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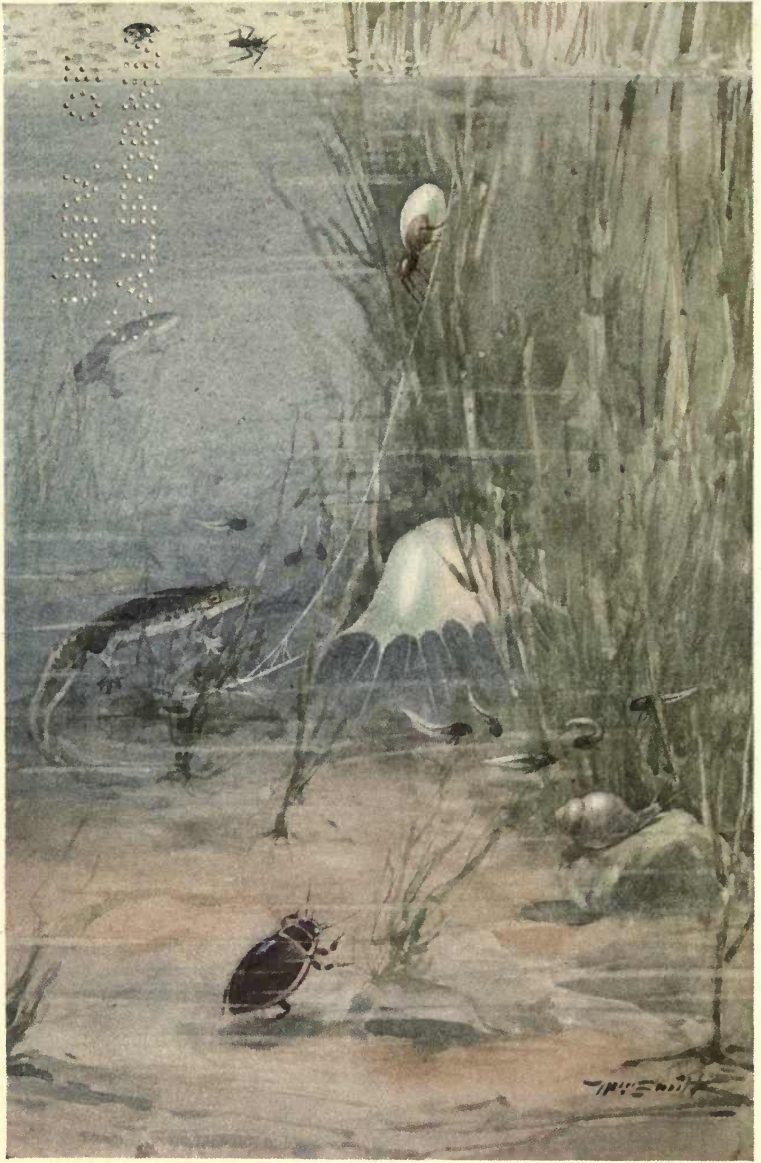
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LIFE OF A TARN: WATER-SPIDERS, TADPOLES, NEWTS

(I)

(FRONTISPIECE)



# THE BIOLOGY OF THE SEASONS

BY

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## PREFACE

THE aim of this book is to get at the gist or inwardness of the seasonal drama, without going too minutely into the details of the successive scenes. In other words, it is a study of certain biological aspects of the seasons, not in any sense a naturalist's year-book, that I have essayed.

The book is intended for all who enjoy the pageant of the year and the drama of the seasons, and who see something of the import of the annual analysis—as if through a prism—of the evolutionary flow of things. There is some reason to believe that Man was helped to find himself long ago by his discovery of the Year—with its educative object-lesson of recurrent sequences and long processions of causes. Similarly to-day we may be helped to live on more equal terms with Time by getting back into close and appreciative touch with the march of the seasons. But if that touch is to be natural to men of to-day, it must be scientific as well as practical and emotional. Hence this contribution to a Biology of the Seasons. It is hoped that it may be of particular service to those who have to conduct courses of Nature-Study, which should certainly follow the seasons as closely as possible.

I am well aware that this series of studies and sketches—some more impressionist, some more analytic—cannot be more than illustrative of the biological outlook on the seasons. For it is a big problem to try to detect the seasonal punctuation of individual development and of



racial evolution, to trace out the inter-relations of organic rhythms and external periodicities. The ideal would be to study the organismal drama of the year with the sympathetic feeling of the old naturalists, such as Gilbert White, with Darwin's dominant sense of correlation and evolution, and with Spencer's grasp of the unity of science! No one knows better than myself how far my reach has exceeded my grasp in this fascinating inquiry. Perhaps, however, the book may give a stimulus to the serious study of Phenology or Season-Lore.

I am not forgetful that many naturalists have studied the life of plants and animals in its varied seasonal expression, and that many of them have found the study so rich in reward that they have sought to attract others to it. From Gilbert White's evergreen *Natural History of Selborne* to Professor L. C. Miall's *Round the Year*—to mention two books remarkable in their accuracy, insight, and sincerity—there has been a succession of Naturalist Year-Books. But the aim of this volume is at once more general and more intimate. It is an attempt to get at the underlying principles.

J. ARTHUR THOMSON.

MARISCHAL COLLEGE,  
THE UNIVERSITY, ABERDEEN,

*April 1911.*

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# THE BIOLOGY OF THE SEASONS

## INTRODUCTORY

BY the Biology of the Seasons we mean the study of the phenomena and phases of life—in plants and in animals—in relation to the time of year with which they are especially connected. That this is a very natural—perhaps *the* most natural—method of biological study will be at once evident to many. Perhaps it would be evident to all, were it not that many of us, dwelling in cities and becoming careworn, have lost much of that interest and delight in the seasonal drama which is characteristic of country-folk in happy conditions. Not that these country-folk are given to talk much about it, a silence which has given rise to the extraordinary idea that the delights of the country were discovered by the town.

The old-fashioned appreciation of the seasons was expressed, as we all know, in many fairy tales and myths, such as those of the Sleeping Beauty and of Proserpina, and it needs but little insight to see that these are really “fairy tales of science”—often, indeed, of surprising accuracy. In this connection, it may be noted that naturalists owe thanks to the poets for consistently helping to keep the appreciation of the seasons alive. From Homer to Horace, from Gawain Douglas to Thomson’s “Seasons,” from Tennyson to Meredith’s “Lyrics and Ballads of the Earth,” there is a



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