

fested in biochemical processes one can not refrain from contrasting, with Arrhenius, the explanation of the Ehrlich phenomenon on the basis of the law of mass action and that based on the assumption of multitudinous "partial poisons," toxins and toxoids, forming a characteristic if somewhat unintelligible "poison spectrum."

The book should operate as a stimulus and a spur. From personal contact the writer has reaped no small benefit and much inspiration in other branches of the scientific field. Could this volume attract the attention of some young student in the field of biochemical labors and induce in him the determination to go to the source and obtain personally the fruits of ripened thought and mature judgment progress would surely result. In the present pages there is manifest the characteristic genius of the author with his clarity of presentation of the particular thesis in hand. A few infelicities of English occasionally mar the text and suggest that perhaps the assistance of the English editor might have been a little more generously given. Words such as "inanimated" and "stomachical" might readily have been replaced.

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The Physiology of the Amino Acids. By FRANK P. UNDERHILL, Ph.D. Yale University Press. 1915. Pp. 169. Price \$1.35.

It is truly symptomatic of modern scientific development that books should be written which divide physiology into physical and chemical portions, and that following this classification still finer divisions are introduced. One of these latter subdivisions is treated for the first time as an entity in Underhill's delightful little book, "The Physiology of the Amino Acids." Each known amino acid is enumerated and its discoverer given. Then follow those details which have thus far been unravelled regarding the intimate life history within the organism of the behavior of the structural units which compose the protein molecule. From the descriptions given in this book the reader

may readily grasp the processes of synthesis and analysis, of oxidation and of reduction through the interplay of which protein under given conditions may be resolved into carbonic acid and urea, and under other conditions, into the texture of the living cells. For emphasis of the latter destiny Osborne and Mendel's experiments on the growth of rats form a fitting descriptive material. The book will be of interest and value to biologists in general and to physicians who have not forgotten their chemistry.

GRAHAM LUSK

SPECIAL ARTICLES

THE DISCOVERY OF THE CHESTNUT-BLIGHT PARASITE (*ENDOTHIA PARASITICA*) AND OTHER CHESTNUT FUNGI IN JAPAN

To Mr. Frank N. Meyer, agricultural explorer of the office of foreign seed and plant introduction of the Department of Agriculture, belongs the distinction of having discovered the chestnut-blight fungus (*Endothia parasitica*) in Japan as well as in China.^{1, 2}

Meyer's discovery of the fungus in China has been accepted as proof of the oriental origin of this parasite which has proven so destructive to the chestnut in the northeastern United States and is rapidly spreading southward. Its discovery in Japan furnishes additional evidence as to the correctness of Metcalf's³ hypothesis that the parasite was introduced into this country from Japan.

Meyer's discovery of *Endothia parasitica* in China made the presence of the same fungus in Japan seem extremely probable. And later, during her visit to this country in the fall of 1914, Dr. Johanna Westerdijk informed the writers that while in Japan she had seen at

¹ Fairchild, David, "The Discovery of the Chestnut-bark Disease in China," SCIENCE, N. S., Vol. 38, No. 974, pp. 297-299, August 29, 1913.

² Shear, C. L., and Stevens, Neil E., "The Chestnut-blight Parasite (*Endothia parasitica*) from China," SCIENCE, N. S., Vol. 38, No. 974, pp. 295-297, August 29, 1913.

³ Metcalf, Haven, "The Immunity of the Japanese Chestnut to the Bark Disease," Bur. Plant Ind., U. S. Dept. Agr. Bull. 121, Pt. 6, 1908.