achievements. There is little, however, in this work to portray to us the human lineaments, the personality of its subject. One aspect of Coulter's mental life is indeed suggested from time to time; his devotion to an orthodox religion which survived unshaken his acceptance of evolution and of deterministic science in general. Most scientists, more or less unconsciously, shed their religion or keep it in a sealed compartment somewhere where it can not interfere with their thinking. It would be interesting to know, even to try to find out, how Coulter managed his own reconcilement. In this we get no help from Rodgers. Indeed, he falls into the attitude characteristic of so much of what passes now for biography—an uncritical reverence for his subject; the hero can do no wrong. This tends to slop over into his environment, so that from the little college where he first studied to the great institute where he passed his last years, we are invited to admire everything with which Coulter had dealings.

The book is attractively produced, and the publishers are to be congratulated on what seems to be good material for these years. It is a matter of surprise, however, that a work which bears the imprint of a university press should apparently never have been edited. At least it is full of the most obvious and elementary mistakes in grammar and punctuation. These, with the curiously naive style, the mixed metaphors and the hackneyed phrases, the sudden outbursts of hyperbole, can not but detract from its value as literature and from any pleasure in its perusal. It is as a reference work for North American botanists of the second half of the nineteenth century that it should have its greatest use; in that way it should be very useful indeed.

H. W. RICKETT

THE NEW YORK BOTANICAL GARDEN

SOIL FUNGI

A Manual of Soil Fungi. By JOSEPH C. GILMAN. xi + 392 pp. 135 figs. The Iowa State College Press. Ames, Iowa. 1945. $5.00.

THE author's interest in soil fungi dates back to the early 1920's when he and Abbott started a systematic study of the fungi isolated from soils of Iowa and Louisiana. Their 118-page paper, "A Summary of the Soil Fungi," published in 1927, described 242 species of fungi in 61 genera. Twenty species were described as new to science, and six old species were described from the soil for the first time. Over half of the total number of species described were isolated and studied by the authors; the descriptions of the remaining 115 were compiled from the reports of other writers from all over the world. This seems to have been the first systematic attempt to get together descriptions of the more common soil fungi.

The present volume is a revision and extension of this early paper, which has long been out of print. Descriptions of 795 species of soil fungi are given, over three times the number of species included in the 1927 paper. As the author states in the preface, the book contains little new data, but is a compilation, for the most part, of the works of others. It is intended as a tool to assist investigators in identifying soil fungi. The need for such a book is clearly indicated by the fact that though numerous monographs on soil-inhabitating groups have been published, no one since 1927 has brought together all the known soil fungi in one volume.

Included in the manual are those fungi which have been isolated from the soil and cultivated artificially. Excluded are the terrestrial mushrooms, soil-borne plant pathogens which have not been directly isolated from the soil and forms which have been reported on leaf-mold, decayed wood and other substrates not fully incorporated in the soil. The Actinomycetes, Myxomycetes and Zoopagaceae are also omitted. All four groups of the true fungi are represented in the manual, the Basidiomycetes by only one, *Pellicularia filamentosa*, and the other three by many species. The genus Penicillium is the most abundant with 189 species from the soil, with Fusarium, Mucor, Aspergillus and Achlya coming next in the number of species in the order named. Many of the species described here are already recognized as very important organisms in medicine, industry and in the spoilage of food and various cellulose, leather and other products. Most of the fungi involved in the deterioration of military material in the tropics are the common soil fungi described here.

The book is well furnished with keys for identification of the classes, orders, families, genera and species. The descriptions are well written and the figures (a total of 135) will be helpful in identifying the genera and species. Following the descriptive text is a list of "Pertinent Literature" with 169 titles and a glossary of several hundred terms.

The book seems to be remarkably free from errors. On page 64, Figure 19 is wrongly labelled *Blastocladiella* when both "a" and "b" should be *Blastocladia parva*. Figure "a" seems to be a combination of Whiffen's figures 21 and 22, and "b" is a misleading reproduction of Whiffen's figure 32. Figure 21, labelled *Blastocladia*, is unlike any figure of Whiffen's, but is very much like some of Indoh's figures. On page 56, Thaxter is credited with *Cunninghamella*, when the authority should be Matruchot.

The book makes no pretense of telling what functions the soil fungi perform or even in what kind of soil the various species are found. A review such as this can only call attention to what the author has

tried to do; how well he has succeeded will be determined by using the book. The reviewer expects to find the book very useful indeed and believes others will also.

JOHN N. COUCH
UNIVERSITY OF NORTH CAROLINA

THE BLOOD IN CHILDREN

Atlas of the Blood in Children. By KENNETH D. BLACKFAN, and LOUIS K. DIAMOND. With illustrations by C. MERRILL LEISTER.

THIS well-written and beautifully illustrated book is a much needed contribution to hematology. While this atlas specifically concerns the blood disorders in children, the excellent series of plates and accompanying subject material are applicable to all age periods. The preliminary text of this book comprises six chapters which serve as an explanatory and directing manual for the illustrations that follow. The first chapter deals with the morphology of normal blood cells, their derivation and hematopoietic changes, incident to growth and development. In the subsequent chapters there is a concise discussion of the common blood dyscrasias, according to the predominating blood element involved. Dr. Blackfan and Dr. Diamond demonstrate their unusual experience in pediatric hematology by their expert choice of the essentials in the description of each disease. These authors have successfully accomplished their stated purpose of merging a consideration of the morphologic changes in the blood with the associated clinical manifestations of each disease. The presentations are complete and their value has been enhanced by the inclusion of illustrative case reports.

The second section contains seventy unusual plates of superb artistry, portraying faithfully the typical cells found in the diseases described in the preceding text. A primary consideration in appraising the merits of any hematology atlas rests on the accuracy with which the author reproduces the finer morphologic details of the blood cells. Dr. Leister has achieved this goal with such perfection that the plates prepared by him will serve as an invaluable guide for all those who depend upon standard textbooks for precise identification of the cellular elements of the blood. Line drawings facing each plate permit comparison with corresponding cells and increase the usefulness of this atlas. The series of plates should prove of great practical value in a field of medicine where the correct diagnosis frequently depends upon the accurate classification of a particular type of blood cell.

It is pointed out in the preface that the text of the atlas has been kept necessarily brief. It has not been possible, therefore, to include detailed discussions of normal and pathological alterations in the blood, an outline of technical procedures, a complete bibliography and reference to some of the more recent contributions of hematology in childhood. The atlas should serve as a required companion volume for the more comprehensive works on hematology.

The authors should be complimented on the excellence of this book. Acknowledgement should also be made for the material support provided by the Commonwealth Fund in making this publication possible. This book is highly recommended for use by the medical students, pediatricians, internists and hematologists.

CARL H. SMITH
DEPARTMENT OF PEDIATRICS,
CORNELL UNIVERSITY MEDICAL COLLEGE

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