

to accept the appointment of clinical professor in Leipsic, as successor of Curschmann. To understand the sensational effect of this decision, one must understand that Strümpell had been won for Vienna only with great difficulty, and that promises had been made to him, which if fulfilled, would have enabled him to develop the third Vienna medical clinic according to his ideas. When he took over this present office a year and a half ago, as successor of Schrötter, he was received with the greatest pleasure by the students, who wanted to obtain a first-class teacher. Numerous bureaucrats and professors who thought it unnecessary to call another man from Germany were less pleased with his appointment. And von Strümpell always found that he was regarded as an outsider by many men. Among the students, however, he was much beloved and respected, and his patients always praised his kind and benevolent manners. Strümpell's idea was to make Vienna a Mecca of first-class clinical teaching. Instead of being assisted in every possible way by the authorities, he has been hampered all along. Naturally, he lost all pleasure and seized the first opportunity to leave a place where his abilities were not regarded as sufficient to warrant a little disregard of routine and red tape in monetary questions. His loss is another sign that science can not hope to progress if bureaucracy is prevalent.

The anatomic institute has been left without director by the death of Professor Zuckerkandl, but his successor will be soon appointed. Out of all the men able to fill the post, only three are actually eligible at present. They are Rabl, in Leipsic, Grosser, in Prague, and Tandler, in Vienna. It is the custom in this country, whenever a new medical teaching appointment has to be made, for the senate of the university to call the attention of the ministry of education to at least three men, named in order of preference. Very seldom is one man recommended as the first and only candidate. This has been the case just now, when Professor Tandler has been presented by the senate. He has been for the last four years *locum tenens* for Zuckerkandl, who was obliged by illness to abstain from all but very

slight work. Tandler has gained the esteem and the attention of students and scientists alike during the time he has been active in the anatomic department. It is not impossible, however, that some outsider will be appointed, for it has happened sometimes that influences more powerful than scientific requirements have been able to outweigh the recommendation by the senate.—*Journal of the American Medical Association.*

SCIENTIFIC BOOKS

The Mammals of Colorado: an account of the several species found within the boundaries of the State, together with a record of their habits and of their distribution. By EDWARD ROYAL WARREN, S.B., Director of the Museum of Colorado College. With three maps and a full series of illustrations reproduced from photographs taken from nature. New York and London, G. P. Putnam's Sons. The Knickerbocker Press. 1910. 12mo, pp. xxxiv.+300, 3 maps and 84 text-cuts. \$3.50.

In the matter of local manuals of the mammals of North America, the supply is far behind that available for birds. Of the half-dozen that have thus far appeared, the latest, Mr. Warren's "The Mammals of Colorado," is easily one of the best. It is thoroughly scientific in spirit, and yet not too technical for a popular hand-book. The large number of text illustrations comprise one or more views of a skull of some representative species of nearly every genus, with many others from life, showing the characteristic external features of the species, while others illustrate the nests of various rodents, and the work of the beaver. The maps include a contour map of the state, and maps showing the distribution of the prairie dogs and of three species of striped squirrels. The introduction contains instructions for skinning and measuring mammals for scientific purposes, a chapter on the life zones of Colorado, and ten pages of bibliography. The book appears to have been first projected by Mr. William Lutley Sclater, the author's predecessor as director of the Museum of Colorado College, who, on being

forced to abandon the undertaking by pressure of other work, turned over his manuscript to Mr. Warren, who not only makes due acknowledgment for important aid in preparing the diagnoses and keys of the higher groups, and for other assistance, but dedicates the work to his helpful friend. The species and subspecies are briefly but clearly described, and their distribution is given in detail so far as it is known, following which, and printed in larger type, is a more or less extended biography. In the case of the rodents and other small mammals, the biographical matter is generally given under the leading member of the group (genus or species, as the case may be); since among closely allied forms there is no essential difference in habits.

The number of species and subspecies here recorded for Colorado is about 150. In the matter of nomenclature the authorities of the biological survey have evidently been followed.

In style of treatment and character of matter "The Mammals of Colorado" sets a good standard for similar works, and its usefulness will be appreciated far beyond the region with which it deals. It satisfactorily reflects present knowledge of the mammal fauna of Colorado, and forms a good basis for the addition of details at present unknown. Furthermore, it contains a vast amount of original information here published for the first time.

J. A. ALLEN

Researches on Fungi. By A. H. REGINALD BULLER. London, Longmans, Green and Co. 1909. 5 plates and 83 figures. Pp. xi + 287.

In this work the author gives the results of his intensive researches on the problems of the dispersal of spores of the Hymenomycetes and other related topics. The book is most satisfying. It gives a mass of new facts well arranged and carefully summarized, by chapter and as a whole, together with full descriptions accompanied by clear figures which show the accuracy of the method and its painstaking character. The experiments are ingenious and brought as far as possible to a conclusion.

Buller points out the admirable features of the sporophores of the agarics, such as the great increase in hymenial surface through the gills, the immense number of spores thus accommodated, together with the economy in the introduction of the shorter gills. The adhesive spores are spaced by the paraphyses and each one has unobstructed access to the open air. The stipe is advantageously placed, commonly central, is often a hollow tube following the well-known engineering structure. It is rigid through longitudinal tensions, holding a cap generally set at a position of stable equilibrium. The annulus serves as a foil in preventing insects from climbing to the unripe gills, yet does not interfere with the spore currents.

In certain chapters which might be said to have a philosophical trend, the phyletic value of the color of spores is considered; anemophily is compared with coprophily and the general problem of the arrangement of the group is touched upon. In this last the author opposes the views of Massee, who holds the Coprini to be primitive.

To the increasing amount of work that is being done on the tropic and morphogenic responses of the mushrooms, the researches of Buller make a distinct addition. His work on *Lentinus lepideus* has been previously published¹ but he reviews the main conclusions. He continues his experiments with the mushroom, with coprins and some polyporoids. The mushroom shows no light reaction, geotropism alone being effective. With *Polyporus squamosus* light is morphogenic but not directive, since the pilei do not develop without light, but their growth is not directed toward it. Gravity plays a part in the final adjustments. With coprins interesting pendulum-like physiological swingings—a parallel to the responses of phanerogam shoots—were obtained by tilting. In the coprins, generally, heliotropic responses were found; this seems to be a necessary consequence of the peculiarly irregular substratum, enabling the sporophores to avoid obstacles. This coupled with the rhythm in development insures the

¹ *Annals of Botany*, 1905, XIX., 427-438.