own efforts, Mrs. Whiting has devoted considerable time and attention in preparation of material for courses and in instructing individual students, thus relieving other members of the department.

My "Program for Teaching and Research in Biological Science at the University of Maine," which was submitted to you after President Little's departure, was worked out with much care and approved by several eminent biologists at the university. It was, however, negatived by the administration in points essential both to efficient teaching and to research, despite the fact that the present budget allowance was ample to cover all expenses involved.

I assure you that I am leaving Maine with no feeling of resentment, but with the hope that a more constructive policy will be pursued in the future.

Very truly yours,

(*Signed*) P. W. WHITING

SCIENTIFIC BOOKS

Textbook of Comparative Physiology. By CHARLES GARDNER ROGERS. McGraw-Hill Book Co., New York. 1927. List price, $5.50.

To state that Professor Rogers's book is new and different from others tells little; yet even this feeble remark may attract attention to the work among the books of the year. The present writer is not a physiologist, but he feels moved to say something about the book for the benefit of his non-physiological brethren. Professional physiologists will soon be familiar with it; zoologists and botanists working in other fields need to have it brought to their notice.

A few of the chapter headings may be listed: II. Solutions, III. Diffusions and Osmosis, V. Properties of Protoplasm, VII. General Phenomena of Life, X. Blood as an Oxygen Carrier, XIII. Circulatory Mechanisms, XVIII. Catalytic Actions of Animals, XXII. Nutrition of Different Animal Groups, XXVI. Physiology of Movement. These rather familiar titles, most of which are found in all physiologies, suggest the general scope of the work and yet they do not give any intimation of the freshness of treatment and the breadth of outlook which our author brings to us. In his hands, physiology becomes functional biology, the real science of life.

Dr. Rogers compassionately spares us the multitude of algebraic formulae and soul-corrupting graphs now so popular. He is teaching physiology, not mathematics, physics and chemistry. He gives clear pictures of life processes in general and offers a wealth of information about the physiology of invertebrates not obtainable in our usual books of reference. He presents his material in logical and interesting form with no apparent bias for pet theories. If an outsider might presume a suggestion, it would be that in future editions the introductory part to each chapter be somewhat amplified or that a rather "popular" summary be placed at the close of each chapter.

Every young zoologist and botanist (and some of the older ones, too) could profit by knowing the book and making use of it.

FRANCIS RAMALEY

UNIVERSITY OF COLORADO

Ice Ages, Recent and Ancient. By A. P. COLEMAN. New York: The Macmillan Co., 1926. pp. 296, 51 figs., 8 maps.

IT is the stroke of the master pen. Only mastery could produce so complete, frank, simple and obviously trustworthy an account of the Ice Ages of the earth. Many accounts of personal experience enliven the style of the book. As an introduction to the work of ancient glaciers, the activities of living glaciers are sketched with a few well-chosen examples. The Pleistocene glaciation is treated only briefly, since "the work is not intended to take up the Pleistocene in great detail, but rather to outline its extent, to describe its mode of operation and to study particularly such features as will throw light on more ancient and therefore less completely recorded glaciations." The drift, the extent, the centers of radiation and the interglacial periods are discussed both for North America and abroad. One interesting point in North America is that the Cordilleran sheet was formed first and was followed in succession by the Keewatin and then the Labradorian sheets. It is inferred by the reviewer that this applies to the last of the Pleistocene sheets. It would be of great interest to know whether this succession holds for the earlier of the Pleistocene invasions. Doubtless data are not available to answer this question, for the author makes no mention of it. Four interglacial periods are recognized near the drift-margin in North America, while at least one is distinguished in Canada near Toronto and Moose River. Likewise three warm interglacial periods are accepted in the Alps and in Denmark, while studies of the interglacial climates have led to the conclusion that the ice in Europe, as well as in North America, was completely removed at least once during the Pleistocene.

Ancient ice ages are beautifully described. Eocene and Jurassic tillites in North America are discussed. In all the periods of the Paleozoic era, glaciation is either strongly inferred or is proved. Of these the world-wide Permo-Carboniferous glaciation, the greatest in the history of the earth, receives its due consideration. Chapters on the Talchir tillite of India, the Dwyka of South Africa, the Squantum of North America and the tillites and interglacial deposits of