

**NATURE STUDY LEAFLET: OUR
COMMON BIRDS. SUGGESTIONS
FOR
THE STUDY OF THEIR LIFE AND
WORK. BIOLOGY SERIES, NO. 2**

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Biology series, No. 2 by C. F. Hodge

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C. F. HODGE

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OUR COMMON BIRDS.

SUGGESTIONS FOR
THE STUDY OF THEIR LIFE AND WORK.

BIOLOGY SERIES,
No. 2.

Cliff
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BIOLOGY OF OUR COMMON BIRDS.

By C. F. HODGE, Ph. D., Clark University.

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Before genius is manliness and before beauty is power.

—Burroughs, *Birds and Poets*, p. 173.

A thing of beauty is a joy forever:
Its loveliness increases; it will never
Pass into nothingness; but still will keep
A bower quiet for us, and a sleep
Full of sweet dreams, and health, and quiet breathing.

—Keats, *Endymion*.



Cedar bird and nest.

Great human values, of power, of thought, of beauty, attach to a knowledge of our birds; and the larger science, biology, takes them all into account. In elementary and popular education,*especially, this wider science should form the solid foundations for all our relations to bird life.

The important question is: What do birds *do* in the world? In striving to answer this question we should also consider what we can do for our birds to render their work as complete and effective as possible. We must first gain by observation and personal acquaintance with the living birds of each species a knowledge of their ways of doing things, their foods, their beauties and their songs. Then give the imagination full play to picture vividly before us what the whole species is doing in every farm and garden and about every home in the land. Think of the millions of beautiful wings and building nests and eating bills and singing throats. Aside from their

Think, every morning when the sun
 peeps through
The dim, leaf-latticed windows of the
 grove,
How jubilant the happy birds renew
Their old, melodious madrigals of
 love!
And when you think of this, remem-
ber, too,
'Tis always morning somewhere, and
 above
The awakening continents, from shore
 to shore,
Somewhere the birds are singing
 evermore.

The summer came, and all the birds
were dead;
The days were like hot coals; the
 very ground
Was burned to ashes; in the orchards
 fed
Myriads of caterpillars, and around
The cultivated fields and garden beds
Hosts of devouring insects crawled,
 and found
No foe to check their march, till they
 had made
The land a desert, without leaf or
 shade.

—Longfellow, *Birds of Killingworth*.

intellectual and æsthetic values the paramount service of the birds lies in their power to destroy insects. For this great work we have a vast mechanism in nature, an army plastic almost as air, on wings, powerful and beautiful, able to carry their literally flying squadrons hundreds and even thousands of miles whither food abounds and insects threaten destruction to vegetation.

In studying living things we should bear constantly in mind this great truth, stated often in the words: "As long as there is life there is hope." In everything that lives there are infinite possibilities. No seed is so tiny but that it may hide the possibility of covering the whole world with plants of its kind. Instead of mourning the loss of our forests, let us go to work. With a single living pine seed, properly cared for by man, we may cover the continent in an incredibly short time with a forest of pines. A pair of living bird's eggs, with proper care by the children of the country, could produce in ten years a pair of birds for every child in the land. Let us consider for a moment the possibilities that lie hidden within the blue shells of a pair of robins' eggs. Allowing that ten young robins may be produced by a pair each year, with the life of a robin as ten years, we shall have:

| | | |
|---------------------|-------------------------------------|--|
| 1st year, (2 + 10) | 12 robins. | A bird came down the walk: |
| 2d " (12 " 60) | 72 " | He did n't know I saw: |
| 3d " (72 " 360) | 432 " | He bit an angleworm in halves, |
| 4th " | 2,592 " | And ate the fellow, raw. |
| 5th " | 15,552 " | And then he drank a dew |
| 6th " | 93,312 " | From a convenient grass, |
| 7th " | 559,872 " | And then hopped sidewise to the wall |
| 8th " | 3,358,232 " | To let a beetle pass. |
| 9th " | 20,149,392 " | —Emily Dickinson, <i>Poems</i> , p. 110. |
| 10th " | 120,896,352 " | The winds blow east, the winds blow |
| 11th " | 725,137,856 " | west. |
| 12th " | 4,350,827,136 " | The blue eggs in the robin's nest |
| 13th " | 26,105,002,816 " | Will soon have wings and beak and |
| 14th " | 156,630,016,896 " | breast. |
| 15th " | 939,780,100,136 " | And flutter and fly away.—Longfellow. |
| 16th " | 5,638,680,640,896 " | |
| 17th " | 33,831,683,845,312 " | |
| 18th " | 203,000,169,299,328 " | |
| 19th " | 1,218,750,835,436,800 " | |
| 20th " | 7,312,505,211,420,800 " | |
| 21st " | 43,875,031,268,524,800 " | |
| 22nd " | 263,250,187,611,155,200 " | |
| 23rd " | 1,579,500,925,666,732,800 " | |
| 24th " | 9,477,005,553,999,993,600 " | |
| 25th " | 568,250,343,339,999,040,000 " | |
| 26th " | 3,409,502,060,639,999,040,000 " | |
| 27th " | 20,457,012,361,999,993,600,000 " | |
| 28th " | 124,731,314,171,999,993,600,000 " | |
| 29th " | 767,070,585,595,999,993,600,000 " | |
| 30th " | 4,602,423,513,395,999,993,600,000 " | |

If we do not have all the robins we want, and this applies to any living thing, it is because we do not know enough about rearing them or are not willing to act in accordance with our knowledge.

In addition to this infinite power of multiplication we must never lose sight of another great law of biology, viz.: that every living thing possesses great possibilities of development and improvement. No one has yet produced the best and most beautiful rose or peach or bird or

man or anything else, that the world is capable of yielding. By proper care we can not only have a world full of such birds as we have now, but of birds with sweeter and sweeter song and more and more beautiful plumage. And in presence of these infinite possibilities for good or for ill we must above all things remember that every human action tends to make the world a garden or a desert, a paradise of joy and beauty or a vale of tears.

If only the birds we have, felt that they and their nests were safe, they might sing more and even sweeter than they do. Indeed, Burroughs remarks of English birds: "They sing with more confidence and copiousness, and as if they, too, had been touched by civilization." They sing more hours in the day and more days in the year.¹ And, further, if our birds were uniformly safe in man's presence and undisturbed, they would doubtless come much closer to us, as they did to Thoreau, and to Celia Thaxter in her garden. And with proper care many of our best songsters and most useful birds that are now rare, might become more common, filling our parks and the thickly planted portions of our towns and even cities; and with much more caution than preceded the introduction of the English sparrow, we might bring about our homes the most beautiful songsters of other lands. But by far the safer and wiser course, as indicated by our title, will be to begin by making the most of our native birds. These are a heritage infinitely rich, developed through geological epochs to exactly fit all the conditions of life on this continent. It is no light matter to break into this vast living harmony, as our bitter experience with the English sparrow bears ample testimony.

With this wonderful power of increase, the question naturally arises: Why do we not have many more birds than we find about us? Why have we not hundreds where we have but one? Has the natural

To produce and multiply endlessly, without ever reaching the last possibility of excellence, and without committing herself to any end, is the law of Nature.
—Burroughs, *Birds and Poets*, p. 180.

Wood birds here are house and garden birds there (Eng.).—Burroughs.

Many haps fall in the field
Seldom seen by wishful eyes;
But all her shows did Nature yield,
To please and win this pilgrim wise.
He saw the partridge drum in the
woods:
He heard the woodcock's evening
hymn;
He found the tawny thrushes broods;
And the shy hawk did wait for him;
What others did at distance hear,
And guessed within the thicket's
gloom,
Was shown to this philosopher,
And at his bidding seemed to come.
—Emerson, *Woodnotes*, I, 2.

¹Burroughs, *Fresh Fields*, p. 136.

limit of increase been already reached, so that attempts to increase the numbers would be useless? All such questions open up wide and important fields for observation

What thou art we know not;
What is most like thee?
From rainbow clouds there flow not
Drops so bright to see,
As from thy presence showers a rain
of melody.

Teach us, spright or bird,
What sweet thoughts are thine;
I have never heard
Praise of love or wine
That panted forth a flood of rapture so
divine.

Teach me half the gladness
That thy brain must know,
Such melodious madness
From my lips must flow
The world should listen then, as I am
listening now.

—*Shelley. To a Skylark.*

and investigation. Food supply, for all seasons of the year, is the main factor in this great series of problems. This will be considered in a section by itself. The next great factors are natural enemies of bird life. In connection with each element in nature which tends to decrease our valuable bird life, we should endeavor to discover the best means of preventing its operation. That this matter is now a national exigency, in the careful study of which every patriotic citizen and every school child should participate, may be duly appreciated by referring to William T. Hornaday's recent paper¹ on the Destruction of our Birds and Mammals. We learn from this that during the past fifteen years our birds have decreased in thirty states and territories 46%. For each of the states named this decrease has been as stated in table. Three states,—North Carolina, Oregon, and California, show neither increase or decrease; and only four states,—Kansas, Wyoming, Washington and Utah have had an increase of bird life. It would be a most worthy ambition to infuse into our school system, reaching, as it does, the life and heart of every child, the purpose and the will to exert every effort to change this destructive process to one of increase, as rapid as possible, in every state and territory, in every county, farm, and city lot of the land.

| | |
|----------------------|-----|
| Maine | 57% |
| New Hampshire | 32 |
| Vermont | 30 |
| Massachusetts | 27 |
| Rhode Island | 60 |
| Connecticut | 75 |
| New York | 48 |
| New Jersey | 17 |
| Pennsylvania | 51 |
| Ohio | 38 |
| Indiana | 60 |
| Illinois | 38 |
| Michigan | 23 |
| Wisconsin | 40 |
| Iowa | 37 |
| Missouri | 36 |
| Nebraska | 10 |
| North Dakota | 58 |
| District of Columbia | 33 |
| South Carolina | 32 |
| Georgia | 65 |
| Florida | 77 |
| Mississippi | 37 |
| Louisiana | 55 |
| Arkansas | 50 |
| Texas | 67 |
| Indian Territory | 75 |
| Montana | 75 |
| Colorado | 28 |
| Idaho | 40 |
| Average | 45 |

Climatic influences are severe in this country. Great numbers of birds are killed in heavy rain and hail storms. Whole species are

¹William T. Hornaday, Director of the N. Y. Zoological Park. The Destruction of our Birds and Mammals. Second Annual Report, N. Y. Zoological Society. N. Y., 1898. Office of the Society, 69 Wall Street.

decimated in times of sleet and in extraordinarily cold weather within the range of their southern migrations. Thus our bluebirds were killed off in 1895, and fearful havoc has been wrought in a number of our most valuable species in the Southern States during the past winter.¹ With these elements it is difficult to contend. To what extent man is responsible by reason of clearing out natural shelter and destroying natural food supplies it is impossible to say. Again, in times of great drouth in regions where our common species breed, both food and water may become so scarce that numbers of nestlings famish or starve. The birds then are loth to desert their nests to go to regions of plenty. If birds were tamed sufficiently to come to man as their friend in times of great need, as they do in rare cases now, and as they learned to come to Mrs. Brightwen, a little food and shelter might tide them over the hard time, and their service afterwards would repay the outlay a thousand fold. About the house and barn and shade trees, safe places of shelter, crannies arranged on purpose, bird houses, due care being exercised to keep them clear of English sparrows and place them out of the reach of cats, might save great numbers of birds yearly.

Millions of fledglings, the country over, now go to feed vagabond cats. The remedy here is to rid the neighborhood of all such cats; and people who have cats that they value, for love of nature ought to see to it that they are provided with other food than young robins, orioles, thrushes and song sparrows. Much can be done by way of training cats to let the birds alone, and lastly they should be kept in as much as possible at times when young birds in the neighborhood are learning to fly.²

In recent years regions have been almost depopulated and whole species practically exterminated for purposes of millinery. The fault here does not rest, as is generally charged, with leaders of fashion or with our good lady friends who wear birds' skins on their hats, but rather with public education and with the ornithologists themselves who know better uses for birds, and who ought to adequately instruct the public instead of scolding and preaching at it.

¹See the Auk for April, 1899, note by Arthur T. Wayne, p. 197.

²Prof. Forbush states that a cat is generally responsible for about fifty song birds in a year, and one cat to his knowledge destroyed six bird's nests in a single day.