospiza fasciata.*)

In one of his most beautiful bits of verse, "The All-Kind Mother," James Whitcomb Riley speaks of nature as

Kindly to the weed as to
Lily, lorn and teared with dew,

and although this remarkable impartiality between the lily we admire and the weed we despise is quite difficult for us to understand just now, the poet assures us if we wait patiently we shall

See the lily get
Its divinest blossom, yet
Shall the wild weed bloom no less
With the song-bird's gleefulness.

In reading this over one feels almost certain that it was the Song Sparrow the poet had in mind; for it is the picture of this bird rather than that of any other that is called up by the verses, and the touch fits it so exactly.

And surely no bird is more worthy the attention of the singer of sweetly common things, than the Song Sparrow is, for more than any of the birds famous in song and story. More than skylark or swallow, more than robin or bluebird or cuckoo or thrush or any other of the feathered host that have figured in literature, this modest singer is fit to stand as one of the types of homelike thoughts and ways. It is perhaps because of this very fitness, of his quiet dress and demeanor that he has been so wholly overlooked by the men who make literature. Although the common people have been hearing him gladly ever since he was known.

In appearance, he is a commonplace sort of bird, not catching the glance at a distance as the tanager or gaudy jay may do, but rather hiding beneath

his sober feathers. Really he is rather dressed for concealment than display, and can so perfectly blend his stripes with the leaves of grass and spaces between that he is easily overlooked. He is, however, a neat, trimly built bird, considerably more slender than the English sparrow, and with his slenderness accentuated with a long, rather narrow tail. He can be distinguished from most of the other sparrows by the dark brown streaks or blotches on his breast, and he looks at a distance like a child who has spilt some berry juice on his bib.

Wherever there is an old brush-pile surrounded by weeds, or a bit of tangled thicket in the open, or a neglected edge of ditch or margin of river or lake, the Song Sparrow is pretty sure to be found. If the place is well sheltered, and the winter not exceptionally severe, he is likely to be found there almost any day of the year, and he greets the inquisitive intruder with a few sharp, scolding notes. It is in such places, especially along the edges of ditches, that the nest is built, a neat, closely built symmetrical structure, usually placed on the ground and overarched with the long brown blades of last-year's grass. If one passes too close to the nest, a streak of bird from where it is hidden, to the grass a little distance away, directs him where to look. Here, if the home has been completely furnished at the time of discovery, will be found five small finely speckled eggs, the spots brown on a pinkish ground.

As to the bird's song, there is considerable variation in the arrangement of the parts. It consists of several calls and a series of clear melodious

whistles, lasting for a minute or two, and often repeated. It is a quiet, unobtrusive strain much like the bird itself; not likely to be noticed until you are near the bird, or have learned to recognize the song and have your ears set to catch it. It is not a remarkable vocal performance, but is full of domesticity and sweetness. It is by no means the first bird-song you are likely to become acquainted with. The operatic performances of the brown thrasher, the ringing call of the wood-thrush, or the strong-voiced cheery song of the robin from the treetop, are likely to attract the attention much sooner. It is as if the Song Sparrow had in mind one, not very far away in mind, and sang directly to one set of ears. While these other gay troubadours, conscious of a large audience of susceptible shes scattered about here and there, amid the leafy coverts within the compass of his voice, puts forth the lures of his most finished song to woo them one or all.

But the most attractive feature of the Song Sparrow's strain is its wearing quality; as something befitting the bird's constant nature. The bird has two full tides of song: one in spring, and another, not so pronounced, in autumn; but besides this, you may hear him singing almost every time of the year, even in the coldest days of winter, if the weather is bright, the song of this brave bird can be heard coming from among the tangled weeds.

"Up to the level of each day's most quiet need," is after all a high level, harder to reach and keep than many a jutting peak of special occasion, but not so conspicuous in the eyes of the world. And this is the level that the Song Sparrow has reached and kept. He does not lavishly spend all his music in an extravagant rapturous courtship, and then forget that he ever knew how to sing, as many bipeds both feathered and otherwise, are so

likely to do, and the bobolink's short-lived rapture, and the Spanish serenade business seem to have little attraction for him. Just as people have always associated the dove and olive branch with the thought of peace, one who knows them both can hardly help associating the Song Sparrow and the little speedwell, which puts out its shy blossoms the year round in sheltered nooks, as the emblem of constancy. Both remind us of one of the bravest and gentlest of singers, who sang clear and unwavering through sullen and gloomy days, through days of dust and shadows.

As for the Sparrow, he seems to have the distinct mission of making waste places glad. Hardly a patch of rank weeds, hardly an old brush pile or neglected edge of ditch or overgrown fence-row but resounds with his cheerful music, and here without asking for a day of vacation he toils for the farmer the whole year around at one of the finest miracles of alchemy, transmuting noxious weed-seeds into song.

Every one who has seen it, of course, remembers that picture, so wonderfully fitting and so finely symbolical, in Vedder's illustrations of the Rubaiyat, the bird with uplifted head and voice singing from the top of the skull. And although the artist was not thinking of any real bird or real skull, any more than we when we look at it, but simply of the symbols for which they stand; although the thing the picture brings is simply an illuminated and concentrated glimpse of the things signified, and the bird pictured there is too subtle to be caged in our zoologies, I feel sure if we could only manage to get it there, and manage to run it down with our analytical key, our search would end up with a description of *Melospiza fasciata*, the Song Sparrow.

H. WALTON CLARK.

WHERE THE WRENS BUILT.

I think I must tell you about our Wren's nest. It was something more than a dozen years ago when my husband had an office down town, with sheds and out-buildings adjoining, and sold farm machinery. The little Wren I have in mind chose the hollow center of a ball of binder twine for her home, and having partially filled it with numerous odds and ends dear to her heart, proceeded to lay her tiny eggs and sit upon them.

Now this particular ball of binder twine was situated in the twine box of a sample binder, which was set up ready for work in a shed fronting the street. Here day after day my husband was called upon to show off the various good points of the machine to would-be purchasers. Not being in the field, and there being therefore no grain to cut and bind, the ball of twine was not molested, but other parts of the machine were raised and lowered and otherwise moved about with an amount of noise quite terrifying to the wee sitter upon the nest.

Sometimes she so far mastered her fear as to quietly sit through the ordeal, the motion of her shining eyes alone revealing her temerity, but usually she found this too much for the state of her nerves, and flew off the nest, fluttering about with her faithful little mate who was always on hand to reassure her, and whose angry chirps mingled with hers as she scolded my poor husband for his persistent interference with her maternal duties, in a way quite heartrending to hear.

Just before harvest when the little birds were hatched and nearly ready to fly, the binder was sold. There was no alternative as it was the last of the kind and the purchaser would take no other. My husband, whose sympathies had been with the little mother from the first, though she, poor dear, could not be persuaded to think so, felt very much disturbed over the affair and hoped against hope that the little ones would fly away before time for the machine to be removed, but they were still snugly tucked down in their unique bed when the eventful day arrived. Carefully opening the door of the twine box he lifted the ball and placed it tenderly in a secure place within sight of the indignant parents, who were flying wildly about, uttering the most plaintive, if also the most angry, of bird cries.

The little family, in no wise injured by the move, continued to reside in the ball of twine until the birdlings—there were seven of them—were strong enough to leave it for "the great, wide, beautiful, wonderful world." To the day of their final departure, however, the mother Wren never forgave my husband for his part in the transaction. She seemed ill at ease the moment he appeared and invariably scolded him without intermission whenever he was in sight, which returns for his friendship and oversight he found rather amusing than otherwise, since his conscience was clear and, despite her indignant protest, the birds thrived happily all the while.

GAZELLE STEVENS SHARP.

THE HERON'S NEST.

The Heron builds her nest in the tall pine,
That rises high, a watch-tower in the land,—
The while her mate, by stream or crystal pool,
Stands, mute and listening, warder of the strand.

—ELLA F. MOSBY.

THE YELLOW-BILLED CUCKOO.

(*Coccyzus americanus*.)

Of the Yellow-billed Cuckoo Mr. Dawson has written as follows: "Most birds prefer to face the enemy, so to keep his every movement well in eye, but Cuckoo presents his back, a cold gray affair, from behind which he peers now and then, turning his neck and giving you one eye in a lofty, well-bred way. I recall no other bird whose gaze is so calm, so direct, so fearless, yet withal, so decorous." The Cuckoos are watchful but they do not neglect their work, which apparently is to eat caterpillars. This they will do in your presence, but disturb them by a too positive action, and they will silently and rapidly leave the locality. These birds are very useful to the farmer and fruit-grower. They will frequent orchards and are very fond of tent caterpillars which they destroy in large numbers. Mr. F. E. L. Beal examined the contents of twenty-one stomachs of these Cuckoos which were collected from May to October, inclusive. He says: "The contents consisted of 355 caterpillars, 18 beetles, 23 grasshoppers, 31 sawflies, 14 bugs, 6 flies and 12 spiders. As in the case of the black-billed cuckoo, most of the caterpillars belonged to the hairy species and many of them were of large size. One stomach contained 12 American tent caterpillars; another 217 fall webworms." Many of the caterpillars upon which they feed are very destructive to foliage.

The Cuckoos are very active and graceful birds when darting through the foliage or hopping along the branches of trees in their search for insects. When in repose, however, they do not appear intelligent but rather stupid. They are somewhat dove-like in appearance and perhaps for this reason they are known as Rain Doves or Wood Pigeons. As they seem to be more noisy at the time of meteorological changes they are also called Rain Crows. They have arboreal habits, and are seldom seen on the ground. Their flight is noiseless, swift, and graceful but rarely protracted. They prefer dense thickets bordering bodies of

water, the shrubbery at the sides of country roads and bordering forests, and orchards infested with caterpillars. They are fairly common birds in many localities, but inclined to be shy and retiring, and were it not for their very characteristic call notes they would be known by few people outside of the circle of bird students. Their call notes are quite varied. One of these notes has the sound of the syllables *noo-coo-coo-coo*, and another sounding like *cow-cow-cow* or *kow-kow-kow*, has given these birds the name Cow-cow. These calls are usually several times repeated. Major Bendire speaks of other calls, one of which resembles the syllables of *ough*, *ough ough* slowly and softly uttered. Of other calls, he says: "Some remind me of the *kloop-kloop* of the bittern; occasionally a note something like the *kiuh-kiuh-kiuh* of the flicker is also uttered; a low, sharp *tou-wity-whit* and *hwet hwet* is also heard during the nesting season."

While the Cuckoos cannot be considered social birds quite a number are sometimes seen in the same tree during the mating season.

The breeding range of the Yellow-billed Cuckoo is coextensive with its geographical distribution in the United States and Southern Canada. Its range extends through temperate North America east of the Great Plains, and in winter it passes southward to Costa Rica and the West Indies. There are few if any birds which are poorer nest builders. The nests are shallow platforms constructed with sticks, twigs, rootlets and strips of bark, among which and on the top of the platform there may be found dry leaves, bits of mosses, catkins of various trees, tufts of grasses, and even pieces of cloth. These platform nests are sometimes not as wide as the parent bird is long. The depression in the center of the nest is so slight that the eggs are not easily retained even in a moderate wind, unless one of the birds is sitting on them. The nests are so care-



lessly constructed that the eggs may be readily seen through the bottom. The nests are usually placed in trees and shrubs, where they are well concealed by foliage. The mother bird, though timid at other times, is very courageous in the defense of her eggs and young. Major Bendire says: "Usually an egg is deposited daily, and as a rule incubation does not commence until the set is completed." Sometimes, however, there is a

considerable interval of time, from two to eight days, between the laying of the eggs, and the bird may begin incubation with the laying of the first egg. The Yellow-billed Cuckoo, unlike its European relative, rears its own young in a nest built by the parent bird. It is possible, however, that they may very rarely lay an egg in the nests of other birds, but this is doubted by some of our best observers.

AMONG THE TREES.

THE LINDEN TREE.

Mabel was reclining on a grassy slope and looking at a tree whose leaves, dark, glossy green above, and apple-green with tufts of brown hair at the axils of its veins, shimmered and glistened in the early summer sunshine; myriads of bees filled the air with their noise as they hovered around the blossoms swinging on their long stems. Her thoughts were busy with the past, when she, a little child, climbed her father's knee to listen to tales of his childhood days, for his earliest recollections were of a lime tree, beneath which he rolled and played; and when in boyhood days he trudged, barefoot, along the country road and with others of his age "toed the mark" in the old log schoolhouse at the crossroads, he and his companions would gather beneath this tree at eventide, and talk over those things so interesting to boys. How often, too, mounted on a chair, he would recite those favorite verses, which, some years later, his bearded lips had taught his little daughter.

Tenderly and lovingly, she repeated the words, so fraught with memories of the past:

"Here's a song for thee—of the linden tree!

A song of the silken lime!

There is no other tree so pleaseth me,

No other so fit for rhyme.

When I was a boy, it was all my joy

To rest in its scented shade,

When the sun was high, and the river nigh

A musical murmur made.

When floating along, like a wingéd song,
The traveler-bee would stop,
And chose for its bower, the lime-tree flower,
And drink—to the last sweet drop.

When the evening star stole forth, afar,
And the gnats flew round and round,
I sought for a rhyme beneath the lime,
Or dreamed on the grassy ground.

Ah! years have fled; and the linden dead,
Is a brand on the cottier's floor,
And the river creeps through its slimy deeps,
And youth is a thought of yore!

Yet they live again, in the dreamer's brain
As deeds of love and wrong,
Which pass with a sigh and seem to die,
Survive in the poet's song."

The pendulous clusters of bloom with their long, ribbon-like, greenish yellow bracts, swayed gently in the light summer breeze, contrasting pleasantly with the leaves which quivered and shimmered in the sunlight, and Mabel, gazing at the tree, heard the musical hum of the words:

"You would like me to talk to you? to tell you the history of our family?"

"Nothing would please me better, you beautiful, sweet-scented tree!"

"Take care; were I not a sensible tree, I might be made vain by your highly complimentary words."

"It is the truth," said Mabel, wishing to defend herself.

"All the more reason to make me proud. We are a proud race, anyway, and an ancient one, for remains of us are found in the cold lands of

Spitzbergen, thus proving that we are a northern race as well. We are hardy and can withstand the cold of winter so well that we are often planted on the windward side of orchards to protect young or tender trees. Notice my trunk; strong, well-knit, and sturdy, our branches divide and subdivide until they form a spray small and thick."

"Yes, and some of them almost touch the ground," said Mabel, as some lower branches caught her wind-blown tresses.

"In some instances they quite touch the ground. There stands in Kent, England, a curious member of our family. The branches of this tree touched the ground, where they took root, and a circle of new trees grew up around the parent; the outer branches of these also touched the ground and took root, thus forming a second circle. So you see, one tree became a small, but very unique, grove.

"We are a small family," continued the Linden, musingly, "consisting of only four branches, these are the American Linden, the Downy Linden, the White Basswood, and the European Linden. The term Basswood is rapidly supplanting the proper name of Linden."

"You call yourself Linden. Father's old poetry calls you the Lime as well."

"I can easily explain all that. You no doubt have heard of 'bast' which is a tough, fibrous string used by gardeners in their work; it very much resembles a bit of yellow ribbon. Now this bast is the inner bark or liber of the Linden Tree, which has been soaked in water and separated into innumerable threads or lines. How it ever became corrupted into Lime Tree, is beyond my knowledge; the true lime is a shrub, the fruit of which, you no doubt know, very much resembles a lemon in size and color. This bast is also put to other uses, in our country it is often fashioned into coarse ropes and mats, in Sweden the fishermen make nets out of it; in Russia, the liber is used in making the tops of shoes, the outer bark being used for the soles; when the tree is thus

denuded, the trunk is converted into charcoal."

"You are a very useful family, then!"

"We are, indeed," came proudly from the Tree. "You should know that trees, as well as human beings, like to be of use in the world. Our wood is also put to other uses; being light, tough and durable as well as free from knots, renders it of great value to the wood-carver. Grinling Gibbons, that famous English wood-carver, who fashioned such beautiful flowers, fruit and game, that they were used to decorate Chatsworth Hall and Windsor Castle, used our wood for his inimitable work. Our wood, too, was used in his carvings for St. Paul's Cathedral, and the great Holbein used the wood of the Linden Tree for his blocks, as no other wood could be relied upon for its utter freedom from knots and its even texture, as is said:

Smooth linden best obeys
The carver's chisel; best his curious works
displays,
In nicest touches."

Please go on, Linden Tree, tell me some legends, will you?"

"There are no legends to tell, but there is history, and we are loved by the poets. Barry Cornwall, your father's poet, was not the only one who wove verses about us. Tennyson who saw and revelled in so many of the hidden beauties of nature, speaks of us more than once; he tells you that:

A million emeralds break from the ruby-budded lime,

which refers to our young leaves bursting from their winter quarters. The ancient poets, Homer and Virgil, also sang of us."

"Do you grow to be very old, like the Conifer?"

"As you would count years we are old, but not as the Conifer; there are instances on record of some members of our family attaining the age of nearly a thousand years. In the grounds of the Imperial Castle at Muremberg is a Linden Tree which was planted by Empress Cunigunde, and is over nine hundred years old; then there was also the famous Linden of Neustadt, in Wurtemberg, which it was

claimed, was fully one thousand years old."

"There are very few members of your family in our beautiful country, Linden Tree, or perhaps I should say that I've not seen many."

"You are right; we are by no means as numerous as the oak, conifer or elm, or the much loved maple, but in that part of Germany formerly called Prussia, and in certain parts of Russia, there exist great forests of us, and the wild bees swarm and hive in our hollow trunks. Do you know that the honey made from our blossoms is very valuable, and will bring three or four times the price of other honey? Do you know also that bees when gathering honey will visit only one kind of a flower at a time?"

"No," said Mabel in surprise, "I never noticed that."

"Well, watch the bees the next time you have an opportunity; there is much to be learnt from these industrious creatures. As I was saying, the honey made from our blossoms is much sought after, so the villagers who live near these forests collect the honey as soon as our blossoms are done, before the bees seek other flowers. This honey is white in appearance, and dishonest people often seek to imitate it by exposing ordinary honey to frost, with the view of whitening it.

"Our fruit when ripe is small, round and white, much resembling peas; a great physician once thought to utilize these nuts by grinding them, which made a kind of chocolate, but as it would not keep, the project had to be abandoned, and our pretty nuts were left to fly away and seed themselves. Although our fruit and our wood are of so little commercial value we are amply repaid in other ways."

"I suppose you refer to your honey, Linden Tree?"

"No, not altogether," said the Tree musingly, and its leaves made a musical murmur, like some soft, sweet lullaby, "although it is considered the most delicious of all honey. Our blossoms when gathered and steeped in boiling water, make a tea greatly re-

sembling in taste that of licorice, and it is a very soothing drink for those afflicted with a cough."

The sweet, low murmur ceased and Mabel heard nothing but the continual hum of the bees and noticed the great number of birds, darting hither and thither.

"I suppose," she thought, "those nectar-laden blossoms attract insects, too, and they in turn attract birds. What's that?" she sat erect, as she noticed a bird whose exhausted pinions seemed scarcely able to carry it and who uttered a shrill note, as if in distress. Closer and closer it came, and, looking beyond it, Mabel discovered the large body of a hawk. Quickly she started to her feet and with keen anxiety in her face, she saw the tiny songster seek the refuge of the Linden Tree. Presto! the whole army of birds had disappeared. The hawk circled near, then spreading its strong wings sailed upward into the blue arch, until it looked like a tiny black speck.

"Oh, I am so glad the poor little bird is safe! How good of you, Linden Tree, to protect it! I must say, though, that I am surprised the hawk gave up its prey so readily; I wonder it did not dart into your branches."

The branches bent and awayed in the wind, and an almost triumphant note seemed in the words which floated to Mabel's ears.

"It knew better than that; the Linden is a City of Refuge among trees. You no doubt have heard of the cities of refuge of olden times, a certain number of these were established, and when a person sought shelter within their sacred walls, the city refused to give him up; then, too, in later times when the persecuted sought refuge in churches, they were safe from harm."

"Yes, indeed, I remember that, for just last evening I as reading that portion of Victor Hugo's Hunchback of Notre Dame where Quasimodo seized the slender, girlish form of Esmeralda and fleeing with her into the holy precincts of the cathedral, flung back the cry 'Sanctuary, Sanctuary,' and thus defied the mob of Paris. But,

Linden Tree, I must say that I am at a loss as to how you can apply the term to yourself."

"Come closer, still closer, right up against my trunk. That's right, now look upward. What do you see?"

"I cannot see much but a thick mass of green. Oh, why it looks like a tiny forest—a dense thicket of—of—brushwood."

"You need not be afraid of offending me; I am proud of that brushwood. There's where the little songsters are safe from hawks and birds of prey, safe, too, from prowling cats and from the thieving, mischievous hands of boys. Now it is almost alive with birds; think what would have become of that exhausted little one, if there had not been something in my branches to protect it."

"Or if you had been twenty feet farther away, its little wings seemed unable to carry it a foot farther. What a pretty trunk you have," said Mabel, as she patted it. "How bright and clean and sunshiny it looks!

"That surely is what one poet thought and he put it into words:

"There a linden tree stood bright'ning
All adown its silver rind;
For as some trees draw the lightning,
So this tree, unto my mind,
Drew to earth the blessed sunshine
From the sky where it was shrined!

"There is a big basswood tree beside the river and its beautiful trunk rises, oh, it must be seventy feet high——" Mabel caught her breath and paused for fear that she had overestimated its height.

"No doubt," came reassuringly from the tree. "Some of the White Basswoods reach the height of nearly one hundred and thirty feet, but the usual height is about seventy feet. They are the tallest members of our family."

"Well, this tree," continued Mabel, "has the most beautiful leaves, they are so wide and broad, almost the size of a small plate; I've often watched them drifting down the river in the fall; but now when the wind stirs them and they flutter on their long, slender stems, the silvery whiteness of the underside contrasts so prettily

with the dark green of the upper."

Mabel ceased, and as she gazed at the sky, which could be seen between the fluttering leaves, she heard what seemed to be the voice of the Tree in tones clear, distinct and proud.

"You have heard of Linnæus, the 'Father of Botany'?"

"Yes, I have; there is a society in yonder city named for him."

"That is only one of many. He was a Swedish naturalist, but his researches in botany were much wider. Perhaps it will interest you to know that his name was derived from a member of my family."

"Is that so?"

"It is, indeed. The father of Linnæus belonged to a race of peasants who had Christian names only; when he, by his own efforts, raised himself to the dignity of parson of his native village, he followed the Swedish custom of adopting a surname. Now it happened that a Linden Tree grew near his humble home, of which, also a botanist, he was very fond, so he chose the name Linné, which is Swedish for Linden. His son Carl was a very precocious child, and at the early age of four, asked his father many questions in botany; the father, Nils Linné, would refuse to answer if he had forgotten what had been previously explained. When in after years Carl became Professor of Botany at the University of Upsala, the name was Latinized into Linnæus, as we know it today. The King of Spain became much interested in Linnæus, and conferred upon him the patent of nobility as Count von Linné, or Count of the Linden Tree, and made him a munificent offer if he would reside in Spain. Linnæus, however, refused, saying that his country deserved all he had to give."

"There was loyalty," said Mabel, admiringly, but no answer came from the Tree. Bees and insects buzzed about, birds twittered in the branches, but listen as intently as she would, no sound that she could construe into words, so rising, she slowly wended her way homeward.

EVELYN SINGER.



RUBY-THROATED HUMMINGBIRD.
(*Trochilus colubris*).
About Life-size.

THE RUBY-THROATED HUMMINGBIRD.

(*Trochilus colubris.*)

Voyager on golden air,
Type of all that's fleet and fair,
Incarnate gem,
Live diadem,
Bird-beam of the summer day,—
Whither on your sunny way?

—JOHN VANCE CHENEY, "TO A HUMMING-BIRD."

Regarding the Ruby-throated Hummingbird, Mr. Wilson has said: "Nature, in every department of her work, seems to delight in variety, and the present subject of our history is almost as singular for its minuteness, beauty, want of song, and manner of feeding, as the mockingbird is for unrivalled excellence of notes, and plainness of plumage." One of the most interesting facts regarding these, the tiniest and most exquisite of our birds, is that they are the only ones of a large family (for there are about five hundred known species of Hummingbirds) which pass through the United States east of the Mississippi River, and finally on to the Fur Countries and Labrador. They may be seen as far westward as the Great Plains, and they winter to some extent in the southern portions of Florida, but the majority pass to the West Indies and through eastern Mexico into Central America. Of the many species of the Hummingbird family only seventeen have been observed within the borders of the United States, and of these only seven species really belong to our country, for they are the only ones whose breeding ranges lie chiefly or entirely within our limits. The other ten species are only visitors within our borders.

The names of few birds are found more extensively in literature. The sedate naturalists as well as the poets and others have been inspired to write eloquently regarding these little birds. Buffon, Audubon, Wilson, John Gould,

Coues, Ridgway and many other ornithologists have glowingly expressed their admiration of the beauty and interesting habits of the Hummingbirds. Audubon speaks of the Hummingbird as a "glittering fragment of the rainbow," and says: "Who, on seeing this lovely creature moving on humming winglets through the air, suspended as if by magic in it, flitting from one flower to another, with motions as graceful as they are light and airy, pursuing its course and yielding new delights wherever it is seen * * * would not pause, admire, and turn his mind with reverence toward the Almighty Creator, the wonders of whose hand we at every step discover, and of whose sublime conception we everywhere observe the manipulations in his admirable system of creation." Beautiful are the lines of Ednah Proctor Clarke:

Dancer of air,
Flashing thy flight across the noontide hour,
To pierce and pass ere it is full aware
Each wondering flower!

* * *

The grave thrush sings
His love-call, and the nightingale's romance
Throbs through the twilight; thou hast but
thy wings,
Thy sun-thrilled dance.

Yet doth love's glow
Burn in the ruby of thy restless throat,
Guiding thy voiceless ecstasy to know
The richest note.

Oh brooding thrush!
Now for thy joy the emptied air doth long;
Thine is the nested silence, and the hush
That needs no song.

It seems strange that so beautiful a bird should have no song. The voice of the Ruby-throat is confined to a chirp or squeak expressive of surprise, excitement or anger, and also fine chirping notes uttered when seeking a mate. Mr. Chapman says: "The Ruby-throat needs no song. Its beauty gives it distinction, and its wings make music." Our little Hummers are inquisitive and fearless birds. When standing near a trumpet-creeper, watching the little bird, it hovered directly over and in front of my face looking me straight in the eye for several seconds. Both parents valiantly defend their nest and its contents, and it is said that should the female be killed, the male will take her place in the care of the young.

While there seems to be no question that the Ruby-throats are exceedingly

fond of the sap of the sugar maple and other trees, and of the nectar secreted in the flowers of the honeysuckle, lilac, begonia, horse chestnut and many other plants, it is also evident that they require and like insect food. They are attracted to certain species of thistles, the flowers of which contain many minute insects but do not furnish nectar to the birds. It is the belief of many careful students of bird-life that these little birds obtain their nourishment chiefly from the large number of minute insects and spiders which they eat. One investigator found sixteen small spiders in the throat of a young Hummingbird which was only about two days old. It is also known that they feed to some extent on the small plant-lice which are so annoying. The Ruby-throats then are not only beautiful ornaments of nature but they are also of some economic value.

HUMMINGBIRDS.

The characteristics of this class of birds are, a slender, weak bill, in some species curved, in others straight; the nostrils are minute; the tongue is very long and is formed of two conjoined cylindrical tubes; the legs are weak, the toes are placed three forward and one back; the tail contains ten feathers.

The Hummingbirds are the most diminutive of all the feathered tribes. They are natives of the warmer parts of America, and of the West India islands; they bear a great resemblance to each other in manners. Their name is derived from the constant humming noise they make with their wings. They construct elegant nests, in the shape of hemispheres, in which they lay two small white eggs. It is said that the young ones are sometimes attacked and devoured by spiders.

A simple way in which to capture these birds is by blowing water upon them from a tube, or shooting them with sand. Although they are small in size, they

are extremely bold and pugnacious. Their colors are too brilliant to be described by any pen.

The length of our Ruby-throated Hummingbird is about three and one-fourth inches, of which its bill occupies three-fourths of an inch. The male is of a green-gold color on the upper part with a changeable copper gloss and the under parts are gray. The throat and forepart of the neck are of a ruby color, in some lights as bright as fire. When viewed sideways the feathers appear mixed with gold and beneath they are of a dark garnet color. The two middle feathers of the tail are similar in color to the upper plumage and the rest are brown. The female, instead of the ruby throat, has only a few obscure brown spots and all the outer tail-feathers, which in the male are plain, are in the female tipped with white.

This beautiful little creature is as admirable for its vast swiftness in the air,

and its manner of feeding, as for the elegance and brilliancy of its colors. It flies so swiftly that the eye cannot follow its course, and the motions of its wings are so rapid as to be imperceptible to the closest observer. Lightning is scarcely more transient in its flight, nor its glare more bright than its colors.

The most violent passions at times animate these small creatures. They often have dreadful contests when they believe that any other bird, even if it is one of their own kind, is trespassing on what they consider their own domain. They are fearless of mankind and in feeding will allow persons to come very near to them but on too near an approach they dart away with wonderful swiftness.

"A friend of mine informs me," says Dr. Latham, "that he kept these birds alive for months by placing artificial flowers with the bell of the flower fastened to a tobacco-pipe and painted a proper color; he then placed them in a natural position in the cage where the little creatures were confined; the bottom of the tubes were filled with a mixture composed of brown sugar and water, as often as emptied; he had in this way the pleasure of seeing them perform every action, for they soon became familiar, and, though close under the eye,

took their nourishment in the same manner as when ranging at large in the open air."

I watched a Hummingbird one day nearly three hours trying to locate its nest which I thought was somewhere near at hand. Finally it entered a rose bush near where I was standing; carefully I parted the branches and there was the nest, but just as I located it, they, for both the birds were present, made an attack on me, attempting to strike me in the eyes, they came and went in almost incredible swiftness, and I was glad to retreat. As soon as I was away from the bush they returned to their home to protect it from further invasion.

The tongue of a Hummingbird is formed much like that of a woodpecker, being curled around the head, under the skin, and thus capable of being darted to a considerable distance. Like many other little creatures, the assurance and impudence of the Hummingbird is remarkable. It is easily tamed, and for that very reason it has been known to domesticate itself in an hour's time after capture, and even when released it has returned again to partake of the dainties which it had tasted during its captivity.

GEORGE W. MACNINCH.

MIDSUMMER.

Hushed are the songs of birds,
And wearily the patient herds
Of dun-road Jerseys, seek the shade a-field
Or slake their thirst amid the oozy shallows
By shrinkage of the pasture stream revealed.
Deserted, brown and dusty lie the fallows;
While, outlined on the hills against the sky,
Flocks of white sheep, close-shorn, in silence lie.

—MRS. CORA A. MATSON DOLSON.

THE HOUSE WREN.

(*Troglodytes aëdon.*)

The russet Wren glides in among the vines,
And adds another strand unto its nest,
Then, on the neighboring trellis, pours its song.
The poor man's cottage is its favorite haunt;
And he is poor indeed, who to his roof
Can welcome not the yearly visitor,
To cheer his door with music!

—THOMAS BUCHANAN READ, "THE NEW PASTORAL."

All birds are beautiful, and in one way or another attract our attention and interest us. There are, however, certain of the smaller birds which seem to be almost a part of our own lives and seem to be members of our households. Such a bird is the House Wren. It is one of the best known of bird species in those rural districts which are enlivened by its presence. It will seek a home in villages and cities, and does not hesitate to build its nest in close proximity to our dwellings. It was once my pleasure to observe a very striking illustration of the attachment that man will acquire for these familiar and cheerful little Wrens. Sitting on the porch of a summer resort hotel and noticing the Wrens visiting the globe of a large illuminating lamp suspended from the roof of the porch, I asked the proprietor if the Wrens nested there. This practical man of the world said "Yes," and that he never lighted the lamp as he could not bear to disturb this happy bird home. He did not realize that in protecting these sprightly and active birds, because of his love for them, he was also favoring himself for the House Wrens are extremely destructive to insect life, which constitutes nearly all, if not the whole, of their food. They should be protected and encouraged to breed wherever they will, for they rear large families and not infrequently two in a season. The number of eggs laid varies from six to nine. Mr. Robert Ridgway in his "Ornithology of Illinois" quotes the observations of Colonel S. T. Walker, of Milton, Florida, who found that forty-seven days elapsed between the begin-

ning of the building of one nest and the time when the young left it. In this instance, the last egg was laid the third of May and the young left the nest on the first day of June.

The House Wrens are very active, and their familiarity and fearlessness are remarkable. One of their marked characteristics is persistency, and pairs have been known to rebuild a nest several times in a site that suited their fancy, though destroyed each time by human hands. Mr. Silloway says: "A pair of Wrens once laid claim to an empty shot sack hanging under a porch of a farm house, and refused to be dispossessed, even after their work had been thrown out twice by the farmer's wife. They finally reared a brood in the third nest made in this odd site." House Wrens become attached to a nesting site once selected and return to it year after year. They are irritably disposed, not only against individuals of their own kind, but also toward other familiar birds, such as the martins and bluebirds, which they will sometimes assail and drive from their homes and then take possession of the site for their own habitation. This habit has made the Wrens disliked by many people, especially in the East, but it should not be so, for the difficulty may be overcome by providing bird-houses enough for the three species. The Wrens are fully as useful as are the martins and bluebirds, but in a different field. Mr. F. H. King says: "The size of the bluebird, its method of obtaining food, and its haunts, fit it best for work in the open fields, where it should be



HOUSE WREN.
(*Troglodytes aedon*).
About Life-size.

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especially encouraged; the House Wren is especially fitted to do work among the shrubbery of orchards, gardens and yards, and these, particularly, should be the foci of its labors." Such places, too, are the choice of the Wrens, and if given places to nest in such localities they will be quite sure to occupy them.

It is quite difficult to enumerate all the kinds of sites that are acceptable to the Wrens for homes. The more common sites are hollows in orchard trees, bird-boxes, holes and crevices or any protected places about buildings, holes in posts, and fence rails, and, in fact, any nook the entrance of which will admit them. They have been known to nest in discarded tin cans, in an old teapot, between the window sash and the blinds, and in many other peculiar places. No matter where the nesting site is located, it is bravely defended against all bird intruders.

While the geographical range of the House Wrens is quite large, extending over eastern North America from Manitoba and Southern Ontario southward and west to Illinois and Louisiana, they are somewhat local in their distribution, for in the selection of haunts they are astonishingly particular. They are resident throughout the year from about the latitude of South Carolina southward.

In addition to its scolding notes, the House Wren has a beautiful song. It is a "merry little roundelay—a forcible, voluble gush of hurried contentment," and it is at its best during the time of courtship and while he is preparing a

home for his mate. The male is too busy, too full of life to sing long at a time, but he keeps up a constant chattering as he moves from place to place. Mr. Chapman has well described his vocal efforts. He says: "The song of the House Wren is delivered with characteristic energy—a sudden outpouring of music which completely dominates the singer, who with raised head and drooping tail trembles with the violence of his effort." Reverend Herbert Langille is very enthusiastic in his description of the song. He says: "Of all the songs of birds within the range of our acquaintance, there is no melody more gushing, more sparkling, more full of the very soul of vital energy than the warbling, twittering performance of this most active and industrious little creature. If the syllables have not that measured cadence, nor the tones, that heart-searching vibration, which moves one to melancholy, or to joy, to prayer or to praise, it touches the nerves with a startling impulse, like the gust of the summer wind shaking the leaves, the patter of rain on the roof, or the streaming of sunshine through a rift of the clouds." Mrs. Olive Thorne Miller listened to the song of the House Wren and wrote: "Never did a personage of his inches pour out such a flood of rapture. It was luxury to lie and listen to the gushing, liquid melody that floated into the window at my head." After the mating is over and the bird-bride of the happy Wren is installed in their home, he still sings, but his song is more subdued and not so vivacious.

IMMORTELLE.

Unto the last the world's best hearts will sing
Of sun and star in boundless sky, and rose, beneath;
These songs will live for aye, and doubtless bring
Full fund of happiness to Life; to Death, Love's wreath.

—C. LEON BRUMBAUGH.

HUMMINGBIRD HOMES.

It has been my privilege to be more or less intimately acquainted with three hummingbird families. With the first I was so timid, fearing to disturb the dainty owners of the home, that I only ventured a peep at long intervals and contented myself with securing the nest after the family had departed.

The second was built some twenty feet above ground on the limb of a large sycamore tree, a knot of which it closely resembled, with one huge leaf above it to protect it from the weather, and I could only observe it through an opera glass.

The third, it was my good fortune to discover some eight feet from the ground on the branch of an apple tree, the nest being formed of vegetable down stuck together with spider webs and covered with lichens until it seemed a part of the apple limb. When discovered, it contained two tiny eggs which resembled the small beans used for baking, except that they were translucent and ethereal looking, as if a touch would break them. Two days after the discovery, the eggs hatched, and there lay the two smallest birdlings I had ever seen. Such miniature unopened eyes! Such tiny, funny, gaping bills! Such thread-like necks!

The hummingbird is the most easily tamed of any of our wild birds, and the tiny host and hostess of this dainty home seemed rather to enjoy the daily inspection of their establishment. Flying to a spruce tree twenty feet from the nest they would preen their feathers and calmly watch me while I, standing upon a chair, would note the change from day to day in the little occupant of the nest. Usually but once a day was allowed for inspection. Then, the whole family assembled, each would mount the chair and enjoy the cunning sight with appreciative exclamations of "oh!" and "ah!" and "how cunning" and "how he grows," then the nest was left to itself for twenty-

four hours. Only now and then when callers came was this rule broken.

In each of the three families of hummingbirds I have known well, one of the tiny fledglings died a few days after hatching. One might think this was due to human interference had it not been the case in the nest far out of reach. In this case, the dead bird was discovered on the ground beneath the nest. In the other cases it was removed on the point of a penknife as the parent birds did not push the body out at once.

The parent birds did one thing that I could never understand. I observed it through the opera glass in the nest far above ground, and again in the apple tree nest near at hand. The parent birds would often stand upon the fledglings and execute a sort of dance with wings extended. They appeared to trample upon the young with their feet as if to massage them. So vigorous did this treatment appear to be that I was fearful lest they kill the little ones, and possibly this would account for the death of one of the young from each nest I have observed. One naturalist mentions having seen this same sight, but gives no explanation of it.

Having the nest all to himself seemed to agree well with the baby bird in the apple tree. He grew amazingly fast and the most wonderfully small green feathers appeared on his little buff body, and when he saw me looking at him he gave forth the most diminutive of birdling squeaks, and was altogether the most fascinating and charming of creatures. But the great world demands its due of hummingbirds as of men. In that tiny breast moved desire for larger life and broader fields, and the tiny wings grew responsive.

One perfect day I watched the little fellow all day, as the new-found joy of life moved within him. He would sit

upon the edge of the nest while his parents encouraged him to try his wings, then his courage would fail him and he would settle back, demanding more honey or another spider before he ventured forth again. The camera was brought and several pictures were taken, but to my great disappointment none of them turned out well. Once, alarmed at the nearness of the camera, the little fellow assayed to fly but fell to the ground in a fluttering heap of distress. I carefully picked him up. O, such a wee, dainty, trembling little object! Tenderly placing him in the nest I held my hand over him until he seemed to be asleep, and he remained quiet for some time. But as the afternoon waned, his ambition and strength seemed to increase. He now sat on the edge of the nest all of the time and he fluttered his wings more vigorously. I did not then know that young birds almost invariably leave their

nests towards night, or I would have gone without eating, so desirous was I of seeing that first real attempt at flight. But when six o'clock came and the shadows of the tall cliffs shut off the light from the western sky, it seemed to me no right-minded parents would allow their offspring to venture forth into the great world, and I left my dear protégé perched upon the edge of his tiny mansion, his little bead-like eyes looking at me intelligently, his little untried wings a-tremble with their new-found life. I ate my meal as quickly as I could, but alas for me!—in those few moments the great instant had come. When I returned the lovely nest was empty; no hummingbirds were to be seen. Infinite space had claimed my tiny companion; he had gone to fill his place in nature's great plan and I could only claim as my own the empty nest and pray for him a continuation of love and protecting care.

EDITH WILLIS LINN.

THE WILD GOOSE.

I hear the voices call me and I go,
Nor question of the way, nor why, nor where;
The tides of seasons bear me to and fro;
I am content as forth with them I fare.

Against the wind I press my trailing wings;
I breast the drive of rain, the stab of sleet,
And through the day and night my harsh cry rings
Over the woodland waste, and city street.

I journey far from mighty inland seas
To lakes and ponds, that lie in softer zone,
And in the warmth of Spring's inflowing breeze,
And in her vagrant storms, content I own.

—THOMAS JEFFERSON MARLIN.

A BOY'S OBSERVATIONS OF A HUMMINGBIRD.

On my way to school one morning, I ran across a Hummingbird's nest, which looked so much like a dried leaf that I came near passing it by. The nest was about an inch and a half across and it nearly matched the light gray eucalyptus leaf on which it was made, both in color and shape. A closer examination showed two pure white, oval eggs and a very cross little Hummingbird, who was very much provoked to have me intrude upon her nest.

About two weeks later, on coming near the nest, I saw a tiny, black-skinned baby Hummingbird in the nest alongside of the egg that had not hatched. The egg never did hatch, so the mother threw it out to make room for her young one, who was growing fast. The following days were busy ones for the little mother who had to work hard to get enough for her growing youngster, who made such rapid growth that at the end of three weeks he was nearly as large as

his mother. Some people near by hitched some cows under the trees; and one afternoon I found the young bird near its demolished nest. I brought it home and put it in an empty canary's nest, which it did not like. After some severe criticism of its new home it at last settled down and went to sleep. The following morning I heard it making a noise for its breakfast; I mixed some sugar and water together in a spoon and gave it from a straw. Later I fed it from a medicine dropper, which it took to as quickly as a duck does to water.

As it grew older, it began to take short flights; and my mother, fearing that a cat would get it, had a cage constructed for its confinement. A few days afterward we placed it on some nasturtiums, because we thought a Hummingbird that stayed around there would take care of it.

It stayed a few hours and then disappeared.

HARLAN TRASK.

JENNY WREN AND THE SPARROWS.

The Wren's box was under the eaves at the corner of the house. The entrance to this tiny, cozy cottage was through a door, the exact size of a 25-cent piece. This diameter allowed the Wren to enter her home with perfect ease, while the Sparrows could do no more than peep within. The door had no entrance step nor porch, but the roof of the well-curb, close by, served for this purpose.

The Sparrows decided to keep the Wren from feeding her family. In consequence, a regiment would line up on the roof of the house ready for battle. The anxious mother, returning with her dainty worm morsel, was sorely distressed. Her cry brought me to the rescue. Flirting my apron at the Sparrow

intruders I completely routed them—"for the time being."

The Wren was quick to learn her relief party. She would alight on the roof of the well-curb, just opposite the "army," drop her bit of food and sing a sweet, trilling song, to let me know of her return and need of help. (When the enemy was absent she failed to call me.) After the birdlets were fed the little mother would pour forth a seeming extra song of thankfulness.

This performance was repeated until the Wren's family was able to go into the busy world of workers. The Sparrows never ceased to bother; the Wren never ceased to work and sing.

HARMONIA TATE.



THE PHOEBE.

(*Sayornis phœbe.*)

Phœbe! is all it has to say
In plaintive cadence o'er and o'er,
Like children that have lost their way,
And know their names, but nothing more.

—JAMES RUSSELL LOWELL, "PHOEBE."

The homely and confiding Phœbes are, perhaps, more generally esteemed than any other birds. They are favorites with all who have made their acquaintance, and are always welcome at the North when they return in the spring from their winter home. The farmer realizes that their presence is a blessing and, being careful not to molest them, the Phœbes' confiding nature leads them to seldom build their nests at any great distance from human habitations in settled districts. While their favorite nesting sites are under bridges, cliffs of rock and earth, in caves, and under protecting rock shelves in quarries, they are almost, if not quite, as well satisfied with suitable places in barns or sheds and the porches of houses. They have also been known to nest in tin cans, and Mr. Dawson speaks of a pair which nested in an old coffee pot which was hanging on a nail in a deserted cabin. The economic value of the Phœbes is so well known that they are seldom disturbed and their tendency to nest near homes is constantly encouraged.

Mr. Chapman has well said: "There is something familiar, trustful, and homelike in the Phœbe's ways which has won him an undisputed place in our affections. With an assurance born of many welcomes he returns each year to his perch on the bridge-rail, barnyard gate, or piazza, and contentedly sings his *humble* monotonous *pewit-phœbe, pewit-phœbe*—a hopelessly tuneless performance, but who that has heard it in early spring when the 'pussy willow' seems almost to *purr* with soft blossoms, will not affirm that Phœbe touches chords dumb to more ambitious songsters." The

Phœbe's reputation is hardly equalled by any other birds. It is loved not for its song nor for the splendor of its plumage, but because its life so well fits the saying "handsome is that handsome does." The Phœbes are insect catchers *par excellence*. They are devoted parents and are never cruel. As a rule they exhibit an amiable disposition toward other birds, often nesting in close proximity to some of them, but a pair will not allow others of their own kind to occupy a nest close to their own. Some one has said the "Phœbes are almost faultless."

A large portion of the United States is favored with the presence of the Phœbes. Their range covers eastern North America, west to eastern Colorado and western Texas, and from the British provinces southward to eastern Mexico and Cuba. They breed from South Carolina northward and they winter from the South Atlantic and Gulf States southward. The Phœbes begin their northward migration very early in the season, and in the North they may well be called heralds of spring, for they begin to appear quite frequently very early in March, when their welcome voices are heard in their old haunts. They are the first of the fly-catcher family to leave their winter home, where there is such an abundance of insect life. Can it be possible that their deep love of home and of a brood of care demanding young hastens their departure toward their summer home, where it is too early for insects to be very abundant. They are also the earliest of the fly-catchers to breed and two or even three broods are often raised in a season. The female performs nearly all the work of incubation,

which lasts about twelve days. She is a close sitter and seldom leaves the nest. Her mate remains in the vicinity and faithfully watches for intruders. The young are fed only on insect food, of which they consume an exceedingly large amount each day. The parents must work very hard to obtain such a quantity of food. The nests vary both in form and in the manner of construction. The form depends upon the kind of support to which it is attached. When attached to the face of the support it is semi-circular, but if placed on a flat support it is circular. The nest is a thick walled cup or cup-like bracket constructed largely with moss and mud and lined with plant-down, mosses, fine grasses

and horse-hairs. The same pair of Phœbes are believed to return to the same place year after year and if they do not always avail themselves of the same nesting site they select one which is near by.

Regarding the economic value of the Phœbes Mr. Beal says: "An examination of eighty stomachs showed that over ninety-three per cent of the year's food consists of insects and spiders, while wild fruits constitute the remainder. The insects belong chiefly to noxious species." As two broods, each numbering from four to six young, are generally raised each season, it is quite evident that a single pair must materially reduce the number of insects in the vicinity of their nest.

SPIDER COURTSHIP.

Courting among spiders is decidedly a dangerous occupation, for, sad to say, in the spider world the female is more fierce and depraved than the male. She is larger, also, and the gentleman spider who goes to woo his lady, braves much more than a mere refusal or a possible unconventional exit from the house at the hands or feet of an irate parent. In fact, he carries his life in his hands, so to speak, for Miss Spider invariably tries to eat her rejected suitor. Nor is acceptance a guarantee of continued safety, for the capricious lady has an original and effective solution of the divorce problem. When she grows tired of her husband she simply makes a meal of him.

Those who have watched a spider courtship must agree that the spectacle is an interesting one. When she sees her humble admirer approaching, my lady takes up her position in the center of her web. The gentleman advances quite rapidly at first, but slows considerably as he gets nearer, and prepares to beat a hasty retreat should the lady of his affection attack him. When within about four inches of the web center he begins to show off his dancing. He

goes through some wonderful balancing feats, which his dear one watches with apparent interest, often changing her position, as though to gain a better view. If she seems satisfied the would-be husband moves toward her, in a series of semi-circles. If she should resent his approach she will make a dash at him, and he will run for his life. She may follow him, and in that case he needs to be lively. But generally she contents herself with a pretense of pursuit, and he returns to try his luck once more. He edges up very closely this time, though still with caution. He begins his dance again and she joins in, and soon both are whirling as fast as they can go.

The gentleman, after a few seconds retreats somewhat, but the lady, now thoroughly worked up, begins to consider his good points. If the result of her meditation is acceptance, they embrace, if not, the gentleman soon becomes aware of the state of her feelings, and, again, is obliged to run, this time, at top speed. After this, there is no return, and no gentleman, in fact, should the lady succeed in catching him.

LOUISE JAMISON.

THE PRICKLY PEAR.

(*Opuntia vulgaris*.)

The useful is not always beautiful, and there is sometimes in plants a combination of utility and harmfulness. A common variety of the North American Prickly Pear which may be classed in this category belongs to one of the most prominent species of cacti, and is found in various parts of our country. It attains its greatest growth in Western Texas and in certain parts of Mexico, matting vast stretches of land, and woe to the traveler who finds it necessary to wind his way through these thorny beds.

The plant is irregular in form, having somewhat the appearance of green plates elliptical in shape, jointed one upon the other, and both sides covered with long greenish thorns. It varies in height, sometimes growing as high as six feet. It is one of the few varieties of the cactus useful as food, and the inexperienced will be puzzled to think how this thorny plant can be acceptable as an article of food for either man or beast.

In cattle regions it is gathered and stacked in huge piles, and a familiar sight during the fall and winter months is a fire in which the plants are held for a moment, thereby burning off the thorns and leaving the fleshy cake a

most nutritious and enjoyable diet for cattle. This work has been facilitated in some localities by a machine which is used to burn the thorns on the plants as they stand.

The plant contains a liquid which doubles its value wherever a scarcity of water exists. The shepherd guides his flock to the prickly pear grounds, severing the plants with his machette and the sheep eagerly nibble the soft fleshy portion.

In certain parts of Southwestern Texas there are extensive tracts of the prickly pear of such large size and thickness of growth as to be impenetrable to man, but which are the home of the deer and other wild animals.

When flowering, the prickly pear presents a most beautiful spectacle, being covered with clusters of brilliant red or yellow flowers with many petals. The bunches of bright red pears, cone-like in form, look very tempting to lovers of wild fruits, but 'tis with a sense of disappointment that the uninitiated discover that a fruit so inviting to the eye should not be more luscious in flavor.

The fleshy portion of this plant has a healing effect, and is now used in the medical world.

NINA KING.

THE BUTTERFLY.

A tiny egg on a milkweed's leaf,
In the warm and mellow sun;
A belted worm on the selfsame leaf,
With its cocoon just begun;
A gilded bag of a china hue,
Like a gem of unknown name;
A mystic change, and a Butterfly,
Soars forth on its wings of flame.

—JAC LOWELL.

THE RUBY-CROWNED KINGLET.

(*Regulus calendula.*)

The Ruby-crowned Kinglet, "that natty little dandy," is only known in the larger portion of the United States during its migrations, for it breeds further north, aside from the Rocky Mountains, the Sierra Nevadas and, it is said, to some extent in the mountains of Arizona. Its range covers North America from the Arctic coast southward, and it winters in the southern United States and southward to Guatemala. During their spring migrations these Kinglets may be seen among the blossom-decked fruit trees, closely examining the blossoms, partly opened buds and unfolding leaves for insects, which form their food. During the fall migrations they are less conspicuous. They frequent woods, orchards and shrubbery and are often mistaken for wood warblers as they flit from point to point among the foliage. Their food also resembles that of these warblers, but in their method of climbing about the branches, while searching for insects, they are more like the chickadees. They are much more tame and lively than are the warblers, and they frequently move their wings in a nervous manner. They also utter a scolding note which, with their nervous motions and activity, make them seem quite wren-like. In fact, they are sometimes called Ruby-crowned Wrens. These dainty and diminutive birds are very useful to mankind. They not only search for their food of minute insects, their larvæ and eggs, on the foliage and twigs at the top of trees, but also search the twigs of branches lower down and on shrubbery. It is said that they have one very noticeable habit; they are thorough and if not disturbed seldom leave the twig upon which they have lighted until they have cleared it of insect life.

During the nesting season the Kinglets frequent the coniferous forests, in the trees of which their nests are built at an elevation of from six to fifty or

more feet above the ground. Their nests are somewhat globular in form and usually semi-pensile. They are constructed with moss and fine strips of fibrous bark which are carefully interwoven and lined with feathers. Sometimes large families are raised, for the number of eggs varies from five to ten. The Kinglets are courageous during the nesting season and do not hesitate to attack birds much larger than themselves. In his "Birds of Alaska," Mr. E. W. Nelson relates an incident observed by Dr. Dall. A pair of Kinglets "which appeared about to commence a nest in a small clump of bushes tore to pieces a half-finished nest of the rusty-headed blackbird, and upon the return of the female blackbird the pair of pigmies attacked and drove her away. This was repeated several times, and when Dr. Dall left Nulato the quarrel was still unsettled."

Often the first indication of the presence of the Ruby-crowned Kinglets are their somewhat garrulous and grating call-notes. These notes sometimes precede its marvellously beautiful and powerful song. This song is noted for its softness, sweetness, and its brightness and vigor of expression. Mr. Ridgway has described the song as "an inexpressibly delicate and musical warble, astonishingly protracted at times, and most beautifully varied by softly rising and falling cadences, and the most tender whistlings imaginable." It hardly seems possible that such a loud and powerful a song could emanate from the throat of so small a bird. Dr. Coues has said: "The sound-producing organ is not larger than a pinhead, and the muscles that move it are almost microscopic shreds of flesh, yet its song may be heard two hundred yards." The song must be heard, for it defies description and any syllabic rendering of the notes is unsatisfactory. One of the best descriptions of this exquisite song is that of Mr. Chapman. It



RUBY-CROWNED KINGLET.
(*Regulus calendula*).
About Life size.

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was the first time that he had heard the Kinglet sing. He says: "The bird was in the tree tops in the most impassable bit of woods near my house. The longer and more eagerly I followed the unseen singer the greater the mystery became. It seemed impossible that a bird which I supposed was at least as large as a blue-bird could escape observation in the partly leaved trees. The song was mellow and flute-like, and loud enough to be heard several hundred yards; an intricate warble past imitation or description, and rendered so admirably that I never hear it now without feeling an impulse to applaud. The bird is so small, the song so rich and full, that one is reminded of a chorister with the voice of an adult soprano. To extend the com-

parison, one watches this gifted but unconscious musician flitting about the trees with somewhat the feeling that one observes the choir-boy doffing his surplice and joining his comrades for a game of tag."

The Ruby-crowned Kinglet has been called a "dainty monarch." Dr. Henry Van Dyke calls him "Little King," and in his poem, "The Kinglet," says:

"Never king by right divine
Ruled a richer realm than mine!
What are lands and golden crowns,
Armies, fortresses and towns,
Jewels, scepters, robes and rings,
What are these to song and wings?
Everywhere that I can fly
There I own the earth and sky;
Everywhere that I can sing
There I'm happy as a king.

A WESTERN MEADOWLARK.

The Meadowlark to which my story relates was reared in a beautiful, hair lined cradle sunk below the level of the unbroken sod and overshadowed by a thick tuft of long coarse grass, upon the far stretching prairie.

He shared the nest with four other fledglings who filled it to overflowing, while their growing appetites demanded the almost constant attention of their devoted parents who foraged far and wide, catching insects which flaunted their bright wings among the prairie grasses, or delving deep in the cultivated soil and drawing forth the corpulent grubs.

Despite the attention their offspring demanded, they failed not to break the prairie's stillness with the clear and varied notes of their wonderous song, so far surpassing that of their eastern relatives. The male seemed to delight in frequenting the roadside and trustful of the chance passerby, he would perch upon a weed or nodding grass stalk and sing his song of hope and cheer until the human listener approached so near as plainly to distinguish the swelling of his yellow

throat; or if discovered upon the ground he would often half spread his wings, stoop lower and throwing backward his beautiful head pour forth a soft sweet trill of gurgling notes before soaring far across the flower bedecked plain.

The summer was well advanced when their young were large enough to assume the responsibilities of providing for themselves, for when the first nest had long been completed and the young were daily expected, a fire swept across the prairie, and their nest, with many others in its path, disappeared as if by magic. Only the charred shells lay upon the naked ground while the saddened owners sought a new site and prepared for the rearing of another family.

The day was intensely warm when the young Meadowlarks started forth upon their first hunting expedition alone and unaided. At noonday the birds had hushed their songs and with slightly extended wings and panting breasts seemed to join the drooping flowers and grain, fast ripening before its time, in their silent appeal for rain. At last it came, but with it came the dreaded hail and all living things sought shelter while

the grain bent before the wind and was beaten as by a mighty flail, and large white stones bounded high in exaltation above the ruin they had wrought.

My hero lay beneath a large gray stone and escaped uninjured but when the storm was spent, shaking his dampened feathers, he started forth. All unheeding him, a hawk passed by dragging a broken wing; a maimed grouse fluttered along the ground, and his beautiful mother lay with her storm-beaten breast turned to the pitiless sky, while across the ice-strewn prairie came the sad note of her lonely mate.

He passed the remainder of the summer and autumn without farther adventure save when, the water supply having failed in the ravine he frequented, he visited a barn yard to slack his thirst and venturing too far over the brim of the watering tank, he fell in and was found there by the farmer's daughter, an apparently lifeless form. After warming him by the kitchen fire, rubbing his damp plumage, and blowing into his unresisting throat, her efforts were rewarded and he showed signs of returning life; but before his unsteady limbs would bear him, the instinct of self-preservation asserted itself and he began pecking viciously at the hands that had saved his life, showing that the mouth held open for the exit of the sweetest song may be used for sterner things.

The prairie grasses were brown and dry and the first snowflakes had fallen before he joined others of his tribe on the long migration southward. I know not of his adventures in his sunny winter home but before the snow had left the northern slopes and slight ravines, before the swelling buds had unfurled their tender leaflets to the breeze, his joyous song was once more heard upon the prairie and each human listener gladly welcomed the sweet harbinger of spring.

In due time, he and his newly chosen mate began the structure of their dwelling and his heart seemed overflowing with joy as in the cool early morning, the genial warmth of noontide, or in the soft hush of evening he called to her whose responsive notes seemed the faint, sweet echo of his song.

But, alas, that man should so often change the purest domestic joys of his feathered friends to keenest sorrow! One evening while singing on a stake by the roadside, all trustful of the human pedestrian approaching him, a shot rang out; the song was stilled and the minstrel's life-blood stained the springtime grasses while through the still evening air sounded the single mournful note of his mate, repeated again and again in accents of despair, one of the saddest notes that Nature ever knows.

HATTIE WASHBURN.

A BIRD IN THE HAND.

While visiting a primary schoolroom near Chicago, my attention was called to a frightened hummingbird, incessantly beating its dainty head against the ceiling of the room. For over an hour, without a moment's pause, the poor creature strove in its agony of fear to find an exit through the hard plaster, which must have seemed like a sky of heretofore unknown resistance.

While the pupils were being dismissed, the tiny bird dashed down behind a large

framed picture, which offered a semi-shady retreat. It could have found no spot on which to cling, for when the frame was lifted the bird fell to the blackboard ledge, where I caught it in my hands. Its head fell to one side from either fright or other exhaustion, and it seemed to be dying. "Get some syrup," I called to my friend. There was none to be had. "Then get some sugar and water as quickly as possible," and as these were at hand they were made ready

for the little patient. I thrust the bird's bill into the spoonful of diluted sweetness and was glad to see the beak open and a small quantity of the water disappeared. In a short time the muscles of the fairy frame began to gain strength and soon the wings pressed strongly against the palm of my hand, as I tried to prevent its escape. A little child, who had remained with us, beseeched me to let her take the feathered guest, and with her promise to not let it fly away until we had examined it more carefully, I parted with my treasure.

Together we went into the next room, where the pupils were yet studying from books, and there our little visitor readily partook of more refreshment from the cup of sugared water. Hardly one of the many children had ever before been so near a living specimen of this fairly common species of American birds and not one, including the teachers, had ever seen one quietly drinking.

"Is its bill a tube? Does it suck the syrup through its tongue? Does it ever eat anything but honey? Can it sing something beside that squeak? These and many other questions showed the intense interest of the little unfeathered bipeds about me, and for awhile it was difficult to find an opportunity to give answer. Perhaps you may make a similar capture during the year and not be ready for such a catechism and a repetition of some hummingbird truths may be of interest here.

The probe-like bill is not a tube, but it is used as a protection and guide for the long tongue, which moves so rapidly that one can hardly discover its motion. These birds do eat insects which haunt the funnels of the trumpet flower, the petunia blossoms, and other long-necked repositories of plant nectar; and here would be a chance to discourse upon the difference between the bee-made honey wrought from the plant supply and its original form when in the flower. The bird does not absorb its liquid food after the manner of the boy with a lemonade straw, but drinks it, drop by drop, by means of its long tongue. Its hard bill, beside serving as a means of defense more powerful than the awe-inspiring hat pin of the school girl, also aids it in

securing a change of diet in the shape of tiny spiders which often infest plants, and other insects which are desired neither by the flower nor the gardener or farmer. It thus pays for its sweet repast of nectar and for its protection; for who has ever heard of the destruction of these morsels of bird-life in our part of the country.

It needed only a glance to tell that this little wanderer from the world outside was either a female ruby-throat or a male less than one year old. Does some one ask "How did you know?"

The method of determining is extremely simple, for there is only one species east of the Rocky Mountains and Colorado, and that is *Trochilus colubris*, or the ruby-throated hummingbird, and it is found from Labrador to Uruguay, according to season. In the Northland they are with us from May to October; the remaining months they spend in travel and search of health in other lands.

Both sexes are wonderfully attractive in the iridescent coloring, but to the mature master belongs the blood-red ruby at his throat, which gives him his name.

Beyond the barrier of the Rockies one will discover many other varieties of these dervishes of the air, who, if they do not actually whirl, at least make as many motions as the most devout of whirligig devotees.

Many persons have declared that they have seen one species hovering over clover blossoms in the dusk of twilight or in the evening hours. But the youngest and the least expert of true, close observers will soon discover that this strange nectar-seeker is a moth and not a bird.

As to actual protection of the ruby-throat by written law I cannot say, but unwritten ruling is in his favor here. Beyond Mexico's northern boundary and southward throughout the South American countries, which are his habitat during his migration, he suffers violence from the bird-hunters who supply the wants of the milliners of all lands which are civilized enough to have their women wear hats. There has been a time when a wreath of murdered ruby-throats about the crown of an Easter creation of rib-

bons and silken flowers was considered the acme of fashion and for which the devout attendant at Easter service would pay a sum sufficient to support a missionary for months. If that sum had been called a fine for the destruction of innocent, happy life the milliner's attempt at artistic arrangement of colors would have received its true name of barbarity. But the word "Fine!" was used only in commendation. Thanks to the united efforts of the Audubon Societies and other bird-lovers, bird sacrifice is becoming poor taste as it grows unfashionable.

A few years since a friend of mine had her dining-room window nearly covered by a trumpet-creeper. In the shade of this plant, among the flowers they seem to love best, a pair of ruby-throats came one May day and made their nest, and so close to the window was it built that all their house-planning and house-keeping could be closely and easily observed. The male would often rest upon a twig among the thick green leaves, and in a squeaking voice tell either of his

love for his mate or of his day's labor. The tiny eggs hatched under the care of the house-people, for they saw to it that no cat or other beast of prey, two-legged or four-legged, molested these tiniest treasures of bird land. The nestlings, small as honey bees at first, grew rapidly from the effect of the nourishment thrust down their infinitesimal throats by the beaks of their parents. They became nearly full-fledged air sailors in a few short weeks; then, all flew away together and the house beautiful on the inside of the window panes has nothing but loving words when any of its members speak of the home beautiful outside.

For reasons very apparent to those who have ever made friends with any family of our little brothers of the air, hummingbirds, mounted life-like upon swaying wires, amid laces and bewitching blossoms, have seemed as a sacrilege to them and to their friends, who together watched the unfolding of that unwritten idyl among the summer leaves.

MARY CATHERINE JUDD.

AUGUST.

I know 'tis August, for the milkweed flower
Hangs heavy-headed on its stately stem.
Soon shall the pale, curved pods, shed silver floss
To broider Autumn's robe with shining hem.

I know 'tis August, for the fields of rye
No longer wave in shining billowy ranks;
But have, like armies, pitched their tawny tents,
And streams have shrunken, 'neath their willow'd banks,

The harvest fly, with sudden stinging sound,
Rings his triangle in the drowsy trees.
He bids us note wan Summer drifting by,
Her robe scarce stirring in the languid breeze.

Subdued bird-music hints of southern flight;
At night the katydids begin to call
And deep-toned crickets chant of shortening days
With coming frosts, and glories of the fall.

—BELLE A. HITCHCOCK.



THE MOURNING DOVE.

(*Zenaidura macroura*.)

The breeding and the geographical ranges, both being practically the same, are extensive, covering temperate North America from the southern portion of Canada and British Columbia, southward ward to Panama and the West Indies. The majority of these birds winter south of the more northern states, but some have been known to remain through this season as far north as Ontario. The cooing of this Dove, which is one of the most mournful sounds in nature, is also one of the characteristic voices of spring. The sadness of its notes, however, do not indicate a mournful nature, for they are not notes of grief, but, rather, they indicate attachment for their mates.

The Mourning Dove, also called Turtle Dove and Carolina Dove or Pigeon, is to my mind a bird of exemplary habits. It is rarely quarrelsome and easily adapts itself to its favorite locality, placing its nest wherever it seems most convenient. The nests of these birds may be built in trees, bushes, on stumps and logs, on cliffs and on the ground, especially in treeless regions. Occasionally they will utilize the old nests of other birds, and I know of one instance where a pair nested in a cavity of a tree. It is my experience that the Mourning Doves are rarely seen during the nesting season in greater numbers than two in an area of one or two acres. This trait may account, to some extent at least, for the fact that they are abundant and have not been exterminated as is nearly the case with its relative, the passenger pigeon. I am informed that these Doves sometimes nest in colonies consisting of a few pairs. In one instance, it is said, the nests were found in a small group of pine trees. The nests are simply frail platforms made of sticks, twigs and roots when built in trees, but if placed on a large limb or a stump a mere rim of twigs, sufficient to retain the eggs, is constructed. On the ground a few

straws and twigs are all that is usually used. These Doves rear two and sometimes three broods in a season.

After the breeding season both the young and the old Doves collect in flocks and resort to grain fields and berry patches. Eating plentifully of various grains, the seeds of weeds, small acorns and other nuts, berries, worms and insects, they become fat and their flesh becomes delicate and makes a food that is appreciated by hunters. At this time, it is a favorite pastime of gunners to station themselves in the fields and bag the birds, their swift and straight flight offering a great temptation to the sportsmen.

An interesting note regarding the Mourning Doves in the arid regions of the Southwest is given by Major Charles Bendire in his "Life Histories of North American Birds." He says: "In the more arid regions of the West, especially in southern Arizona, I have often noticed this Dove a long way from water, but as they are exceedingly strong and rapid flyers, distance is but a trifling matter to them. They usually visit their regular watering places in the morning, and in the evening just before sundown, and, where water holes or springs are scarce, they can be seen coming from all directions in search of such localities, usually in pairs or little parties of from four to six. At this time, if closely watched, they are a sure guide to water. Old mountaineers are well aware of this fact, and, if not familiar with the country they shape their course after the line of travel of these Doves, which is always a direct and straight route to the objective point."

In the southern portion of the range of the Mourning Doves, their mating season begins early in March, and fresh eggs have been found toward the last of that month, and Major Bendire says that he has taken them in Arizona as late as the fourteenth of September and might,

probably, have found them still later had he looked for them. In northern Illinois I have found them nesting from the last of April to the first of August. The eggs of these birds vary considerably from a true oval and are usually a glossy white, though some have a rather rough surface.

The Mourning Doves show a strong attachment for their mates throughout the season. Both parents exhibit a true

love for their young and give them much attention even after they have left the nest, and it is said that the mother bird will brood fully fledged young, though she always sits crosswise of them. The love notes of these Doves are familiar to those who are acquainted with the birds. While they are low and rather mournful in sound they may be heard at some distance. It seems impossible to give a satisfactory syllabic description.

FRANK MORLEY WOODRUFF.

THE RUSSET-BACKED THRUSH.

(GRAY'S HARBOR, WASHINGTON.)

O wandering thrush! the homeland is the best;
The salmon berry blooms for thee, its guest,
And songs are in the air, ended thy quest.

The forests' thine, their fragrances so sweet,
Afar the line where sky and mountain meet,
Thy message lends the charm to make complete.

After the long and difficult ascent
To heights where vision sweeps the firmament,
What infinite repose thy voice hath lent!

Like to the fir tree's fragrances that stay
In rich suggestions through the long sweet day,
The echoes tell that thou hast passed that way.

O song that lures me where the fir trees grow
Or down into the "tide flats" far below,
Still constant where the shadowed rivers flow!

Tenderest at morning, half subdued, it seems
Only the ending of the gladdest dreams,
The gentle wave beat of melodious streams.

Triumphant when the sun sinks low behind
The dark hill-forests, and the searching wind
Is gone with day, and night is still and kind.

'Tis then it rings in notes so sweet, so clear,
The very angels well might pause to hear
And, listening long, leave heaven to draw near.

And when the twilight fades, the long day done
Between the silences thy song rings on,
The voices of the night are thine alone.

Aye, when the darkness comes, silence un stirred
Save by thy son, O little flute-voiced bird,
A truer harmony was never heard!

—NELLY HART WOODWORTH.

BIRDS AND NATURE

Smithsonian Inst. May

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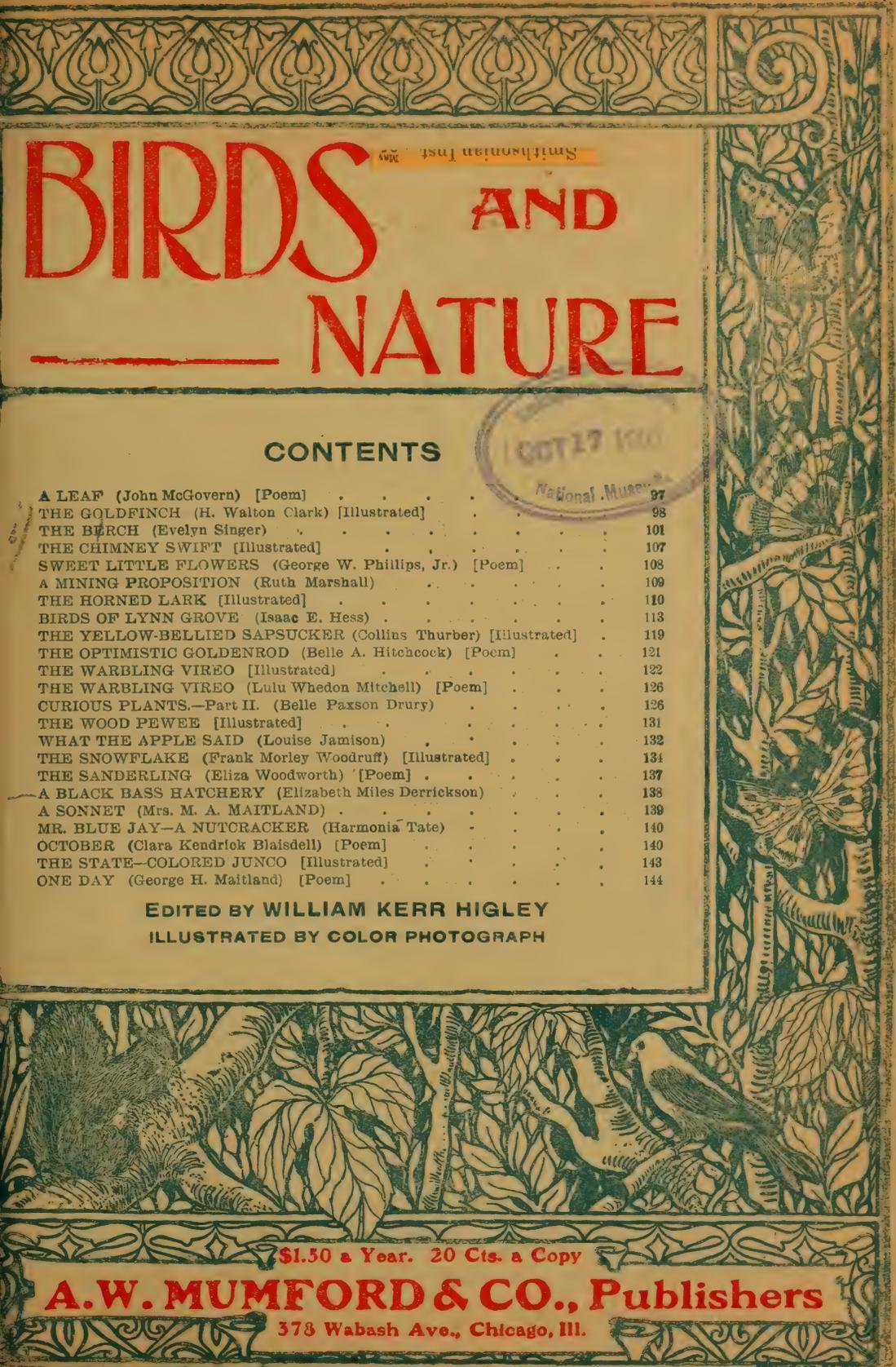
EDITED BY WILLIAM KERR HIGLEY

ILLUSTRATED BY COLOR PHOTOGRAPH

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BIRDS AND NATURE

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BIRDS AND NATURE.

ILLUSTRATED BY COLOR PHOTOGRAPHY.

A LEAF.

From out the topmost bulb—a budding sentry—
A leaflet spread its green against the blue;
The songsters heralded its earthly entry
And it was christened in the morning's dew.

All through the summer, on an oak that towered,
A stately captain of his lordly kind,
It fanned the birdlings in their nest embowered,
Or from their housing turned the churlish wind.

Then autumn chanting came, in vestments sober,
Bearing the cup of dissolution's lees;
Forth in the majesty of hazed October,
A withered leaf was hearsed upon the breeze.

—JOHN MCGOVERN, "John McGovern's Poems."

THE GOLDFINCH.

(*Spinus tristis.*)

Let almost any country boy tell over the birds he knows by name, and one of the first names to be mentioned will be "wild canary" or "yellow bird" as he calls it.

There are several reasons why the Goldfinch is one of the best known of our native birds. The far-seen yellow, gleaming like sunshine, contrasting with the unilluminated blackness of cap and wings, distinguishes him from every other bird, so there is no getting him mixed up with his various relatives or with some other fellow that looks like him. The sight of one of these birds perched on the rim of a thistle chalice, busily pecking seed and launching fleet after fleet of airy parachutes upon the dreamy autumn haze, mingling a cheery call now and then, is one of the most familiar and idyllic of country scenes, and full of significance too, as to the usefulness of the bird.

The call, also, is one of the items that helps make the bird well known, for it is quite characteristic of him, and he is never silent for a long time. It is not a call that particularly attracts the attention or makes any startling break in the silence; it is not even a clear whistle nor in any way a challenge to the attention nor a sustained song, though he can sing when he tries. It is rather a cheery, conversational voice, that one learns to recognize just as he does that of a friend.

Again, the Goldfinch is one of the comparatively few birds that even the amateur can distinguish by its flight. One does not need to wait until it alights to tell what it is. Its flight, unlike that of any other of our birds, is a series of undulations. It is like some fairy boat bounding over waves of air. As he approaches the top of each crest, he utters a musical, cheery *teé-de-dee*, so that you can actually identify him in flight with your eyes shut, or looking the other way.

Perhaps another thing that helps not a little in the recognition of this bird

is the fact that he reminds one somewhat of a canary, and there are few circumstances more helpful toward seeing things than to have them in the mind's eye to begin with. Most of the boys are of the opinion that the bird is a real canary that has either escaped, or not yet been captured, and it is this bird, perhaps more than any other that his wishes associate with a cage; not because it is more beautiful or a sweeter songster, so far as he knows, but because it is one of the most familiar birds in this relation.

Most boys are of the opinion that the bird leaves us in winter; that is because he changes his colors so completely in autumn that his best friends recognize him only by his ways—his voice and flight. He is now more sparrow-like, with two white wing-bars. Now he associates more with others of his own kind and they frequently gather in large flocks, and seek out weedy places in neglected fields, where they take care of the seeds. When frightened, the flock arose together into the air, each one rising and dipping in gentle undulations. It is as graceful as the aerial dances of midges on a summer's day; only there is a forward motion, and as they weave their way through the air, it occurs to one that if they had only kept their summer raiment, what a splendid cloth of gold they would weave.

They are among the earliest birds we hear in spring. Two birds alight on the same or neighboring trees and begin *tee-heeing* each other. In their language it is perhaps only a friendly conversation, but in human language that "*tee-hee*" with which they salute each other is one of the most guying and derisive sounds on earth and it would be difficult to imagine two children bandying that sound back and forth without serious results. Perhaps if he had been known better when fables were in vogue some gentle Aesop would point out to quarrelsome children how this angelic bird keeps his temper



GOLDFINCH.
(*Spinus tristis*.)
7-8 Life-Size.

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unruffled under the most exasperating circumstances.

One of the most inconspicuous things about him, a thing that many of his acquaintances do not suspect him of, is a most delightful song. It is a quiet affair, surprisingly well sustained and varied, and full of sweetness and melody. It can occasionally be heard in spring after the leaves have come out well, but is most frequently heard later, in July or August, after most other birds have ceased singing. The singer is almost always hidden in a dense leafy covert, but one can recognize the singer by familiar calls that slip now and then into the song. It is hard to decide after one has heard it

all, whether his song is a symphony of his notes, or his notes are fragments of his song.

This pretty bird is found throughout temperate North America, from southern Labrador, Manitoba and British Columbia south, in winter, to the northern boundary of Lower California. It breeds southward to the middle districts of the United States, and it winters mainly within the United States. The nest is a beautiful little structure of vegetable fiber and is lined with vegetable cotton or thistle down, and it is placed at various heights in trees or bushes. The eggs are pale bluish white and are unspotted. H. WALTON CLARKE.

AMONG THE TREES.

THE BIRCH.

"How beautiful the country looks!" thought Mabel, as perched on a grassy knoll high up on the hillside, she looked down into the valley beneath. "What a variety of shades there are! Those fields of wheat look just ready for the reaper, and when the wind stirs them they look like great billows of gold on a mighty ocean. There, the oat fields are swaying in the breeze; their blue-green color contrasts so prettily with the wheat. How beautiful the country is! and what a pretty tree that is yonder! Its silvery-white bark shows so plainly through the foliage how peculiar it is! its limbs show so distinctly and it stands so straight and erect on this slanting hillside. The young branches with their small, light green leaves droop like the weeping willow. Let me think, what kind of a tree is it. I believe I have it now.

'Nor Birch, although its slender tress
Be beautifully fair,
As graceful in its loveliness
As maidens flowing hair.'

These words she quoted, as she came within its shadow and reached up, carefully drawing a long, graceful, trailing twig near her and gently fingered it.

"You are right, I am a Birch," came in low, musical notes to her ear.

"And your voice is as low and sweet as your foliage is light and airy. You are a singularly graceful tree and the shade which you cast on the ground reminds me of the walnut for I can see the flickering lights and shadows when the wind stirs your leaves. You are like the walnut in another respect, for I can see the full outline of your branches through your foliage."

"In those respects I am like the walnut, but unlike it in this, there is not in my foliage the glint of gold which you so admire in that tree."

"Tell me about yourself, your family, will you, Birch?"

"If you wish; perhaps you know that we, like certain other trees, are of an ancient family, for we date as far back as the tertiary rocks. There are nine branches of our family of which one, the Canoe Birch, should belong to the Indian alone, for it was so interwoven with his life as to be of it a part. It furnished him not only with snowshoes and sledges but also with canoes and paddles, with which in summer he could glide down the mighty streams, shoot the foaming rapids, or steering out into the placid waters of the inland seas, wander from island to island, fishing or hunting; or when intent on war its frail bark would bear him swiftly and safely to his enemy. Or again, when

the streams were frozen over and the lakes were sheets of ice, when the ground was covered with snow and the winds of winter were howling, he would bind on his snowshoes, or harnessing his dogs to his sled, be off like the wind.

"Nor was this all; when building his wigwam, he would take strips of its bark to thatch it, and thus protect himself and his family from the rough storms of winter, and in summer's heat, its sap gave him a cooling drink, or boiling it down, he had a syrup for his corn bread. Is it any wonder that I say the Canoe Birch should belong to the Indian alone? Alas! the Indian no longer roams the forests as he did of old."

"I suppose the Canoe Birch is the one so closely connected with Hiawatha?"

"The very same; there was a man, the poet Longfellow, who rightly understood our inner life. He does not have Hiawatha ruthlessly destroy, or mercilessly take but has him ask, for does he not say 'Give me.' All through that wonderful poem founded on the legends of the North American Indian it is not 'I will take,' but 'Give me.' Notice.

'Give me of your bark, O Birch-Tree!
Of your yellow bark, O Birch-Tree!
Growing by the rushing river,
Tall and stately in the valley!
I a light canoe will build me,
Build a swift Cheemaun for sailing,
That shall float upon the river,
Like a yellow leaf in Autumn,
Like a yellow water-lily!"

"And the tree with all its branches
Rustled in the breeze of morning,
Saying, with a sigh of patience,
"Take my cloak, O Hiawatha!"

finished Mabel.

"You know it then "

"Yes; Hiawatha is one of my favorite poems. Longfellow so described the beauties of nature in telling those Indian legends as to make it very fascinating."

"If I had hands I would clap them for Longfellow, since I have not I will rustle my many leaves."

"Oh what a pretty picture you make; but tell me some more."

"About the Paper Birch, another

member of our family? Pliny and Plutarch agree that famous books were written on its bark fully seven hundred years before Christ.

"Another member, the Hop Hornbeam has wood so strong that it excels in strength all other woods of the forest and to it has been given the wild-wood name of Leverwood. This tree bears its fruit in hop-like clusters and each seed is enveloped in an inflated bag. Being pale green in color they contrast well with the dark leaves of the tree which is a low-growing one, generally standing in the dense shadow of some larger tree.

"There is also the Yellow Birch whose beautiful, golden bark has a silver sheen and the shreds when separated curl about it, for all Birches peel horizontally, like the ribbon decorations of some fantastic lady. I suppose we are the gypsies among trees, for our apparel is always thread-bare and ragged."

"I have often noticed bark peeled like that on trees, but did not at first know what it was; but tell me Birch Tree, the bark is the most useful portion of you is it not?"

"I rather think it is, especially in the far north, for you should know that we grow farther within the Arctic Circle than any other trees, even the firs. Our inner bark is often bruised and mixed with food to which it is a valuable addition, owing to the abundance of starch which it contains.

"We are the only tree of Lapland and we grow so small that it is said six full-grown trees can be put in a man's overcoat pocket."

"Pretty small trees," laughed Mabel, "and I should say of little use on that account."

"Not so; they use every bit of us there. Our bark is used in the manufacture of mats, cords, baskets and waterproof boats and shoes. You wonder how so small a tree can do so much! Well a strip of bark furnishes an incredible number of thin sheets.

"They also use it as does the Indian, in roofing their homes to protect themselves from snow and wind; strips are twisted into torches and burn well,

owing to the oil which they contain. Thus you see we light the hut which we have helped to make. There also our inner bark is used as food, but it is ground into flour and then made into bread."

"The Laplander must indeed be proud of you!"

"It is but a small journey from there to down-trodden Finland where you will see that the people virtually live on wood; but there it is the shavings of our wood with which they thatch their roofs. The women of Finland use us as brooms."

"As brooms, how very strange! Pray tell me how."

"The simplest thing in the world. A bundle of fresh green leaves are tied together and with this she sweeps her floors; it is the best kind of a broom too, for it does not raise the dust only to let it settle again, but the natural dampness licks it up. The broom is then burnt and next day another is used. The Finnish woman is very particular about sweeping, for be it known she sweeps her entire house every day."

The Tree ceased, and Mabel sat looking up at its beautiful foliage. How she loved to be out among the trees! She loved the wild freedom of the woods and often said to herself that there surely must be some Indian in her. She could think of no more delightful an outing than roaming through woods or listlessly floating down the river in her canoe.

"From Finland to Russia is but a step," seemed to come from the Tree. "You have heard of Russian leather?"

"Yes indeed; I own a pocket-book of it. It has a pleasant though a peculiar smell."

"That odor is due to an oil which is distilled from our leaves and young branches, and is used in the manufacture of Russian leather. Perhaps you have heard of its ptarmigan, that white bird of the north?"

"Yes, and often longed to see it. The poor thing! Why does it not migrate like other birds?"

"I'm sure I do not know unless it is that it is so well provided with food where it is."

"Food, I should think its food would be all covered over with the deep snows!"

"Not so, for the bird feeds chiefly on the seeds of the birch."

"What are your seeds like?"

"Like the pussy willows. In some parts of the world country lore tells us that evil spirits seek and greedily devour the seeds of the Sweet Birch."

"How pretty the pussy willows are! I love to rub them against my cheek. Then too, the sight of them is always so gladdening, for it speaks of the joyous spring-time when all nature is awakening from her long sleep. Have you no legends in connection with your family, Birch Tree?"

"No; but I can tell you an odd freak of nature in connection with us, which has only recently been discovered. It seems that a quantity of Canadian Birch timber was purchased for a certain chair factory. Now in the center of one of these pieces, which was thirty-six inches in thickness, there was found a young birch tree two and a half inches in diameter. Fortunately the saw had not severed it, and it is to be preserved."

"How did it get there?"

"Well, as it enjoyed an independent existence, it is supposed that years ago a seed fell into the hollow part of the old tree and developed into a sapling which forced its way up through the trunk of the parent. This hollow was completely filled for the distance of several yards."

"That is odd."

"Another strange story almost equal to a legend, comes from the head waters of the Stewart River in the frozen north. At the first outbreak of the Klondyke excitement, a widower, the father of two daughters, went north from Spokane, Washington, to seek his fortune in the gold fields. He lost his life in a snowslide which occurred as he was trying to cross one of the passes. Now the brother of his dead wife was also in the north, but he spent toilsome years in prospecting and mining; in company with a friend, he had just begun to work some promising claims when he was taken ill. They

were camping in the snow, and feeling no doubt that the end was near, he wished to send his beloved nieces a message and to bequeath to them the wealth which he had acquired. Search was made for paper but none was to be found, so by the light of a taper, probably made from the portion of the bark of a birch tree, he wrote his will on a piece of birch bark. Then Death seized him for his own, and he was buried in the snow."

"How sad it is," said Mabel, as she watched the scene beneath her. Far off she could see men at work in the hay fields, and mellowed by distance the whirr of the mower was borne to her ears. Brilliant hued butterflies were flitting about like animated blossoms, and the joyous notes of an oriole sounded near. She looked about for him, and espied his gorgeous form swinging on a drooping limb of a maple, as he sang to his more sober colored mate on the nest. A light wind stirred the trees, but gaily he sang on his airy perch; the same breeze played with the graceful, drooping twigs above her and the rustling of the thin and dainty leaves took form:

"The grand old oak grows slowly, it takes its time and does its work well; we grow quickly, for our life is short. Our wood is often converted into shoe pegs and also into furniture which passes for mahogany; but our bark is lasting. We grow on windy hillsides and on breezy tops, where often a great storm blows one of our number down. If allowed to lie, the heartwood decays, but the bark remains intact, like a huge pipe whole and sound.

"In the peat bogs of Lancashire and Cheshire, England, pieces of birch bark have been dug up which must have lain there for thousands of years. The wood has long since become a portion of the peat, but the white bark was sound and tough and bright as ever.

"Along the rocky shores of some of your northern lakes, you would see strange sights, and so would any one who loved Nature and sought for her, shall I say hidden, secrets? No; for they are plain enough to those who look."

"I understand your meaning, Birch

Tree. Many take a glance and pass on without a thought; others again, see so much in a glance because they love Nature and all her marvellous ways. Some see trees and know that they have life because they grow, others believe that they have feeling."

"There you have it! Which one of your great writers said: 'A bird alighting on a small branch sends a thrill through the whole tree,' and again: 'I believe that every little rose has its own sorrows and joys?'"

The tree was silent as though musing on the different phases of human character. Mabel waited for a while and then asked:

"Have you forgotten what you were going to tell me about the rocky shores of those lakes?"

"Oh, said the Birch Tree as it roused from its reverie, "well, a birch seed will perhaps be carried by the wind or dropped by a bird in a fissure of a rock. It sprouts, there is sufficient moisture for the tender roots and it grows quickly; the roots become stronger, and sometimes split the rock open in their search for deep earth and food. Or again, the slender roots wander over the surface of the rock until they reach the earth, and the tree grows tall and straight to the height of sixty feet or more, with the roots still encircling the rock."

"There are indeed strange things in Nature's world," said Mabel.

"Yes, if one has but the seeing eye to search them out; you, for instance, have enjoyed life more thoroughly since you have carried about with you the 'ears of imagination.'"

"Indeed I have," said Mabel, and then she fell into a train of thought. How many wonderful things she had learned of late! What new zest was imparted to her life! Long and earnestly she waited for the Birch Tree to speak but although it rustled its dainty leaves and the long tendrils swayed gracefully in the wind, no sweet, low words like the voice of the Tree reached her ears. Still she remained, for the breezy hillside was a delight to her, and the scene beneath her was a pleasant one indeed.

EVELYN SINGER.



From col. Eugene Bliss.

CHIMNEY SWIFT.
(*Chastura pelagica*.)
2-3 Life-Size.

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THE CHIMNEY SWIFT.

(*Chatura pelagica.*)

The range of these well-known birds is quite extensive for it includes North America east of the Great Plains, from the Fur Countries southward. They breed from Florida and Texas northward and seemingly winter south of the United States. They are very commonly called Chimney Swallows and while there is a general resemblance between them and the swallows they are much more closely related to the Whippoorwills and Hummingbirds and are now classed between these two groups. The Swifts are remarkably gregarious excepting during the nesting season. They are frequently congregated in such large flocks as to quite darken areas underneath them. This social habit also extends to their period of rest for they are known to roost together in certain large hollow trees and even in large chimneys which have become popular with them as lodging places. Audubon and Wilson, as well as more recent writers on the habits of birds, record instances where very large numbers of these birds have resorted to large hollow trees which served them as a roosting place from which they would issue at the break of day with such a rush as to create a loud noise. Mr. Langille, in his book "Our Birds in Their Haunts," speaks of one very interesting instance which came under his observation. It was an enormous brick chimney belonging to a large stone building which was once used as a distillery. Around the top of this towering chimney he saw "an immense cloud of many hundred, perhaps, thousands, of Chimney Swifts." As he saw them, they were "whirling and gyrating in swift evolutions, the whole body moving in the same direction like a feathered whirlpool, their wings beating with astonishing rapidity, and the volume of their sharp twitter being almost deafening." The black cloud while still whirling became more dense as it neared the

chimney-top and every few minutes a section of the great host dropped into it. Mr. Langille watched them until the greater number had thus disappeared. He says that this was a common scene about the old distillery and that it may have occurred from the time of the arrival of these birds in the spring to the time of their departure in the fall. As he thought the chimney might be the breeding place of the Swifts, he watched the inside from an opening which gave a full view of the whole interior but did not at any time detect a nest. He believed that the chimney was simply a grand place of rendezvous. As it was noticeable that the number which frequented the chimney was reduced during the time of nidification, it seemed probable that it was then used as a general resort for the males. Mr. Ridgeway in his "Ornithology of Illinois" sites an instance of where a sycamore tree which was hollow its entire length was used as a lodging place by the Swifts. The birds commenced to assemble around the top of this tree about half past seven in the evening until three or four thousand had arrived, when they rapidly disappeared beneath the foliage. It was said that the tree had been thus used by the Swifts for nine successive years. In the morning, the birds left their resting place at sunrise. The tree was deserted at the appearance of frost in the fall.

The family of Swift's is cosmopolitan in range, but east of the Rocky Mountains, like its nearest relatives, the family of hummingbirds, it is represented by but one species, the Chimney Swift. Before the advent of man and his habitations and factories with their chimneys, the Swifts nested altogether in hollow trees, selecting, as a rule, those with a large hollow trunk which had an opening at the top like a chimney. At the present time, the

Swifts usually nest in chimneys, a fact which well illustrates how readily birds will change their habits when the conditions presented are more favorable. In the chimney they are free from the enemies which annoy them when they are nesting in trees. In the unsettled and wilder portions of the country, they are still known to nest in hollow trees. The nests are bracketlike structures of twigs which are fastened together and to the supporting wall by an adhesive secretion of the birds' salivary glands. These glands become much smaller after the breeding season is completed. The cement-like secretion hardens into a very firm substance which not only securely holds the twigs together but also, as firmly attaches the nest to its support. It is said that in separating the nests from the sides of chimneys, sometimes the bricks will break before the cement will yield.

Few birds bear a more appropriate common name than the one we illustrate. The word Chimney is appropriate because of their nesting and roosting habits, and anyone who has

observed their flight will agree that the word Swift is a most satisfactory name. So rapid and powerful is the flight at times, that it is not surpassed if even equalled by any other birds. It is said that the Swifts may fly a thousand miles in a single full day. They rest only in their lodging places, to which places they do not seem anxious to retire even when darkness approaches. While resting, they do not perch but cling with their claws to the walls and are partly supported by their tails. While the Swifts sometimes fly quite late at night, they are really crepuscular rather than nocturnal in their habits. In dull and cloudy weather they may hunt their insect prey, which is always captured while flying, throughout the whole day. During brighter days, however, they chiefly hunt during the early morning and late in the afternoon. It is true that "few sights in the bird-world are more familiar than the bow-and-arrow-like forms of these rapidly flying birds silhouetted against the sky."

SWEET LITTLE FLOWER.

Sweet little flower! so fair, so frail,
How can'st thou bear the ruthless gale?
Surely some power must bid it spare
So sweet a flower, so frail, so fair.

The earth is happier for thee,
And yet what chance if any see!
The air is sweeter for thy breath,
But who will know or heed thy death?

If thou wert human, little flower,
Thou'd pine and perish in an hour,
Instead of blooming, day by day,
Contented by the lonely way.

O heart of mine, though full with pain,
What reason hast thou to complain?
When thou wouldst murmur at thy lot,
Remember the Forget-me-not.

—GEORGE W. PHILLIPS, JR.

A MINING PROPOSITION.

Breakfast was late one hot morning last August. So we walked out on the porch to possess our souls in patience as best we could. There was no need of hurry after all. At the end of the porch was a luxuriant growth of wild clematis. We idly sauntered up to it and picked off a leaf, which we were just about to throw away when our attention was taken by some queer markings upon it. What was the matter with it? In fact, what was the matter with most of the leaves on the vine? Brownish serpentine lines were on all of them, each beginning in a small, round spot which curved out, widening as they progressed. Some were short, some were several inches long. What could they be? Not marks on the leaf, but something inside; we could see a tiny tunnel, with a thin roof over its length. We seated ourselves on the steps and went to work to solve the mystery, with a pin for a dissecting instrument. No lens was at hand, but perhaps sharp eyes would do. We started with a big tunnel. Sure enough, the roof was the delicate upper epidermis of the leaf; something had dug out the green parenchyma cells leaving the lower epidermis intact for the floor of the excavation. It must be something very tiny indeed to find room to work between the upper and lower edges of a leaf. We would follow up the tunnel and find the miniature worker. The chase grew exciting, as the clumsy pin tore away slowly the delicate tissue of the roof. Finally the enlarged end was reached and there was

the miner, the tiniest little white grub or caterpillar snugly curled up, and almost too small to be seen with the naked eye.

Now it was all clear, going back the other way, the ever narrowing tunnel ended, or rather began, in a little round spot. It was a case of circumstantial evidence. Some mother insect had laid a speck of an egg in the leaf under the epidermis. The larva emerged and ate the food at hand, the green cells. When this was gone, it ate on forward in a winding line, till now, its appetite appeased, it was ready to turn into a pupa. To confirm our suspicions of the parentage of this little miner, we now noticed the presence of several minute moths flying here and there over the leaves as if looking for places to deposit more eggs which should hatch into more miners and make more blotches on our clematis vine.

It was a long time after breakfast was finally eaten that we found out the family history of the leaf miners. There are many of them, so say the insect books, and each species mines a different kind of a leaf. Some mines are long and narrow, and these are called the linear. Some are narrow at the beginning and enlarge rapidly and curve, and so they get the name of trumpet mines. Those which we investigated are the serpentine. Some leaf miners are flies, some are beetles, but most of them, like ours, are tiny moths, the pigmies of their race, to whom a leaf offers an ample field for operations.

RUTH MARSHALL.

THE HORNED LARK.

(*Otocoris alpestris.*)

It is quite disappointing that the beautiful Horned Lark, or Shore Lark as it is frequently called, should only be known in the United States during the winter season, when it is songless and its time is spent only in the practical work of obtaining food. On the western continent it breeds only in northeastern British America as far west as Hudson Bay, and southward through Newfoundland and Labrador. It also breeds in Greenland and Northern Europe. Its fall journeys extend its range as far westward as Manitoba and southward into the United States as far as Illinois, Ohio and on the Atlantic coast to North Carolina. The Horned Larks come to their winter home in flocks varying from a dozen or so to a very large number. Upon the Atlantic coast they appear in October or November but the larger flocks soon break up into smaller groups, each of which settles in some locality where there seems to be a sufficient food supply. There they usually remain until they have exhausted the supply of food and are obliged to seek a new field. They feed in large numbers upon the flats left bare by the retreating tide. In the interior of the country they frequent large, flat and open tracts and are seldom seen in wooded localities.

The Horned Larks are in reality always terrestrial, seldom aspiring to a perch higher than the top of an ordinary fence. They walk and run with perfect ease upon the ground or upon the snow. When disturbed they do not fly, as a rule, except when forced to do so in order to escape and then they fly high and utter a sharp whistle note.

In their summer home, the Horned Larks are said to sing a charming song which is uttered while the bird soars.

Mr. Audubon says: "The male soars into the air, sings with cheerfulness over the resort of his mate, and roosts beside her and his nest on the ground, having at this season a very remarkable appearance in the development of the black and horn-like egrets." Mr. Langille gives an interesting account of the male's song habits. "Hearing its song, now quite familiar to me, I strolled warily through the open field, hoping to find its nest. But whence came the song? It was as puzzling as the voice of a ventriloquist. Now it seemed on the right, and now on the left, and now in some other direction. Presently I caught the way of the sound, and lo! its author was soaring high in the air, moving in short curves up, up, singing for a few moments as it sailed with expanded wings before each flitting curve upward, till it became a mere speck in the zenith, and finally I could scarcely tell whether I saw it or not. But I still heard the song, one that never can be mistaken, so unlike is it to that of any other bird." Finally the bird started to descend and Mr. Langille says: "Down, down it comes, meteor-like, with wings almost closed, until one fears it will dash out its life on the earth. But no, it alights in safety, and steps along with all its wonted stateliness."

The nests of the Horned Larks are built in a depression in the surface of the ground which is copiously lined with fine grasses, moss and feathers. Sometimes the nesting is begun while the snow is still upon the ground near the chosen nesting site. Instances have also been reported in which after the eggs had been laid, snow had fallen to such an extent that the faithful sitting bird was nearly or quite covered.



From col. F. M. Woodruff.

HORNED LARK.
(*Otocoris alpestris*.)
4-5 Life-size.

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BIRDS OF LYNN GROVE.

Upon an elevation conspicuous for a radius of twenty miles and known as one of the highest points in Illinois, stands Lynn Grove,—one of Nature's beauty spots. A hundred acres of heavy natural timber so entirely foreign to its immediate surroundings of black rolling prairie land, is an unusual sight. Indeed we who dwell near this beautiful grove feel that Nature in a most lavish mood overstepped her natural laws in the creation of this jewel of the prairies.

It stands alone in its majesty, having neither forest nor stream connection with the neighboring timber-belts which stretch away in long blue lines, five miles distant on either side. We find no streams of water gurgling and murmuring through its forest aisles and looking upon so noble a gathering of giant trees we wonder at its conception.

Great sycamores and shell-barks abound along the streams of the neighboring forests but both are absent here. In their places are lofty honey-locusts lifting their heads to dizzy heights;—great, spreading walnuts grown to the size of oak trees, while the oaks themselves, not to be outdone by inferiors, have reached magnificent proportions. An outer wall of thorn-trees, wild crabs and plum thickets surrounds three sides. The humbler growths of saplings, with heavy masses of paw-paw and wild gooseberry form an ideal undergrowth. At every suggestion of an open spot a lynn (or bass-wood) has sprung toward the sun, and the great number of these trees present has given the grove its name.

High, and distinctly outlined against the horizon, Lynn Grove is a veritable bird magnet, a mighty gathering place for the hosts of feathered creatures journeying southward in the autumn and returning in the spring. Pierced geographically by the fortieth parallel, the grove nestles between two bird zones. Latitude forty is the northern limit of many southern species as well as the southern border line of many stragglers from the north. Hence we

may reasonably expect (and are often rewarded with) opportunities in forming new acquaintances in the bird world. Occasionally we are surprised with unlooked for visitors, for Kites have sailed and Bald Eagles have screamed over her mass of inviting tree tops. But who would expect to meet that noble specimen, the Golden Eagle, in an inland grove of Illinois? Yet a fine seven-foot "Aquila" left his home among the Rock Mountain crags to spend three happy weeks feeding upon the rabbits of Lynn Grove. It is to be regretted that such a life was taken, but his magnetic presence excited Nimrodic ambitions among the farmer boys and his daring proved his undoing. During May and early June the grove is literally alive with Warblers and an early morning visit in time for the awakening of the chorus, will prove a never-to-be-forgotten one. Twenty species of this attractive family have been observed here on a single day in May. During August, Robins in armies of thousands, Grackles in hordes, and Red-Wings with innumerable kindred spirits, gather and spend several weeks feeding upon the berries, before their departure for the south.

Living in close proximity for several years and being permitted through the kindness of the owners to enter and explore at will, I have spent many happy and profitable hours taking bird census in Lynn Grove. My visits have usually begun in early spring, for while much is yet to be learned about the winter habits of the birds, our actual winter residents form so small a list, that the uncertainty of meeting them on mid-winter days, tends to lessen rather than encourage the enthusiasm attending later visits. Winter lingers long with us in central Illinois and so powerful is her grip that when the first week of March has arrived we see no visible sign of her departure. The clouds are of the same gray hue and the bleak winds moan in the same key that saddened the February days and lengthened that shortest month of the year into

a seemingly interminable period. Usually, however, about the second week in March a miracle is performed. One morning the sun rises in a cloudless sky, a gentle clinging breeze creeps in from the south and we hear soft whispers of promises in the air. Even the dead snow on the southern slopes seems to awaken into life and with a last flash and sparkle, disappears. Something, invisible but intoxicating, lays hold upon us and we are restless. From past experiences, we know that all nature is responding to the voice of spring and we are seized with an irresistible longing to hasten to the grove and tell it to the birds. Before we reach the woods, however, we find the secret is out. The birds already know it and have been for days preparing to celebrate this very morning. High in the air, from some quarter in heaven, it seems, comes softly floating down the first Bluebird notes of the season. Surely these little birds with the blue sky on their backs, are blessed with intuitive power, for are they not here and does this not prove that a day and a night's journey away, they had heard the whisperings of spring?

Entering the woods we find the Crows wild with delight, and would you believe it?—there is almost melody in their caws to-day. High overhead a Red-tailed Hawk is lazily drifting and I shortly find his mate reconstructing their last summer's home. Here again we see evidence of several days' anticipation of spring's arrival. How do they know? Does Nature in her loving ministrations speak to these, her wilder children, in quite another language? How humiliating to feel that we, of the genus "homo"—heirs of a superior intelligence, are tardiest of all God's creatures in interpreting Nature's various tongues.

The fine March morning brings out the entire feathered population of the grove with the exception of the three resident owls. The Great Horned, Little Screech and Long-eared representatives of this family are not attracted by the sunshine and remain in hiding in the dark corners and hollow trees. They are among the few birds that are little affected with changes in weather conditions.

From every quarter of the timber comes the rolling taps of the Downy and Hairy Woodpeckers. These vigorous little fellows have found their favorite sounding boards and each key of the scale is represented, with all the sharps and flats. Interspersed with the rolls, we hear the loud "chinks" of the excited Hairy Woodpeckers and the same notes of lesser volume, from his miniature cousin, the Downy.

Running up and down the main trunks of the trees we see numbers of White-breasted and Red-bellied Nuthatches—the little upside-down birds. The former is a constant resident with us and is perhaps even now looking for a suitable site in which to rear his interesting family of eight or nine children. The latter, however, is not satisfied to stay with us and within a few weeks will be well on his way toward his northern summer home in Canada.

Following the Nuthatches in their search for insects in the bark, are the Brown Creepers. These tiny little birds have a peculiar habit which distinguishes them from other species at a distance. Ascending the trunk of a tree in a spiral climb, they usually leave it after reaching the first limb. A short flight then brings them to the bottom of the next tree, which is mounted in the same manner, each tree in turn being ascended round and round, in a way suggestive of an inclined plane. The long, curved bill of this bird enables it to reach the inner crevices of the bark and obtain the insect food passed over by the larger birds. The notes of the Creeper are so like those of the little Kinglets, that they are with difficulty distinguished. The spring love-song of the Kinglet, however, is a superior production; in fact, one of the richest of all bird melodies. Only snatches of it are heard here, just enough to prove the little performer worthy of the praises bestowed upon it by its fervent admirers from the north. Both of these diminutive birds spend the summer months in the pine woods of the northern states and Canada.

With the Woodpeckers, Nuthatches and Creepers performing their several parts, the trees are fairly well stripped of insect life, the outer branches only being neglected. Here we find that

little favorite, the Black-capped Chickadee, lively and acrobatic; now grasping the tip of the outermost twig; now hanging head downward, in his zeal in fulfilling the mission Nature has assigned to him. The Chickadees are content to remain with us and although the grove is near the southern limits of the Black-cap's range, several pairs may be found here most any day during the year.

The Chickadee is an excavator and hews out the cavities for his nests like the Woodpeckers. His bill, however, is not so hard as those of his larger friends and he must needs find a softer wood in which to ply his chisel. For this reason you will find the dead stumps of the wild plum trees to be his favorite nesting sites. The cavities are hewn out with marvelous neatness, the entrance being as true a circle as could be made by man with tools. Much taste is exhibited in the selection of nesting material, only the very softest fur, hair and feathers being used. When the nest is completed, the little owners become almost fearless of man and this sociability has endeared them to bird lovers to such an extent, that they are easily the favorites with the majority of observers. One of my Chickadee experiences will never be forgotten and the memory of it is sufficient to draw me to their haunts, each succeeding spring, in pleasant anticipation. I had found one of their homes in a plum stump, and to determine how far the nesting had advanced, I inserted a finger in the entrance. Immediately I felt a succession of vigorous pecks, and upon withdrawing my hand, Mrs. Chickadee appeared. Bristling with anger at being disturbed, she alighted upon my wrist. With ruffled feathers she slowly walked up my forearm, turning her head to view me with either eye. After giving me an unmistakable scolding, she seemed satisfied with my humbled appearance and my promises to be good, and carefully smoothing her feathers, she saluted me with "chickadee, day, day," and hopped back to her duty to the hidden treasures.

This troop of Chickadees enlivening the March woods reminds me of my

little friend, and their spirited "day, day, day's," recall the fact that a month later will find them busily engaged with home duties.

Two other birds are helping to swell the March chorus and both are whistlers. The louder of the two musicians is a Cardinal, and we look with pleasure for a flash of his bright crimson coat. We shortly see him (and to his best advantage) scratching in a snow bank, and here Nature presents to us, her strongest and most vivid color contrast.

The other whistler, (perhaps the more pleasing because of the softer tones) is a Tufted Titmouse, and his "purley" "purley" is heard from every direction. When you find him (for he is a sort of ventriloquist and hard to place), you will be surprised at having to credit so plain a bird with such sweet liquid notes as you hear falling from his throat. Two more birds end our March day's list; the Blue Jay and the Bluebird. Both are conspicuous in the sky's brightest shade of blue, but how different are their natures. The former's notes are loud and ringing, with defiance and a challenge in each cry. The latter's song is soft and mournful, with a seeming sob in every note. The Jay, though admired for beauty of form and feather, is despised and shunned by man and bird because of his cruel nature; while the Bluebird, with gentleness exhibited in every movement, is beloved by all.

The winter residents of the grove number about twenty-five species. Of these, fourteen stay throughout the summer season and are therefore the only true residents. The great spring migration brings a procession of forty-three species which spend the summer months in the grove, rearing their families. These we list as "summer residents."

Stragglers are arriving all through the month of April and not until late in May does the last traveler return. By the 25th of May, we may safely conclude that all non-residents have departed northward and any bird seen after that date is almost sure to spend the summer with us.

On the first warm morning of April

we will doubtless be able to record a number of interesting home comers. Sweeping the skies in graceful evolutions, the great silent Turkey Vultures are showing unmistakable delight at being home again. Three giant trees with huge cavities are awaiting their tenants. They are typical "Buzard" residences and at least one is occupied every season. A month later a visit to one of these homes will reveal the mother Vultures silently covering two great, handsome eggs, the most beautifully marked of all bird's eggs.

Upon all sides we hear a constant rattling of the dead leaves covering the ground and investigation shows the presence of an army of Towhees. These shy, but conspicuously feathered birds have just arrived and are rapidly turning over the leaves of their new feeding grounds. His lively musical "chewink" regularly dashed between scratches, has a pleasing tinkle to ears listening and longing for early spring melodies.

The Red-bellied and Red-headed Woodpeckers, with the Flickers, arrive in unison, augmenting the Hairy and Downy forces already here. Such an army of woodchoppers soon set the chips a-flying, while the woods ring with the combination of noise-making efforts. The Hairy nests in April; the Downy, Red-bellied and Flicker in May; while the Red-head, for reasons known only to himself waits until June to begin housekeeping.

Already we hear the loud emphatic notes of the Great Crested Flycatcher, one of the most interesting of our birds. If he is not king of the woods, it is not because he has not proclaimed himself as such. His self-satisfied demeanor and proud bearing would seem to indicate his natural right to the honor, and yet we do not know what he has done to merit the title. He is an eccentric fellow and through a peculiar inherited trait he has puzzled the ornithologists for ages. He exhibits an odd mania for adorning the walls of his tree-cavity home with cast off snake skins,—a barbaric taste which seems to be regulated only by the source of supply.

We do not visit the grove again until

May, and lo! it is as though touched by a magic wand. The trees are heavily dressed in that eye-restful green, the ground richly carpeted with "Blue-eyed Marys" and Violets and the delightful perfume of May apple blossoms pervades the air. Bees are humming and birds are wildly singing. The eye is delighted, the ear is ravished, the heart is enraptured and held.

At regular intervals a series of "Aeolian" notes thrumb to the breeze; it is the perfect melody of the Wood Thrush. We hear the wildly happy carols of the Rose-breasted Grosbeak, intermixed with the "chip" "churs" of the Scarlet Tanagers. The garrulous caws of the Crows are softened by the sonorous "quanks" of the Nuthatch. The hoarse croaks of the ponderous Great Blue Herons at work on their nests in the tops of the honey locust trees, seem to fill a natural place in the woodland concert. Startlingly close to my elbow, I hear the Red-eyed Vireo with his never ending questions, "did you see me," "prove it," "who saw me?" In his sad and mournful strain the Wood Pewee answers, "Wee-o."

The quick, nervous calls of the Crested Flycatcher, the excited cackling of the Cooper's Hawk, the screams of the Red-tail, the squawks of the Night Heron and the resonant challenge of the querulous Jay, have their parts in the woodland chorus. The simple, earnest whistle of the Bob White, the hurried warblings of the House Wren, the soft mourning of the Dove, the happy care-free ditties of the Indigo Bunting and Yellow-throat, and the sweet chatter of the Goldfinch are so soothing in effect that I am content to sit and listen to the wonderful melody. The first days of May in the woods surpass all others in the year, for it is Nature's season of thanksgiving, when birds and bees and flowers and trees give praise and honor and glory to the Creator.

Evening's shadows are stealing upon me and I am loth to leave, for well do I know that a full cycle of months must roll around before the glories of this season shall be repeated.

Isaac E. Hess.



From col. F. M. Woodruff.

YELLOW-BELLIED SAPSUCKER.
(*Sphyrapicus varius.*)
3-5 life-size.

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THE YELLOW-BELLIED SAPSUCKER.

(*Sphyrapicus varius.*)

The Woodpecker family is of great interest not only for the variety of brilliant and striking colors which mark many of the species but also for its unusual structural peculiarities, the heavy, chisel-like bill, the sharply-clawed feet with two toes pointing behind and two ahead, the stout tail-feathers used to help support the body against the tree trunk, and lastly its peculiar sharp bristle-barbed tongue. This combination of odd characters has produced a very curious and interesting group of birds.

Of the twenty-five species of woodpeckers which inhabit the United States, one of the most interesting is the Yellow-bellied Woodpecker or Sapsucker. It is a conspicuous bird, easily known by its bright red head and throat, and black and white streaks on the sides of the head and the greenish-yellow color of the breast and under parts. It is not as active as most of the other woodpeckers, being apparently of a sluggish nature. Indeed, so slow is this bird to fly when approached that one may almost put their hand upon it before it will take flight. Like its relatives, it has the habit of always being on the opposite side of the tree trunk.

The Yellow-bellied Sapsucker is the most migratory of the woodpeckers, wintering from Illinois and Pennsylvania southward and breeding from this section northward. Its range includes the whole of Eastern and Northern North America from Costa Rica and the West Indies to Texas, Nova Scotia, Kansas, North Dakota, Manitoba, Ontario, Great Slave Lake, and British Columbia; it is accidental in Greenland. In the latitude of northern Illinois the birds arrive about the first of April on their northern migration, and in the New England States about two weeks later.

Like that of other woodpeckers, the nest is made in the hole of a tree from eight to fifty feet from the ground. The hole is excavated by the bird to a depth of some twenty inches. Unlike the perching birds this Woodpecker does not line its nest with soft materials but lays its eggs on a bed of chips left from cutting its hole. The eggs are five to seven in number, glossy white, and measure about seven-tenths by nine-tenths of an inch. The eggs are laid one each day until the set is completed. Both parents assist in the important function of incubation. The young are fed wholly upon insects, the sap-eating habit being acquired after they have learned to fly. During the time the young are in the nest the old birds become as adept at catching insects on the wing as flycatchers, and it is a very curious, and sometimes a ludicrous sight, to observe these ungainly birds perform their aerial gymnastics in their efforts to catch these insects.

Of all the woodpeckers, the Yellow-bellied Sapsucker is practically the only one which is harmful to the agriculturist, and this is true only in certain localities. The bird is insectivorous like its fellows, but adds to its insect diet the sap of trees as well as the inner bark or cambium. Its method is to drill a hole in the tree and allow the sap to flow. This is repeated over and over again until a tree is fairly girdled with these punctures. Not only are fruit trees thus girdled but also shade trees, such as birch, maple, oak and ash. This bird has been observed at work of late in Lincoln Park, Chicago, some of the maple trees having the sap running from the punctures like water.

In bulletin number seven of the Division of Ornithology and Mammalogy of the United States Department of

Agriculture, Mr. F. E. L. Beal, following Dr. Merriam, makes the following interesting reference to the sap-sucking habits of this Woodpecker. "They really do considerable mischief by drilling holes in the bark of apple, thorn-apple, and mountain ash trees in such a way as to form girdles of punctures, sometimes two feet or more in breadth (up and down), about the trunks and branches. * * * * The holes, which are sometimes merely single punctures, and sometimes squarish spaces (multiple punctures) nearly half an inch across are placed so near together that not infrequently they cover more of the tree than the remaining bark. Hence, more than half of the bark is sometimes removed from the girdled portions, and the balance often dries up and comes off. Therefore it is not surprising that trees which have been extensively girdled generally die and mountain ash are much more prone to do so than either apple or thorn-apple trees, due, very likely, to their more slender stems. The motive which induces this species to operate thus upon young and healthy trees is, I think, but partly understood. It is unquestionably true that they feed, to a certain extent both upon the inner bark and the fresh sap from these trees, but that the procurement of these two elements of sustenance, gratifying as they doubtless are, is their chief aim in making the punctures I am inclined to dispute. As the sap exudes from the newly made punctures, thousands of flies, yellow-jackets, and other insects congregate about the place, till the hum of their wings suggests a swarm of bees. If now, the tree be watched, the Woodpecker will soon be seen to return and alight over the part of the girdle which he has most recently punctured. Here he remains, with motionless body, and feasts upon the choicest species from the host of insects within easy reach. In making each girdle they work around the trunk, and from below upwards, but they may begin a new girdle below an old one. They make but few holes each day, and after completing two or three remain over the spot for some little time, and as the clear fresh

sap exudes and trickles down the bark they place their bill against the dependent drop and suck it in with evident relish—a habit which has doubtless given rise to the more appropriate than elegant term Sapsucker, by which they are commonly known in some parts of the country. I have several times watched this performance at a distance of less than ten feet, and all the details of the process were distinctly seen, the bird looking at me, meanwhile, 'out of the corner of his eye.' When his thirst is satisfied he silently disappears, and as silently returns again, after a few hours, to feast upon the insects that have been attracted to the spot by the escaping sap. This bird, then, by a few strokes of its bill, is enabled to secure both food (animal and vegetable) and drink in abundance for an entire day; and a single tree, favorably situated, may suffice for a whole season."

Mr. Beal states that the insect food of this Woodpecker is made up of ants, wasps, beetles, flies, bugs, grasshoppers, crickets, and mayflies; a few spiders are also eaten. Of these insects, thirty-six per cent consisted of ants, five per cent of beetles and six per cent was made up of bugs, wasps, caterpillars, crickets and mayflies. This constituted a large per cent of the diet. Of the spiders the 'daddy-longlegs' made up by far the largest percentage. Among the fruit and other vegetable food are dogwood berries, black alder-berries, Virginia creeper berries, wild black cherries, blackberries or raspberries, poison ivy seeds, mullin seeds and juniper berries. From the above food list it will be seen that this Woodpecker is not entirely injurious, but does really destroy some noxious insects.

The tongue of the Sapsucker is very curious. Unlike its relatives in the woodpecker family it is not barbed nor is it as long or as extensible. It is comparatively short and thick and the tip and sides of the end are provided with fine, strong hairs. These are supposed to aid in guiding the flow of sap into the mouth. The tongue is not used as a dart, as in many other woodpeckers, the bill alone being used to pick

up insects, as in most insectivorous birds.

The note of this Woodpecker is said to resemble the low mew of a cat, and it is most often heard in the spring. This is in great contrast with the loud rattle-like cry of its relative the red-headed woodpecker. In the Pacific coast

region the Yellow-bellied Sapsucker is replaced by the red-naped sapsucker, which has similar tree-girdling habits. Another common western form is the red-breasted sapsucker, which is common in Oregon and California.

COLLINS THURBER.

THE OPTIMISTIC GOLDENROD.

“The splendid glow of my yellow hair
Is faded now,” said the Goldenrod,
“To fluffy greyness so soft and fair,
And I am still thankful that from the sod
I sprang a stately, dominant weed
To cheer the land when late summer comes;
My sunny warning the birds all heed
And seek the south ere the winter’s drums
Are beating a sleety reveille.
I do not mind that my hair is grey,
I have been beautiful in my day—
Gold-haired or silver, my heart is gay,”
Said the cheerful Goldenrod.

“Pansies and roses and lilies rare,
Gorgeous poppies in ruffled silk,
Mystic moonflowers, white as milk—
All have shone in their beauty fair,
Filled with enchantment the days and nights,
Flowery pageant of sweet delights.
Then I, unloosing my hair of gold,
On hill and roadside my glory shed,
And light so cheering it plainly told
Never are beautiful things all dead.

“If you are thinking I look forlorn,
Faded, forsaken, of beauty shorn—
Don’t you feel sorry. I shall be born
Again, some mislaiden August morn,”
Said the cheerful Goldenrod.

—BELLE A. HITCHCOCK.

THE WARBLING VIREO.

(*Vireo gilvus.*)

Sweet little prattler, whom the morning sun
Found singing, and the livelong summer day
Keeps warbling still: here have I dreamed away
Two bright and happy hours, that passed like one,
Lulled by thy silvery converse, just begun
And never ended.

—ARCHIBALD LAMPMAN, "TO THE WARBLING VIREO."

Of the vireos Mr. Silloway has well said that they, "like the various members of the flycatcher group, are frequently confused by the general observer, and hence they are not so well known as their charming manners and pleasing characteristics merit." The Warbling Vireo is not only a beautiful and interesting bird but it is also a most useful one. It should be better known than it is, for its economic value cannot be overestimated. It is exceedingly industrious in its search after its insect food and is most persistent and painstaking in its examination of the leaves and branches of trees in search of the insect foes of the foliage. In the Northern part of its range it begins its work early in the season, soon after the buds have opened and before the fruit-trees of our orchards have burst into blossom. Its valuable work is continued until about the time in the fall when the foliage loses its value as a provider of insect food. Its most useful service, however, is its habit of examining the young buds and branches for the larvæ which are so destructive to these tender growths. Fortunately the range of this little bird is an extensive one. It covers North America from the Fur Countries to Oaxaca, Mexico, and it breeds quite throughout its range. It winters in the southern portion of the United States and southward.

There are few birds whose song is more expressive and, to many persons, sweeter than that of the Warbling Vireo. Its song is a rather prolonged and continuous warble which has been described by Mr. Chapman as possessing a "singular alto undertone." It

is a firm, rich and beautifully undulating melody. This Vireo does not need to perch as it sings but, rather, delivers its touching notes while flitting about in the foliage of trees in search of its food. It is at such times that its notes seem the sweetest. It sings from early dawn until evening, and during the heat of noontime, when nearly all of our bird songsters are silent. Excepting perhaps a short period in July, its happy nature leads it to sing from the time of its spring arrival in the North until it departs for its winter home in the South about the first of October. Dr. Brewer has spoken of the Warbling Vireo in the following words: "This Vireo, more than any other of its genus, if not exclusively, is to a large extent a resident of villages, towns, and even cities. It is by far the sweetest singer that ventures within their crowded streets and public squares, and the melody of its song is exquisitely soft and beautiful. It is chiefly to be found among the tall trees, in the vicinity of dwellings, where it seems to delight to stay, and from their highest tops to suspend its pensile nest. It is especially abundant among the elms on Boston Common, where at almost any hour of the day, from early in the month of May until long after summer has gone, may be heard the prolonged notes of this, one of the sweetest and most constant of our singers." Dr. Brewer also speaks of its melody as being flute-like. Its song is perhaps the best means of noting its presence, for it is more often heard than seen as it spends most of its time among the upper branches of the trees where it



From col. F. M. Woodruff.

WARBLING VIREO.
(*Vireo gilvus*.)
Life-size.

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A. W. Mumford, Chicago.

is hidden from view by the foliage. Then, too, it does not attract attention for its dress is not at all conspicuous. Though trees are its habitat, it is only very rarely seen in our deeper forests.

The pensile nests of the Warbling Vireos are generally constructed in tall trees where they are suspended from forked twigs near the extremities of the branches. While they are usually built at an elevation of from thirty to fifty feet above the ground, they are not infrequently located much lower. The eminent ornithologist Audubon has given us a most interesting account of the building of a nest by a pair of these Vireos. It was constructed in a poplar tree, near his window, in Camden, New Jersey. He says: "One morning I observed both of them at work: They had already attached some slender blades of grass to the knots of the branch and the bark of the trunk, and had given them a circular disposition. They continued working downward and outward until the structure exhibited the form of their delicate tenement. Before the end of the second day, bits of hornet's nests and particles of corn husks had been attached to it by pushing them between the rows of grass, and fixing them with silky substances. On the third day the birds were absent. * * * On the fourth morning, however, their notes attracted my attention before I arose; and I had the pleasure of finding them at their labors. The materials which they now used consisted chiefly of extremely slender grasses, which the birds worked in a circular form, within the frame which they had previously made. The little creatures were absent nearly an hour at a time, and returned together, bringing the grass, which I concluded they

found at a considerable distance." That the Vireos are particular about the materials they use in the construction of their nests is well illustrated by the fact that Mr. Audubon followed the birds and was slowly led out of the village to a meadow where they obtained the dried grass they had selected from a hay stack. "Two other days were consumed in traveling for the same kind of grass. On the seventh, I saw only the female at work, using wood and horsehair: the eighth was almost entirely spent by both in smoothing the inside. They would enter the nest, sit in it, turn around, and press the lining." During the following five days one egg was laid each day.

The nests of these Vireos though they resemble those of the other species of the genus are nevertheless more carefully and compactly built. They are pretty and cozy structures and usually so placed that they are protected by a leafy canopy from storms and the sun. They are not easily seen or reached by their enemies. The Warbling Vireos are excellent parents and both the male and female cheerfully assist in the duties of incubation. The male possesses such a happy disposition that it is said to even sing, at times, while sitting upon the eggs. They show no fear while defending their home and young, and after their young have appeared, their sharp, scolding notes seem to replace for awhile their happy warbling notes. In fact they are so watchful of their homes and so anxious regarding their young that they seemingly, scold when there is no apparent reason for their harsh notes of anyer. After the male is relieved of family cares his sweet song is again heard and the scolding notes disappear.

THE WARBLING VIREO.

Through saffron tints of twilight,
Moves the young moon, remote.
Ah, listen! Wandering, sweet—
The Vireo's tender note.
All that was dear in yesteryear,
Or dreamed, or won, or missed,
The Vireo flutes at eventide—
When Memory's keeping tryst.

The summer flowers are fading,
Dead leaves bestrew the ground.
Entranced past smile or tear,
My face lifts to the sound.
All that was dear in yesteryear,
Or dreamed, or won, or missed,
Wakes in that melting melody,
When Memory's keeping tryst!

—LULU WHEDON MITCHELL.

AN AUNT JANE STORY.

CURIOUS PLANTS.—PART II.

"Besides these royal Orchids, what other queer things are there in the history of flowers?" inquired Alice.

"Luminous flowers are interesting to me," was the reply.

"You know some flowers have the habit of emitting sparks or flashes during twilight."

"No, I have never heard of such a thing. Where do they grow?"

"Right here in this garden—the nasturtium, the sunflower, the yellow lily, the tubè rose, are all 'fire-plants,' throwing off, under certain atmospheric conditions, electric flashes."

"Fire-plants," repeated Howard, a little doubtfully. "Now, auntie, we are often in the garden and we have never seen these floral fire-works, not even on the Fourth of July!"

"That is not at all strange, Howard; very few people are patient, careful observers; but we must accept the testimony of scientific men, who give their time to the study of nature. I very much doubt if ever you have listened to the mysterious, little vibrating sound

which the Evening Primrose makes when she unfurls her yellow tent."

"The Primrose makes a noise?" exclaimed all the children in astonishment. "Can flowers really be heard, Aunt Jane?" Howard inquired, with a surprised look.

"Yes, the Aloe, or Century Plant, whose fifty-foot flower-stalk grows six inches in a day, can really be heard growing. If you wish to test the matter go into a growing cornfield on a very still night, and you can yourself hear the ticking sound of the bursting sheath, as the young blades grow, or, to-night, listen while I water the artillery plant, and see if the noise it makes warrants the correctness of its name. Of course you must not expect a report as loud as a cannon would make."

"Oh, no; I'll be satisfied if I hear the slightest sound."

"Another curious feature of the Aloe is this, that you can snap off the point of one of its leaves, and have a needle, and a thread clings to it, which may be peeled off a yard long."

"That's the flower that does not bloom for a hundred years," cried Bird. "I always thought I would not have such a shy bloomer, but, Madge, wouldn't it be nice to get one for the sake of having thread and needles in the garden, all ready for making dolls' dresses?"

"But, my dear, you are mistaken," continued Aunt Jane, "about the Century Plant blooming once in a hundred years. Don't you remember that your Uncle Casamir said, when he was in Algeria, he saw Aloes of all sizes and ages in full bloom?"

"See here!" cried John; "by Aunt Jane's showing, flowers eat, flowers give light, flowers make a noise; I want to know what other wonders they perform?"

"They dance and travel," Aunt Jane replied. "They predict the weather, and tell the time of day; they nod and sleep, and climb, and act as a compass, and some are so bad they steal their living."

"Do tell us what flower is so gay and lively as to dance?"

"The 'Dancing Orchid.' To be sure, he is a genuine little acrobat, and is said to perform the most amusing feats of agility. His antics have given him a world-wide reputation. Animated oats make curious movements when laid upon the ground. The leaflets of some kinds of oxalis sink down vertically at night, perhaps to sleep, and other flowers, as the Sensitive Plant, and the 'Ox-hoof' of Brazil, open and shut their leaves. The 'Ox-hoof' is a very good time-piece, as at daybreak the leaves are spread out horizontally, but gradually double up as the sun advances, then as the sun descends the leaves gradually open, and at sunset are again spread out level."

"I know which flower tells the time of day. Here is a bed full of them, and they are all saying 'Four o'clock' now," cried Birdie.

"Which flower is a barometer?" John inquired.

"The clover is the farmer's barometer. It is thought to close its leaflets if rain is coming. The pimpernel also foretells a storm. The lotus lolls on the water till a storm approaches, when it hides in safety beneath the waves."

"Tell us about the Traveler. What flower goes journeying, and what are his adventures?" Howard asked.

"The 'Rose of Jericho' has its branches folded up in a ball, but, it is said, moisture causes them to spread out. The wind gives it a gentle lift, and frees it from the loose sand, and away it goes on and on to a great distance. Some species of Algæ come up out of the sea, and dry off upon the beach, when the wind carries them over the land, and the children hunt for them under the name of 'meteor paper,' for they now look like coarse, brown paper. The Dandelion is, you know, a great traveler. He is a sort of balloonist, and navigates the air with his little white ship."

"I had a speech about him at school one day," cried Madge. "The best verse in it was this:

"'A perfect sphere of daintiest white,
As soft as air, as still as night,
Leaving the earthly damps of ours
To seek, perhaps, the heaven of flowers.'"

"I know very well," said Howard, "that the compass plant points north and south, but I'd like to know the reason it does so?"

"In reply to your query, I can only tell you what I have read upon the subject, as I have never tried to investigate it myself. It seems that the secret of the compass plant lies in the fact that the number of stomata is equal on both sides of the leaf, equally exposed to the morning and afternoon sun, assumes a position of equilibrium between the two forces, by turning one side toward the morning, the other side to the evening sun, thus throwing the breadth in a north and south direction."

"I think," said John, "that the compass plant is quite friendly to a fellow; for once when I had been out fishing I got lost, and went round and round in a circle, till I noticed a compass plant, and it gave me a hint which way to go."

"Aunt Jane, don't you think you have been a little severe on the carnivorous flowers?" said Edith. "Is it any worse for them to eat insects than it is for us to kill chickens? Now, I know that some plants are said to sleep, and I've seen them nod, and of course many of them can climb; my *Cobea scandens* has

ever so many grappling hooks to hold it up, but are you quite sure that any plant steals its living?"

"Certainly I am. Have you not often seen parasites? Some Orchids belong to this class of thieves. You have often noticed the Dodder, or 'love-thread;' I've seen you trying your fortune with it by throwing it backward over your head. If the Dodder caught upon a bush and lived, the sign was that he loved you; but, if it fell in the dust, or died upon the bush, then alas, he preferred another to you."

"How does Aunt Jane find out everything?" whispered Bird to Madge. "I don't know, but she does," was the low response.

"The Dodder has no leaves, because it needs none, as it does not prepare its food, but it takes it from another plant. The Mistletoe is something of a parasite also, though it retains its leaves, and—"

"I do wish you would tell us what is the most interesting flower you know of," interrupted Birdie.

"That will be hard to do. Let me think. Perhaps I may as well say the 'Christmas Snow Flower.'"

"Snow flower!" reiterated the children; "where in the world does a snow flower grow?"

"It grows upon the drear, snow-covered peaks of the Siberian Mountains, and only blooms at Christmas time. The flower is said to last but a day and night, and then melts away with the snowy

flakes. This flower would do very well for a poem—a far better subject than the cruel 'Drosera.'"

"Tell us what the poets say about flowers," begged Alice. "I know the Violet was Shakespeare's favorite, and the Daisy was loved by Chaucer." "No, no," objected the boys, "tell us some fables about flowers. You can get in a story if you will."

"If there were time we might consider the romance which clings to the Thistle, and become acquainted with the curious history of the 'Broom Plant,' the 'Shamrock,' and other flowers used as national or historic emblems."

"Do tell us about the 'Broom Plant.'" cried Edith, "for I always thought Plantagenet came from broom—a common, old sweeping broom—and often wondered why a dynasty of sovereigns would take such a name; I never thought that 'broom' meant a flower."

Every one laughed at Edith's mistake, and Aunt Jane said: "As regards the fables of the flowers the boys ask for, I wonder if you know how curiously the Forget-me-not received its name, and how the blood of—"

'Ajax tinged the Hyacinths?'"

"No; tell us; tell us," clamored all voices.

"There! I hear the tea-bell ringing. We must leave the 'Curious Fables of the Flowers' until some other time."

BELLE PAXSON DRURY.



From col. Chi. Acad. Sciences.

WOOD PEWEE.
(*Contopus virens.*)
3-5 Life-size.

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THE WOOD PEWEE.

(*Contopus virens.*)

"Dear bird," I said, "What is thy name?"
And thrice the mournful answer came,
So faint and far, and yet so near,—
"Pe-wee! pe-wee! peer!"

For so I found my forest bird,—
The pewee of the loneliest woods,
Sole singer in these solitudes,
Which never robin's whistle stirred,
Where never bluebird's plume intrudes.

—J. T. TROWBRIDGE, "THE PEWEE."

While the Wood Pewees seem to prefer the solitude of our deeper forests they will, at times frequent and even nest in orchards which contain large spreading trees. Occasionally they may be seen searching for their insect-food among the shade trees of villages and the trees of the larger city parks. Large and ample trees are a necessary part of the environment of these birds, for they belong to one of the few species which are shade-loving. The Pewees are not well-known for their plain plumage and undemonstrative ways do not readily attract the attention of others than the careful observers of bird-life. Their plaintive and pensive notes, which are a most characteristic sound, are usually the first indication of their presence in one's vicinity. It is a familiar voice to those who frequent the woods of the Pewees' range. *Pee-a-wee*, *pee-a-wee* is the sweet but monotonous song which is in perfect harmony with the quiet solitude of their forest home. They seek solitude and they do not seem to care to associate with birds of either their own or other species. However, their sad notes are not depressing and the Pewees seem to be of a most happy disposition. They sing all day long, from the appearance of dawn often until late in the evening. Often his quiet, sweet-toned voice may be heard in the stillness of midnight, apparently humming a greeting to his mate upon the nest. Even during the summer heat of noontime its voice is

heard, and "the clear sympathetic notes of the retiring songster come from the green canopy overhead, in perfect harmony with the peace and stillness of the hour." The words of Mr. Chapman well express the views of all who have studied the Pewee from the standpoint of a lover of the harmony in Nature. "His pensive, gentle ways are voiced by his sad, sweet call: The notes are as musical and restful, as much a part of Nature's hymn, as the soft humming of a brook."

The range of the Wood Pewees extends east of the Great Plains, from southern Canada southward. They nest from Florida, northward to the limits of their range, and at the approach of cold weather they migrate southward through eastern Mexico and Honduras to Ecuador.

Their nests are beautiful and compact structures of which the floors are thin and the sides are quite thick and not very high. Mr. Dawson speaks of the Pewee's nest as "One of the most sightly and romantic structures which an ingenious Nature has evolved." Dr. Brewer speaks of it as "extremely beautiful, rivaling even the artistic nests of the hummingbird." Mr. Robert Ridgway has called it "one of the most elegant examples of bird architecture." The nests are always built upon a horizontal branch upon which they are usually saddled, though sometimes they are placed in a fork. They are frequently built at a considerable distance from the trunk of the tree

and at a height of from eight to fifty feet above the ground. The nests, though shallow, are cup-shaped and form a quite perfect segment of a sphere. Fine dried grasses, rootlets, mosses, lichens and fine strips of bark fibers are used in the construction. The exposed sides of the walls are beautifully coated with mosses and lichens which are fastened by spider's webs. The birds usually select branches, either dead or living, which are lichen or moss covered. The nests resemble knots, or protuberances upon the limbs which are covered with lichens and are thus hard to find unless the

birds are seen to approach them. After the completion of the nesting season the Pewees are less solitary in their habits and often several may be observed in the same portion of the woods, busily catching their insect-food.

The Wood Pewees, like all the other members of the Flycatcher family, are experts in the catching of insects, for even those which are exceedingly minute do not escape them. Their power of sight is most perfect as they readily perceive insect forms when the light of day has nearly departed or in the very gloomy light of our deeper woods.

WHAT THE APPLE SAID.

Elsie was lying in the hammock under the big apple tree, watching the yellow pippin just above her, when suddenly the Pippin began to talk. This was a strange thing for an apple to do, but there seemed to be no mistake about it.

"Eat me. Please eat me," it said quite plainly.

"Eat you!" repeated Elsie. "Do you wish to be eaten really?"

"Of course I do. Don't you suppose my babies ever want to get out? You were ready enough to eat us last summer, when we were green."

"I only ate two of you, and I had a dreadful pain afterwards."

"I am glad you had," answered the Apple. "You deserved it. I suppose that sounds unkind," it went on, in a milder tone, as Elsie showed her displeasure, "but some people try one's temper so. Those apples had packed their babies away, as carefully as possible, and you spoiled all their work by letting their babies out too soon. They asked you not to eat them, too."

"Asked me not to eat them!" repeated the astonished Elsie. "Why they never said a word. You are the first apple I ever heard talk, and I don't know what you mean by an apple's babies either."

"I mean their seeds, Goosey. Of

course the apples did not ask you in words, but they did taste as sour as they could, and they puckered up your mouth. That plainly meant they were too green to eat. Then as that did not stop you, they had to give you pain, so you wouldn't eat more another time. How are apple babies to grow up, and do their work if you treat them that way?"

"Do apples work?" asked Elsie.

"Certainly. Everything in the world has some work to do, or it would not be here. Some people are blind to the wonderful things happening around them. The whole earth is a beautiful fairy tale if you only knew how to read it. Perhaps I'd better tell you my story. That may teach you something."

"Oh, please do," begged Elsie. "It is unusual I know."

"On the contrary, it is quite like any other apple's," the Pippin answered. "All of us were flowers once, you know."

"Really?" asked Elsie, "but I remember now," she added with a bright smile. "This tree was just covered with blossoms last May, and they smelled so sweet. Do you mean that one of them really turned into you?"

"That is just about what happened," answered the Apple, with a proud air. "Now, I don't believe you ever exam-

ined an apple blossom closely, so I will tell you about one. To begin, we have five pretty leaves which are sometimes white and sometimes pink, and a number of little, pin-like things, with tiny knobs on top, covered with yellow dust. Also, we have five other pin-like things without any dust on them, and these last are joined together below and set in a green cup, whose top is cut into five pieces, rolled back like leaves. Just look carefully at an apple blossom next May and see if this is not so. The wise men have names for all these parts, and some day you may study all about them and then you will know that I am telling you a true story. Well, it happened one day that a bee paid me a visit."

"Oh, dear!" said Elsie. "Were you afraid?"

"Afraid," was the scornful answer. "Certainly not. Didn't I wear my pretty dress and store my precious drop of honey, just to attract that bee? You see, she had been making calls on other blossoms and was covered with their yellow dust and it was this yellow dust I needed for the little pin-like things, without dust, which I mentioned a minute ago."

"But I don't understand," Elsie answered. "Why couldn't you use your own dust?"

"Oh, that's Mother Nature's secret and I have not time to explain it now. I had to have the dust from another blossom, and only the bee could bring it to me! I paid my good friend with honey, and also gave some of my own dust in exchange for what I received, so it was no robbery you see. If you ever have a chance, watch a bee as he visits an apple blossom. It will be worth your while, I promise you."

"It may be," agreed Elsie, "but I

can't see much sense in it now."

"You will when you are older and wiser," the Apple answered.

"After the bee's visit, I no longer needed my pretty dress, and it gradually dropped away. Then a great change came over me. You remember the cup I spoke of awhile ago? Well, in that cup were a number of little green things, like tiny eggs, and the life in the dust went down to them and they too became full of life and began to grow. Of course, the cup had to grow also. It became larger and juicier until——"

"Oh! I know what happened," interrupted Elsie, clapping her hands. "It grew into you, and the tiny green things are your seeds; babies, I mean; only they must be brown now."

"Just it," agreed the Apple. "You are beginning to think a little. All summer I have taken good care of my babies, but now they are quite grown up, and it is time for them to be out and about their work. You see, they must make the new trees, which will bear apples long after these trees are gone. Dear me, how tired I am. I fear this talk has been too much for me."

"I should think," began Elsie—then she stopped, for something had touched her quite sharply.

She started up with a little cry and began to rub her eyes.

The big Pippin had fallen and lay beside her in the hammock.

"Why, I must have been dreaming," she said, "but what a wonderful dream it was. I'll tell mama all about it; and after this I mean to keep my eyes open and look out for the wonderful things that the Apple said were happening all the time."

LOUISE JAMISON.

THE SNOWFLAKE.

(*Plectrophenax nivalis*.)

Then 'mid snowdrifts white,
Though the trees are bare,
Comes the Snowbird, bold
In the Winter's cold,
Quick and round and bright,
Light he steps across snow,
Cares he not for winds that blow,
Though the sifting snow be drifting
Through the air.

—DORA READ GOODALE, "THE SNOWBIRD."

The Snowflakes, or Snow Buntings as they are frequently named, are the well known white birds of winter which frequent the northern tier of the United States. They are also irregular visitors, during the colder weather, as far south as southern Illinois, Indiana and Ohio. Occasionally they even pass as far southward as Georgia and Kansas, and they are said to be abundant some seasons in the western interior, as far south as Colorado. The general geographical range of the species may be given as the entire northern parts of the northern hemisphere, but the birds breed only in the Arctic regions. If they can only obtain a sufficient quantity of food they care but little for icy blasts. On the snow covered prairies, nothing can brighten a cold and dreary winter's day like a flock of these dainty birds as they circle and wheel around looking for a favorable spot on which to alight, finally dropping in a mass for all the world like snow flakes in a whirl of wind. At all times, when they are with us, their soft white plumage and amiable disposition appeal to us and we look forward to visits from the Snowflakes with a great deal of pleasure.

Snowflakes never perch on trees and while it is truly a bird of the ground it will frequently perch on a fence or a house. Their food is chiefly, if not exclusively, wild seeds and grain which they gather in stubbles and barnyards. They frequent the latter places when the fields are covered with snow. During the winter months they do not need

our sympathy, for they always seem cheerful and happy and apparently find enough to eat, as they become very fat. Thoreau speaks of the Snowflakes as "true spirits of the snowstorm." Mr. Ernest E. Thompson has said: "In mid-winter, in the far north, when the thermometer showed thirty degrees below zero, and the chill blizzard was blowing on the plains, I have seen this brave little bird gleefully chasing his fellows, and pouring out as he flew, his sweet, voluble song with as much spirit as ever skylark has in the sunniest days of June." During the nesting season the Snowflakes are said to utter an agreeable song, but as they choose to nest only in the dreary and desolate areas of the Arctic regions it has been the pleasure of but few to listen to them. While we who reside only in the region of their more southern winter home cannot listen to its song, we may often hear them utter cheerful twittering notes which are very inspiring during the uninviting days of winter.

In the government report on the Cruise of the Steamer Corwin in the Arctic Ocean, Mr. E. W. Nelson gives an interesting account of the summer home of the Snowflakes. It is as follows: "In the north, the range and abundance of this species in summer is to a great extent complimentary to that of the lapland longspur. Along the rugged parts of the coast, on rocky and barren islands and desolate shores of the Arctic Ocean, wherever explorers have gone, they have found these

From col. F. M. Woodhull.



SNOWFLAKE.

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birds before them. The desolate hill-tops of Saint Lawrence Island, the bare weather-worn sides of the mountains surrounding Plover Bay and East Cape, Siberia; the rocky wind-swept islands in Bering Strait, as well as the lonely shores of Herald and Wrangel Islands, and the shingle-strewn beaches along the north coast of Asia and Alaska all appear to be chosen as the favorite summer homes of this bird. When we landed at any of these places we were certain to be greeted by the clear, sharp note of the Snow Bunting, which would be seen running busily about searching for food or wheeling about from place to place, its sharply contrasted black and white (summer) plumage quickly attracting the eye and usually the first sign of life. On the mountain sides at Plover Bay its mellow note was heard on June 26, uttering the long, clear, and rather hard song, full of a wild and exhilarating melody fitted to the surroundings. This song consists of four or five clear whistling notes, shorter than the song

of the longspur, and uttered from a rocky point or the top of some jutting ledge. At Saint Lawrence Island, on June 24, we found them common and nesting, and some native children showed us a nest about one hundred yards back of their huts. This nest contained one egg, which was obtained, with the female. After the latter was shot the male kept flying about our heads, or from rock to rock close by, and continually uttered a loud p-cher, p-cher, p-cher, in such a plaintive tone that I was glad when we were out of earshot. As long as we remained in the vicinity the bird followed us from place to place, hovering about, not taking the slightest notice of his rifled nest after the female was shot. He showed by his actions that he was fully aware of our having his mate in our possession. I do not remember ever having seen a bird show such affectionate solicitude for his mate as was exhibited on this occasion."

FRANK MORLEY WOODRUFF.

THE SANDERLING.

The Sanderling goes to the wave-worn beach,
And feeds, when the surf to the sea outpours;
Swiftly he runs on the oozy reach
And swims on the swell, when it coastward pours.

For the shell-fish, laid by the surf on the sands,
Is his simple fare from the sea; and he seeks
A covert for rest, in the reedy lands,
Through the nights of our charming summer weeks.

But where does he roam in our winter-time?
Perchance by the Gulf, and its sedgy leas;
Or slow, where the bayou winds, with the rhyme
Of the mocking-bird, in the cypress trees.

O, the Sanderling's lot seems a pleasant one,
When I wait by my fire, through a dreary storm:
He follows the breath of the brine with the sun,
And his year is all summer, and kind and warm.

—ELIZA WOODWORTH.

A BLACK BASS HATCHERY.

Near Lake Waramaug, Connecticut, well known as a resort for fishermen and "summer boarders," is situated one of the first successful hatcheries for small mouth black bass in this country.

Over fifty years ago the lake was stocked with bass, which for a long time grew remarkably in size and number. It was their rapid decrease within the last few years, and consequent injury to the fishing, which suggested the idea of a hatchery. It was due to the patience and intelligence of a local enthusiast in the fish line, and the money and enterprise of a prominent New York art dealer, that the idea has been carried out and made a success.

During the winter of 1902 a site was chosen, about an eighth of a mile below the lake. Upon studying the subject, it was found that every attempt to raise small mouth black bass, including one carried on at great expense by the United States government, had ended in failure; consequently it was left to the two men to seek out their own path, in spite of discouragement.

The planning and superintending of the work was left to the local fisherman, while the art dealer showed his interest by patiently signing the numerous and necessary checks.

During the following summer the work was carried on. Three adjacent ponds, separated by stone walls, were built similar to other hatcheries; the lower one, about eight feet deep, was for the old fish, while there were two long, narrow and shallower ones, side by side, for nurseries. Seventeen hundred feet of piping brought water from the lake. In the fall, one of the ponds being completed, twenty-nine large, live black bass, caught in various neighboring lakes, were set up in housekeeping, with a supply of minnows and frogs to stock their larder; then the pond froze over and they were left to their own devices, lying dormant during the winter.

Early the next season, work upon the ponds was resumed, with the result that

they were finished May 9th, just in time for the first bass babies.

In a wild state, the male bass prepares the nest, choosing a gravelly bottom, at a depth of from eighteen inches to two feet. He sweeps all the sand away with his tail, over a space about three feet in circumference, making a circular nest with the larger pebbles in the centre, the smaller gravel on the outside. Upon these stones the eggs are laid. Acting upon advice received from the Michigan hatchery, the manager prepared nests similar to the natural ones, and placed over them boxes with screen doors which could be closed when necessary to prevent the escape of the little fish. Incredulous onlookers laughed at the idea that the mother bass would swim into a box to lay her eggs, but in every case she took to them kindly.

It is the father bass, also, who takes charge of the eggs, fanning the water gently with his fins to keep it circulating, and prevent the deposit of sediment. It is interesting to watch him, posted at the opening of the box, sallying forth now and then to drive away intruders, no other fish being allowed within a yard of the nest. Even the mother is driven away.

The eggs hatch in four or five days, in water from 64° to 70°. When the temperature falls below 60° the eggs are usually killed, when the father immediately leaves the nest. When first hatched the tiny fish are nearly colorless, and are provided with yolk sacs which contain enough food for a fortnight. They grow rapidly for awhile, gaining form and color as the yolk sac is absorbed. Soon the little fish begin to wiggle up to the surface, their mouths open in search of food.

The father remains on guard nearly three weeks altogether, scarcely eating during the time. Just before the school rises, the screens are closed, and the babies transferred to the nurseries. In a natural state the father would guard them a few days longer, until they

learned to recognize their enemies, and became more active in caring for themselves.

As soon as the young fish were removed, the old ones began to prepare the nests again for a second supply. There were eight boxes, and four deposits of eggs in each, the third installment being lost during a cold storm. There are about ten thousand eggs in every deposit. As preparations had not been made for such an immense family, only the comparatively small number of sixteen thousand infants could be accommodated in the nurseries. The remainder were kept for a time in tanks, and as soon as possible placed in the lake to look out for themselves, where many of them may have been destroyed by their own relatives, the bass family being inveterate cannibals. Even parents, at a later stage, devour the children they once guarded with so much care.

After the fry are deposited in the nursery, they still continue to be a source of anxiety. During a severe storm the manager watched all night in the cold and wet lest the muddy water coming through the screen destroy, or overflow and carry away the little bass.

Feeding the babies was another problem. Their food consists of minute

Crustacea, which are not supplied in sufficient quantities by the running water, and must be collected and supplied to them every day.

The young fish thrived, and had attained a growth, in the fall, of from three to five inches. Two thousand of the sixteen originally placed in the nurseries were lost; this is supposed to be a "survival of the fittest" due to cannibalism induced by scarcity of food.

During the summer, the hatchery as a novelty, attracted many visitors, enquiring, amused or sceptical. Thousands of tiny bass could be seen, and the manager kindly answered questions and explained methods. One large bass, named "Uncle Tom" because he was taken from Mt. Tom lake, was identified by the manager, and became a general object of interest, especially to the children, who delighted to feed him.

The second summer of its existence, the hatchery received financial assistance from the state, which was also to benefit to the extent of half the fish raised. A number of large bass have been added, and it is hoped this season may be even more successful than the last.

ELIZABETH MILES DERRICKSON.

A SONNET.

It is not meet to sorrow when from earth
The mellow fruits are borne in Autumn's haze;
They had the showers of the April days,
The quickening glances of the month of mirth,
E'en ere the pregnant buds had given them birth;
They drank the glory of the summer noon,
And when Night told her beads at the full moon
And blessing fell, they waxed in weight and worth.
But when the tender shoots are wrenched away
From the dear parent stem before they know
The gladdening sunbeams or the gracious dew,
Or felt the stir of nestlings, or the play
Of wings and whispering winds amid their leaves,
O'r Hope's defeat the spirit rightly grieves.

—MRS. M. A. MAITLAND.

MR. BLUE JAY--A NUTCRACKER.

My grape arbor had been remodeled, but the workmen were not careful to remove old nails. At a corner of the central arching one large-headed nail projected probably two inches from the board-work.

From the kitchen my attention was arrested by a gentle but firm hammering. Of course I thought first of the woodpecker, and wishing to secure some of the chips he throws away for my coming school nature study, I hurried out to hunt the carpenter.

Seating myself in the shady arbor I was soon listening to the return of the tapping noise. Finally looking up for my visitor, I received direct on my cheek a hazel-nut hull or shell. Surprised interest caused me to move to

better vantage ground. My friend was a beautiful Blue Jay. The bird stood firmly, and holding the nut in his bill would throw back his head, carefully striking the nut on the nail-head.

This pounding was repeated until the shell was opened. The dear bird seemingly ate the meat with an "I've-earned-it" relish.

Following his movements I discovered his store of nuts on a kitchen roof about two blocks distant. Each day Mr. Blue Jay, in his true-blue suit, would return to the arbor and prepare his meal.

I said nothing to the owner of the hazel-nuts, for I did not consider the bird a thief—do you?

HARMONIA TATE.

OCTOBER.

Gray and crimson, green and yellow
And golden brown,
Leaves of every form and color,
Tumbling down.

Skies are deepening into azure,
Charming blue—
Purest air makes life a pleasure,
'Tis living true.

Birds their evening songs are trilling,
Chirping low;
Seeds from out their pods are spilling,
Flowers will grow.

Scurrying low,
Clouds are flying in the distance,
Light and shadow show resistance,
'Tis sunset glow.

While we stand and gaze and listen
To Nature's voice,
For very joy our tears will glisten
And we rejoice.

Because the earth so shines with beauty
On every hand,
We hasten home to love and duty,
A happy band.

—CLARA KENDRICK BLAISDELL.



From col. F. M. Woodruff.

SLATE-COLORED JUNCO.
(*Junco hyemalis*.)
Life-size.

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THE SLATE-COLORED JUNCO.

(*Junco hyemalis.*)

The Juncos or Snowbirds as they are commonly called, are hardy and abundant birds. However, during the breeding season they are found only from the northern border of the United States northward, and in the higher altitudes of the mountain ranges of the Eastern States southward to Virginia. Their geographical range covers North America chiefly east of the Rocky Mountains, and they winter southward to the Gulf States. About the first of October, or soon thereafter, these birds begin their southern migration southward, not because of the cold, but rather because of hunger for from that time on through the winter it becomes almost impossible for them to obtain food in the far North. In the more temperate portions of the northern United States, it becomes a winter resident, for the snow is not so deep but that the weeds stand above it and the birds can gather the seeds. In such localities the usually shy Juncos frequently become quite tame during the severer weather and time of deep snows which prevent them from obtaining food at the borders of the forests, where they seek it among the shrubby thickets and fallen leaves. They then visit the weeds of roadsides and seek food also in the vicinity of farm-houses. They will even visit the kitchen door, with the chickadees and sparrows, and feed upon the crumbs and scraps which may be found there. Florence A. Merriam has said: "When the snow begins to fly you will look out some gray morning to find a flock of small, plump, slate-colored birds hopping about the dooryard, picking up what they can find, or sitting in the bushes with an air of contentment that is pleasant to see." When we see the Juncos over a field of snow, the somber color of the plumage of the upper-sides and the white of the undersides of the birds, reminds us of the words

of Mr. Parkhurst "Leaden skies above; snow below" so well do they match their winter environment.

If we desire a better acquaintance with these gentle and interesting visitors to our door-yards during the bleak winter months, we must visit them in their summer homes in the far North, even as far as the "barren grounds" of the Arctic regions. The Juncos leave their winter home about the time that our own summer birds, such as the bluebirds and robins, begin to appear. Regarding the time of its appearance in the far North, Mr. E. W. Nelson says: "It reaches Fort Reliance, on the Upper Yukon, by April 30, and I have found it at the Yukon mouth by the 11th of May. At Nulato, Alaska, it was found common by Dall, who records its arrival on the first of June. In the Hudson Bay Territory, Kennicott found it breeding abundantly to latitude 65° North, and it is known to arrive on the Mackenzie River by the 20th of April. While I was camping at the Yukon mouth, the last of May, 1879, it was a common bird, and at Kotlik it was found numerous about the trading post, searching the ground close to the doorstep for food." Mr. Nelson also says that one of his collectors brought him a nest from Nulato, which was obtained the first of June, 1880. It was built on the ground and contained five eggs. One authority states that the Juncos begin nesting in Ontario "the first week in May, and nests with eggs are found as late as August." Dr. Brewer says: "About Calais and in all the islands of the Bay of Fundy, and throughout New Brunswick and Nova Scotia, I found this by far the most common and familiar species, especially at Pictou, where it abounded in the gardens, in repeated instances coming within the out-buildings to build its nests." He also says that at Pictou they were usu-

ally called Bluebirds by the common people.

The nests of the Juncos are built in a variety of places though they are usually built on the ground, under the protection of undergrowth or concealed in tufts of grass. The nests may also be placed in fallen tree-tops, among the roots of fallen trees, under logs, in crevices in banks, or even in bushes. They also, though not commonly, nest in buildings. Dr. Brewer speaks of one instance when several Juncos nested in a woodshed connected with a dwelling in Pictou, Nova Scotia. These nests were within reach of the hand and in a place where people were passing and repassing throughout the day. The nests of the Juncos are usually built of dry grasses, moss and rootlets and well lined with fine grasses, fine mosses and long animal hairs. Sometimes strips of fibrous bark, straw and horsehair are used in the construction

of the walls, and nests have been found, the walls of which were made entirely of animal hairs, and the lining, of mosses and hair.

In addition to their call-notes, the Juncos have a very pretty song which is only occasionally heard before the birds leave us for their nesting places in the far North. Mr. Nuttall speaks of the song as consisting of "a few sweet, clear, and tender notes, almost similar to the touching warble of the European robin redbreast." Another observer speaks of it as "a simple thrill, and a faint, whispered warble, usually much broken, but not without sweetness." Florence A. Merriam calls the Juncos "Little gray-robed monks and nuns," and also says: "The *'tsip* of the Junco is unmistakable and more often heard than his song, but he has both a trill and a low, sweet song as unpretentious and cheery as the friendly bird himself."

ONE DAY.

As fell the leaves, one day, one day,
A crimson palace fashioned I;
 My leafy ridges on the grass
 Were walls wherein a king might pass,
My rooftree was the autumn sky,
 One day, one day.

As fell the rain, one day, one day,
My sodden walls it stained, it stained;
 Out of the north the cold wind crept,
 My palace halls were weather-swept,
A yellow scar alone remained,
 One day, one day.

As burst the buds, one day, one day,
I heard the happy bluebird sing;
 Out of the south a zephyr stole,
 I sought my wound, I found it whole:
There is for every heart a spring,
 Some far-off day.

—GEORGE H. MAITLAND.

BIRDS AND NATURE

Smithsonian Institution

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BIRDS AND NATURE.

ILLUSTRATED BY COLOR PHOTOGRAPHY.

NATURE'S FRIENDSHIP.

To him who looks on nature as a friend—
Who loves her varying moods, whate'er they be,
Of calm and glorious sunshine, or the free,
Wild sweep of winds, that toss about and bend
The branches of the mighty oaks, or rend
Their great hearts wide—to him, the mystery
Of life is not so great—he holds the key
To much that others cannot comprehend,
And finds a miracle in every bird,
Or creature wild—and endless spring
Of joy, and as the seasons come and go,
And Nature's wooing voice is clearer heard,
Rejoicing in the best, he learns to fling
Aside as worthless much—for room to grow.

—BESSIE ANDREWS DANA.

THE VERMILION FLYCATCHER.

(*Pyrocephalus rubinus mexicanus*.)

The range of the beautiful Vermilion Flycatcher is a very limited one, extending from Guatemala northward through Mexico and Lower California, southern Texas, southwestern New Mexico, southern and central Arizona, and southern California, to southwestern Utah and possibly southern Nevada. Its breeding range is very nearly the same as its distribution in the United States, but it is not known to nest in southern California. While it has been reported from several localities within the United States, Major Bendire considered that its center of abundance within our borders must be in southern Arizona. In his records of the Birds of Arizona, Mr. W. E. Scott says. "On the foot-hills of the Catalina Mountains it is a common migrant, many breeding at the lower altitudes, and a few ranging up to and breeding at an altitude of forty-five hundred feet, which seems to be about the limit of the vertical range." He also found this species to be quite common as a summer resident about Tucson and Florence in Arizona, and a few individuals remain through the winter.

Major Bendire gives the following description of the nest of the Vermilion Flycatcher: "The nest is a rather frail, shallow and flimsy affair, and is always saddled on a horizontal fork, well out from the trunk of the tree, as is that of the wood pewee. The foundation is composed of a thin layer of twigs from two to three inches in length; the sides are constructed of small weed tops, a species of *Evax*, plant fibers, empty cocoons, spider webs, plant down, etc. The whole is rather loosely held together. The inner lining consists most frequently of feathers, sometimes of a little wool, cattle hair, fur, or plant down." While some nests have the rims ornamented with lichens he found that this was rather unusual. The nests are built in various species of trees and

shrubs at elevations varying from six to fifty feet above the ground. The more common trees selected by the birds are mesquite, oaks, cottonwoods, acacias, and occasionally willows. In Texas, Dr. J. C. Merrill found it nesting in retama or horse bean trees or shrubs at a height of not more than six feet above the ground. The forests and shrubbery bordering water courses are the favorite grounds of these flycatchers. While they are, perhaps, more commonly seen in the more level country, they may be found following the canyons in the mountain side up to an altitude of nearly five thousand feet.

The handsome males of this species have, during the mating season, some very interesting habits. One of these is that of poising in the air, some twenty or more feet above the ground, when they flutter their wings, and elevating the feathers of the body and tail, they repeatedly utter sharp, loud but somewhat twittering notes and snap their mandibles together as if in the act of catching insects. Their food of insects is usually caught while on the wing, but they will also, at times, pick up insects while standing on the ground. The male assists his mate in the incubation of the eggs, which lasts through a period of about twelve days. Major Bendire believed that two broods were occasionally raised in a season. He says: "On June 6 I found a nest of the Vermilion Flycatcher in a small grove of cottonwood trees, with no other shrubbery nearer than six hundred yards; it was placed on a horizontal fork of one of these trees, about twenty feet from the ground, and contained three fresh eggs; close by, the male was feeding a full-grown young bird; no other pair appeared to occupy this grove, and it seemed very probable that it belonged to these birds. The fact that I also found fresh eggs as late as July 16 further strengthens this supposition."



From col. Geo. F. Breninger.

VERMILLION FLYCATCHER.
(*Pyrocephalus rubineus mexicanus*.)
3-5 Life-size.

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AMONG THE TREES.

THE ASH.

In one portion of the large lawn, grew a fine specimen of an Ash tree; its wide canopy offering a refreshing shade on those hot days in mid-July when to breathe seemed an effort. Rustic chairs stood beneath its shelter; there, too, swung a hammock whose strong and graceful meshes supported in indolent ease the forms of those who took advantage of its unspoken invitation to rest.

On one of those glorious days in golden October when the crickets chirp all day, when the orioles with their brilliant plumage; when the bluebirds, who carry a portion of the heavens on their backs, have flown to the far, sweet south and only a few belated robins remind us of the days when our woods and lawns were filled with the music of the feathered choiristers—on one of those days so filled with Nature's wonderful beauty, Mabel sought the shade of the Ash tree and reclining lazily in the hammock, looked up into its broad canopy. The chirp of the crickets fell soothingly on her ears.

"How delightful it is! I do love to hear the crickets; all summer I listen and wait for them, although I know their coming is a true sign of waning summer. Here is another sign of departing summer in this beautiful Ash, for its long, feathery foliage, so much like the walnut in the shape of its leaves, is already showing a lilac tint; soon it will be a great head of purple as it was last year."

A light breeze was blowing and dead leaves were scurrying about as if in play. The Ash bent its branches and swayed gracefully, while a sound like the gentle wash of the waves on the beach seemed to take the form of words:

"Is it my turn, fair maid, to tell you the history of our family?"

"I would love to hear it if it is not too prosaic; I feel in rather a languid mood to-day."

"It's the weather. That's the way October affects the majority of people; they seem to have a desire to go off to some woods and saunter about, listening to the rustle of the dead leaves beneath their feet, or to watch the leaves slowly falling, one by one, as they idly sit and dream. Well, one might as well enjoy these lovely days. Nature is but resting, soon she will be blustering and storming, and Man will be wrapping up in warm clothing or sitting comfortably beside the glowing hearth."

"Oh, do not talk of those days, let us enjoy the present! What about your family history? Is it dull?"

"By no means. Our history is the most fanciful of all trees. We can date our days back to the tertiary period as some other trees, and can also lay just claim of having lived within the Arctic Circle, yet we can make a boast which no other tree can, for curious myths and traditions among many nations gravely ascribe the descent of the human race from an Ash tree."

"That is indeed strange; I'm sure I would like to hear that legend."

"The most remarkable of all these legends belongs to the Norse and is called the 'Tree of the Universe.' In the legend, the tree springs from the earth and its trunk rises to the sky; its wide-spreading branches overshadow the earth and support the heavens. This mighty tree is sustained and nourished by three roots only, which perform their part well, and you will not wonder when you learn from whence they derive their nourishment. The first root extends into Asgard, the home of the gods; beneath it continually bubbles a fountain with whose waters the tree is sprinkled. By its side is a magnificent hall where dwell three maidens—Urd, the past; Verdandi, the present; Skuld, the future—the Scandinavian Fates who direct and sway the destinies of men.

"The second root enters Jotunheim,

the abode of giants, and by its side is Mimir's spring, within whose sparkling depths wit and knowledge lie hidden.

"The third root strikes deep into Nifheim, the region of darkness and cold; the spring here feeds the serpent Nithoggs—Darkness—which perpetually gnaws at the root.

"The leaves of the tree drop honey; upon the uppermost branches sits an eagle who observes all that goes on in the world, while a squirrel, Ratatoskr, runs up and down along the trunk and branches, bearing messages between the eagle and the serpent, stirring up strife between them—a busybody you will say, there are many such in the world. Four stags, which are the four winds, run back and forth among the branches and bite the buds.

"Such, fair maid, is the fantastic legend of the 'Tree of the Universe,' for which there is neither explanation nor interpretation. Some other nations carry this legend on, telling us that after the creation of the universe, the gods created the first man, Aske, out of an Ash tree."

"That is indeed odd; it is just like a fairy tale."

"Our history is nothing if not fanciful; the ancients delighted to honor us."

"Oh, do tell me some more, Ash Tree."

"I would wish first to tell you a few facts about our family. I will not detain you long."

"I will listen, Ash Tree, for surely you deserve my attention in return for the beautiful legend which you have told me."

"I only wish to tell you that we are members of the Olive family, which consists of forty branches; twelve of which are American, but only six are widely known. These are the red, white, black, blue and green Ash, and the fringe tree. Our leaves, as you notice, are compound like those of the walnut, but of a deeper green. Notice that young ash yonder; is it not beautiful with its slender, grayish trunk and the easy, graceful sweep of its branches?"

"It is indeed, but it does not give the same shade which you do."

"It is young yet."

"What about the other legends? Have you forgotten?"

"Not I; they are a part of my existence. I was thinking of two very old traditions, whose origin is lost in the mists of antiquity; one of them was old in the time of Pliny and is to the effect that no serpent willingly rests under the shade of an Ash Tree nor glides beneath its branches. Pliny states it as a fact that if a serpent were placed near a fire and both surrounded by ashen twigs, the serpent would sooner run into the fire than pass over the pieces of ash."

"Owing to that fact, I should think your shade would be much sought after by timid persons."

"If not afraid of lightning, for the other legend refers to the susceptibility of the ash to lightning."

"Just the reverse of the Beach."

"Exactly; our wood is singularly light, strong and elastic. Achilles fought with an ashen spear; Cupid made his arrows of the ash. Prehistoric man, when he wished a desirable weapon, found it in an ashen club; our North American Indian who knew so well the value of all the trees of the forest, used the wood of the ash for his bow and oftentimes for his paddle. The pioneers of this country found it especially useful for the making of farm implements and machinery, while one variety, the Black Ash—because of its readiness to separate into its annual layers—is much used for splint basket work. Then, too, Ash wood takes a high polish, and for that reason is much in demand in the manufacture of furniture."

"While walking in the city the other day, I saw a very strangely shaped tree, which I was told was an Ash. It did not grow upright, but its branches were twisted and turned downwards. Is it a member of your family?"

"It is; nearly two hundred years ago, an old Ash Tree was found in a field in Cambridgeshire, England, which, instead of turning up its tips, let them sweep the ground, thus forming under its luxuriant branches a beautiful summer tent. Grafts were taken from this tree and planted and all the weeping ashes that now grow on the lawns are

its great-grandchildren. Only a little training is necessary, then part the branches on one side, and there is a unique summer-house with a central pillar and a soft green curtain all around."

"Oh, how delightful that would be!"

"Folk-lore tells among other legends, that we have the power to ward off pestilence and disease. Now this is indeed true, but not through any supernatural charm which we possess, it is simply through drainage. We are great feeders; our roots strike deep and take up quantities of water, by this means swamps are drained and useless land is made to bring forth grain."

"You are something like the larch in that respect," said Mabel, as she looked off towards the hills where could be seen fields of corn in shock, great piles of yellow pumpkins, which spoke of Thanksgiving Day, and men busily stripping the orchard trees of their burdens. Nearer at hand, she could see golden quinces and clusters of purple grapes. All spoke of a bountiful harvest from the Great Giver.

"In England, at one time," the soft, musical whisperings seemed to say, "it was believed that we possessed a supernatural charm, and there still exist Ash Trees which bear a long scar, the mark of a wound received in early days. These trees, when young, were split open and a puny, suffering baby was passed three times, by its father, on one side, to its mother on the other, through this gap in the tree. Then while the mother tenderly bore the little sufferer home, cradled in her arms, the father quickly plastered the tree with mud and deftly bandaged the wound that it might heal, for on this hung the baby's recovery; if the gap remained open the baby would die."

"How strange a superstition!"

"Yes; but it harmed nothing. Here is another: When a horse or a cow had pains in its legs it was thought that a gentle, harmless little animal with a long nose, called a shrew-mouse, had run over it. The cure was to cut a hole in the trunk of an Ash, in which was placed a live shrew-mouse, and the hole plugged up. The Ash was then called a Shrew-Ash, and the suffering animal

was cured by the touch of its branches."

"What became of the poor mouse?"

"You can imagine what became of it in that place; bereft of light, air, food and drink. They have no such superstition about us in France, nevertheless, no one cares to have an Ash Tree in his grounds."

"How is that?"

"Because of the existence of a little, golden-green beetle, called the blister-fly, which lives upon our leaves. It has a sickening smell and devours our leaves, when it dies; its body then falls to powder and is blown about by the wind, falling on the faces and entering the lungs of passers-by, causing inflammation. The bodies of these insects are often used by medical men in making blisters."

Mabel lay in the hammock listening to the notes of the Ash and the chirp of the crickets, while she pondered on the many wonderful things in this beautiful world of ours; the leaves swayed gently, and she fancied she heard the Ash Tree say:

"An Ash key once fell into a decayed willow where it took root; it soon finished the food to be found in the old trunk, for the Ash is a great feeder, and it reached below into the earth; it then thrived so well that it burst the willow open; the root thus exposed to the air soon became transformed into a strong trunk."

"That is rather a curious incident; I think though that I care more for your legends. To my mind they are more fascinating than any other tree legends which I have heard."

"I am pleased that you like them. I have one more to tell you as you lie dreaming there, then my story is done. This legend states that the earth is flat and in the middle rises Yggdrasil—on Ash Tree—its great canopy covers the whole world and under its shade the gods hold their councils. It, like the 'Tree of the Universe,' has three roots, one in heaven, one in the land of the frost-giants, and one in the under world. At each root is situated a sacred fountain of wisdom and knowledge, with which three maidens water the tree, whose abundant foliage drops dew of

honey upon the world. Under this wonderful tree is hidden the horn of doom, and when this sounds the great Ash will crack and bend, the sea will give up its

dead, the fire-god will come forth and burn up the world, when there shall rise a new world, a better world, with a new Ash Tree in the center.

EVELYN SINGER.

LITTLE BROTHERS OF THE AIR.

Gone—

A voice, from the anthem of dawn!
So golden a voice and so gay,
So blithe o'er the birth of the day!
Ah! who would be fain to adorn
Herself—by thus wronging the morn?

Lost—

A wing, that, unclipped, should have crossed
The sky, in free joyance of flight,
To soar in the blue out of sight!
Amid all the trophies of earth—
To make, in the Heavens, such dearth!

Stilled—

A throbbing heart, spring would have thrilled,
Though slight, with what ecstasy strong,
Of mating and nesting and song!
Yet she of the warm human heart,
Hath herein borne unwitting part!

Slain!

No softlier word doth remain—
A bird of too glowing a crest—
Too brilliant a bloom on its breast!
Alas! doth she dream what is done,
In wake of her will, 'neath the sun?

—EDITH HOPE KINNEY.



THE AMERICAN WHITE-FRONTED GOOSE.

(*Anser albifrons gambeli.*)

The American White-fronted Goose has an extensive range which includes North America, though it is rare on the Atlantic coast. In the interior and on the Pacific slope it is common, excepting during the nesting season, for it breeds only in the Far North. This species winters in the United States, southward to Mexico and Cuba. As a winter resident it is much more abundant on the Great Plains and westward to the Pacific coast. In the Mississippi Valley and eastward, it is more common as a migrant, and in most localities of this region it is rare in winter. In Illinois it appears in its fall migrations during October or early in November, and in the spring it returns during March and April. In those localities where it only appears as a migrant, its peculiar and rapidly repeated notes *Wah, wah, wah, wah, wah*, may well remind one of the words of Celia Thaxter in her poem "Wild Geese":

Hark, what a clamor goes winging through
the sky!
Look, children! Listen to the sound so wild
and high!
Like a peal of broken bells,—Kling, kling,
kling,—
Far and high the wild geese cry, "Spring! it
is spring!"

The loud, harsh and quite trumpet-like notes of this Goose have given to it the name Laughing Goose. But it also bears many other names. As it shows a special liking for low prairies, it is frequently called the Prairie Brant or Goose. Because of the coloration of its plumage it is often called Gray Brant, Speckled Brant or Goose and Yellow-legged Goose. It bears several other popular names, but the ones already mentioned are those more commonly used. During their migrations, they often fly so high that they appear as mere dots against the clouds or sky. They, however, spend most of their time upon the land, for it is there that they

obtain their food. When flying in large flocks this interesting species, like the Canada goose and the snow goose, with which it is frequently associated, flies in a wedge-shaped company led by one whose ringing call notes are constantly uttered. The flight of these birds is beautiful, but appears to be much less rapid than it really is because of their large size and the height at which they are moving. The flesh of the White-fronted Goose is very highly esteemed, and by many epicures it is considered much more delicious than the flesh of any of the other geese.

The geese are vegetarians and much more terrestrial than are the ducks, for they frequent the land in order to feed upon tender herbage. The White-fronted Goose during its migrations and in its winter home, frequents prairies and fields where it feeds upon the tender blades of grass and to some extent, at least, upon the green blades of winter wheat. It will also glean the scattered grains of corn in corn-fields. In California, where it is very abundant in winter, it is said to be very destructive to the growing wheat crop and that, in some localities, the farmers employ men to kill them or drive them from the fields. When obtainable, berries of various kinds and buds of shrubs are staple articles of food. When these Geese arrive upon their breeding grounds in the early spring, the lakes are still frozen and the ground is more or less covered with snow. At this time the heath berries of the preceding year form their principle food.

Mr. E. W. Nelson has given an excellent account of their breeding habits in Alaska where they nest very abundantly. There, the White-fronted Geese begin to arrive the latter part of April if the season is early, but usually early in May. "As the season advances they become more numerous and noisy. Their loud call notes and the cries of the males are heard everywhere." He found, how-

ever, that the mating season ends quickly and at the mouth of the Yukon River he saw their eggs on the twenty-seventh of May. Regarding their nesting habits, Mr. Nelson says: "These Geese choose for a nesting site the grassy border of a small lakelet, a knoll grown over with moss and grass, or even a flat, sparingly covered with grass. Along the Yukon Dall found them breeding gregariously, depositing their eggs in a hollow scooped out in the sand. At the Yukon mouth and Saint Michaels they were found breeding in scattered pairs over the flat country. Every one of the nests examined by me in these places had a slight lining of grass or moss, gathered by the parent, and upon this the first egg was laid; as the complement of eggs is approached the female always plucks down and feathers from her breast until the eggs rest in a soft warm bed, when incubation commences." Regarding the care of the young Mr. Nelson says:

"The young are pretty little objects, and are guarded with the greatest care by the parents, the male and female joining in conducting their young from place to place and in defending them from danger. * * * Very frequently during my visits to the haunts of these birds the parents were seen leading their young away through the grass, all crouching and trying to make themselves as inconspicuous as possible." He also states that all through the month of September both the old and young gather in larger flocks, and "as the sharp frosts toward the end of September warn them of approaching winter, commence moving south. The marshes resound with their cries, and after some days of chattering, flying back and forth, and a general bustle, they suddenly start off in considerable flocks." Very soon thereafter we begin to hear their cries, and see them in the United States.

THE PRICKLY-ARMoured CLASS.

Man has been very inventive and skilled in contriving coats-of-mail, iron-clads, plated armours and other paraphernalia of defense against his enemies; but Nature, itself, has kindly furnished to many of the lower animals the coat-of-mail and spiked armours necessary for their protection.

The armadillo, the lobster, the tortoise, and many sorts of beetles and other animal creatures have jointed armour plates almost exactly on the same plan as those of the mediæval knights.

The hedgehog (the porcupine) the globe-fish, the prickly crab, the spiny caterpillar, the prickly horned-lizard, and others wear spiked defenses which are ready at a moment's notice.

Most of these varieties of the animal kingdom have spines subject to muscular action, so that, though lying close to their bodies naturally, they may, at will, be raised for defense instantly; but in the vegetable kingdom, where there are like defenses also, there are no mus-

cular movements, so the spikes, thorns, etcetera, are fixed, and on the defensive always. The nettle, the spiny cactuses (the vegetable hedgehog), the colletia, the gorse, the thistle, the Spanish bayonette and many other spiked plants all must be approached with guarded stratagem. There is no catching them asleep.

Among the animals, the hedgehog is one of the most characteristic of the spiny sort. He is a squat, ugly little creature. He is cunningly inquisitive, and appears quite comic, but he is really very sedate, takes himself seriously and is royally independent. He has no tail worth mentioning. According to an old darky's version, "Natur done mah'ked him by cutting him tail right smooove, smack off." He is of a dirty white color which merges, more or less, into a dirty black. He has a small head and sharp nose of the ant-eater sort. His eyes are little, beady, black ones. He allows no familiar

liberties. If we meet him in the road, instantly his head disappears, and we see but a round ball apparently stuck full of long needles, with every point straight towards us. There is no chance of playfully slapping him on the back and giving him an "Hello, old boy." He will not utter a sound, or even nod, nor will he give us one inch of the right of way. There he stays fixed, and all we can do is to walk around him and leave the unsociable fellow to himself. To dogs, he is, as yet, an unsolved problem. One moment, on first sight, he is a subject to be tackled for battle or mere sport, but the next he is a mysterious and painful one, to be left severely alone forever after.

The hedgehog strolls along in a don't care when I get there manner; plainly, his short, bandy legs were not built for racing. If he happens to be on the top of a hill he rolls himself up in a ball and lets go. Arrived down at the foot, he unrolls himself and proceeds on his way as though this were the usual method of getting at the bottom of things. His habits of life are nocturnal. He lives in a hole in the hedge, or burrows himself in a heap of leaves, and sleeps the day away in owl-like seclusion; but when night comes, he is up and doing. He is an insectivore. Hard-shelled beetles is his favorite diet; but, like the human tramp, he knows how to adapt himself to circumstances and be thankful for almost any sort of a "hand out." In winter, when hand outs are altogether too few, he elevates his spines and rolls himself, over and over, in leaves until he has stuck himself all about with a thick blanket; then he goes to sleep until spring opens again. He is a queer looking object at most any time, but when he wakes up and ambles forth from his winter's nap, with his blanket sticking in tatters all about him, he is decidedly funny.

Like the opossum, the hedgehog is a savory dish for some palates. But it's catching before eating. One way is to push a shovel under him and throw him in a pond and drown him. Then,

with the shovel, place him in a fire until his hide, along with his bristles can be peeled off with pincers.

The globe-fish—the sea-hedgehog—has also the gift of being able to change itself from the elongated shape, natural whilst swimming, to a ball of bristling prickles when danger threatens. It rises instantly to the top of the water, inflates itself with air, distending itself into the shape of a globe. The skin thus tightly stretched, the spines stand defiantly out in every direction, forming a radial ball as does its terrestrial analogue, the hedgehog. When thus distended, the fish becomes top heavy, and turns topsy-turvy, floating on its back at the will of wind and waves. When all danger is past, it expels the air from its mouth in little gurgles, until it again subsides into its normal swimming state. Few enemies would dare attack a globe-fish when put thus on the defensive, but it has been said that live globe-fish have been found inside the stomachs of large sharks—it has even been said that globe-fish have eaten their way out of sharks, but we fear these are but questionable stories.

The prickly lizard, which lives in the dry deserts of Asia and Australia, is itself innocent and harmless, but is, nevertheless, a formidable looking creature with sharp spears all over its back, and barbed hooks, or horns, on its nose.

Then there is an insignificant looking caterpillar which seems but intent on nibbling a few juicy leaves—the woolly-bear caterpillar. Dare to touch him, and instantly myriads of tiny, and poisonous darts prick your skin, and you will suffer for hours because of having taken a liberty with the innocent (?) creature.

There are a great many varieties of animal and vegetable "sticklers"; and of each a volume could be written; but the lesson we may learn, briefly, is that, if we search the histories of the science of warfare we will find that the so-called great geniuses have, in their inventions, gone to mother Nature for practical hints and ideas.

MARY M. STRATNER.

THE BELTED PIPING PLOVER.

(*Aegialitis meloda circumcincta.*)

The range of the greater number of the Belted Piping Plovers is the Mississippi Valley, though they are occasionally seen as far to the eastward as the Atlantic coast. Their breeding range extends from Northern Illinois and Nebraska northward to Lake Winnipeg and "eastward to the Magdalen and Sable Islands." Mr. Dawson records the finding of their nests in Ohio on the shore of Lake Erie in June, 1903. They winter chiefly south of the United States. The family of plovers (*Charadriidae*) contains one hundred species which, during the breeding season, are quite well distributed throughout the world. While their habits in a general way resemble those of the snipes, they do not feed in the same manner. Their food is obtained from the surface as their bills are short and stout and not fitted for probing. Probably for this reason they do not frequent shallow ponds and the wet margins of streams, as do the snipes, but rather they inhabit meadows and sandy areas. They run swiftly and in a most graceful manner over the ground. But eight of the species belonging to the family are found in North America.

The Belted Piping Plovers are also called Ringed Piping Plovers and White Ring-necks and are so popular with hunters and collectors that they have been driven from some localities. My own observations of their habits have been made on the shores of Lake Michigan in the vicinity of Chicago where they have at times been quite common, and I have found that their habits are similar in other localities. At the present time, there are twelve or fifteen pairs nesting in an isolated small area of this region, and I believe that they return each season and if the site is not found by unscrupulous collectors that they may eventually become abundant. In 1876 Mr. E. W. Nelson found them to be common summer residents along the

shore of Lake Michigan in northeastern Illinois. He also found them breeding as early as the last of the month of April. My observations would indicate that they are now breeding at a much later date, for I have never found them nesting before the first of June, and I have seen both eggs and young from June to the first of August.

I have noticed that in the vicinity of the southern end of Lake Michigan the Belted Piping Plovers arrive in straggling pairs from the last of April until about the middle of May. Seemingly they have already mated and unlike the other beach birds which mingle indiscriminately, they seek such seclusions as the narrow beaches afford. Fortunately the light color of their plumage protects them as there is not a strong contrast between it and the light-colored sand. Their soft notes also do not readily attract attention.

Their nests are only a shallow depression in the sand and their four eggs are so colored and speckled as to well imitate the sand in which they rest. In the locality of which I have spoken, the nests are placed well back from the water and in the fine sand between the dunes and the shore. The young birds when able to leave the nest are bright and very interesting little chaps, and their parents are affectionate and faithful in caring for them. The nest is usually surrounded by a few small bones and light-colored pebbles.

Mr. Dawson has given the following description, in his "Birds of Ohio," of a male which entertained his mate with a flight song. "He would circle round and round with quivering wings, descending curves a hundred feet or so in diameter, and whistling the while a prolonged soft note with a rising inflection." The nest of this pair was afterwards located by Mr. Dawson and his colleagues.

FRANK MORLEY WOODRUFF.



From col. F. M. Woodruff.

BELTED PIPING PLOVER.

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BIRD NOTES FROM THE CUMBERLANDS.

NOVEMBER.

I like the woods in early winter. The wind slaps one in the face and boxes his ears with the energy born of long sojourn in the Far North; there are rustling leaves as in "the good old summer time," but they are underfoot, not overhead; the trees stand out, each in his own individuality, instead of losing themselves in the forest.

Summer buries the senses under an avalanche of sensations, colors, sounds, odors; winter makes one hunt for them, and he feels all the better for his effort when his search is crowned with success. The lone oak that has kept its leaves in spite of frost and wind can be studied better now than his competitors for attention have lost theirs. The bit of blackberry vine with its green and red leaves peeping up through the first snowfall is all the prettier for his dainty background; the wild rose with red seed vessels still adhering waves its slender arms in the wind, secure in the belief that there are no rivals to be feared at this season of the year.

The birds, too, are not so confusing as in the warmer months. If one has passed the first stage of the ornithological infection; if the itch for numbers has given way to the steady glow of enthusiasm and one has come to study the birds themselves; the reduction in the number of species will prove only a tonic. The coming of the cold tests the ornithologists, sifting out the sheep from the goats with unerring accuracy; it decides definitely whether one's enthusiasm is the real article or is a by-product of spring fever, so to speak.

In 1903 winter settled down over the continent much earlier than usual. Even in the Cumberland region of Eastern Kentucky where the ground seldom freezes hard enough to support one's weight till after Christmas, winter, real winter came soon after the middle of

November. Beginning with November 14, for five consecutive weeks I gave one forenoon out of seven to the study of a certain little valley and its life. It was a very ordinary valley as valleys go in that part of the Appalachians, and I assure you that they are numerous enough to suit the most exacting throughout the foothills of the Cumberland; a creek, Red River the natives call it, formed the center of attraction; on both banks growing almost down to the water's edge was an almost impenetrable tangle of river birch, alders, willow and cottonwood. On both sides of this narrow strip of bottom land rose the hills forest clad to their summits, thickets of haw and crabapple scattered here and there among the larger growth, oaks, maples, beeches, chestnuts and poplars.

Toward this little valley I set my face that morning in mid-November. In the weed patches near the stream juncos, the "snow bird" of a large portion of our country were very plentiful. The havoc that they were working in the weed patch prophesied an easy time for the farmer next year in his struggle with the weeds; if they work like this for any length of time there won't be enough seeds left to propagate the species. Here and there on the border of the bottom lands are clumps of smilax still green and smiling if the frosts have been hard and frequent. Distance lends enchantment to the view; this particular variety of smilax, sometimes called horse-nettle, is armed with strong thorns that scratch and tear the shoes of all who venture into their midst.

Leaving the lowlands I climbed the hill opposite, not stopping till I came to a terrace half way to the summit. This shelf is covered with a fine persimmon grove; already the elements and the wild creatures have done their work among the little amber globes, but here

is one that has plenty for me. Two or three of the everpresent rocks hurled up among the translucent spheres bring down a grateful shower, soft-hitting, sweet smelling. The ecstasy of the first attack over, I pick up a generous handful of the fruit and seat myself on a projecting ledge of sandstone to enjoy my treasures at leisure.

Fastidious epicures of a certain school hold this mellow honeyed fruit in contempt, asserting that it is too sweet for persons of refined tastes, etc. Plebeian, no doubt it is, prime favorite of the 'possum and the pickanniny, but must we eschew it because it is common or because it is popular with marsupial or African? If we acknowledge any such precedent in what way can we establish the thorough-going aristocracy of our taste for chicken and watermelon, similarly beloved?

The debate was running strong in favor of the *Diospyrus* when an incident occurred that changed entirely the current of my thoughts, a flock of waxwings came suddenly upon the scene and settled in the top of my tree. The way they tackle the persimmons would make a dyspeptic green from envy; my own appetite is satisfied and I don't care; I can lean back upon the hillside and watch the onslaught. Dapper little fellows they are with coats of gray and brown so harmoniously combined that one wishes milliners and dressmakers would sometimes take a lesson from Nature in color combinations. How the unthinkable berries and impossible roses would disappear from our streets and homes! They flutter in and out a moment, then with a beady chirrup they are gone over the hill; perhaps their next stopping place for lunch will be among the red cedars on the other side of the Cumberlands.

November twenty-first found me again headed for the little valley. The previous night had been quite cold; ice had formed clear across the stream except in a few places where the current was very swift. Birds, however, are more numerous than a week ago; juncos are plentiful in the weeds of the creek bed, the eye can scarcely rest anywhere without falling on drab and

white. The day is bright and sunshiny, one song sparrow warms up enough to sing us a few strains, a sample of what he can do or rather hint of what he might do if he really tried. Any music at this season of the year is very acceptable if it does lack some essential element. I don't know what term a musician would use, but I know that the real lack in the music now is motive; there can be no results without a cause, no accomplishment without a motive; a mate and a nest in the haw tree would make all the difference in the world with his music.

The song sparrow is not the only representative of his tribe out this morning; his brother of the fields is here skirmishing about the worm fence, and a flock of goldfinches in their winter garb fly over my head uttering their plaintive "Maybe" to make sure I would recognize them, I suppose. They don't need to do that, the airy curved flight is all the evidence one needs. A pair of cheewinks are making the leaves fly in a thicket of young birches; while I am watching them a cardinal jumps out of the mysterious recesses of the tangle and flies away up the valley; before long I hear him or his brother whistling merrily; winter suits him well enough.

Seventeen species in all for one forenoon's jaunt, a fair record for this season of the year. Besides those I have named I saw the Carolina wren, crow, chickadee, tufted titmouse, downy woodpecker, white-breasted nuthatch, bluebird, red-breasted woodpecker, robin, horned lark, and last but not by any means least, the red-breasted nuthatch. This is the first time I have ever seen this bird; there is no mistaking nuthatch motions for those of any other genus; they are strictly *sui generis*. His name is almost description enough to any one who is familiar with his white-breasted brother.

November 28. There is snow on the ground to-day, not enough to interfere with walking but plenty to show every mouse, bird or squirrel track. The weed patches that have been so full of busy visitors on the occasion of my last two visits are nearly deserted; a lone junco flies out and away at my approach.

Farther up on the slope of the hill I find them in plenty running in and out of the blackberries; no doubt they find it easier work to hunt a breakfast under the briars than to go to the trouble of digging the seeds out from under the snow.

In the tulip trees (*Liriodendron tulipifera*) cardinals, nuthatches, and the two species of titmice are holding high carnival among the seeds which still adhere. The cardinal seems a little awkward at the business, but after a while he gets what he is after, a true Yankee if he does wear a coat of flaming red. The nuthatch and the titmice are each quite particular to follow one method of extraction; the former hammers his seed into a crevice and proceeds to enjoy its goodness at his leisure, while the titmice clamp their booty down to a convenient limb with one foot and split the cover off with their sharp beaks. They say that a man's table manners when he is off his guard fix his place in the scale of culture and refinement. I wonder if birds should be judged by similar standards, and if so which is the more polite, to eat with one's fork or to hold one's beefsteak down with one hand while we eat?

DECEMBER.

One week later. This week has been very cold for Eastern Kentucky; the snow that fell ten days ago is still on the ground everywhere except on the south slopes where the sun has had a good whack at it. The woods seem strangely silent as I turn toward the old stamping ground along the creek; somewhere off in the distance I hear the hammering of a woodpecker, a downy, most likely. Yes, hammering is the word, not drumming or roll or call, for he is engaged in the very prosaic business of digging out grubs from a stub, not telling his chosen how much he loves her.

It is no trouble to-day to find a good place to cross the stream; the ice is thick and supports one almost anywhere. In the weed patch that furnished so many short orders for Mr. Junco and his family I find a colony of tree sparrows. They fly in and out of the rag-weeds, stopping now and then to pick out a good plump seed; I whis-

tle, one chap heeds and sits bolt upright on the top of a weed; the sooty black spot on the breast, the label of the species, shows plainly now. Tree Sparrow is a very good looking bird; his back is a fine demonstration of the harmony and the beauty that lies in simple greys and browns tastefully placed; moreover, his color scheme is modest and inconspicuous, well suited to an industrious fellow who has to work for his living, rain or shine.

The junco has but the shadow of a title to the name "snow bird" compared with *Spizella monticola*, he enjoys life far better on the sunny side of a Mississippi brake than in any nook of a hedge or weed patch north of the Ohio, while the tree sparrow seems to rejoice at the coming of the "beautiful," and is so sorry to see it go that he leaves with it. Let us keep the title for the one who has earned it and call the other simply by his name "junco."

Under a tulip tree I found the snow literally covered with the hulls of the rifled seeds; it was quite evident that black cap and tufted titmouse had been here for breakfast. In a second tulip hard by I found the two and heard them call: Black cap's call rings clear and sharp, "Chickadee, dee, dee"; his cousin lisps a little, for he says, "Thickadee, dee, dee." They are an interesting pair, indeed, I know that these Kentucky woods would be lonely enough at this season without the cheer of their voices and presence.

There is vim and snap in the air to day; it stirs the blood and makes one want to do things; there is always a good view from the top of the mountain so up I go, if the snow does yield and slip under my feet, till it seems that I have climbed three such hills by the time I reach the top. As far as the eye can see there is one succession of ridges, rising here and there to the dignity of ranges but constantly falling back into common every-day hills. There is scarcely a vestige of snow on the south slopes, but the north ones have apparently lost not an iota of the snowfall so far this season.

As I stand on the ridge and fill my lungs with this tonic air there is a rustle

of wings in the trees behind me, and flash of blue, and our old friend the blue jay is in sight. In the lowlands of the Far South as well as of the North the noisy blue-coat is a common winter resident, but in these foothills of the Cumberlandlands he is very uncommon at any season of the year; in May and June you will find a dozen yellow-breasted chats to one blue jay. Just why this is true I do not know, for these magnificent forests of the Southern Appalachians furnish what to my eye are the best of nesting places and opportunities for unlimited plunder; no doubt there is something lacking in these uplands, some subtle charm of atmosphere or flavor of the favorite food that will account for his rarity in these parts.

One week later I made the fifth trip over the course. The snow was getting soft and beginning to disappear in the sheltered spots under the combined influences of the sun and the warm south wind. The rag-weed patch beyond the creek is full of birds, juncos and tree sparrows, harvesting the last of the crop; up on the hillside where the tulip trees are plentiful the titmice are making merry; while from the slope beyond comes the nasal "Yank, yank" of the white-breasted nuthatch.

A downy calls, and somewhere in the forest a red-bellied woodpecker speaks his piece. The air is not so bracing as a week ago, but the hill is soon climbed and from a seat on a prostrate chestnut I absorb the scene. The hills seem a little barer than they did then, for the soft mantle is being gently withdrawn and all their ruggedness laid bare. A loud cackle in the clearing before me

puts every nerve on the alert; I have heard that voice before, but where? O, yes, it was down in the Mississippi bottoms. A second cackle, he is evidently just over the slope in the area of girdled trees. After a time, it seems a very long time, the bird flies across the open in front of me, marking time with strong wing strokes in his undulating woodpecker flight. He is large, as large as a crow, it must be, it is the pileated.

A view of this bird is as good as a feast, but after a while I turn from the red and black beauty in the deadening before me and retrace my steps. Here are a group of sparrows jumping about in the dim interior of a button bush swamp, six "trees" and one "white throat." No doubt the latter is only a stray, lost from his herd and waiting here among strangers for something to turn up.

With all their snow and ice the winter forests have their attractions, none the less alluring because they must be sought out clad in overcoat and mittens. It is the more serious side of bird life that one sees at this time of the year; there are no teasing antics, no playful races, none of the ornamental graces and the side-lights of the mating season. When spring comes these hills and valleys will be alive with warblers, vireos, tanagers and the other brilliantly colored birds of the Upper Mississippi Valley region, but none of them with all his beauty of plumage and sprightliness of manner can quite enlist our sympathies or gain our respect as do these sturdy fellows that brave the rigors and perils of the winter.

JAMES S. COMPTON.



From col. F. M. Woodruff.

CERULEAN WARBLER.
(*Dendroica cerulea*.)
7-8 Life-size.

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THE CERULEAN WARBLER.

(*Dendroica cerulea.*)

Of the many diminutive feathered songsters that spend the summer months in the northern part of the United States, the Cerulean or Blue Warbler is one of the most beautiful and striking. The male is resplendent in his azure-blue back and pure white breast, his sides streaked with bluish black and his wings with two white bars. The female, like all of the warblers is less conspicuous, as becomes the one which is to perform the important duty of incubating the tiny eggs. Her coat is more or less subdued to a greenish gloss and the white becomes yellowish.

The Cerulean Warbler enjoys a wide range, being found from Bolivia north to New York, Ontario and Minnesota, and west to Nebraska. The breeding range is from West Virginia, Tennessee and Missouri, northward. Curiously enough it is very rare east of the Alleghany mountains.

The nest is a neat little affair, saddled on the horizontal limb of a tree from twenty to fifty feet from the ground. It is composed of the shreds of treebark and vines, together with grass and vegetable fibre. Lichens may also be used to ornament the outside. The inside is lined with grass and fine shreds of bark. The eggs are four to five in number, three-fifths by half an inch in size. The color is greenish, or bluish white spotted with reddish brown and lilac. Some eggs are creamy in color. The spots are nearer the larger end.

The Cerulean Warbler is a summer resident in the northern part of the United States. It appears to be rare in some localities and common in others. In the southern part of Indiana and Illinois it is one of the most common of the warblers during the migrating and resident period. Its arrival in this region may be looked for the latter part of April, after which date it rapidly

spreads over the northern part of its range.

The courtship of this species is interesting and is thus described by Mr. E. W. Butler in his *Birds of Indiana*: "The males precede the females by from one or two days to a week, and always outnumber them greatly. At once, upon the arrival of the females, the season of courtship begins. I have observed them mating as early as April twenty-six, and by the first week in May their time is largely occupied in choosing a mate. All does not go smoothly, however, for frequently more than one of the beaux has a very decided fancy for a particular belle. There is a meeting between the rivals, and frequently the battle is long and severe. So engrossed do they become at times that they fall, fighting, to the earth, unheeding everything about them. At this time the male is using his utmost effort to sing his sweetest songs. When he first came, his song was, *zee-zee-zee-e-e*, the last syllable, sometimes the third, sometimes the fourth, trilled. It was not loud and shrill, but distinct, carrying to a considerable distance. It reminds me some of the songs of the Helminthophilas, approaching nearest to that of *H. chrysoptera* (golden-winged warbler), and bears some resemblance to that of the Cape May warbler. The song, however, changed. In eight to twelve days it was *tweet-tweet-tweet-tweet-ee*, ending with a trilling or twanging effect on a rising scale. At times, a part or the whole of the first song is added to this more pleasing effort. Within twelve to fourteen days after arrival, the differences have all been settled, all are happily married, the honeymoon has begun, and the most thrifty pairs are housebuilding. The Cerulean Warblers are, typically, birds of the tree tops. Save when crouching in some sheltered valley, to escape a raw

wind, I have seldom found them elsewhere than among the limbs of the tall maples, hickories and elms. There they spend their time, obtain their living from the many insects that infest the foliage, flowers and bark, and build their nests. The nests I have found were usually forty to sixty feet high, on top of a horizontal limb. The male evidently exhausted his strength in his efforts to overcome rivals and to show his attentions to his favorite. He now is not able to assist in building the nest. His wife does that, and he sings while she works."

This Warbler, with its seventy odd relatives of the warbler family, is a great destroyer of noxious insects. These tiny birds, many of them of inconspicuous colors, are splendid insect destroyers and they should be rigidly protected. Especially should the collection of their eggs be strictly prohibited, except for strictly scientific purposes and even the number used for this purpose should be limited. If the insect hordes are to be kept within safe bounds for the agriculturist, the small, insect-eating birds, such as the warblers, must be protected.

COLLINS THURBER.

MUFF.

Not a piece of fur stuffed with wool and lined with silk, but one of the most interesting little black terrier dogs that you could ever see. Of his early life little is known, as when we made his acquaintance he was a tramp.

One morning my friend noticed that part of the breakfast of her little niece Helen, who, with her brother and sister, was spending some time with her, was disappearing into Helen's lap, and that the other children were trying to appear very unconscious of the fact. My friend wisely decided to keep still, and watch the outcome of the manœuvre.

When breakfast was finished, Helen quickly disappeared by way of the kitchen door, and was promptly followed by her brother and sister. After a short time their aunt thought she would try to discover the cause of their unusual actions, and upon going into the wash house, adjoining the kitchen, she found all three upon their knees watching a hungry little black dog eat his breakfast.

Instinctively Helen's affectionate arms twined around the little fellow, and looking up with her pleading eyes she said, "Oh Auntie, please let me keep him; I found him under the boardwalk, and he was so cold and hungry that I

brought him in here and saved part of my breakfast for him. Please let me keep him." Whereupon the little fellow, as if conscious of having found a friend, stuck his nose into Helen's face, and kissed her with his little red tongue. This made all the children laugh, and was all that was needed to win their aunt's approval, provided his previous owners could not be found.

By common consent, he was looked upon as Helen's especial property, as she had first discovered him, and now it devolved upon her to find a name for him. When he cuddled down in her lap, she said, "Oh, he is so warm and soft and smooth, just like auntie's muff, that I am going to call him Muff," and thus he was known from that day forward.

As no trace of his former home could be found, the children soon looked upon him as their very own, and took great delight in the unusual intelligence of their little playmate, as he was an apt pupil in learning all the little tricks they wished to teach him. When with eager eyes he looked into Helen's face, she would say, "O Muff, I know if you could talk you would say many interesting things, and I know you would say that you love me." With this, he would bound into her lap, put his little

paw upon her shoulder, and his struggling efforts to bestow his dog kisses would end in a romp.

But these happy months were soon over, and the children returned to their own home, leaving little Muff behind them, with many regrets.

By this time, however, he had found a warm friend in their aunt, and in his loneliness after the children had gone, he gave all the affection of his warm little heart to her. When he saw her attired for the street, he would bound to his feet, wag his tail, and by his eager looks ask permission to go with her, a favor very frequently granted; but it was not always convenient to have a little dog along, and never at church or prayer meeting.

It was not long before he learned the meaning of "No, Muff, you cannot go." Although these words chased all the joy from his expressive eyes and tail, they seldom failed to be effective. After many months had passed by, it was noticed that at church time on Sunday, and at the hour for the weekly prayer meeting, Muff never asked to go along. When attention was called to this, the question arose, "How does Muff know that it is church or prayer meeting time?" It was at last concluded that the bright little creature had noticed that when the bells rang he was always refused permission, so now had lost all desire to go on those occasions.

As the years went by, his affection for his mistress was often very touching. If she was absent for any length of time, he would hunt for her all over the house, and when he failed to find her, he would go to his cushion and lie down with a sigh that seemed entirely human; and at one time I was sure I detected tears in his eyes, which he wiped away with his little paw. But oh, the joy of the homecoming. It seemed sometimes as if his little heart would burst, and for a long time afterwards, every movement of his mistress was jealously watched.

Usually he was very obedient, and a tone of reproof was all that was necessary to correct any transgression, but on one occasion his desire for luxurious comfort got the mastery. His own

bed was a soft cushion on the floor of the library, but one day it was discovered from hairs left behind, that he, when alone, had taken possession of a large plush chair in the parlor. He was taken to this and severely reprovved, and seemed very much ashamed, but a few days later the same thing happened; then for the first time in his life he was whipped with a little switch. For a long time no traces of disobedience were found; but one afternoon I was the interested observer of a severe struggle between his desire and his conscience, and I am sorry to say he would have yielded to the temptation if he had not been prevented.

While he was asleep, I had taken a seat behind the drapery of a large bay window in the parlor, and was absorbed in my book, when suddenly I heard the pat, pat of little feet, and on quietly looking through an opening, I saw Muff standing before that chair gazing longingly into its soft depths; then he turned sadly away, and I rejoiced, but he had taken only a few steps when he returned. This he repeated several times, till my heart fairly ached for the little hero, but, I am sorry to say, at last he was just ready to spring up, when I suddenly exclaimed, "O Muff!" Then he turned, and with head down and tail drooping slowly walked to his cushion in the adjoining room. I followed, and when I gently put my hand upon his little head, he looked up, saying as plainly as a dog could, "I'll never, never, do it again," and I think he never did. When I said, "Poor little doggie," he put his delicate little head in my lap, and looked so much as if he wanted to talk that I was full of sympathy for his speechless pain.

It was not long after this that the end of his life came through a sad accident, notwithstanding the fact that he had always been afraid of the cars, he attempted to cross before a moving train, and was caught by the cruel wheels.

So human did he seem that I cannot but hope that even for little doggies there is another life, free from pain and accident.

AUGUSTA KLING.

THE WILD TURKEY.

(*Meleagris gallopavo.*)

One of the most vivid recollections of my boyhood is of the time when a flock of eleven Wild Turkeys, perhaps the last flock to be seen in that region, came into a wood near our house. I remember the clear call of the birds, and strained my ears day after day to hear it again. We boys built a rail pen and covered it over and dug a trench under it, and scattered corn about, after the pattern of a picture we had seen in a book on traps but the Turkeys never came.

In both general form and habits the Wild Turkey is so similar to the well-known domesticated turkey that a detailed description of the bird would be tedious; indeed, the domestic turkey often goes half-wild and spends much time running through woodlands, stealing its nest and acting in every way like the Wild Turkey.

It must be borne in mind, however, that the turkey of domestication is different in origin from our Wild Turkey. To get the precise relationship between the two clearly in mind it will be both helpful and interesting to consider briefly the history of the tame turkey.

The early explorers of this country found the turkey already in domestication among the Indians of Mexico. This was a different species from our northern Turkey, being paler in color, smaller in size and very likely less hardy. Some of these birds were taken to Europe, where, under the supposition that they came from Turkey they were called turkey-cocks, a name later shortened to its present form. Thus the name of this bird, and "Indian" serve to remind us yet of a bad geography-lesson our ancestors had long ago. This bit of history may help explain the statement of one writer who states that "the turkey presents the remarkable case of an animal which has decreased in size, bril-

liancy of color and flavor through the process of domestication."

The early settlers of New England found there our native Wild Turkey, a larger, more brilliant bird than the bird we know, and one of the largest and finest game birds of the world. Using the word "game" in the sense of it furnishing sport, of putting the hunter to the test of all his strategy and skill, it could hardly be called a "game-bird" then—possibly, however, no animal has ever deserved this term until man has educated them and made them wary and cunning. It seems to have been a rather tame business getting them at first, and even after they had learned the attitude of man toward them and the range of a gun, they could be trapped by flocks in the manner described in the beginning of this article; as the Turkeys, after entering the pen and eating the corn would keep looking upward for some opening above their heads and never discover the trench by which they had entered.

Another favorite way of getting a turkey dinner was by using a turkey call, which consisted of a sort of a hollow tube (preferably the hollow wing bone of another turkey). The hunter concealed himself, and by placing one end of the tube in the hollow of the loosely clasped hands and sucking on the other end, made a noise much like that of a Turkey. If the scheme succeeded, some old gobbler soon answered, and approached the supposed turkey. I remember reading an entertaining account of a famous turkey-hunter who, having found where a magnificent gobbler ranged, started forth with his turkey call. He hid behind a log and called, soon an answer came clear and certain from across the woods. The hunter crept from ambush to ambush, calling from time to time. The gobbler also



WILD TURKEY.
(*Meleagris gallopavo*.)
1-5 Life-size.

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came, his call sounding nearer and nearer. At last it was well within range and the hunter cautiously peered from behind his covert, all a tremble with excitement, his eyes dancing with expectancy. He gazed into the expectant face of another famous turkey-hunter, peeping from behind a log. Now, no doubt, one of his most cheerful memories is of the joke he had on the other fellow.

As has been said, the habits of the Wild Turkey are almost identical with those of the domestic turkey. The birds go about in flocks, sometimes in open places, sometimes in deeper forests, feeding on mast and insects. One male is usually found in company with several females. In the spring the females steal away and make their nests, where they lay from ten to fourteen eggs. They keep the nests hidden from the male who, if he finds them, will proceed to break up house-keeping at once.

It was practical, unimaginative Ben Franklin, I believe, who proposed the Turkey instead of the eagle as the national emblem, and gave a number of very practical reasons therefor. Indeed, there is a sense in which he is a national bird, as he is the principal factor in the one great feast that is distinctly an American institution, and a feast which means more to us perhaps than any other day of the year, as it means home-coming, and the gathering of separated families together around the old home table.

But I think we all have reason to rejoice that Franklin's excellent reasons were not listened to, for take him all in all, outside the enthusiasm of the hunter when the bird has come within range or the expectancy with which the epicure looks forward to a savory dish, there is hardly a bird on earth that can waken less enthusiasm. If you want a good half-hour's amusement, sit down and fancy the Wild Turkey as an emblem of the republic. You will discover the foundation for a rousing comedy. Think of his picture on our coins, and the bills we occasionally see. Imagine the cartoons our European friends would make. Think of the things our and other poets have said of the eagle.

Tennyson's magnificent

He clasps the crag with hooked hands
Close to the sun in lonely lands,
and Drake's

Then from her mansion in the sun
She called her eagle-bearer down,
and the hundreds of other references you can call to mind, and try to substitute "Turkey" instead.

Indeed, outside of the question of eating, and considering questions of character, there are few birds we view with such lack of affection. Other game birds appeal to us. The whistle of the quail makes for home and summer-time and feelings that lie near the hearts of men, and the farmer actually loves them for their cunning, buntz forms. He has touched poets and authors, and Riley speaks of him when he "whistles his name in high delight," and one of the most delicate touches in Irving is a bit of description where the quail calls from the empty stubble-field. The drumming of the pheasant from the wood quickens the pulse and starts the marching of the long, long thoughts of youth. Even among our barnyard fowl bold chanticleer has had noble fame from time immemorial.

But the Turkey, with his brutal, disreputably red face, his inordinate self-esteem and constant strut, his flying into a passion at the sight of a red rag, or even a guying call, annul every feeling of admiration that his brilliant colors and stately form might awaken, and even to those who are not gourmands he looks never so handsome as when nicely browned and hot and smoking, he emerges from the oven where he has received a richly deserved roasting.

While the Wild Turkey was formerly found as far north as Maine, Ontario and North Dakota, its range is now practically limited to the region from Pennsylvania southward to the Gulf of Mexico and westward to the Great Plains. It nests upon the ground at the base of a bush or tree. The female only cares for the young and, in fact, is deserted by the male as soon as she departs to sit upon the eggs in her hidden nest.

H. WALTON CLARK.

AN AUNT JANE STORY.

CURIOUS STONES.

"Aunt Jane, do come up into the attic and see what a collection of stones we have made," said Bird one day when it was too rainy for the children at Woodland to be off on one of their frequent rambles.

"Do, do," John added, "for we have designs on you for a talk about historic stones. Our collection is of common, every-day stones and pebbles, that one can pick up almost anywhere, but we want to know something about famous stones, and we are sure you will tell us. Now won't you?"

"John, you forget," cried Howard, "that we have a few stones by no means common. There is Edith's Agate from Agate Island in Lake Superior, which is as large as a hen's egg and a beauty, too, and then there is Alice's curious gray stone with a face on it in white that looks like a cameo of some old Greek philosopher."

There was a merry scramble up the attic stairs, a dilapidated rocker was offered Aunt Jane, and after she had duly examined and commented on the geological collection she said:

"Children, when John Herschel was a boy he asked his father, William, what was the oldest of all things. The great astronomer is said to have picked up a stone and replied, 'Here, my child, is doubtless the oldest thing that I certainly know.' The commonest rock has a history of its own, full of interest, especially to one well versed in geology. But there are other stones, around which cling legendary and historic associations."

"Are there any of these here in our own country?" Alice inquired.

"Yes, in the memorial room in Lincoln's monument at Springfield, Illinois, there is a stone some two and a half feet wide by three feet long, from the wall of Servius Tullius, sent to Lincoln from Rome in 1865. It bears this inscription: To Abraham Lincoln, President for the

second time of the American Republic, citizens of Rome present this stone from the wall of Servius Tullius, by which the memory of each of these brave asserters of liberty may be associated, A. D. 1865. No doubt this gift from Rome will long be preserved by the American people as has the stone known as Jacob's Pillar or the Stone of Destiny by the English."

"That stone given to Lincoln is one we may all easily see," cried Edith. "I am so glad; I mean to read all about Servius Tullius and see if he was anything like as great as our own Lincoln, if he was a Roman."

"Tell us about the Stone of Destiny," cried John, "I like the sound of that word, destiny!"

"It is a dark-colored stone, streaked with red and is only some twenty-six inches long, sixteen inches wide and eleven inches thick, with surface defaced and scratched. Its legendary history is that it was preserved in the temple, taken to Egypt by Jeremiah, carried thence to Ireland by a princess, taken next to Iona and thence to Scotland at Scone. Here for four hundred and fifty years it remained, and Scottish Kings were crowned upon it. Then it was carried to England by Edward I., and for five hundred years England's Kings have been crowned upon it, as it is under the coronation chair in Westminster."

"Is there any writing on it?" Madge asked.

"Yes, the inscription seems prophetic as Queen Victoria is descended from James of Scotland. It is this:

'Where e'er is found this sacred stone
The Scottish race shall reign.'

Another stone of curious history is the 'Moabite Stone,' portions of which are preserved in the Louvre."

"How is it inscribed?" Howard asked eagerly.

"It contains the oldest alphabetical

writing now known. It gives an account of a revolt of King Moab against Jehoram, King of Israel, 890 B. C."

"People who go to Paris can see the old curiosity," said John. "I wish I could."

"Much younger is the famous Rosetta Stone, set up in 195 B. C. and discovered in 1799. It proved a valuable key to the interpretation of hieroglyphics."

"That long word fairly takes my breath away," exclaimed Madge, "but you need not stop to define it, my Sunday school teacher did that the other day and I haven't quite forgotten it yet."

"Then there is," Aunt Jane continued, "a stone called the 'Sunday Stone,' because it is a calendar of Sundays and holidays."

"And how did that happen, I'd like to know," said John.

"In this way. It is composed of carbonate of lime. When the miners worked in the colliery drain, from which it was taken the water left a deposit colored by coal dust; when not at work the water ran clear and left a white deposit. In time the black and white layers made a stone of considerable thickness with a black streak for day, a white one for night, and a broad white one for Sunday, hence it has its name the 'Sunday Stone.'"

"Which is the largest stone you know of, Auntie?"

"The largest artificial stone in the world is the one used as the base of the Bartholdi's Statue of Liberty in New York harbor. It is made of broken trap rock, sand and cement."

"Were not the pyramids built of stone of considerable size?" Howard queried.

"Yes, it is estimated that one of the largest weighs eighty-eight tons, yet the stones of the pyramid are laid without mortar and so close that a pen knife cannot be inserted between them.

"Those visitors to earth from unknown space, the aerolites, are often of great size. One in Stockholm is said to weigh twenty-five tons. In Washington at the Smithsonian Institute there is one from Mexico which weighs 1,400 pounds. Such stones are largely composed of iron.

"The Astrologist's Stone, or Devil's Looking Glass, used in Queen Elizabeth's time to unveil the future, was simply a polished piece of coal; but in the British Museum may be seen a rock-crystal once supposed to have a spirit imprisoned in it."

"I have seen a rock-crystal beautiful enough for the home of some spirit," cried Edith. "Oh, I think rocks are wonderful!"

"It is said that in Gothland stones are found which are covered with a red pigment that upon being rubbed turns yellow and diffuses the smell of violets, hence such stones are called 'Violet Stones.' Perfume is certainly an unexpected attribute of a rock, but it is doubtless due to the presence of an extraneous substance in the pigment.

"There are so many curious stones in Nature's museum, stones sculptured by the ages into rare forms, or dyed in lovely colors, or filled with strange fossil remains, that to make a living study of them so as to become in a manner in 'league with the stones of the field' is a most desirable pastime for you young folks."

"Please tell us a little bit about Plymouth Rock?" pleaded Madge. "It is an historic rock we all like to know about."

"Certainly," she smilingly responded; "I do like you to feel interested in Plymouth Rock. I expected when I saw it to find a great ledge of rock right on the edge of the water, but what I really saw was a large smooth looking rock with a stone canopy over it and an iron fence around it. My coachman said that in 1774 an attempt was made to raise the rock from its original bed, to prevent it from being covered by the falling in of the wharf about it. The piece under the canopy was broken off. It was removed to the town, and during the war a liberty-pole was erected upon it."

"How did they drag it so far?" Birdie inquired.

"With horses, of course," John responded. "You can move anything with horses."

"No, they used oxen. I do not think they actually needed so many, but twenty

yoke of oxen were hitched on and a big procession followed the stone. That was a Fourth of July worth seeing!"

"When was the stone taken back to its original site?" Alice asked.

"Not many years ago. The Plymouth Association feared it might be destroyed in some way, and so it was brought back and enclosed with a strong iron fence and the canopy erected over it."

"Dear me," sighed Alice, "how sorry I am to know that no cold waves dash over Plymouth Rock."

"You wouldn't expect water to stay in the same place for hundreds of years to accommodate you, and what if the rock has traveled about a little, that doesn't hurt it one bit. Can't you just imagine Mary Chilton or John Alden stepping on the rock? For my part, I think it was Mary Chilton that landed first. It's

just like a girl to want to and a boy to let her do it."

"Bravo!" said Aunt Jane. "I'm glad your sense of chivalry helps you decide the much-argued question. You know the descendents of both Mary Chilton and John Alden claim the honor. But sit still a while, children, dear, and let us try to picture the landing in our minds. The bleak December day, the barren rocks, the somber leafless trees, the cold, biting winds, and an earnest, but cold and worn, boat load of people seeking new homes, thankful that they had escaped the dangers of the ocean, courageous to meet the rough experiences that were sure to come. Never before did a nation spring from such a disheartening beginning, and from such God-like patience and faith of a little handful of men and women.

BELLE PAXSON DRURY.

AN INTERRUPTED SERMON.

(Written on hearing a yellow-bird sing during a church service.)

Twittering, fluttering, lirting on high,
Dipping and tipping wee head with each measure,
Preening and cooing and crooning near by.
Yellow-bird! Whence comes such rapturous pleasure?
What does he know of the Preacher's oration,
Flooding through archway and stained glass ajar,
Swinging and flinging and bringing elation,
Isn't *he* spreading bird-gospel afar?

Spilling and thrilling and trilling his carol,
Shaking soft feathers of olive and gold,
Where gray boughs and green leaves set off such apparel,
Hid in the elm-tree so stately and old.
Warble and treble and ripple, sweet singer!
Love is the theme which such anthems inspire.
Our Father keeps watch o'er the tiny joy-bringer,
Surely He cares for His small feathered choir.

—ETHEL WHITTIER BOYNTON.



From col. F. M. Woodruff.

TURNSTONE.
(*Arenaria interpres*.)
1-2 Life-size.

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THE TURNSTONE.

(*Arenaria interpres.*)

Mr. Herbert K. Job has said: "Many a sojourn by the sea has been brightened for me by the presence of the shore-birds. They are Nature's contribution toward filling a vacuum. Every other sort of locality—forest, pasture, prairie, mountain, swamp and ocean—has its peculiar birds, and so has, therefore, the shore." Among these birds of the shore none are more interesting or handsome than the Turnstones. While they are nearly cosmopolitan in their distribution, they frequent only the marine beaches and, in the interior of America, the shores of the Great Lakes and the larger rivers. For this reason they are not known to a large number of those who are interested in birds. If one desires to study the Turnstones, a visit to the seacoast during their migrations is desirable. There they are not uncommon at the time of their northward journey in May, and also during their southward trip in the fall. In such a locality, they may often be seen feeding along the outer beaches, either in small flocks of their own kind or associated with other shore-birds such as the semipalmated and Wilson's plovers, the plover-like sandpiper, or sanderling, and the semipalmated sandpiper, or "peep" as it is often called. Not infrequently they may be seen feeding singly, or in groups of three or four. Their migrations take them as far southward as Patagonia. It is evident that they are birds of strong and rapid flight, for they travel from Patagonia northward to the Arctic regions where they nest.

When in an assemblage of other birds with which they are liable to associate, the Turnstones are easily distinguished when feeding, by their larger size; by the black of the neck and sides of the breast, and the variegated reddish brown color of the back. They may

also be easily known when in flight by a peculiar display of white. Not only is the plumage of the under surface of their bodies white, but also that of the linings of the wings. Their legs have an orange red color.

The Turnstones seem almost burdened with common names. Because of the variegated coloring of their backs they are called Calico Backs and Checkered Snipes, and their red legs have given them the name of Red-legged Plover, as in some of their characteristics they resemble the plovers. Unlike nearly all the other beach birds whose plain and soft colors harmonize so well with the sand that they are quite inconspicuous except when in motion, the Turnstones' strikingly colored plumage makes them always conspicuous. Possibly it is a knowledge of this unfortunate condition that makes them shy and inclined to be wild. They are very fond of the eggs of the horsefoot or king crab and are often called Horsefoot Snipes. Brant Bird and Chicken Plover are also common names of these birds. The name Turnstone, however, is a particularly appropriate designation, for it perfectly describes one of their most marked habits. Upon the beaches where they feed, they actively search for the small marine creatures by turning over stones, pebbles, shells, masses of seaweed, clods of earth and pieces of rubbish. Ordinarily, the bill only is used to turn over lighter substances. The bill is inserted under the object and the head given a quick jerk. Sometimes the head and the breast are used to assist in pushing over some of the heavier objects. At times the birds will try to overturn a stone or clod which is larger and much heavier than themselves, and sometimes they fail after trying a number of times. They seldom leave a feeding ground until they have patiently ex-

amined every possible source of food, which consists of the small marine creatures such as worms, insects, crustacea and the eggs of the horsefoot crab.

The Turnstones breed only in Arctic

regions and nest upon the ground, laying their eggs in mere depressions in the sand or gravel of sea-beaches. The nest is a poor affair as the depression in the sand is only very slightly lined.

THE CAMP ROBBER.

No doubt all of you have heard of a bird called the "Camp Robber." I think that very few of you have seen him, however. He is a bird that lives far away from any human habitation, up in the high mountains. He does not seem to like the society of people one-half so much as he does that of the wild creatures. He's a very interesting bird to watch, and as I know you are interested in birds, I am going to tell you some things that I have observed about him. Whenever I say "him" I mean "her" as well, for it is very seldom that you see one without the other. They always travel in pairs. I always selected a nice place to make the camp for the night when we were traveling in the mountains, and the very first thing that I would see after dismounting from my horse was one or both of these birds sitting upon the lowest limb of a fir tree watching the process of making camp. If, perhaps, there was only one, by some process of communication, that one telegraphed to its mate and in a very few minutes there were two, sedately observing the arrangement of the camp. I opine that they are more concerned about the disposition of the larder than anything else. They always sat upon the nearest limb of a tree that they may find, and looked like a pair of gray friars with white cowls, as they silently watched. After everything is made secure, one may see them mounting the tree, which they do by successive hops, from one limb to another, higher and higher, until they have reached the topmost bough. No person ever saw a

"Camp Robber" take his flight from anything but the highest branch that he could reach. Once there, he takes one last look at the camp as though not to forget where it is, and then sails away. There! now that bird has gone and you will never see him again. Well! don't worry about that bird. He knows his business just a little better than any other bird of my acquaintance. In less than one hour he is back to stay. That is, he will stay until he gets something to eat, and that something tastes a great deal better if he can steal it. Meat is what he most desires but if there is anything edible that he will not accept (provided he can steal it), then I have overlooked that article in my camp kit.

Some people tell you that a bird can't smell. I wouldn't say that they can, but this fact is well known to me, that one of these birds will appear on the scene within five minutes after you start to cook a meal on the camp fire. He can either smell or else has some sixth sense that we poor mortals are deficient in. No matter how long one camps at the same spot the birds will be there in constant attendance. The last thing at night that you see is the gray forms; the first thing that greets your vision at daybreak is the same uniform of gray sitting upon the same limb in the same watchful attitude. They are always ready to dart down and purloin any morsel that may be overlooked for the moment. Lay a bit of meat down and turn your back and in an instant it is gone. An amusing trick is to pin a bit of meat to a stump with a stout nail

and secretly watch the birds attempt to steal it. The look of chagrin upon their faces when they find themselves unable to fly away with the coveted bit is very amusing. They always attempt to take everything by stealth. Silently they slip out to the end of a limb and when you are not watching they dart down and nab the morsel, flitting back to their perch and looking as innocent as possible.

The "lumber jacks" have a great deal of sport at the expense of these feathered robbers during the winter season in the logging camps. There are always several of them about such camps, where they pick up a very good living from the scraps and waste from the cook table. Failing in this, they will eat the tallow from the team harness. This has caused them to be called "Tallow Birds" by the woodsmen. The trick that I spoke of seems to be a little cruel, but as the bird is seldom injured by it I must tell it to you. A nice little bit of meat is selected from the loggers' lunch pail and tied to the end of a "skid." A "skid" is quite a heavy pole some sixteen feet in length and is used for rolling the logs upon the rollway. The "skid" is then lain across a convenient log so that it nearly balances. The trap is now set for the unsuspecting bird. A workman hides behind a nearby rollway with a heavy ax or maul in his hand. Soon the "Camp Robber" espies the meat and alights upon the end of the "skid." No sooner does he begin picking at the meat and trying to carry it away than the man with the ax strikes the other end of the "skid" a powerful blow. Of course the end upon which the bird is sitting flies up and the bird himself is tossed several yards into the air. This process is repeated as often as there are birds about, or until the "boss" calls to the men "all out," which means that the men must resume work, the noon-hour being spent.

It is said that these birds are always found about the haunts of the moose, and some have called them "Moose Birds." I very much doubt if this

be true, though I cannot say that it is false. I am inclined to think that during severe winters they may frequent the "yards" of moose or other animals, but that they follow after any particular band of animals, is subject to a great deal of question in my mind.

I never could understand why the bird was sometimes called "Whiskey Jack." There certainly never was a more sedate bird and one as little given to garrulity. His whole demeanor is one of the greatest reserve. You would suppose that he was expecting to attend his own funeral the very next minute. Then why call him "Whiskey Jack?" Major Charles Bendire suggested that it might be a corruption of the Indian name for the bird. You had better look up that Indian name and see if you can see any similarity. I can.

It is a pretty difficult matter to find the nest of this bird. I have looked for them several times but only once did I meet with success. I don't know that you would call it a success, either, unless you call seeing a whole row of "Camp Robbers" sitting on a limb with the old ones at the head, success. I was riding along a mountain trail with my eye out for anything in the bird line when I saw one of these birds. He was flying through the timber leisurely, seemingly without any particular object in life except to kill time. Now, I have learned enough about birds to know that when they appear to be the least interested, right then is when they have something of grave importance on their minds. I kept close watch on our friend in gray until I saw him alight in the top of an immense fir and gradually begin to hop downward, limb at a time. By keeping him in view I was permitted to see the whole family at home—that is, near home. The young ones had left the nest—there were five—and were sunning themselves not far from it. The nest itself was situated near to the trunk of the large fir and seemed to be built entirely of moss. I continued on my way, leaving the family watching me until I was far out of sight.

CHARLES S. MOODY.

THE EUROPEAN KINGFISHER.

(*Alcedo ispida.*)

The English or European Kingfisher was mentioned by the writers of very early ages and is a notable element in both classical and medieval mythology. In medieval legends it was believed to have been at one time a plain bird of a uniform gray color, but that when liberated from Noah's Ark it flew toward the sun and, as a result, the plumage of its upper side changed to the color of the sky above; its lower plumage was scorched by the heat of the setting sun and assumed the color which it has at the present time. The dried bodies of Kingfishers were also believed to possess a power which would create thunderbolts, and also that their bodies would protect woolen goods from the ravages of moths if laid with them. One of the most interesting of these early superstitions was, that if a Kingfisher's body was hung from the ceiling of a room by a thread, in such a manner that it would swing freely, its bill would always point in the direction from which the wind blew. Pliny, in his *Natural History*, relates an interesting superstition: "It is for this that the halcyon (Kingfisher) is more especially remarkable; the seas, and all those who sail upon their surface, well know the days of incubation. * * * It is a thing of very rare occurrence to see a halcyon, and then it is only about the time of the setting of the *Vergiliæ* (the seven stars, Pleiades), and the summer and winter solstices; when one is sometimes to be seen to hover about a ship, and then immediately disappear. They hatch their young at the time of the winter solstice, from which circumstance those days are known as the 'halcyon days': during this period the sea is calm and navigable, the Sicilian sea in particular." Ovid tells us of how Alcyone threw herself into the sea, because of grief for her husband, and was changed into a Kingfisher, and how her

father Aeolus, the wind-god, caused all gales to be hushed and the sea calmed in order that their nest (her husband was also changed into a Kingfisher) might float uninjured on the waves. This period of time was known as the Halcyon Days. There are many other interesting legends and superstitions regarding the Kingfishers.

The English, perhaps more properly the European Kingfisher, is one of the most beautiful of the birds of Europe. They are solitary birds and quite local in their habits. While not abundant in any locality, they frequent every country of Europe, and also the northern portion of Africa and the southwestern portion of Asia. Their flight is rapid and, as Robert Mudie has said, "There are few sights in quiet nature more novel and pleasing, or that one wishes more to have repeated than the first glance one gets of a Kingfisher, darting along some reach of a clear but placid stream, which glides between soft banks fringed with reeds and bushes." Frequently, as they fly over the water, they will stop their direct flight and, hovering over a spot for a few moments, will suddenly dart downward into the water and return with a fish, or possibly an insect which may have been floating on the surface of the water. They also watch for their prey while perched upon the boughs of trees, or other objects which overhang the water. Upon the sea-coasts, it is said, they will feed upon small crabs. Because of the freezing of the streams in the northern portion of their range, as winter approaches, the Kingfisher must necessarily migrate southward. As they dive for their food and must see the fish first, they frequent only those streams which are not turbulent. Neither do they fish when the wind roughens the surface or mud colors the water. They must have "halcyon days" when the waters are quiet and they can



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EUROPEAN KINGFISHER.
(*Alcedo ispida*.)
9-10 Life-size.

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see their prey of fish. It is undoubtedly this habit which gave rise to the superstitions of the ancient observers of which we have already spoken.

These Kingfishers nest very early in the year. The nest is at the end of a tunnel which may or may not be bored by them in a bank, and opens toward a stream. The tunnel slopes upward and may be straight or crooked as the birds will frequently bore around an obstruction. While the nests are nearly always built in the banks of a stream or other body of water, they have been found at some distance from water. One observer records the finding of a nest which was tunneled under the roots of a fallen tree in woods bordering the river Thames and fully a quarter of a mile from its banks. The number of eggs laid are usually six or eight and may lie upon the floor of the chamber or upon a mass of fish bones. These bones which form the indigestible portion of the fishes eaten by the birds are thrown up in pellets by them. The young remain for a considerable time in the nest and, in fact, it is said, until they are ready for the practice required in the preparation for perfect flight for, on account of the usual position of the nests in banks, they could not begin to obtain their own food except by flying. Pliny, as well as Ovid, believed that the nests of the Kingfishers were built in a form

which would permit them to float upon the water. Pliny says: "They make their nest during the seven days before the winter solstice, and sit the same number of days after. Their nests are truly wonderful; they are of the shape of a ball slightly elongated, have a very narrow mouth, and bear a strong resemblance to a large sponge. It is impossible to cut them asunder with iron, and they are only to be broken with a strong blow, upon which they separate, just like foam of the sea when dried up." Cuvier has said that the objects called by Pliny the nests of the Kingfishers were merely a low form of animal life which is similar in its form to a nest. This belief that the Kingfishers nested on the water led to the name "Halcyon Days." These were the seven days preceding and the seven days following the shortest day of the year and were so called "from a superstition that calm weather always prevailed at this time, which was the brooding-time of the Halcyon or Kingfisher. The nest was supposed to float on the sea; hence the bird was regarded as the harbinger and symbol of calm weather, security and peace." The name Halcyon Days is used, at the present time, to designate any period of tranquility. Bret Harte has written:

Thou bring'st me back the *halcyon days*
Of grateful rest, the week of leisure.

IN THE WOOD.

Here, in the solemn stillness of the wood,
Long ages past, some dying heart beat slow,
Some dusky watcher saw the shadows grow,
And cried her kinsmen to avenge the blood.
We hold us nobler than the men who stood,
Relentless, grim, with ready shaft and bow,
Waiting the watchful coming of the foe;
To fight—to die who might, to win who could.

In some far forest of eternity
Dwell those brave spirits; and where once they trod
The blood of birds cries ever up to God,
And man stalks by, that all the world may see
The thirst for blood, the mad desire to kill,
The naked lust for life, unconquered still.

—GEORGE H. MAITLAND.

WHERE THE SUMMER WENT.

Did she not come a-down this way?
Would I could trace her steps to-day,
I saw the floating of her hair,
And now she seems not anywhere.
Her brow was wreathed with cardinal flower,
Her arms were heaped with goldenrod;
And now for her the crimson tears
Are dripping in the woodbine bower,
Are dripping downward to the sod.
Oh! Is she hiding now her face
From me, for but a little space?
Or gone, where other summers went,
To rest through centuries content,
Within the Biding-place of God?

—MRS. CORA A. MATSON DOLSON.

A VISIT TO A RED-TAILED HAWK'S NEST.

High up in a towering hemlock which stood one-third of its length above the other trees of the forest, a pair of red-tailed hawks had built their nest. Year after year it grew, as the birds returned and repaired it; and year after year it was the home of a happy family. High above the cares and troubles of the world; unmolested, save by the sun and shadows, it cradled its restless brood in summer, sheltered the squirrels in autumn and rocked the little owls in winter. Deep in its roomy crevices many a brown nut was hidden by deft little paws, and over the openings spiders spun their webs, like sentinels to guard the stores within.

One of those sunny mornings, just as the crows were nesting and the leaf-buds bursting in the sunlight of early spring, I happened to be near this tree, glass in hand, watching the newly-arrived warblers and the growing insect life about me. Little spiders were hanging their first webs in the sun, newly matured flies sported on crisp new wings, and the black ants in a dead tree nearby kept dropping down little bits

of decayed wood. Chipmonks raced and chattered on the dry leaves and gazed curiously from vantage points on stumps and rocks. The crows called and cawed from the spicy pine tops back of me, and the broody call of the female on her nest seemed to take in, from the air and sunlight, a sound of dreamy softness. Everything was peaceful and happy.

All of a sudden the loud, quick scream of a hawk came from overhead. It sent the warblers helter-skelter and the chipmonks to their holes. Soon it was repeated, and, from way off in the distance, an answer came floating back as though born of the wind. A swift-moving shadow shot past and I saw a hawk alight in the tall hemlock, and soon another came and settled in the same tree. I listened and waited. It seemed as though the sunlight would betray me, or the soft breeze of spring-time would carry tidings of my presence to that lone treetop, and its tenants would be gone. But no; for soon I heard the loud voice of the male bird calling and crooning a love song, so

wild, and weird, and fantastic that it seemed as though the winds and wildness had lent their voices to it and made it like themselves. For fully an hour I listened to it without seeing much, when the birds both left and I ventured out. Great was my satisfaction when I saw the nest, and for the next few days I watched it closely. Though I tried to keep out of sight as much as possible, the hawks, in some mysterious way, seemed always to be aware of my presence and they never let me see them in or very near the nest. When ten days had passed and I still saw signs of the birds, I determined to climb the tree and get, if possible, a picture of the nest and eggs. And right here, let me add, my troubles began. The tree was three feet and a half through at the ground and the branches were few for some distance up. Besides this, my camera and a pocket full of plate holders did not help me any.

Though I approached the tree with the utmost caution, the mother bird heard me and slipped quietly off the nest and went away before I was hardly in sight. After much trouble with the camera, I reached the live limbs above the lower dead ones, and from there the way was easier. When I was within twenty feet of the nest a crow, one of that noisy crowd that was nesting in the pines nearby, saw me and began to caw with all its might. Soon it was joined by another and another until the air and wood seemed alive with crows; indeed, I began to think that the crows had some claim on the nest above me after all, and that the hawks were deceiving me. Even now, I cannot understand why the crows were so interested,—it surely was not because the hawk is a particular friend of the crows, for he takes delight in tormenting him whenever he can. But as I neared the nest the crows began to disappear and soon there was not one in sight.

The size of the nest surprised me; indeed, I could not get around it on one side only—the side on which the trunk of the tree stood. Some of the sticks in it were fully a yard long and of a weight that seemed incredible. Almost half a cart load of sticks and leaves

were gathered there, and it was well for the owners that the limbs which supported it were strong, else the whole would long ago have fallen to the ground. You may be sure that I was eager to look over its rim and see what was in it, for I had always longed to see a real wild hawk's nest. And I saw one this time, surely. Two large, dirty white eggs rested there on its nearly flat top, as peacefully as though their mother had been a domestic fowl, and not a wild hunter of the wilderness. The sun played upon them and danced with the shadows over the nest, and naught was in sight to show that this was the home of a warrior, a hunter whose very existence was earned by killing. Little bits of white down from the birds' breasts clung to the twigs of the nest and to the surrounding branches, like flakes of snow in winter. The bark on some of the larger limbs near the nest bore little scratches and furrows, as fine as those from the engraver's point, which were made by the birds' talons in alighting.

I was about to take a picture, which was no easy task so high above the ground, when a scream from the tree-tops nearby told me that one of the hawks had returned; I wondered if it meant ill or good for me. Soon I heard another scream, far away and faint in the distance. I looked up and far above me in the silent ether, a black speck appeared, which rapidly grew larger and I knew that the mate was returning. Dropping down like a comet out of the sky, the large bird alighted with a thud on a large oak limb, not forty feet from my head. Writhing and twisting in its heavy yellow talons was a black and yellow snake three feet and a half long. The bird was entirely unaware of my presence, for it quietly began to smooth the glossy feathers of its broad back with its bill; all the time, however, keeping an iron grip on its feebly struggling prey. For fully a minute I watched it in the greatest admiration and delight and then I moved,—ever so slightly,—and the spell was broken. Those restless yellow eyes, trained to catch the slightest motion, met mine so quickly that they startled me, and the whole

appearance of the bird changed like a flash. The snake dropped unnoticed to the ground, where, though its spine was broken, it squirmed as though alive. The bird crouched low on its perch, as a cat does before it springs; its glossy coat ruffled and its yellow eyes glaring defiance. It flew directly toward my head and brought its wings together just above me with a snap that made me dodge. Several times it wheeled and snapped above me, so quickly that I could not turn my head rapidly enough to follow its movements. The last time it bumped into a bough almost touching my shoulder, and its black-tipped yellow talons came much too near my face for comfort. Then for a while it circled madly about, now and then swooping down toward me but never coming very near. Soon it was joined by its mate, which had been in the dense treetops nearby all the while, and gradually they circled off into the clear blue sky, farther and farther away until their voices died in the distance. And as they circled away, sick at heart though they must have been, no majesty was lacking in those broad, even sweeps, and one would never surmise that they left, for aught they knew, all hope behind.

When they were gone I ascended the tree somewhat above the nest and took some pictures. When about to expose the last plate, and when I was just steadying the camera for the picture, a crow's shadow skimmed past like a shot and I instinctively dodged it, thinking, in the short time I had to think, that the hawks had returned. My hand involuntarily pressed the bulb, upon which it was already tightening, and the result was a photo of just half of the nest, so nearly half, indeed, that it shows but one egg, and the eggs were touching each other, too.

When my plates were all exposed, I hung the camera up and began to look about me. It seemed as though I were in another world, high up in the wavy, leafy treetops. All was peace and quiet. Far away, like a dim picture, the distant river and meadows basked in the soft sunlight, and here and there in the deepest hollows, patches of snow were visible. In the wood below I could

hear every sound with a distinctiveness that surprised me, and I understood, as I listened, how the hawks with their more acute senses of hearing, had so soon become aware of my presence at all times. A warbler calling in the thicket below, or a chipmunk scampering over the dry leaves could be heard with the greatest clearness, and as I heard them I realized their disadvantage when stalked by an enemy from on high.

The breeze swayed the lofty tree gently and imparted to it a dreamy, restful motion, and I surmise that the quiet joy of bursting spring set me to thinking. Here beside me was the home of a bandit, a highwayman whose very appearance lent terror, and yet it was peaceful and happy. Whatever the owners' lives were abroad, they were quiet and loving at home. However merciless and cruel the hawks were when hunting, they had a home that for quietness and beauty all of us might envy. The sun and wind played on it as quietly as they ever would on the yellow-throat's nest in the thicket below, yet in one it caressed a family of marauders; in the other, the type of gentleness. And so it seems that one's home, like his life, is what he makes it. The same love that lived in the yellow-throat's breast and nursed her wee eggs into life, soothed the fiery spirit and cruel nature of these unquiet warriors and made their home an ideal of devotion and happiness.

Before descending the tree, I dropped a weighted line to the ground to ascertain how high it was. It was just sixty-five feet to where the eggs rested, and the camera was, of course, considerably above this. I intended to return to the nest after the eggs were hatched and get a picture of the young birds, but business, that interrupter of pleasures, hindered me and I was obliged to leave home before I had another opportunity of visiting the nest. I suppose it still rests there in that massive hemlock as peacefully as it did when I left it, that morning when the crows were nesting in the pines, and the warblers calling in the thicket below, all the day long.

WALTER E. BURNHAM.



From col. F. M. Woodruff.

YELLOW-BILLED TROPIC BIRD.
(*Phaeton flavirostris*.)
1-4 Life-size.

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THE YELLOW-BILLED TROPIC BIRD.

(*Phaethon flavirostris.*)

The interesting and beautiful Yellow-billed Tropic Birds frequent the sea coasts of tropical regions, and to some extent the coasts of subtropical regions. In America, their range includes the tropical coasts, the West Indies, the Bahamas and the Bermudas. They are occasionally seen on the coasts of Florida and have been reported as an accidental visitant in western New York and in Nova Scotia. These birds are called Boatswains by sailors, and they often follow in the wake of vessels sailing in tropical seas, for many miles. Because of their tendency to follow the path of the sun, Linnæus gave them the fanciful generic name *Phaethon*, derived from a Greek word meaning to shine, and in mythology the word was the name of the son of Helios (the Sun) "who insisted on driving his father's chariot, and by unskilful driving set heaven and earth on fire."

There are three well-marked species of the Tropic Birds. They are the only representatives of the family *Phaethonidae* of the order of Totipalmate Swimmers (birds having the toes fully webbed). In general, their habits are similar to those of the terns. One of their most striking characteristics is the

very long middle tail-feathers which, as Mr. Chapman has said, "add greatly to the grace and beauty of their appearance when on the wing." They are capable of long and extended flights, frequently flying many miles from land and they seem to be attracted by ships, upon the mast-heads of which they will sometimes alight.

They nest in holes of high cliffs and sometimes, as related by Mr. Oliver Davie, in hollow trees and on the flat surface of rocks. They breed in companies and nest in large numbers in the limestone cliffs of the Bermudas. They are also said to breed extensively in the islands of the Pacific Ocean.

The red-beaked tropic bird is more southern in its range than the yellow-billed species and is more widely distributed, as its range includes the tropical portions of the Atlantic, the Pacific and the Indian Oceans. It is only an accidental visitant on the eastern coast of North America, having been reported only from the coast of Newfoundland. The three species of tropic birds are shore rather than sea birds, though they fly for long distances across the open sea.

NATURE NOTES.

During the first days of last October I gathered from my celery three caterpillars of the Asterias Butterfly. I put them into a box covered with netting and fed them a few days upon celery leaves. They grew finally but did not moult. I had some twigs in the box and one morning I found one had spun its cocoon and was hanging fast from one of the twigs. The other two soon followed and the box was set away to await the springtime. In April the box was put in among some plants in a sunny window. April 29th a fluttering was heard in the box and a perfect butterfly was found clinging to the net. We mounted it after it was dry and awaited further developments. May 2d we noticed one of the remaining cocoons had a small opening on top and just behind what you would suppose was the head of the insect. A fierce looking head would dart out occasionally and fall to nibbling the edges of the aperture. For a few minutes, less than ten, our attention was drawn away from the box and when we looked again an ichneumon fly was drying its gauzy

wings and making its toilet in the most approved fly-fashion. So this had been an unwelcome guest of one of the cocoons, devouring its host in its zest for its own growth and development. That followed the way of butterfly number one and was mounted in the same box.

The next morning as we stood watching the last cocoon, one of us remarked, "I wish that one would come out and so complete the story." In less than ten minutes a bedraggled insect was slowly crawling along the net. Both pairs of wings were tightly rolled up and most unlike a butterfly did it look.

It was an interesting sight to see those wings slowly unroll themselves as they dried out gradually. Little by little the butterfly gained strength to complete her toilet and soon a beautiful Asterias was flitting about its cage. A larger, finer specimen I never saw than this. Mounted with its companion and its uncanny guest, the ichneumon fly, the three await the touch of the camera to perpetuate the likeness of these caterpillars whose story I have told above.

BERTIE M. PHILLIPS.

INDIAN SUMMER.

We deemed the Summer's exquisite volume closed
And sighed, regretful, in the sharper air.
In royal robes the hills, broad-breasted, dozed;
The milkweed's fairy fleet sailed everywhere.

Beneath the fervid blandishment of noon
The clasped leaves turn back. Once more we trace
June's radiant and gold-enmargined rune,
Then, smiling still, the frosty night-winds face.

—LULU WHEDON MITCHELL.

BIRDS AND NATURE

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EDITED BY WILLIAM KERR HIGLEY

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BIRDS AND NATURE.

ILLUSTRATED BY COLOR PHOTOGRAPHY.

TO A BIRD.

Thou singest alone on the bare wintry bough,
As if Spring, with its leaves, were around thee now;
And its voice, that was heard in the laughing rill,
And the breeze, as it whispered o'er meadow and hill,
Still fell on thine ear, as it murmured along
To join the sweet tide of thine own gushing song.
Sing on, though its sweetness was lost on the blast,
And the storm has not heeded thy song as it passed;
Yet its music awoke, in a heart that was near,
A thought, whose remembrance will ever prove dear;
Though the brook may be frozen, though silent its voice,
And the gales through the meadows no longer rejoice,
Still I felt, as my ear caught the glad note of glee,
That my heart in life's winter might carol like thee.

—JONES VERY, "THE WINTER BIRD."

THE ALLEN'S HUMMINGBIRD.

(*Selasphorus alleni.*)

The Allen's Hummingbirds occupy a very limited and narrow range lying in the Pacific coast regions from the southern portion of British Columbia southwards through the states of Washington, Oregon and California, into Mexico. They have also been reported from southern Arizona where at an altitude of forty-five hundred feet, Mr. W. E. D. Scott obtained an adult male in the Santa Catalina Mountains. When flying this Hummingbird very closely resembles the rufous species (*Selasphorus rufus*) which frequents the same territory, and there is no doubt that the bird of our illustration is frequently mistaken for it. Allen's is also called the Green-backed Hummingbird. Its breeding range is undoubtedly co-extensive with its distribution in the United States. It has been reported a common summer resident at Gray's Harbor, Washington, where it seemed to be just as common as the rufous species.

This beautiful Hummingbird was first discovered by Mr. Charles A. Allen, at Nicasio, California, and he was later honored in the naming of the species. In a letter written by Mr. Allen to Major Bendire, and quoted by him in his "Life Histories of North American Birds," Mr. Allen relates his observations of the habits of these birds at Nicasio, where they arrive about the middle of February and commence nesting soon after. He says: "The earliest date on which I found one (a nest) was February 27, 1879; this was then about half finished, when a heavy storm set in which lasted about five days and I did not visit the locality again until March 8, when the nest was completed and contained two fresh eggs. I have taken their nests as late as July 3, and am well convinced that two broods are raised in a season, at least by all of the earlier breeding birds. They select all sorts of situations and various kinds

of trees and bushes to nest in. I have found their nests as low as ten inches and again as high as ninety feet from the ground."

All observers of the habits of Allen's Hummingbirds agree that their courage is remarkable, and is, perhaps, more marked than that exhibited by any other of the smaller birds. They are also extremely pugnacious. Mr. Allen says: "I once saw two of these little warriors start after a western red-tailed hawk, and they attacked it so vigorously that the hawk was glad to get out of their way. But these little scamps were even then not satisfied, but helped him long after he had decided to go. Each male seems to claim a particular range, which he occupies for feeding and breeding purposes, and every other bird seen by him encroaching on his preserve is at once so determinedly set upon and harassed that he is only too glad to beat a hasty retreat. During their quarrels these birds keep up an incessant, sharp chirping and a harsh, rasping, buzzing with their wings, which sounds very different from the low, soft humming they make with these while feeding. Every action and motion at such times indicates that they are as mad as can be." At such times other birds must get out of their way. The males often noisily quarrel among themselves, and while the females are much more quiet, they, too, quarrel when two or more meet while feeding on the same bush. The misunderstanding ends only when all but one have departed. "During the nesting and breeding season the male frequently shoots straight up into the air and nearly out of sight, only to turn suddenly and rush headlong down until within a few feet of the ground. The wings, during the downward rushes, cut the air and cause a sharp, whistling screech, as they descend with frightful velocity." Mr. Allen believed that if they should strike any obstacle in their



ALLEN'S HUMMINGBIRD.
(*Selasphorus alleni*).
Life-size.

downward course they would be instantly killed.

The nests of these Hummingbirds are beautiful and compact structures built on either trees or bushes. The walls of the nests are constructed with tree mosses and fragments of lichens which

are thoroughly fastened together by the use of spiders' webs. The nests are lined with soft vegetable down. As is the case with all the Hummingbirds whose nesting habits are known, the Allen's Hummingbird lays but two white eggs.

WINTER FEASTS.

"Down from the roofs in gusts are hurled
The eddying drifts to the waste below;
And still is the banner of storm unfurled,
Till all the drowned and desolate world
Lies dumb and white in a trance of snow."

—MRS. ELIZABETH AKERS ALLEN.

The winter season of 1904 was cold and sharp and in this locality many times the thermometer went below zero even to fifteen and twenty. The snow was deep also, for storm followed storm and the sleighing was continuous from Christmas to the middle of March. After New Years, the zero mornings were more frequent and the snow deeper and we called it a very old-fashioned winter. Three or four robins had been seen two days before Christmas, but we hoped they had journeyed south before the big snow of January the ninth, which filled the country roads so full that they had to be "broken out" as the saying is, done by a team with six horses.

On January the eleventh, I heard two chickadees in the apple tree and threw out some crumbs, and one sharp-eyed little fellow soon spied them, flew down and seized one and carried it off. They came all winter, half a dozen of them, and would call for crumbs and then dart down to secure one, even while I stood in sight. A small bone was hung by a long string to a small branch and it was highly amusing to see a chickadee cling to the under side of it with his tiny claws and swing round and round. Yet he got a bite and quite frequent bites as well as exercise. Such a tiny gymnast and a friendly cheerful companion is he all the year round.

The juncos were more shy, and many times I wanted to say while a bigger bird was away with his crumb,

"Quick, now, get it before he comes back." But it would hesitate and by the time its mind was made up and it had advanced to the desired bit, the larger bird was back and poor snow bird had to depart. Few juncos seem to winter near my home in Massachusetts but in spring flocks are seen as they are preparing to go North and they cover the back garden, picking up weed seeds.

The downy woodpecker also came to the feast, a solitary one, and he chased the chickadees from the clothes post where a piece of suet was tied, and had his share. It seemed natural to him to be clinging to something as he ate, but later in the winter I saw him pecking at a bone lying in the middle of a big yard, a most exposed spot; and one day when driven by the pangs of hunger he was even taking oatmeal mush spread on a piece of wood and laid on the snow: I thought the trees around must be dry and stripped of grubs or he would not have come to such a low table. He is a beauty always to my eyes, and seems to be content with his own company.

A tree sparrow came more than once but always alone. Did he live all winter so, or was he left at one side when his relatives found a better winter home than cold Essex County? But I was delighted to see him, and unseen behind my window, observed all his fine points and dainty way of feeding.

The guests who wore the handsomest dress and gave me most entertainment were the blue jays. I had never seen

them so near the house before, but one cold January day a big fellow lighted in the peach tree only twelve feet from the kitchen window where I stood, an hour at a time, watching my visitors. He looked about a bit to investigate and then seized a chunk of bread and flew off to enjoy it or hide it, I did not know which. But he did hide the stuff many times. I caught him once; but he was followed by another and another till there were four in the yard. They seemed to wait for each other. I cannot imagine why; only one came down at a time, but the greedy bird would fill his throat till he could not shut his bill, and comical enough they all looked, with mouths gaping wide. They provoked our laughter, for they would try to carry one more piece, even when they could hardly hold on to what they had seized. The snow was a foil to the vivid blue of their coats, and set them off finely. I used to fasten a large piece of fat to the post before mentioned and one jay was cunning enough to spy a big nail driven in one side, where he used to perch and very comfortably eat till driven off by an envious companion who meant to get his share. When the jays had their turn and proper proportion, the back door was opened and they took the hint and retreated to the pine trees. Then three chickadees had a taste by turns; then a junco arrived but was too bashful to get more than a bite.

One day a piece of fat was tied on the side of the post opposite the nail—I intended that the small birds only should have this, but a jay came first and lighted on top. He scented the fat of course, and seemed surprised that he couldn't get a bite but reach it he could not and he flew off to the apple tree to meditate. Evidently his motto in life was, "Try, try again," for back he came, perched on that nail, reached around the post halfway and straightway seized the provision for the whole family, and away he flew with his prize. He got the best of his hostess and was welcome in return for the fun he gave her. For a change of diet an ear of corn was hung in the tree and very welcome it was. If the jay dropped a kernel in getting it off, down he would drop, too, and seize it. In the village eight or nine ears of corn

were hung in a tree at once and twenty jays assembled, a hungry crowd.

A nuthatch came a few times for crumbs; this was the red-breasted nuthatch which winters with us and many people do not notice it. This bird is smaller than the common white-breasted nuthatch and has reddish brown on its breast, and a different voice from its relative.

The winter was so long that the ground was covered with snow when the first arrivals from warmer climes reached Massachusetts. I wondered where they could find seeds uncovered and was hardly surprised to see three or four song sparrows at my table. They were its last but not least attractive guests, for who does not love their musical voices, now in March singing to us, "sweet, sweet, sweet, right merry cheer?" They will continue all summer and solace us in dark days' no matter how the wind blows or rain beats. Blessed be the song sparrows!

A neighbor told me that fox sparrows came close to her door and ate the crumbs and bird-seed she threw out. Large flocks lingered with us nearly three weeks on their journey to the Northland and were delightful visitors, with their whistling warble and bright fox-colored backs and tails. The partridges helped themselves to the buds on our apple-trees right in sight of our windows, and not many feet away from the barn. The small birds would once in a while drop into the barn floor and pick up the oats lying loose. What the crows live on has been a source of wonderment for years. Is it frozen apples, or berries and seeds? They manage to find rations without our help and it is pleasant to hear even the caw of a crow on a blustering winter day.

I tried an experiment and set my table in April to see if I could entice any bird after the ground was brown and bare. And sure enough, the chickadees and downy were glad enough to see the fare set forth and for several days came to avail themselves of the offered dainty.

Whoever desires entertainment for a small effort, let him feed our winter birds and thus save some wee lives and find pleasure and amusement.

LUCIE A. PEABODY.



BLACK GROUSE.

THE BLACK GROUSE.

(*Tetrao tetrix.*)

The Black Grouse belongs to a group of birds called "Black Game." It is a native of both Europe and Asia and is not uncommon in some portions of the British Islands, especially on the heath-areas. The two sexes are very appropriately named. The male because of its general black plumage is called the Blackcock, and the female, whose plumage is brownish in color, is called the Grey Hen. The Black Grouse inhabits the sides of hills, lonely heaths, and the banks of marshes, but not too near human habitations. These birds are not uncommon in the vicinity of "pine and birch forests bordering moorland, where bilberry, cranberry, heath and bracken flourish, though they may sometimes be seen on the open moor." They love any uncultivated and desolate tract which is well covered with a growth of shrubs and coarse herbage. A region of which Mary Howitt has written:

Oh! beautiful those wastes of heath
Stretching for miles to lure the bee.

The Black Grouse are polygamous, each male pairing with as many females as he may be able to attract. At the opening of the breeding season the males resort to some open spot where they utter loud and resonant notes which are accompanied by a harsh and grating sound which has been likened to the noise caused by the whetting of iron with a rough stone. These sounds are usually produced at early dawn, and as the day advances, the birds display the beauties of their plumage by a variety of poses and motions. The females are thus attracted and the males fight among themselves until the older and stronger ones have won the females. In

the case of these birds, the word pairing can only be used in the sense of mating, for the Blackcock does not pair, but attracts all the females who are willing to become his mates. These he soon leaves to follow his own inclinations and they alone must prepare the nests, incubate their eggs and raise their young. The females, however, are fond parents and take most excellent care of their young. Early in their lives, the young are fed upon insects, but later, upon wild berries and seeds, grains, buds and tender herbage. The Blackcocks do not confine their attentions to the females of their own kind during the mating season and hybrids are not uncommon as a result of a cross between it and related species, such as the wood, red and willow grouse. In fact, crosses between it and domestic fowls have been reported.

The Black Grouse feed to a great extent upon buds, flowers and tender herbage, and in the fall, upon the grain to be found in stubbles. These birds are very wild and wary and as they grow older become shy and crafty. In the autumn the young males of the season are said to leave the individuals of the other sex and flock together, living in perfect harmony until the nesting period of the next season approaches. The flight of these Grouse is rapid like that of related species, and is accompanied by a whirring sound caused by the rapid strokes of their wings. The name grouse is probably derived from the French word *griesche*, *greoche*, or *griais*, meaning speckled, and allied to the word *griseus*, grizzly or grey, which was at one time applied to a partridge or a quail, birds which belong to the same family as the Grouse.

AN AUNT JANE STORY.

BIRD SONG.

"Auntie, is it really true that about half of our birds do not sing?" Alice enquired, as she closed a beautifully illustrated bird book which was one of her most highly prized Christmas gifts.

"No doubt the statement is correct, though at first thought it may not seem so, as the name bird suggests the idea of songs, but remember, water birds, birds of prey and the gallinaceous tribes do not sing," Aunt Jane replied.

"But they all have voices," said John, "the eagle screams, the owl hoots, the crow caws."

"Do any of the birds except the parrot kind talk?" enquired Madge.

"Of the birds that flute, whistle and sing, many use colloquial expressions. Some of the birds most noted for exquisite vocalization have an expressive language which may not be translated into the human tongue. Whatever it may mean to them it is, however, shrouded in mystery to us."

"Many of them tell us their names," said John. "The whip-poor-will, cuckoo, bob-white, jay, kildeer and others."

"Yes, the jay does more than simply call his name," exclaimed Howard. "I've heard him cry 'thief,' 'wake up,' 'come out,' as well as 'pluphay.'"

"Some of the bird songs may be syllabified to the satisfaction of the listener," said Aunt Jane, "but there will be slight variations of opinion among the hearers. For instance, some say the guinea fowl cries 'come back,' others insist on 'pot-a-rack,' and still others hear only 'buck-wheat' as its call."

"I think it would be so interesting for us to listen this spring and see how many of us translate the bird songs into the same sentences," said John.

"Indeed, it would be well for you to try the experiment. I once visited an Indian school, and, at the conclusion of

a little talk on birds, I observed that I had heard a bird that morning say 'Whip Tom Kelly.' The big black eyes of the pupils looked their disbelief, but the teacher told me afterward that a crowd of them came shouting into the school room the next morning, 'It does say "Whip Tom Kelly," we heard it ourselves.' Before they had only heard its usual cry of 'peto, peto, peto.'"

"That is just the way with me," said Alice, "I can hear the words distinctly after some one else tells me. You remember how we all heard the oriole say 'Quit this territory' after our teacher called attention to it."

"Next to identifying a new corner in birddom," said Aunt Jane, "nothing exceeds in interest the attempt to translate into words the various little trills of our merry songsters. The first robin of the season delights us with the encouraging admonition to 'cheer up, cheer up.' The woodpecker stops his hammer to cry 'wish, wish,' while the flicker says 'quick, quick' and 'wee-chee, wee-chee,' a sound like the swishing of willow wands or boughs. With us the quail seems to say 'pay thy debts, pay thy debts,' but in Germany it is thought to cry 'pray to God, pray to God.' This reminds me that when I visited the wonderful zoological gardens in Amsterdam I sat down amidst a group of parrots, hoping to have a little chat with them, but to my dismay they all spoke Dutch."

"That was a good joke on you," cried John, "but I'll tell you the white-throated sparrow is the bird I like to hear when he stops his 'peabody' cry to say 'all day whittling, whittling, whittling.'"

"Ha! ha!" laughed Howard, "A fellow feeling makes you wondrous kind; that's exactly what you'd like to be doing, I'm sure."

"I like to see the dainty wren flirt her

square tail and say 'sip, sip, sip—your tea,'" said Alice. "Now please don't say I'm addicted to the 'beverage that cheers but not inebriates.'"

"No, no, we won't say that of you or of Aunt Jane either, if she will please tell us as many bird colloquialisms as she can recall."

"Certainly," Aunt Jane responded readily. "I'm always glad to be allowed to say anything about my little favorites. There is the bluebird, rightly called the standard bearer of the spring brigade, who calls 'deeree, deeree—me,' as if he were very sorry that for the present he had left his mate behind awaiting fairer weather.

"The preacher bird, the vireo, gives an appropriate little sermon when he asks, 'You see it? You know it. Do you hear me? Do you believe it?'"

"The white-eyed vireo says, 'who are you, eh?' and then makes an odd little speech which sounds like 'ginger beer quick,' or, as some hear it, 'Chick-ty beaver timber stick.'

"Bobolink sings a different song in different places. Sometimes he says, 'be true to me, Classy, be true to me' again, 'kick your slipper,' or his Indian 'quonqueedle, quonqueedle,' or, 'bobolinkum.' Farmers fancy he gives the direction for planting corn, crying 'dig a hole,' 'put it in,' 'cover it up,' 'stamp upon it,' 'step along.' The Maryland yellowthroat says, 'which way, sir,' so plainly one feels like answering the inquiry.

"The cardinal grosbeak—I saw fifteen of them on a wild crab yesterday"—interrupted John, "calls 'what cheer,' and sometimes 'hurry, hurry, hurry' in excited tone. That beautiful bird, the

indigo bunting sings very fast 'July July, summer's here; merry moon-tide evening list to me,' while the veery bleats out 'ba-ah-ah,' also cries 'titaree' and 'wheah.' The hermit thrush, sweetest of singers, says 'ah-re-oo-oo.'"

"I know a little song sparrow," said Howard, "that cries quite plainly, 'pres-pres-pres-by-te-rian.'"

"The sparrows are not as a rule fine song birds. The best of them may be called only ballad singers if we except the grosbeak. But I admire," said Aunt Jane, "the song of the meadow lark with his sweet 'Spring o' the year,' 'Spring o' the year,' and 'you can't see me,' which he calls so plainly the young child hears and repeats the phrase."

"I wonder," interrupted Alice, "if birds do not sing when idle and talk when busy. I've often heard the male sing for his sitting mate."

"I must tell you what I saw," said Edith. "Sir Woodpecker did not try to speak himself, but he did try to make the telephone talk. He shook it with his bill several times, stopping each time as if to listen."

"And I," said John, "heard the brown thrasher say, 'Go away do, go away do,' as if he feared I might interrupt his home building.

"You must never forget," said Aunt Jane, "that such seeming remarks on the part of the birds are purely accidental, but it is always a temptation to give their chatter a human meaning. No doubt they understand each other and the poet well says

"What friend to friend cannot convey,
Shall the dumb bird untutored say?"

BELLE PAXSON DRURY.

THE ENGLISH SPARROW.

(*Passer domesticus.*)

In America no bird is more thoroughly disliked and its presence depreciated than the English Sparrow. No one interested in birds enjoys its presence. Its obnoxious character is well known by nearly every person who lives in a locality which it frequents. It is certainly improper for us to give this bird, of which we can say but very little in its favor, the name of an eminently-respected people. The name English Sparrow is a misnomer and was first given to the species because most of these Sparrows, which were imported into America from Europe, came from England. The name became so fixed before the character of the birds was fully understood that it is now impossible to make a change. These Sparrows are not only natives of England, but also of nearly the whole of Europe and parts of Asia. They are the House Sparrows of these countries. In the United States they are simply a nuisance, and some one has well said that our proper common name for them would be "Obnoxious Sparrows."

The European House Sparrow was first introduced, so far as known, into this country in the fall of 1850, when eight pairs were brought to Brooklyn, New York. These did not thrive and in 1852, more were ordered and during the next year were set free in Greenwood Cemetery. These thrived and multiplied. Many other lots were imported and set free in various cities during the next few years, and from these places pairs were carried to other cities and towns. "In most cases these few birds were carefully watched, protected and fed, and so multiplied rapidly, forming new colonies from which the birds spread steadily without assistance, and more rapidly by successive transportations by

man." A publication of the Department of Agriculture states that before the year 1875 there were many large Sparrow colonies throughout the United States east of the Mississippi, as well as several in Canada, one or more in Utah, one at Galveston, Texas, and probably another in San Francisco, California. While these Sparrows are most abundant east of the Mississippi River they are also common in many localities west of the river, even to the base of the Rocky Mountains in Colorado. West of the Rockies it is common in isolated localities. They are also well established in the eastern portions of Canada. Throughout their range they are much more common in cities and towns, along roads and about farms. Even in their native range in the Old World these birds are more attached to the vicinity of human habitations than any other wild bird. Professor Alfred Newton has said: "One may safely assert that they are not known to thrive anywhere far away from the habitations or works of men," and they follow men when they establish new settlements.

The United States Department of Agriculture has made extensive investigations regarding the relation of the English Sparrows to man. As a result of the examination of over six hundred stomachs it was decided that these birds were a serious pest. These investigations also showed that the food of the young instead of being exclusively insectivorous, as is the case with the young of probably all of our native sparrows, fully one-third of their food consisted of grain. Only about two per cent. of their food was weed seeds. The remainder of the food consisted of insects, many of which are of harmful species, but the amount of grain that they con-



ENGLISH SPARROW.
(*Passer domesticus*).
Life-size.

sume overbalances the good that they may do. Dr. Ridgeway has said of the English Sparrow: "Concerning this unmitigated pest we have little to say, further than to bewail the misfortune of its introduction, and to plead for its extermination. It is in every respect a first-class nuisance."

That the English Sparrows habitually injure grain crops is not their only fault. In cities they cause considerable injury to buildings and statues. They are injurious to trees and vines in two ways; first, by the destruction of the buds and blossoms, and second, by the chemical action of their excrement. Dr. Ridgeway states that a luxuriant English ivy which at one time covered portions of the Smithsonian Institute was totally destroyed in this manner. They injure the buds and blossoms of peaches, cherries, grapes, plums and pears, and it is very doubtful if any fruit trees escape their attacks. It is said that this "Sparrow in Europe is very much the same bird as in the United States, certainly no better." One of the worst acts of these Sparrows is their habit of molest-

ing our native birds, nearly all of which are of economic value to us either in the destruction of harmful insects, or by eating large quantities of the seeds of noxious weeds.

The English Sparrows have a few good qualities which are worthy of imitation by all birds. They are most excellent parents. Mr. Otto Widmann has said: "A Sparrow never deserts its brood. If one of the parents is killed, the other will do all the work alone. If a young one happens to fall down from the lofty nest, it is not lost; the parents feed it, shelter it, and defend it. If a young Sparrow is taken from the nest and placed in a cage, the mother feeds it for days and weeks, even if she has to enter a room to get to it."

On the other hand: "Many young martins tumble out of their nests, and are invariably lost. The parents make much noise about it, and try to make the young fly up, but finding that they can not do it, they let them perish, and even if placed where they could easily get to them, they do not feed them."

THE FEATHERED AUTOCRAT.

The English sparrow, for some reason, has but few friends. Possibly it is his own fault, as he is one of the most "uppish" little scamps of the bird world. He is aggressive, too, resenting any intrusion upon what he conceives to be his rights. This is manifest in the pugnacious means by which he has driven nearly every other bird from the cities. Thirty years ago, it was common to see the red bird, cat bird, chickadee, martin, wren and other small birds, about the orchards and gardens of the cities. But they have all vacated their rights to the swarming millions of sparrows, with the possible exception of the mocking-bird, who is something of a fighter himself, and has taught the English intruder

not to seriously interfere with his vested rights.

The rapid increase of the sparrow tribe has caused him to extend his domain, in the last two decades, until now he far outnumbers all other species in both town and country. In the rural districts, the English interloper finds another master, like the mocker, in the shrike, or butcher bird, which latter has a dark record for villainy, and the sparrow gives him a wide berth. But in the country, the birds confine themselves to the barnyards and public thoroughfares, seldom venturing away from the highways into the wooded or uncultivated sections. Consequently, the other birds have some peace, in their more remote

retreats, which have not yet been coveted by their selfish English cousins.

The message, which the sparrow carries to the student of nature, is that his size invites but little molestation, while his communal instincts, coupled with his undoubted courage and his extraordinary faculty of rapid generation, invites the conclusion that he will eventually supplant all the smaller species of bird life in the south. That this will work mischievous results, in the future, may be debatable. His present record certainly justifies some of the indictments brought against him, but none of these are sufficiently serious for the general condemnation, which, in some few isolated instances, have led to legal enactments for his extermination.

In the first place, he is here by invitation and that he is contented and happy in his adopted home, is really a tribute to our well-known hospitality. If he has abused his freedom, he has only de-

veloped traits and characteristics well-known to those who brought him. In the second place, he has not abused courtesy to any grievous extent. His predilection for the gutter and the offal of the streets, is an instinctive one, and if offensively reminded of his congregating in trees, by the laws of gravitation, we must grant him the same arboreal rights of all other fowls of the air.

On the whole, I must confess to an admiration for this proud and even autocratic little sparrow, who seems to be at home anywhere and everywhere, from Winnipeg to the Equator. As an invited emigrant, turned loose upon his own resources, I think he has behaved himself with even more grace, if not gratitude, than many of those two-legged individuals, who may have preceded or followed him to "the land of the free and the home of the brave."

ANDREW JAMES MILLER.

AMONG THE TREES.

THE HOLLY.

The sun was shining brightly from a deep, blue sky, as Mabel walked briskly along the snow-covered street. Sleigh-bells added their merry music to the laughing, happy notes of the boys and girls, who flung snowballs at one another, or sprang lightly on passing sleighs, farmers cracked their whips and laughed loudly as they gave the boys an extra tumble into the fleecy snowdrifts. All was merriment, for was not this the joyous Christmas time?

"Look, mother, isn't that a great armful of holly?" asked Mabel, as she entered the kitchen where her mother was superintending the preparations for the next day's dinner. "Isn't it beautiful?"

I don't think I ever saw a finer lot," continued Mabel proudly.

"It is beautiful," said her mother, as she looked more at the glowing cheeks and sparkling eyes of her daughter, than at the holly.

"It's a perfect winter day; just look at the sky. We read much about the beautiful skies of Italy. I'm sure they cannot surpass that."

"I've often thought so myself, Mabel, especially on those clear, bright days in mid-winter. The sky then seems a clearer, deeper blue than at any other time. I'm so glad you love Nature, Mabel, she is fascinating at all times, as well as instructive. Now, dear, I wish

you would carry the holly into the dining-room and arrange it; be sure to select the choicest bit for the pudding."

Mabel carried the holly into the dining-room, where she carefully looked it over, and chose a nice piece for the Christmas pudding.

"There, I think you are the very nicest piece—not the biggest, but the best. How pretty you are with your dark green, glossy leaves and scarlet berries. You'll look fine on the pudding."

"I'm glad you chose me; I've been hoping all the time that you would," seemed to come from the holly.

"Well, I declare," said Mabel, as she pricked her finger on the holly leaves in her surprise. "I—really—I never expected a voice to come from you. Why you're only a little thing—a part of a tree."

"Large enough to have a spirit. Oh! you need not start! Do you flatter yourself that you mortals are the only part of God's creation gifted with a soul?"

"No, indeed. I know that a great number of great and good men believed that trees especially had souls. Then what does Shakespeare say:

"And this one life, exempt from public
haunt,
Finds tongues in trees, books in running
brooks,
Sermons in stones, and good in everything."
and again who is it says:

"There is a tongue in every leaf,
A voice in every rill—
A voice that speaketh everywhere,
In flood and fire, through earth and air;
A tongue that's never still!"

Wordsworth claims:

"the meanest flower that blows can give
Thoughts that do often lie too deep for
tears."

"Now, I'm going to sit down in this easy chair, beside the glowing fire this evening, when I've helped mother all I can, and you must talk to me."

"That's right; help your mother all that you can, and in the meantime I'll think of some legends to tell you."

"Well," said Mabel, some hours later, "they've all gone up town to see Santa Claus, so Holly, tell me those legends."

"Have you ever heard of the Holly called 'Aunt Mary's Tree?'"

"No, I have not."

"Well, that is not strange, for very few people who have not been born in Cornwall, England, have. The Cornish-born people regard themselves as a race apart from those who settle within their borders, and are very loath to impart their convictions or superstitions to the strangers within their gates.

"The truth is, the Cornish Catholics call the Blessed Virgin by the familiar name of Aunt Mary, and always imagine that the holly is under her special protection. One of their ancient carols refers to the holly thus:

"Now of all the trees by the king's highway
Which do ye love the best?
Oh! the one that's green on Christmas day;
The bush with the bleeding breast;
The holly with drops of blood for me,
For that is our dear Aunt Mary's tree."

"That is rather a quaint carol."

"Still another belief in regard to us in many parts of England is, that all Holly used in church decoration is gifted with certain peculiar powers. For this reason it is carefully preserved, and sprigs of it are hung in the porch as well as the rooms of the house, for it not only brings good luck, but has also the power to avert fire and ward off lightning. This does not apply to that used in domestic decorations, which is termed Anathema, and must be buried when taken down."

"Well, I'm not going to bury any of mine," said Mabel, as she tenderly touched the scarlet berries. "Please tell me something more, Holly."

"The boughs of the prickly Holly are often called 'he-holly,' while the smooth is called 'she-holly.' Here is the legend connected with it: The Holly must not be brought indoors until Christmas eve, then if the prickly variety comes in first, the man of the house will rule and have his way during the following year; but if the smooth-leaved twigs appear first, the woman will dominate."

"That is odd; but I never knew there was any difference. Why is it that some are smooth and others prickly?"

"Well the theory is that of protection. Cattle are very fond of young holly, so

that which grows near the ground and within reach of their tongues is furnished with spiky leaves, while the upper ones, being well out of their reach, are smooth."

"I think you must have grown on a lower limb," said Mabel, as she examined her sprig of Holly. How pretty you will look on the pudding tomorrow! Tell me, will you be afraid when you see the fire?"

"By no means; I know full well that it is only the brandy which burns. I'll be safe upon the top of the pudding. Do you know I've often heard of this custom and wished that I might one day be chosen for the honored place. That is the reason I pricked your fingers; I wanted you to notice me."

"How lovely a tree of you must look!"

"It does look fine, but to see it at its greatest advantage you should look upon it when the ground is covered with snow which glistens and sparkles in the sunlight as if strewn with diamonds, while the gaunt and naked branches of the other trees form a striking contrast.

"We, as well as the mistletoe, have always been connected with the blazing yule-log and Christmas cheer of old England."

"Yes, I've seen the mistletoe of Druid lore; but it is not nearly as pretty as you are."

"Our scarlet berries are the great source of our beauty. We are of ancient lineage, for fossil remains of us have been found in the tertiary rocks. There are only two branches of our family—the American, and the European—but these have many species. In Europe there are one hundred and seventy-five varieties, North America has fourteen

species, while South America is rich in them.

"We're a slow-growing tree, and never reach a great height. Our wood is hard, white, of fine grain and very valuable; it is very pretty when made into worktables and boxes, and is sometimes used for cradles and cabinets. It is said the cradle of Prince Arthur, the elder brother of Henry VIII, and the first husband of Queen Catherine of Arragon, was made of Holly wood. The panels of this cradle were painted with incidents from the legendary life of King Arthur and his Knights of the Round Table."

"How unique that would be. I think I hear mother's footsteps. Yes, here she is."

"Well, Mabel, we're back; we were much longer than I expected for the stores were filled. Have you been lonely?"

"No, mother, dear, I've been listening to the Holly talk, and mother, I can understand now what was meant when sometime ago you quoted these words. 'Trees have voices of different tones, and quick, trained ears know these tones though it is only the hearing heart that can understand what the trees say.'"

"Yes, Mabel, and I've been told that those who make a study of trees, not only know these tones, but their ears are so attuned to the hidden voices of Nature that, in passing through a wood at night, they can tell under what kind of tree they are standing by the whispering of the leaves. Truly, Mabel, this world of ours is both beautiful and wonderful."

"It is indeed, mother; how much so, I never fully realized until I carried with me the 'ears of imagination.' Good night, Holly, and a Merry Christmas."

EVELYN SINGER.



THE AMERICAN FLAMINGO.

(*Phœnicopterus ruber.*)

When Nature produced the Flamingo she evidently tried to make a composite bird, which would be suggestive of almost all the rest of the water birds and the wading birds. With long legs and a long neck like a crane, webbed feet like a goose, and a lamellated bill like a shoveller duck, this beautiful bird is certainly unique among avian creatures. Its bill is very peculiar, being bent on the back and peculiarly flattened. When feeding, the Flamingo appears to literally stand on its head.

There are six species of Flamingoes known, two being species living in the old world and four in the new. One of the best known of the latter is the subject of this sketch.

The American Flamingo ranges from Southern Florida and the Bahamas to Brazil and the Galapagos Islands. Although a very abundant bird in its breeding range, the Flamingo was until recently quite unknown in its domestic life. Various authors have argued pro and con in regard to its alleged habit of straddling the nest when incubating its eggs, a fable started by Lampier in 1699. It remained for Mr. Frank M. Chapman, of the American Museum of Natural History, New York City, to visit a colony of these gorgeous birds and to clear up the mysteries surrounding the home life of the American Flamingo. His articles in "Bird Lore," and in the "Century Magazine" give us the first complete account of the nesting habits of these birds and this article is drawn mainly from these papers.

While the American Flamingo is known in Florida and in parts of South America, it is in the Bahama Islands that it can best be studied in large numbers. It is here that the little ceritic snail shell (*cerithium*) is to be found in countless numbers in the shallow lagoons and flooded areas, which is said

to be the exclusive food of this bird. Its enemies (save man) are absent from this region and it is, therefore, an ideal place for a nesting colony.

Mr. Chapman's first sight of a Flamingo colony is thus described: "With an utterly indescribable feeling of exultation we advanced rapidly to view at short range this wonder of wonders in bird life. At a distance of about three hundred yards, the wind being from us toward the birds, we first heard the honking notes of alarm—a wave of deep sound. Soon the birds began to rise, standing on their nests, facing the wind, and waving their black and vermilion wings. As we came a little nearer, in stately fashion the birds began to move, uniformly like a great body of troops, they stepped slowly forward, black pinions waving and trumpets sounding, and then, when we were still a hundred and fifty yards away, the leaders sprang into the air. File after file of the winged host followed. The very earth seemed to erupt birds, as flaming masses streamed heavenward. It was an appalling sight."

The flock of birds observed by Mr. Chapman was estimated to contain about two thousand birds. The return of this vast multitude of birds after they had been frightened from their nests by the presence of Mr. and Mrs. Chapman was interesting. Mr. Chapman had constructed a blind at the edge of the rookery from which he could take photographs and make notes unobserved by the birds. In order to deceive the birds the ruse was hit upon of having Mr. and Mrs. Chapman enter the blind together, but only Mrs. Chapman left it. As the birds could not distinguish between one and two persons, the ruse worked to perfection. As soon as the retreat of Mrs. Chapman was observed by the birds,

they returned, marching slowly forward to their nests. As the birds came to their nests each one touched the nest or egg with its bill, then stood upon the edge of the nest, and, honking loudly, they moved their wings about for a moment and then one by one they dropped upon their nests. A peculiar wriggling motion followed, evidently to get the egg in close contact with the body, and then the great colony became motionless, save for the waving about of the long necks, as a bird drank from some nearby pool of water, picked up some stray matter near its nest, or sparred with some one of its near neighbors. Here and there a bird was observed adding mud to its nest, which it did with its bill, the bill and feet being used in pressing the fresh clayey material to its nest.

The nest of the American Flamingo ranges from six to thirteen inches in height, while the diameter at the top is from ten to fourteen inches, and thirteen to twenty-two inches at the base. The top has a slight depression, scarcely more than an inch in depth, which is not lined with any substance, and in which the single white egg is laid. The height of the nest would seem to be determined by the height to which the water normally rises, an instinct probably acquired by the species by reason of many catastrophes in the form of exceptional high tides and excessive rain falls. Both sexes incubate the eggs, but only one bird is near the nest at one time. Mr. Chapman records that the setting or brooding bird was relieved in the early morning and late afternoon. The rookery at these times of changing is said to present a very remarkable scene, the birds coming and going in lots of fifty or more. The young bird when hatched is covered, with down and is white without color of any kind. For its first meal it receives from its parents a quantity of regurgitated liquid food. After this meal it eats its own egg shell and then proceeds to feed on its own account. Unlike the parent bird, which

has a peculiar bent bill, the bill of the young Flamingo is straight and it picks up its food like the beach birds for a period of about three weeks, when the bill begins to assume the bent form of the parent and the feeding habits are changed correspondingly.

The feeding habits of the adult birds are very curious and interesting. According to Mr. Chapman the food of the Flamingo is always obtained under water where it is reached for by the long neck. The feeding is often carried on in water several feet deep, and the bird when thus engaged shows only its body above the water, the legs and neck being submerged, the bird, in fact, standing on its head. The shells are sometimes partly or wholly buried in the mud, and the Flamingo loosens them by performing a treading motion, appearing to perform a sort of dance. When feeding, the Flamingo moves the upper part of its bill, the lower portion being unmovable, thus differing in this respect from other birds.

Like many other conspicuous birds, which nest in large rookeries, the Flamingo is falling a prey to man's cupidity and unless rigid restrictive laws are enacted and enforced, this beautiful and unique bird will ere long be a thing of the past, following in the footsteps of the great auk. The natives of the Bahamas seek the eggs as well as the young birds for food, and every year the colonies grow smaller. As the Flamingo has difficulty in raising its one progeny on account of excessive rains, storms and other natural causes, it requires but little persecution on the part of man to place this most interesting bird on the list of "animals which have recently become extinct." It is said by Mr. Hornaday, of the New York Zoological Garden, that every year from twenty to fifty birds are brought to New York by dealers in wild animals, and sold for prices ranging from twelve to twenty dollars each.

COLLINS THURBER.

"GO TO THE ANT, THOU SLUGGARD," BUT NOT TO THE SQUIRREL.

Squirrels have always been considered the most provident of creatures, and from time immemorial they have been held up as examples to thriftless people who will not save for a rainy day. So it is decidedly amusing to know that the "City Fathers" of Memphis had to dip into the public treasury last year to pay a food bill for the squirrels of their central park.

This park, Court Square, is the very heart of the city, and all summer long the tame little animals had whisked from bench to bench begging peanuts or bits of lunch from the loungers. They were so comically impudent, searching pockets and peering into bags and baskets like veteran custom-house officials, that they never failed to get a generous supply of all the nuts that came into the park. When loungers happened to be few, one who showed any disposition to feed them would be besieged by the clamorous, greedy little fellows; they would swarm around

him and over him, like street-urchins about a broken down banana wagon.

Summer lasts long in this country, and even New Year's day found the park full of strolling people and the squirrels still supplied with daily peanuts. Like children waited upon continually, they lost their energy; so much luxury stifled their prudent instincts; they failed to store away a single nut! But how were they to know that the red benches would be deserted by and by? That the loungers would loll beside grates instead of beneath the dripping trees during January and February days?

How well they fared while dining at the city's expense I cannot say, but I shall watch carefully to see what they will do next fall. And I am wondering if any amount of prosperity would make the industrious bee cease to labor, or cause that model of thrift, the ant, to forget to put up her winter's stock of preserves.

LEE McCRAE.

THE CHARMED SNOWSTORM.

Flecking the shaken air with crystal down
That floats and wavers in bewildering way,
The winter's soft, delightful reverie
Becomes material thought, in home-sweet play.

And while the hills, and all the background hide
To faintest outlines through the speckled haze,
Low, soft, sweet voices of the magic air
Proceed from out a wave of coming fays.

And by the door, and 'neath the window sill,
The dear-tongued twitterers of the silent storm—
The fairy snowbirds—hop and flutter round,
In one vivacious little, twinkling swarm.

And so the day rides on in even flow;
And so the down piles, through the windless day;
While Nature's God seems nearer, with the snow
That draws to peace all thoughts beside, away.

—WILLIS EDWIN HURD.

THE RING-NECKED PHEASANT.

(*Phasianus torquatus*.)

The family of birds (*Phasianidae*) to which the Ring-necked Pheasant belongs, includes nearly one hundred species, all of which, with the exception of the Yucatan turkey and the wild turkeys of the United States, are natives of the Old World, where more species are found in Southern Asia than elsewhere. To this family belongs the peacock and the interesting jungle fowls from which our domestic chickens have been developed. Many of the species of this family are remarkably beautiful birds and are ornamented by various peculiar developments of their plumage. Some of these foreign species have been successfully introduced into the United States, and in some localities the birds are quite numerous.

The Ring-necked Pheasant is a native of China, its range extending through eastern and northern China. Its name refers to the definite collar of white feathers upon the neck. This species crosses freely with other pheasant species. In England, where these Pheasants have been introduced to a considerable extent, they cross with the common pheasant (*Phasianus colchicus*) which has also been introduced from its native home in southeastern Europe and Asia Minor. Mr. Darwin has said that he has reason to believe that the hybrids which result from the crossing of these two species of pheasants are perfectly fertile.

The Ring-necked Pheasants have been introduced and acclimated in the states of California, Oregon and Washington, and in British Columbia. In some localities of this region they have become quite abundant and are shot by sportsmen. Mr. William T. Hornaday says: "From Portland, Oregon to Vancouver the taxidermists are annually called upon to mount scores of these

birds, because they are so beautiful that many of the sportsmen who shoot them cannot consent to see their skins destroyed." Lately, some of the eastern states have introduced these pheasants. Regarding the state of Ohio, Mr. Dawson says: "The successful introduction into our state of this splendid game bird really marks a new era in the history of sports, and its advent should be hailed with delight by all true sportsmen. Quick on the wing, prolific, hardy, rapid, this handsome Pheasant is admirably adapted to take the place of those larger native birds, the wild turkey, the prairie chicken, the ruffed grouse, which are no longer available to us."

In his beautiful "Monograph of the Pheasants" Dr. Elliot says of the Ring-necked Pheasant: "This is the common species of China and is met with in great numbers in the eastern parts of that vast empire. * * * In most parts of China they keep much to the hill-covers, but about Shanghai they resort to the cotton-fields, and occurring in large numbers, afford excellent sport. * * * Dr. Lamprey states that the common Ring-necked Pheasant constitute the fourth and most abundant kind found in the markets (Tien-Tsin). The number of these birds that are sold every winter is wonderful. It was noticed that in birds apparently of the same age there was frequently a great disparity in size, almost giving one the idea of two species, though it is not improbable that this difference may be attributed to the different circumstances of food and locality." Mr. Dudley E. Saurin, as quoted by Dr. Elliot, says: "The common Chinese Pheasant is found everywhere in the north of China. I am not aware how much farther south they are found than Shanghai;



RING-NECKED PHEASANT.
(*Phasianus torquatus*).

but in that neighborhood, since the devastation of the country by the Taipings, they are shot by hundreds. Thousands are brought down to the Pekin market in a frozen state by the Mongols." According to Dr. Elliot hybridism has been so general among the

three species, the common, the Ring-necked and the Japanese pheasants, naturalized in England, that at the present day it is exceedingly difficult to get a pure-blooded individual of either of them in that country

WE WERE SEVEN.

We were seven when the flush of morning
Spread over the Eastern hills,
And in spite of our parents' warning
We roamed at our own free wills.

O, sweet as the breath of the roses,
The air at the dawning blew,
And wafted to seven small noses,
An odor so strange and new.

An odor that tried and that tempted,
And lured from the right at last,
A frail band by their craving prompted—
Keen-toothed from their night-long fast.

So forth on their pitiful message
There scampered a reckless crew;
I watched by the hole in the passage
And counted six tails go through.

Six tails of the young and the trusting
That knew not the wiles of men;
Six tails to their ruin hastening,
That never returned again.

We were seven when we rose from our slumber,
The merriest troop in town,
But all that was left of our number
Was one when the sun went down.

MRS. M. A. MAITLAND.

AMONG THE TREES.

THE WALNUT.

It was a fine, clear morning in late October, when Mabel started for the old walnut tree on the sunny hillside. There had been a heavy frost, and the white earth glimmered and glistened in the early morning sunlight. The stubble and the dead grass were hung with the fairy lanterns of the Frost King, which glowed for a time, flickered faintly, and went out. The trees still retained a portion of their foliage, adding a touch of color to the somber hues of the pines; here and there could be seen the bare, naked limbs of a tree, held aloft, as if imploring mercy.

"The nuts will fall readily today," thought Mabel, as she trudged light-heartedly along. "How good it is to be alive such a morning as this! The air is so fresh and crisp," she continued, as she felt the color mounting to her cheeks, and her very finger-tips aglow with the exhilarating exercise. "We've had two heavy frosts, and the nuts will just come tumbling down. I'll gather a nice lot and have ready by the time father and old Fan come along. How good they'll be in the winter when we're all gathered around the fire! There's always a taste of the woodland in them! Mother's wine, too, made from the juice of the wild grapes, always retains a taste of the wild freedom of the woods and streams. There's the old tree, stripped of leaves, but bearing nuts as large and yellow as lemons! I wish they'd fall, but never mind, there's a goodly number on the ground."

She busied herself for a time, and soon a large pile lay at the foot of the walnut, then she paused to look down the valley. How pleasant the sun felt as it caressed her cheek. What music it was to hear the leaves rustling beneath her feet!

"What a deep blue the sky is, and how pretty the clouds are!

The clouds are at play in the azure space,
And their shadows play on the bright
green vale,
And here they stretch to the frolic chase,
And there they roll on the easy gale.

There's a dance of leaves in that aspen bower,
There's a twitter of winds in that beechen tree,
There's a smile on the fruit and a smile on
the flower,
And a laugh from the brook that runs to
the sea."

"Surely William Cullen Bryant deserved the name of 'Nature's Poet' if any man did," said Mabel, as she seated herself at the foot of the walnut tree, and rested her head against its trunk. "I love the fields and woods too, but cannot express my thoughts as he did."

"That gift is not bestowed on all mortals."

"Is that your voice, Walnut Tree?"

"I rather fancy so," seemed to come from the tree, as a perfect shower of nuts fell on both sides. "Now, don't gather those; I shook them down for the squirrels which come to me every day. You don't need them; they do."

"Well, if I leave them alone you must talk to me, Walnut Tree."

"I'll do that; but I'll not have many days to talk, for I have to go to sleep soon. You know that trees sleep all winter, therefore do no talking. I have finished my year's work; my babies are all wrapped up snugly in their blankets and tucked away under their scales, safely housed from the minions of the Ice King, who has already sent his messenger, Little Jack Frost, out. The hoary old king will pitch and toss our naked arms; he will sigh dismally, or shriek in anger; he will pelt us with ice and snow, but we fear him not; we are ready for him."

"Your tone is almost a challenge, Walnut Tree."

"Perhaps; but I must tell you of our ancient lineage; we, too, existed in the tertiary period. We were beloved by the ancients, my branch of the family—the Black Walnut—was dedicated by the Greeks to the goddess Diana, whose festivals were held beneath our shade. Greeks and Romans alike used our nuts at their weddings; we were called the nut of Jove—the king of the gods."

"Your nuts do have a fine, rich flavor, but then, so has the butternut."

"The butternut is the White Walnut of our family. We embrace eight branches; the hickory nut and the pignut also are members, as well as the mockernut, with its fragrant, resinous leaves."

"I am glad of that; do you know the only thing which I do not like about you is the fact that your hulls turn my fingers brown."

"That fact made me very useful to the wife of the pioneer. She used our husks and a portion of our bark to dye the wool she made into clothes for her family."

"I've heard, too, that your shade was injurious to grass and grain, in fact, that nothing thrived beneath your branches."

"Oh! that is owing to carelessness on the part of our owner. If he would gather our fallen leaves and remove them, instead of allowing them to lie and decay where the rain and melting snows would wash their astringent properties into the soil, it would be all right."

"Our wood is of a beautiful dark brown color, strong and heavy; it takes a high polish and for that reason is used in cabinet work and interior decorations. It is also very durable, but that is not to be wondered at, as, like the oak, it takes us a long time to reach maturity. It is estimated that we require fully one hundred years growth, before we are valuable as a timber tree; how long our life might last, man does not allow us to know, for he comes with his ax and lays us low for the money we bring him."

Mabel was sitting quietly in the warm sunshine, watching the light wind as it scattered the leaves, making a carpet of

many hues for the sloping hillside, watching too, the quick motions and bright eyes of the squirrels, so intent on filling their granaries for the days when there would be no smiling sun nor balmy air. Presently she roused from her reverie to ask:

"Have you no legends to tell me, Walnut Tree?"

"No; our family is singularly free of legends and devoid of interesting bits of history; although Loudon claims that *Carya*—the name by which the hickory was known to the Greeks—was also given by them to the White Walnut, in honor of *Carya*, daughter of Dion, king of Laconia, who was changed by Bacchus into a walnut tree. The goddess Diana, it is claimed, bore also the surname *Caryata*, from the town of *Carya*, in Laconia, where her rites were always celebrated in the open air, beneath the wide-spreading branches of a walnut tree. But Plutarch claims the name was given us because of the effect which the smell of our leaves has on the head."

"Do you know I always liked the odor of your leaves?"

"There are some who like the odor, but you must remember that all people are not constituted alike."

"Another thing which I like about you is the glint of gold which your leaves always have. I've often thrown myself down beneath your low, sweeping branches, in midsummer, and your sparse foliage—for I can always trace your branches through your foliage—seems to catch and hold the sunlight, making of your very shade a golden glow."

"I've often noticed you here. Unlike our wood, that of the hickory is light, but it is elastic, tough, and strong."

"That is the reason no doubt why father is so particular to have his ax-handles made of hickory. Oh, Tree! that reminds me of the fact that I've often heard father speak of President Jackson as 'Old Hickory.'"

"Yes, he was generally spoken of in that manner; not in terms of ridicule, but because the people were fond of him and appreciated the sterling qualities of his good strong character."

"The nuts of the hickory are held in high esteem by the red men of the forest

who gather bushels of them to eat during the winter."

"I wish I could gather bushels of them. Do you know that hickory and butternut trees are much more scarce than those of the walnut? I wonder why! Their wood is not as valuable. I believe I see father and old Fan coming on yonder hillside."

"Yes, they will be here in a few minutes, so I will say good-bye, fair maid, for you cannot work and talk, too. In a few short days the trees will all be asleep, nor waken again until spring, when the warm sap coursing through us will rouse us to new life and activity. The earth will be smiling and you will be looking forward to blossom time."

"That reminds me of a lovely piece of poetry which I found in part of an old magazine the other day. It was entitled 'God in Nature,' and did not bear the author's name. I wonder why? He need not have been ashamed of the pure thoughts which he clothed in such beautiful language. Father has stopped to talk to a neighbor, so if you will listen, I'll recite it to you."

"I will listen, fair maid."

"We walk through the meadows in spring-time,

Where the bluebells and buttercups grow,
Where myriad dewdrops are sparkling,

And these secrets we long to know:
Why are the buttercups yellow?

And why are the bluebells blue?
Who sprinkled the clover with dewdrops?

Who made all creation look new?

"A short time ago it was winter,
Not a crocus or grass-blade in sight;
But now, what a marvellous wonder,—
With verdure the landscape is bright!
Could the wisest of men in a lifetime
One daisy or violet make?
Or sprinkle one meadow with dewdrops?
Or the strong power of winter break?"

"We walk in the forest at noonday,
When breezes of summer blow,
And list to the music unrivalled
Which the birds of the wilderness know,
And again we would learn some secrets:
Who taught the robin its trill?
Who gave the mockingbird lessons?
Who bids them the lone forest fill
With melody sweeter than ever
Echoes through lordly halls?
Earth's masters of harmony listen
Entranced when the nightingale calls!"

"Could the skillfulest man in a life time
Make one flute like the voice of a bird,
Or build a cathedral as glorious
As the groves where their anthems are
heard?
Art, science, philosophy, learning,
Can never the mystery attain;
God alone knows the secrets of nature,
He creates, He withholds, He explains.
Every rosebud unfolds at His bidding,
Every grass-blade, He calls from the sod;
All nature fulfills its great mission,
Upheld by the wisdom of God."

"As you say, I see no reason why the author should be ashamed of those lines. Here comes you father and old Fan. Get to work, fair maid, that he may not have to bend his back; that's right. And now, farewell."

EVELYN SINGER.

SING! BOBOLINK, SING!

Sing! Bobolink, sing!

While glories of dawn are bright and so clear,
Sing, while thy mate and thy nestlings are near,
Sing while the sunbeams the dew drops now kiss,
Soar, toward the heavens and sing of thy bliss!

Sing! Bobolink, sing!

Sing of thy bliss!

—DR. A. C. FERGUSON.



BRONZED GRACKLE.

THE BRONZED GRACKLE.

(*Quiscalus quiscula æneus.*)

Perhaps no other of our native birds is more generally known or often seen than the Crow Blackbird, or Bronzed Grackle as it is sometimes called. Indeed the number of names by which this bird is known, Purple Grackle, Common Blackbird and Crow Blackbird, serves to show how widely the bird is known, and, perhaps, indicates a rather remote acquaintance in general not so familiar and close as that we have for robins and bluebirds.

The Bronzed Grackle is truly remarkable for his adaptability to all sorts of conditions. The number of these birds has probably been greatly decreased by the changes which have taken place in the country, but they now bid fair to hold their own pretty well, for they have taken to changed conditions so naturally that nothing seems to disconcert them. Whether the forest is cleared away to naked fields, or whether the city is built, makes apparently little difference to the Grackle. He is at home as much in the city park as in the open field, and almost at home as much in the open field as in the primeval forest, and as much on the ground as on the treetops. The bird that comes nearest to him in this respect and also in general appearance and habits is the crow, but the crow usually fights shy of cities and houses, while the Grackle is at home in shady towns and frequently prefers to roost in the evergreens in the farmer's dooryard.

Perhaps, this bird would serve as one of the best examples we have of a persistent type. What are the qualities a bird should possess to enable it to withstand the changes brought about by man? we may ask, and this bird can give us a few answers, at least, in so far as his case is concerned.

In the first place, he is not too handsome. Beautiful he is, indeed, when one

catches glimpses of the metallic iridescence of his plumage, and it is a pleasure to glance at him from different directions in the sunlight, as it is to play a diamond in the light, but the great mass of hastening people do not stop to look at a bird that way, and the impression he generally gives is that of a rather somber individual, not catching the eye nearly so quickly as a redbird or jay would. He seems to be always dressed in mourning; rich, indeed, but not gaudy, and no one cares to catch and put him in a cage, and no woman sighs for him to adorn her hat.

His deportment is stately and grave, as becomes his garb. If he were a bit joyous and quick some one would find fun shooting at him, but as it is, only a few boys with their first guns try a shot at him now and then and find it more interesting than shooting at a wooden target. However, they soon find a dead blackbird is nothing to boast of, and so let this bird alone.

And he does not tempt the appetite particularly. People have eaten him, and some have called him good eating, but have never seemed particularly to yearn for a piece of Blackbird again. Certain it is that his name is not enrolled high among favored delicacies.

And he never makes such a grave nuisance of himself so that everybody wishes he were dead. He is said to sometimes eat the eggs of other birds, and now and then he does make a raid on the farmer's corn, for which latter act the farmer too promptly punishes him, unmindful of good work the bird does by lessening the number of grubs, but damage done is only occasional and the bird is almost constantly doing some good to offset it.

In spite of his becoming a resident of the town and dwelling in the farmer's

yard, there is nothing in the bird's ordinary actions that suggests domesticity. He prefers a rather distant acquaintance with man. The shy quail in the distant field makes it seem homelike, but the Blackbird in the dooryard trees brings with him a sense of the wildness of the forest.

There is one time when the bird looks really domestic. That is when he follows along the furrow after the farmer's plow. Then he reminds one of a pet hen, but there is a lot of business in his stride as he searches here and there, and picks up grubs. Now is the time he is earning a little of next fall's crop.

At times, when he is busy, especially such times as this, one can approach quite close to him. One thing prevents him from showing handsome on close inspection, that is his eye. The yellow iris, contrasting with the black of the bird, looks almost ghastly—one would almost take him to be blind.

But he sees well enough, and upon being approached too closely, will rise and fly, not a scared flight, but dignified and calm, like his walk, but hardly so graceful, the long tail he uses for a rudder

comes out to a rather sharp point behind, and this helps distinguish him when on the wing.

The birds breed sometimes in colonies in bushes or trees, and to some extent in cavities, and both assist in incubation. They are at all times sociable among themselves, and are usually to be found in flocks of various sizes.

In autumn before they leave, they collect in large flocks and, alighting in the tops of the trees, try to hold camp-meetings like their cousins, the red-wings. It is to be hoped this does not often happen for the attempt of a number of these birds to make music is quite distressing. The last I saw at this performance was among the tops of the bronzed beeches, and it looked like a thanksgiving for the bountiful harvest.

The Bronzed Grackle may be known by many observers for it has a wide range extending from Louisiana and Texas northward to the Great Slave Lake, and from the New England states and Newfoundland westward to the eastern base of the Rocky Mountains. It winters in the lower Mississippi Valley.

H. WALTON CLARK.

THE PIGEON FAMILY.

One day in spring we were quite surprised to see a pair of Pigeons flying over the house, as we had none and knew of no one else near by who had. Evidently they were home seeking and liked our appearance, for, after a close scrutiny of the premises, they took possession of an old pigeon house which some former occupant of the ranch had nailed high up on the barn.

We watched them with a good deal of interest for the first few days of their stay, and were quite pleased when they fully made up their minds to remain permanent neighbors.

For a while they were busy with house-cleaning and settling in their new abode. Then after a few weeks, we discovered

two baby Pigeons in the nest. Such hungry little fellows as they were too! It kept both father and mother busy bringing worms and choice morsels for their ravenous family. When one of the old birds returned with a tidbit, there was great quarreling in the nest until it was poked down the throat of one or the other of the young ones.

At length the day came when both young birds hopped out of the nest and stood shivering on the outer shelf and looking about at the great world.

The parents seemed quite overjoyed at first, but as the day wore on and the youngsters got no farther than the shelf, their impatience increased, and by afternoon they were in a high state of excite-

ment. They left them where they were for that night, but the next morning they evidently thought the time for action had arrived, so, despite the youngsters' despairing cries, they set about to push them off the shelf. No doubt the ground seemed a long way off for their untested wings and they clutched wildly at the edge of the shelf, but the old birds had no mercy in their discipline, so over the birdlings went to the ground.

Here they strutted and fluttered about until I rescued them from under the

horses' feet and set them up on the barn roof. But it did no good, for their unrelenting parents pushed them off again and again until at last the youngsters gained confidence in themselves and flew of their own accord.

Then was peace restored in the family and the four went on many happy expeditions together, cutting great circles through the air and darting among the rafters of the barn as though fear had never been known to any of them.

AMY TAYLOR.

THE BLACKBIRDS' BREAKFAST.

Mr. Blackbird awoke in his dark pine-tree home
One bright early morning in spring,
Said he to his wife, "The time is now come
For us to get out on the wing;
The old farmyard hen is beginning to cackle.
I'll keep even with her or my name isn't Grackle."

Said his wife, "Mrs. Redwing was over last night
To make us a short, friendly call,
She said that this morning, as soon as 'twas light,
We could come to their sycamore hall,
And we'd go to the cornfield and breakfast together
And meet more of the folk of the rusty black feather."

Mr. Blackbird replied, with a bow and a quirk,
"As you please, dearest wife, you know best."
Then he straightened his tail with a queer little jerk
And swelled out his greeny-blue vest.
And then from his place, with solicitous glances,
Peered his big yellow eyes, surveying their chances.

Soon down in the cornfield a wonderful sight
As well as a wonderful sound!
A red flash, a black one as dark as the night,
And scarcely a bare patch of ground!
A flutter, a clutter, a patter, a clatter—
This breakfast indeed is a sociable matter.

When all of the grubs and the cut worms are gone
And a few of the best hills of corn,
Then a bevy of birds, as with instinct of one,
Rise like a dark cloud on the morn.
The good-byes are said by this party so clannish
And away to their homes in the tree tops they vanish.

—MARY NOLAND.

THE VERDIN.

(*Auriparus flaviceps.*)

The Verdin, or the Yellow-headed Bush-titmouse as it is frequently called, is one of our most beautiful and interesting little birds. In size, the birds of this species vary from four to four and one-half inches in length, and are smaller than some of the species of hummingbirds, which frequent the same regions.

It is to be regretted that their distribution is so limited that they are known to but a few of those who enjoy the study of birds and their habits. While the Verdins are abundant in certain localities, their geographical range is quite limited. They are known to frequent Mexico, and the southern border of the United States from the Valley of the Rio Grande River westward to Arizona, and southern California. They are occasionally seen as far north as southern Nevada and southwestern Utah. They are also abundant in Lower California, especially in the vicinity of Cape St. Lucas.

Many observers have found it very difficult to study the living Verdins because of their extreme wildness, flying rapidly when approached to a very distant point before alighting.

Though the Verdins are very small birds they build remarkable nests, which are both large and bulky. In the "Ornithology of California" the following interesting observation of Dr. J. G. Cooper regarding the nesting habits of the Verdins is given: "On the tenth of

March, I found a pair building, first forming a wall nearly spherical in outlines, out of thorny twigs of *Algarobia* (the honey-mesquit), in which tree the nest is usually built; then lining it with softer twigs, leaves, down of plants and feathers, covering the outside with thorns, until it becomes a mass as large as a man's head, or nine inches by five and a half on the outside." He found that the cavity measured four and a half by nearly three inches, and that there was an opening on one side just large enough for the bird to enter. Another observer, who studied the Verdins at San Lucas, California, where he found them abundant, says that for the most part the nests were hung from low acacia trees and on the extreme outer branches. He states that in all cases the entrance was at the lower end or toward the ground, and he speaks of one nest that was over two feet long. Mr. Davie states that the nests are either globular, flask-shaped or retort-shaped in form, the wall being an interwoven mass of thorny twigs and stems, and that they are lined with feathers.

It is said that the Verdins while searching for their insect food, will often remain suspended with their backs downward as do the titmice. Their song is quite like that of the chickadee. Dr. Cooper also heard them utter a loud cry, as they perched on high twigs, and a triple lisping note sounding like the syllables tzee-tee-tee.



FROM COL. F. M. WOODRUFF

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VERDIN.
(*Auriparus flaviceps*).
 $\frac{2}{3}$ Life-size.

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A WINTER RAMBLE.

To become familiar with nature we must go to her at all seasons, and observe the varying changes from day to day and month to month. There are many interesting things to see and learn during the winter season. Thus it was that Thoreau, the poet-naturalist, occupied his little hut in the woods by Walden Pond, through the long, cold days and nights while the snow fell three feet deep on the level, and the waters of the pond were congealed into a solid floor of ice. He was there to learn the secrets of Nature, and many of her secrets could be learned only in this way.

Choose a mild winter day, and call upon your old friends of the summertime, the trees, hills, and the valleys of the wood. You will find no wild flower in bloom, for even the witch hazel has succumbed to the cold; no robins singing in the leafless trees. The snow lies cold and white where the arbutus grew, and the mountain stream is silent. Yet there is much to observe, and many specimens to carry home if you will.

We see how Nature has formed the leaf-buds for next year, and protected them from the frost. We see into the depths of sylvan glens and woody retreats with unwonted distinctness, as though admitted for the first time into unfamiliar places. The leafy shadows are gone, and the sunrays penetrate where they never entered while the woods were green.

We fail to recognize our old friends in their winter nudity, the bare trees and shrubs so well known to us when clothed in their summer foliage.

You will perhaps be surprised to find a great variety of color in the winter landscape. At first glance, it appears to be all white snow and green pines. But look closer, and see the gray and brown of the tree-trunks, the warm red

branches of the cornel, the golden yellow of the willow twigs, the scarlet sumac, the rich russet of the oak-leaves, and numerous other objects blightly colored, such as the fungus, lichens, berries and decaying stumps.

Never before has the velvety moss on the rocky ledges seemed so beautiful. And how silvery white the paper-birches look against the dark background of spruce and hemlocks!

Up among the twisted branches of an old tree, there is a monstrous wasp's nest. The wasp is the original inventor of paper made from wood pulp.

Across the path in front of us scurries a fat, little meadow-mole, disappearing into a tiny cavern under the snow, where his warm nest of soft grasses is hidden.

The larger tracks of a rabbit indicates where one of these shy creatures hopped along earlier in the day. We see by the position of the tracks that he proceeded leisurely for several yards, then came dangerously near to slipping over the icy ledge. Having scrambled to a place of safety, the little fellow jumped along for a while in the same direction, pausing now and then to nibble at the tender bark of a shrub.

Then alarmed by something seen or heard, he gave a sudden backward leap and bounded away to his burrow. In a moment, the cause of his hasty retreat is apparent, for in the soft snow are the deep tracks of a dog. Let us hope that the fleet legs of the little wild creature carried him to a place of safety.

Looking up the steep hill, where the rocky shelves are hung with polypodiums and Christmas ferns, a merry twittering attracts our eyes to a flock of lively snow-birds feeding among the evergreens. And yonder is a funny little bird chasing up and down a dead hemlock, head down most of the time,

the gymnastic white-breasted nuthatch. It is most amusing to watch him going up and down in search of spiders' eggs and other dainties. He is most agile of all climbing birds, and seems happiest when the snow flies past. Over the crest of the "pine-dark" hill, soar half a dozen coal black crows, calling to each other from the breezy height. How gracefully they balance and wheel in the wind with scarcely the flutter of a feather. Living on those lofty heights what a view of the world they must have.

Along the edge of the woods, in protected places, we find the small rock-cress, looking so fresh and green we almost expect to see the tiny white flowers beginning to appear.

Under an icy covering where the water has dripped down and frozen clear as crystal, we find green herbs im-

prisoned and perfectly preserved. Life would seem absolutely extinct. Yet we know that a few days of warm spring sunshine will revivify the apparently lifeless roots, and again beautify them with leaf and flower.

We miss the choral music of the summer songsters, yet the woods are not noiseless. There is the low singing of the wind in the pines, the creaking of the branches, the twitter of snowbirds, the cawing of the crows, and the soft gurgle of the river where the water rushes, through an unfrozen channel. Now and then the sharp crack of a rifle is heard, followed by the excited barking of a dog.

Certainly there are many things of interest in the winter woods, and one misses much if he fails to go out at least a few times while the snow is on the ground. CHARLES F. FUDGE.

THE BLACK-THROATED GREEN WARBLER.

A gorgeous butterfly with wings
White-barred, a gilded robe and crown,
Into the pine tree flutters down
And half-asleep, half-waking sings.

Voice of the calm midsummer's day!
As sunlit bees are droning long,
It woos the listener with its song,
The tree and song a harmony.

'Tis said the white pine's soul became
Incarnate in this butterfly—
This little bird that knows the sky
Yet loves the parent bough the same.

And still the impassioned spirit sees
The pine trees waving, hear the sough
Of wandering winds and tells us how
They sang the same soft melodies.

O spirit bird! thy tender breast,
Crape-muffled, thrills with unsung songs,
No careless heart to thee belongs,
The sky forgot, thy home is best.

—NELLY HART WOODWORTH.



GREEN-WINGED TEAL.

THE GREEN-WINGED TEAL.

(*Anas carolinensis.*)

The dainty little Green-winged Teal is second only to the wood duck in the beauty of plumage and were it not for its small size, doubtless it would rank as the most esteemed of all of our ducks. The delicacy of its flesh, the wonderful speed it attains when on the wing, and its amiable disposition make it the prime favorite of nearly all sportsmen. I can attest to the rapidity of its flight. Many times when I have been concealed in my blind, the little bullet shaped form has passed me so quickly that I hardly could realize that it was the form of a bird, and only when seeing a long streak of flying spray and a splash, as the bird struck the water would I be disillusioned. Many times my hunting companion and I have looked at each other in a shame-faced manner and each has asked, "Why did you not shoot?" Our favorite excuse would naturally be "I waited for you to shoot first."

The range of this attractive Teal is large, covering North America in general, though it breeds chiefly north of the United States. In its fall migration it passes southward as far as Honduras and Cuba. It is said that representatives of this species have been known to occasionally winter on the Great Lakes and Professor Cooke records the nesting of a few on the St. Claire Flats, Michigan. Mr. Robert Kennicott has given a most interesting account of the Green-wing's nesting habits: "The nests found by him were in nearly open ground among moss, and generally far from water. In one instance he saw the nest of the duck at the foot of a small spruce in a mossy, half-barren, small dry plain, and at least forty rods from the water. This nest was a simple depression in the moss, but thickly lined with down, and well protected by the over-hanging branches of the spruce.

The female fluttered slowly off along the ground at his approach and the nest was found to contain eight eggs." While the usual number of eggs is about eight or ten, Dr. Dall states that nests often contain as many as sixteen to eighteen.

Mr. Ernest E. Thompson in his "Birds of Manitoba" says of the Green-winged Teal: "It is usually met with in pairs and is of a very affectionate disposition, for if one is to be shot, the other either remains to share its fate, or if it does fly at first, usually returns almost immediately to the side of its mate." The mother Teal is very solicitous in the care of her young. Mr. Thompson speaks of one female Teal which he observed travelling with her brood of ten young ones across the prairie toward a large pool. "The mother bird was in great grief on finding that she was discovered, but she would not fly away; she threw herself on the ground at my feet and beat with her wings as though quite unable to escape and tried her utmost to lead me away. But I was familiar with the trick and would not be beguiled. I caught most of the tiny yellow downlings before they could hide and carried them carefully to the pool, where soon afterwards the trembling mother rejoined them in safety." The drakes do not assist their mates in the duties of incubation or the care of the young but spend their summers in putting on an extra suit of handsome feathers and living an idle life of pleasure. The Green-winged Teals are not only fleet of wing but also of foot. They feed upon various wild seeds and berries of marsh and water plants; upon tadpoles and aquatic insects, worms and small snails. Mr. Audubon has well said that the flesh of the Teal is superior to that of the canvassback in tenderness, juci-

ness and flavor after it had extensively fed upon the wild oats of the north and west or soaked rice in the fields of Georgia or Carolina. Unfortunately it is said that the Teals sometimes feed upon putrid salmon, which they find in the

streams of the northwest. At such times the flavor of their flesh is far from attractive. On the land, these beautiful birds move with remarkable grace and ease which is quite, if not fully, equal to the movements of the wood ducks.

FRANK MORLEY WOODRUFF.

THE FURIES' DAY.

This day, oh! my soul, is a wild, wild day,
We'll off to the woods together,
We'll talk to the Spirit of all wild things,
The Lord of Tempestuous Weather.

He's loosed all the Furies, those creatures of air,
And bid them make merry today—
Oh! hark to their laughter, as shrieking with glee,
They hurry along their mad way.

They clasp the bare branches in icy embrace,
As they wave their lean arms in the air,
Then fling them aside, in a fierce fit of rage,
And are off at their wails of despair.

The poor beaten birds seek for refuge and rest
In the folds of the pine tree's gown,
And huddle and peep in a pitiful way,
As the Furies come swooping down.

They poke their long fingers in woodpeckers' holes,
And into the squirrel's nest;
They whistle and wail through the hollow halls
Where the owls take their daily rest.

The dead leaves are driven before their cold breath,
And singing their shivering song,
To the warm little nooks, at the foot of the trees,
Are hurriedly blown along.

The gay little brook now lies wrapt in its shroud,
And hushed is its gurgling note,
The Furies swept by, and with savage delight,
They flew at its musical throat.

Ah! soul, we must hasten, for death's in the wood,
So we'll quietly steal away
From the sobs and the shrieks of the suffering wild,
For this is the Furies' Day.

—BESSIE ANDREWS DANA.

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