

REVIEWS

Theoretical Organic Chemistry. By J. B. Cohen. Revised Edition by P. C. Austin. (Macmillan and Co., Ltd., London), 1942. Pp. viii + 622. Price 10/-.

The latest revised edition of this most popular book on Theoretical Organic Chemistry should be welcome to all students beginning the study of the subject. The book is noted for its clear and concise exposition of the subject which is supported by a large number of carefully selected experiments for illustrating the main reactions of Organic Chemistry. Nearly sixty pages of additional matter have been added since the first edition appeared, and descriptive details for the preparation of important compounds have been included. The general arrangement of the original edition has been adhered to, the enlargement of the text being mostly confined to Parts II and III. Two new chapters have been introduced in Part I—one on stereo-chemistry, and the other on the electronic theory of valency. These two chapters have replaced those on ureides and proteins, the latter having been transferred to Part III, in which a new chapter has been added on compounds of biological importance. In this, the beginner is given a general idea of some of the recent developments which have taken place in vitamins, hormones, plant-pigments, etc. Apart from these, slight additions are noticeable in almost every chapter in the book. The electronic theory of valency, which has now attained such importance, might have been given a more prominent place in the book, and electronic formulæ for organic compounds and interpretations on the basis of this theory of many of the important reactions of organic compounds, such as those of nitro-paraffins, iso-nitrites, etc., might have been given throughout the book in appropriate places. These are, however, minor deficiencies, and the book may be safely recommended to our students of the B.A. and B.Sc. (PASS) classes.

B. B. D.

Organic Chemistry. By Sarkar and Rakshit. (H. Chatterjee & Co., Ltd., Calcutta). Revised and enlarged second edition. Pp. 576. Price Rs. 6.

This book is meant to be a text-book in organic chemistry for B.A. (Pass) students. It covers almost the same course as given in *Theoretical Organic Chemistry* by Cohen or *Organic Chemistry* by Perkin and Kippings, Vols. I and II.

The book is divided into 46 chapters of which the first five deal with the general methods such as purification of substances, detection and estimations of elements and determination of molecular formulæ, etc. The next 24 chapters deal with aliphatic portion while the last 17 chapters are devoted to aromatic compounds. Each chapter begins with the most important members of a group of organic com-

pounds followed by general methods of preparation of such compounds and notes on their industrial importance. At the end of each chapter are given exercises bearing on the subject-matter dealt with in the chapter.

A special feature of the book is the pointed reference it makes to the industrial importance of the substances to India. On this account the book makes a stimulating reading even to the general public. The treatment is complete and the information given is up to date. The illustrations are attractive, the printing is clear and the typographic errors are surprisingly few. The book can be heartily recommended as worthy of consideration as a text-book for B.A. (Pass) students.

K. S. N.

FISHES OF LAHORE

Fauna of Lahore—5: "Fishes of Lahore". By Nazir Ahmad, *Bull. Dept. Zool. Panjab Univ.*, 1, 253-374; 49 figs. and 1 map (July 1943). (Published by the Punjab University.) Price Rs. 4.

The *Ad hoc* Fish Committee of the Advisory Board of the Imperial Council of Agricultural Research, in its meeting of the 9th November 1937, in considering practical development of fish industry in India, expressed the opinion that

"In order to effect development upon satisfactory lines, it was necessary to carry out local surveys of the amount and class of fish available and in this connection proper identification of the fish caught in each area was essential."

From the above it will be clear that the proper study of the fish fauna of a locality is a condition precedent to the development of its fishery resources. Viewed from this standpoint, the publication of *Fishes of Lahore* is a welcome addition to a number of articles that have appeared in recent years, such as *Fishes of Northern Bengal*, *Fishes of Travancore*, *Fishes of Mysore*, *Fishes of Hyderabad*, and the results of faunistic surveys carried out by the Zoological Survey of India from time to time in different parts of the country.

The author of the *Fishes of Lahore*, off and on, spent two years in making a thoroughly representative collection of the local fishes occurring within a radius of about fifteen miles from the Zoological Laboratory, Government College, Lahore. After a preliminary identification of the species with Day's standard works on Indian fishes, he took the trouble to compare his specimens with the named material in the collection of the Indian Museum and to consult literature in the library of the Zoological Survey of India for nomenclatorial purposes. A certain amount of information on the bionomics and life-histories of the species studied are also given either from personal

observations or from earlier records. The result of all this labour is the production of a thoroughly reliable and fully illustrated handbook of the fishes of Lahore, which should prove invaluable to fishery administrators interested in the fish supply of Lahore. Owing to the limited scope of the series, "Fauna of Lahore", of which *Fishes of Lahore* is the fifth contribution, the author had to leave out such species which though marketed in Lahore, are imported from far off stations. Fortunately in reviewing the records of fishes from Lahore, the author has indicated a number of such forms, the addition of which to the 49 species described by the author can give an almost complete picture of the fishes sold at Lahore. Though undertaken purely as an academic piece of research at a University centre, a monograph of this nature has great practical value, as it can form the basis of works like *Common Food Fishes of Shanghai* and *Common Marine Food Fishes of Hong Kong*, which have already been reviewed in this *Journal*. For the collection of fishery statistics, a work of this nature is indispensable.

Both the author and the publisher are to be congratulated on this excellent production which, though not entirely free from blemishes, is beautifully printed and well got up.

S. L. H.

RELIGION AND SCIENCE

Science, Cause, and God. By J. B. Freeman, The Hogarth Press, Madras. (The Author, Apud Auctorem, Chingleput), 1943. Pp. 341. Price Rs. 7-8-0 or 12sh.

Notwithstanding the fact that the relation between Science and Religion is perhaps the most persistent problem which challenges human intellect and to which evidently no permanent solution could be found satisfactory alike to the scientific and the religious conscience, any attempt to focus or concentrate attention on the different aspects of the problem surveyed historically or genetically and to suggest some suitable way out deserves unreservedly to be welcomed by the world of scientists and religionists. Father Freeman's work, the second revised and enlarged edition of which is now under notice, is a systematic and sustained attempt to analyse as fully and completely as possible the philosophical and scientific implications of the concept of *Cause* undertaken with the palpable motive of demonstrating that *God* is to be understood as the *Cause* of the Universe. Part I, entitled the "Survey of Knowledge", contains *five* chapters devoted respectively to "Mathematics", "The Concrete Sciences", "The New Outlook in Physics", "The Human Sciences", and to "Relativity". Part II, which contains *eighteen* chapters, constitutes the main portion of the book dealing with the analysis of the concept of *Cause*. I would invite the attention of your readers to Chapter 3—particularly to page 174, and to Chapter 12—specially to page 258 for an unequivocal statement of the author's central or cardinal position. "This first cause Uncaused,

this first perfection Unperfected, this pure form we call *God*" emphatically states the author. There are other statements in other contexts which emphasize the same truth.

When statements like these are categorically made difficulties begin to confront those engaged in scientific research understood strictly within the jurisdiction of laboratory discipline devoted to qualitative and quantitative analysis. Unless supremely significant reservations are made and re-interpretations of the concept of *Cause* resorted to a strict orthodox laboratory scientist would be perfectly entitled to contend that an uncaused First Cause is right though riddled with contradictions. For, among the well-known weapons of experimental analysis nothing would seem to secure under the established conditions of verification such an uncaused Cause. The author has found from Whitehead, Jeans, Eddington and others to show that some of the modern scientists have abandoned the *Deterministic Outlook*, and recognised the existence of "intuition of free will". That would not take one very far or far at all. The human free-will on even a superficial analysis would appear readily as hemmed in on all sides with countless restrictions, and as surrounded by a veritable barbed wire fence of determinisms, evolutionary, hereditary, environmental, and even individual. Assuming for the sake of argument that somehow there is human free-will, that would lead to no evidence whatever in support of the existence of an uncaused First Cause. A difficulty like this cannot be lightly or light-heartedly dismissed. Christian Theists like the author have to face it and remove it. So have the Indian Vedantins. But, neither the vedantic nor the Christian theological solution can be forced down the throat of scientists who may contend that laboratory evidence for the existence of an uncaused First Cause is not forthcoming. The author has traced the countless vicissitudes of the concept of *Cause* since the days of Hume, and after a discussion of post-Humian ramifications has brought down the discussion to contemporary philosophy to Bergson, Radhakrishnan and others. Here again the conclusions lead us nowhere and the criticism of the different European and other Western system-builders found in Radhakrishnan's *Reign of Religion in Contemporary Philosophy* on which the author sometimes relies for support is totally unfounded and untenable as the main argument stands vitiated by a deliberate and disingenuous assumption that Absolute Idealism or Monism is the only rational or fashionable philosophy of life and that pluralistic and theistic systems owe their origin to the interference of religious prejudice with strict metaphysical speculation! While the author presses Radhakrishnan's critique of Russell into service, he himself clean throws overboard the self-same Radhakrishnan's Absolute Idealism or Monism. From this elaborate excursion into the works and arguments of these "thinkers" only one rational conclusion can be drawn. The conclusion is that the peculiar type or variety, or species of causality which points to *God* as the Uncaused First Cause of the entire creation