

## CURRENT SCIENCE—50 YEARS AGO



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FIGHTING THE INSECTS, THE STORY OF AN ENTOMOLOGIST. TELLING OF THE LIFE AND EXPERIENCES OF THE WRITER. BY L. O. Howard, pp. xvii+333. (New York: The Macmillan & co., 1933. Price 12s. 6d. net.)

This is a splendid book full of humour, interest and information. It deals with the practical application of scientific researches to combat the insect pests and the account is presented in an easy style and attractive form which will profit everyone who is interested in the contributions of science to the promotion of public health and the increase of public revenues. It is a record of the tireless efforts of a great man in organising an international campaign against the minor and major horrors of peace and war, with numerous autobiographical sketches of piquant interest.

Howard, a born naturalist, was originally trained for the medical profession which he abandoned to take up an assistant's post under Professor Riley who had been brought from Missouri to assume the appointment of Entomologist to the U. S. Department of Agriculture. Prof. Gage bade farewell to his old student in these words: "Now, Brother Howard, you and I are going to devote our lives to science. We are not going to let any confounded girls come between us and our work." While working in the Federal Bureau of Entomology in Washington he wrote in these words to his mother in 1884 about the share of credit which usually in those days fell to the lot of assistants: "Whenever you see a treatise by Professor or Dr. So and So in which he says in his introduction, 'I cheerfully acknowledge the help of my assistant Mr.....' or words to that effect, you can make up your mind that the Professor wrote the introduction and the assistant the treatise." As soon as Howard became head of the department in 1897, he

changed the old practice and permitted the assistants to publish their work in their name,—a reform which attracted to his service some of the eminent American biologists. When Howard was working as an assistant under Constock, he became interested in parasitic insects and the natural control by parasites and predators and the interest so early formed in the study of these little creatures and of their extraordinary interactions, has continued all his life and the first fruits of his labours were embodied in a big paper on the parasites of coccidæ. The most dramatic episode of this period was the successful introduction of "Australian Lady Bird" which completely destroyed the fluted scale that threatened the extinction of the citrus industry of California. In 1894 when Riley resigned, Howard received the appointment and Chief of the Service and his efforts to focus the attention of Europe and America on combating the grapevine Phylloxera, the Gipsy Moth and Brown-tail Moth, the Mexican Cotton Boll Weevil, the discovery of the eggs of tachina fly on the army worm, the rice stem borer and on the unintentional interchange of injurious insects between countries through commerce, constitute the noblest chapter in the history of applied entomology. His experiments to introduce silk culture in the United States may have failed, but his attempt to establish international co-operation in overcoming and eradicating insect pests through natural control laid the foundation of the industrial prosperity of America and curiously, he never suffered from want of funds from the Government for carrying on his researches and founding expensive Laboratories.

The book has a strong human appeal. It is the story of a great scientist with an amiable simplicity of character who freely wrote and practised "internationalism" and endeared himself to every scientist in Europe with whom he came in contact. His account of the Cosmos Club, the Bicycle Club, his services in the preparation of the Century Dictionary and International Encyclopedia, his scientific expeditions and his description of Congresses and personal conversations, his work on mosquitoes and domestic fly, his public lectures and scientific addresses and every other detail of the career of this remarkable scientist, will form an enduring record of noble service cheerfully rendered for the advancement of knowledge and the promotion of human happiness.

To read Howard's "Fighting the Insects" is liberal education.