

THE MIGRATION OF BIRDS*

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The natural phenomenon of bird migration must appeal as interesting and mysterious to every thinking person, especially to the lover and observer of nature. But I fear the mysterious part of it must remain so to a greater or lesser extent, even after all that can be, has been said on it. A flood of new light, however, has been shed on this subject recently by the publications of the Biological Survey of the Department of Agriculture at Washington, D. C. This department has for about 20 years been sending out blank question sheets to competent ornithologists all over America, on which are to be noted the names of all the migrant birds passing through certain localities, the first and last dates when seen in spring and fall, etc. I may say also that a member of the Ottawa Field-Naturalists' Club has for many years been sending in these sheets, well filled out, from this section, namely that very competent and indefatigable ornithologist, Mr. George R. White. This vast amount of data and statistics on migration is now being systematically worked over and has already yielded highly interesting and unexpected results, as witness the writings of Prof. Wells W. Cook, of the Biological Survey, Washington. To these I am indebted for many of the statements I am here able to make.

The first question suggesting itself in regard to migration is: *Why* do birds migrate at all? *Why* do they leave us? Some will answer: "Because it would be too cold for them in winter." That this cannot be the whole reason we can at once see from the fact that the tiny Chickadee, the Snowflake, frequently the Pine Siskin and Redpoll remain with us all winter. Besides, some birds, also their young which never experienced a winter any-

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Since this had not been written out before the lecture, it can not be reproduced in exactly the same form as delivered. There are many but slight omissions and alterations. The greater part of the introduction is also omitted.