

INDEXING THE HYDROCARBONS

Faraday's Encyclopedia of Hydrocarbon Compounds Compiled by Dr. Joseph Escott Faraday. Vol. I: C₁ to C₅. Pp. xxv+47+92+40+104+103. (Manchester: Chemindex, Ltd., 1945.) £7 10s. 0d.

FOR many years past organic chemists have been making and describing in detail thousands of new organic compounds; it was and is essential that a worker should know what had been done previously to his discoveries. The advent of Beilstein's handbook had a profound influence on progress when it appeared well over sixty years ago, for it enabled quick reference to the literature. Later it was supplemented by Richter, at first a private enterprise, but later taken over by the German Chemical Society, which created a considerable organization to keep it up to date. British chemical journals and *Chemical Abstracts*, like the corresponding American and German publications, have since contained a formula index on the Richter plan. Decennial indexes have been produced. Yet in spite of all, the magnitude of the task is so great that everything is decades out of date: the two long wars have contributed to the chaos. Now Dr. Faraday will make a fresh start—less ambitious, because it confines itself to the hydrocarbons, and presented in loose-leaf form so that an annual issue of new sheets will keep it up to date either by inserting new pages or substituting new matter for old.

The choice of hydrocarbons is both indicated and happy, for they stand to-day in the forefront of chemical interest as bricks for further synthesis. It is sought to give for each both a wide range of physical properties and every known method of preparation.

The first volume deals with compounds containing from one to five atoms of carbon. Its price is £7 10s., which is reasonable in regard to present-day costs, but obviously restricts possession of the book to firms and university libraries. A larger sale than has been estimated would no doubt reduce the cost, and we are inclined to recommend that it be considered an obligation on the part of all firms who make use of hydrocarbons to possess a copy. The time saved by its use can be very considerable, and every chemical unit must carry its share of the burden of producing chemical literature. Up to now this burden has been very unequally distributed and has fallen on the shoulders of far too few loyalists concerned with chemical progress.

Reference to the book is quick and easy; the sheets relating to a particular compound are numbered in order; formula and alternative names are clearly given. Taking C₅H₁₀, trimethylethylene, as an example, eighty-one methods of preparation are given on six sheets, with references to the journal in which each of these is found. The nomenclature adopted naturally follows very closely the International Rules for naming Organic Compounds.

The Germans in the past have used their hold in scientific literature to propagate the doctrine of German supremacy in chemistry which it has proved so hard to destroy, not so much among chemists, who were aware of the falsity of the claim, as among the intelligent public and the financiers in the City of London, who would often accept an invention, however incomplete or spurious, brought them by a foreigner but would rarely listen to a British inventor. These pages of our credulity must be closed for ever; British inventions are best must be our slogan. We must produce and finance our own literature and not

be afraid to proclaim our own achievements. The secrecy imposed by the censorship to-day is a blight on progress, but it is small in comparison to that imposed by firms on their doings. How many know that the first magnesium from sea water was made in Britain and not in America? Surely this was a chance to tell the world of a British achievement.

In our opinion Dr. Faraday has made a start on a project which deserves widespread support; if we fail him, then the chemical industry of Britain deserves to fail also. E. F. ARMSTRONG.

PLANT ROOT DISEASES

Root Disease Fungi

A Treatise on the Epidemiology of Soil-borne Disease in Crop Plants, and a First Exposition of the Principles of Root Disease Control. By S. D. Garrett. (*Annales Cryptogamici et Phytopathologici*, incorporating *Annales Bryologici*, edited by Dr. Frans Verdoorn, Vol. 1.) Pp. xiv+177. (Waltham, Mass.: Chronica Botanica Co.; London: Wm. Dawson and Sons, Ltd., 1944.) 4.50 dollars.

TO the plant pathologist, at work on a root disease, there quickly comes a realization of the enormous complexity and essentially dynamic nature of his problem: the soil, its organisms, and their vagaries make a whole world. But it is a world susceptible to the methods of science, and already, in some instances at least, results based on exact observation and carefully controlled experiments have been obtained; in other instances, because of the incompleteness of experience and the insufficiency of precise data, the subject is at a more elementary stage.

As the sub-title indicates, the author has undertaken a not inconsiderable task. The many and varied aspects of root infection and of the spread of fungal pathogens in the soil have been faithfully dealt with; so, too, the effect of temperature, moisture content, texture, organic content and soil reaction upon parasitic activity are considered in detail and clearly set forth. The latter part of the book is devoted to the ascertained facts relating to the control of root-invading fungi. It may be noted that the author has not considered it within the scope of this volume to deal with the related problems of root physiology and ecology.

There can be no doubt that this work represents a close and fair review of the literature, which is extensive. As an up-to-date survey of work in a field in which he has special experience, Mr. Garrett has written a book which should be of very considerable use to all engaged on the investigation of soil-borne diseases.

Due prominence has been given to the specific conceptions of this branch of botany. The author of a work such as this is necessarily limited by the contemporary state of knowledge. Because of the extensiveness of the subject and the relatively restricted number of workers engaged on it, much of the research, on the fungi of tropical soils for example, is still at an early stage of development. Generalizations based on existing knowledge must therefore be accepted with due caution.

Since the work aims at an exposition of principles, and since the subject-matter is by its nature somewhat discursive, brief summaries at suitable points would have added to the usefulness of the book by rendering it more incisive. C. W. WARDLAW.