

made every effort to study the living cell under conditions as natural as possible. He describes certain appearances in the white cells during their activity and certain fine processes called dendrites, which function in much the same way as the blunter pseudopodia. These are illustrated by some excellent plates, but neither these nor his arguments convince one that the appearances are not artefacts, although his reasons are put forward very lucidly and temperately.

The most interesting and original part of the book is the attempt to probe into the chemical processes taking place in the leucocyte. Two substances are described. One of these occurs in the cell and stains readily with iodine, and may be of the nature of glycogen; the other readily diffuses from the cell and can be shown in the surrounding media, and it stains with benzidine and differently with iodine. It is not one of the ordinary oxidases and is probably aldehyde in nature. The author claims that if the leucocytes are incubated with glucose, more of the latter diffusible substance is produced in the presence of insulin.

The book cannot be recommended to the general reader, but will be of interest to the specialist. It seems to the reviewer that the experiments and the theoretical discussion would be better in the pages of a journal devoted to this subject than issued as a separate monograph.

*Across the Great Craterland to the Congo: a Sequel to "The Wonderland of the Eastern Congo." Describing a Journey of Exploration and Research to the Land of the Giant Craters in Tanganyika Territory, and to the Forests, Lakes, and Volcanoes of the South-Eastern Congo; with some Account of the African Apes, and the Capture and Training of the African Elephant.* By T. Alexander Barns. Pp. 276+64 plates+2 maps. (London: Ernest Benn, Ltd., 1923.) 25s. net.

CAPTAIN BARN'S volume on his expedition in 1921-22 from Mombasa to the Congo at Stanleyville and thence to Capetown is a valuable contribution to the natural history of Central Africa. The author combines the qualities of a daring explorer and hunter, of a keen observer of man and Nature, and of a graphic and interesting narrator. The primary object of the expedition was the discovery of a large butterfly which has been seen on the Upper Congo, but has not yet been captured. On his way to the haunts of this elusive insect he explored a remarkable group of volcanic mountains and basins in northern Tanganyika Territory, and collected skins of some of the third species of gorilla, *G. berengei*, in the forests of Kivu. He also made a large collection of Lepidoptera, including many new and rare forms.

Capt. Barns has written an interesting account of the geography of the region north of Lake Tanganyika. The chapter on the gorillas contains valuable information as to their habits; another is devoted to the adventurous story of the domestication of the African elephant by the Belgians. The volume has an introduction by Prof. J. W. Gregory discussing the nature of the great volcanic basins explored by Capt. Barns. That of Ngorongoro is eleven miles in diameter. He concludes from the geological evidence available that they were not formed as craters, but as calderas or

volcanic cauldrons. He defines the distinction between ordinary upbuilt craters, explosion craters and calderas or cauldrons, which have been formed by the collapse of the ground around a volcanic vent. The volume is illustrated by many beautiful photographs, especially of the scenery and big game.

*An Introduction to Reflective Thinking.* By Columbia Associates in Philosophy: Laurence Buermeier, William Forbes Cooley, John J. Coss, Horace L. Friess, James Gutmann, Thomas Munro, Houston Peterson, John H. Randall, Jr., Herbert W. Schneider. Pp. vii+351. (London: Constable & Co., Ltd., n.d.) 10s. 6d. net.

THIS is one of those co-operative books which are becoming a feature of publishing enterprise. It has, however, some quite exceptional marks. The nine authors, members of the staff of the Department of Philosophy in Columbia University, are named on the title-page, but their individual contributions are not specified in the text. We are told in the preface that they sought advice and received aid from their colleagues in other departments. The book therefore has, and is intended to present to the student, a unity due to team work. It is offered as a first course in philosophy or as an introduction to science. Each chapter is divided into sections and followed by a list of questions and exercises and an extensive bibliography. The impression it leaves on us is that the interest of the matter is spoilt by the form, and the matter apart from the form is elementary to the point of insipidity.

*Vibration in Engineering.* By Julius Frith and Frederick Buckingham. (Reconstructive Technical Series.) Pp. xiv+123. (London: Macdonald and Evans, 1924.) 7s. 6d. net.

AN increasing degree of attention has been given recently in engineering colleges to the study of vibrations, and students will welcome the appearance of this volume in which has been collected a large amount of information hitherto scattered in various volumes dealing with physics and in technical journals. The matter is arranged in two parts, physical and mathematical, and vibrations commonly occurring in both mechanical and electrical engineering receive attention. For the most part the principles are stated clearly, but there are some loose statements which require amendment, e.g. on p. 11 we read, "The restoring force is now a turning moment, the force is measured in pounds weight as before, and its moment in feet."

*Spinoza, Descartes and Maimonides.* By Dr. Leon Roth. Pp. 148. (Oxford: At the Clarendon Press; London: Oxford University Press, 1924.) 7s. 6d. net.

DR. ROTH has produced a scholarly book. The author rejects the view that Spinoza is originally a follower of Descartes and that the purpose of his speculation is to develop the logical consistency of the Cartesian principles. He holds that he is mainly concerned to oppose and overthrow the theory of Descartes, and that he does so by recovering and reanimating the four-centuries-old doctrines of Maimonides in the "Guide to the Perplexed." The argument is not lightly to be set aside but it is scarcely likely to be convincing.