would be even clearer, perhaps, to speak of these salts as mono-, di- and tri- *potassium* phosphates. In all cases it is desirable to give the formula as well as the name of the salt.

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THE LOAN OF LANTERN SLIDES TO ILLUSTRATE LECTURES ON HOOKWORM DISEASE

REQUESTS for the loan of lantern slides to illustrate the anatomy and life history of the hookworm and the methods of preventing hookworm diseases have increased to such an extent that I have ordered several extra sets of forty-five slides each.

These slides will be loaned to medical societies, colleges, schools, teachers' associations, women's clubs, etc., that may desire to use them. The two conditions attached to the loan are: (1) that all requests be forwarded through the secretary of the state board of health; (2) that the slides be returned, express prepaid, immediately following their use.

Preference will be shown to societies and institutions in hookworm-infected states.

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SCIENTIFIC BOOKS

Die Variabilität niederer Organismen. Eine deszendenztheoretische Studie von HANS PRINGSHEIM. Berlin, Julius Springer. Pp. 216.

Dr. Pringsheim has done a unique and valuable piece of work in thus resuming our knowledge of unicellular organisms from the standpoint of the student of variation, heredity and evolution. The book is based mainly on bacteriological work, together with work on yeasts and pathogenic protozoa. This is probably just, since it is chiefly in these groups that investigation has gone deep enough to furnish data on the problems of genetics. Other groups of protista are not left out of consideration, and a number of the more important pieces of work on these are dealt with, but the pertinent literature is by no means so fully considered as in the case of the groups mentioned. The author is himself an investigator in bacteriological lines, and has gone over the literature in this and related fields with a fine-toothed comb, bringing forth whatever bears on the problems of genetics. This material is well digested and is arranged in unified sections following a well-laid-out plan. The references to literature are so extensive as to make this a handbook of the subject.

There is an introduction dealing with variation and inheritance in a general way. This is followed by sections on the struggle for existence in lower organisms (with many concrete examples, of great interest); on the normal "breadth of variability"; on variation in form and structure; in colonial growth; in movements and reactions; in spore-formation; in production of ferments and of colors; in virulence; variation as evidenced in acclimatization to heat and cold; to light; to variations in food and oxygen, to poisons, etc. A final chapter gives some general results, with suggestions for future work.

A broad view is taken of all these phenomena, so that the author gives us what might be called a general (though condensed and concrete) treatise on the physiology of protista, dealt with from the standpoint of genetics. From the purely physiological point of view the result serves as a valuable corrective for the impressions obtained from physiological works that deal chiefly or only with the supposedly typical.

The author is very conservative as to the conclusions to be drawn regarding fundamental problems, though this does not conceal the enthusiasm which he feels for his subject, particularly for its future. He holds that it has been proved that in certain cases fluctuating variations have shown themselves heritable, giving rise to new races; and that in some cases direct adaptations have proved heritable—concrete cases being cited for each.

In the great majority of cases, however, neither of these categories of change give heritable results. There are many other points of extreme interest to students of genetics; the chapter on variation and regulation in the production of ferments, for example, will be found specially suggestive, since here we appear to be dealing with one of the elemental phenomena of life, and a study of the genetic relations of these things is hardly possible in higher organisms. The author, however, rightly characterizes his book as chiefly a program for future work. A well-known authority on bacteriology expressed to the reviewer his belief that results of great importance for the theory of genetics, such as the appearance of new heritable characteristics by adaptive change, can not be accepted with confidence from the study of bacteria, owing to the extreme difficulty of isolation, and the impossibility of following and identifying individuals and their progeny. Apparently the author of the present work is not so convinced that this difficulty is insuperable, and it has apparently been overcome in certain cases, as in the work of Barber. But a certain weakness in the positive conclusions to be drawn is here indicated, though this makes the book all the more inspiring to the man with the investigator's spirit, since it suggests to him many lines of work that can be carried out on the higher protista, where individuals can readily be followed and positively certain results reached. To all such, as well as to the general student of evolutionary problems, this book will be found of much value.

H. S. Jennings

The Coleoptera or Beetles of Indiana. By W. S. Blatchley. Bulletin No. 1, Indiana Department of Geology and Natural Resources. 8vo, pp. 1,386, 590 figs. Indianapolis, 1910.

This volume is the first in America to deal with our native coleoptera in a comprehensive manner. There has been no single work to which one could resort for the determination of beetles, and this condition has compelled many to abandon the study of this important group of insects. The present work will, therefore, in a measure, supply a long-felt want; for, while ostensibly it treats only of the species found in Indiana, the majority of them are so widely distributed that it will be a most valuable aid in the determination of coleoptera from the eastern United States and Canada.

In this bulky volume all the Coleoptera, excepting the Rhynchophora, are treated. The familiar classification of LeConte and Horn is adhered to and accordingly the forms treated are divided into six series. There are identification tables for the families, tribes, genera and species. There are 2,535 species recorded as actually occurring in the state and 777 others which have been found in adjoining territory are added, and all these are included in the identification tables. Those known from the state are furthermore described and notes given on their regional and seasonal occurrence, and habits when known. A number of new species, scattered through the larger families, and one new genus are described. The new genus, *Blanchardia,* is placed in the Omethini, a tribe of problematic position but here referred to the Telephorinæ. The name *Blanchardia* has already been proposed for no less than four different genera; *Blatchleya* is proposed as a substitute for the present one. There are a goodly number of figures, not a few of them original, the remainder taken from all available sources. At the end is a glossary of technical terms, an index to the families and genera, and finally an index to the species described as new. Attention must be called to the fact that this last is not complete. There are omitted the species published under the manuscript names of others and described here for the first time and, therefore, to be credited to Professor Blatchley. Also the newly described varietal forms, for which trinomials are employed, should have been included in this index as some of them may, on further study, be raised to specific rank. It is possible that some of the forms described as new in the Staphili-