

departments; and, further, that the professional opinions of technical officers too frequently are not given the due weight which they deserve. Science has done much for the civil service; it has not, in return, received the recognition which it merits.—*Nature*.

SCIENTIFIC BOOKS

The Physical Chemistry of the Proteins. By T. BRAILSFORD ROBERTSON. New York, Longmans, Green and Co. Pp. 483. \$5.00.

The limiting adjective "physical" might be omitted from the title of Robertson's new edition, so completely does it cover the field of protein chemistry. Part I., including the first third of the book, is devoted to the chemical constitution of the proteins, their preparation, methods of estimation, and the various types of compounds which they form with each other and with acids, bases, salts, heavy metals, etc. Part II. is devoted to the electro-chemistry of the proteins; Part III. to their physical properties, such as gelatinization, swelling, coagulation, viscosity and surface tension, not included under Part II.; and Part IV. to the hydrolytic and synthetic actions of enzymes on proteins. Throughout the work statements and discussions are placed on a quantitative basis by the use of mathematical treatment wherever data sufficiently complete and accurate to justify it are available. Biological applications are kept continually in view. Despite the fact that he covers so wide a field and thoroughly reviews the literature, the author seldom fails to augment the interest of his material by presenting it from a view-point developed from his own experimental and intellectual researches.

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SPECIAL ARTICLES

UNLIKE REACTION OF DIFFERENT INDIVIDUALS TO FRAGRANCE IN VERBENA FLOWERS

IN classifying the floral colors in a certain pedigree of verbenas, the writer noticed a considerable difference in the amount of fragrance evident in their flowers. Some plants appeared to have flowers devoid of odor while

the flowers of others were strongly fragrant. One with pale pink flowers, which may be called plant *A*, was especially pleasing in this respect. In showing it to my assistant, Mr. B. T. Avery, Jr., I remarked that it should be called an *arbutus verbenae* since the flowers resembled the *arbutus* in both color and odor. To my surprise he failed to find any fragrance at all in the flowers of this plant. Moreover, when he arranged the pedigree according to the strength of fragrance which they gave to him it was roughly in the reverse order from that in which I should have arranged them. The most fragrant of all to him was a red-flowered plant the flowers of which to me were absolutely without fragrance. This for convenience we may call plant *B*. The flowers of plant *B* then were fragrant to him but not to me while those of plant *A* were fragrant to me but not to him. Each of us agreed that the other's favorite had a very slight odor that could be best described as a leafy or plant odor which apparently was the same as that of the foliage. Moreover, he described the fragrance from plant *B* as of a spicy nature resembling that from a carnation flower to which I am not insensible, while the fragrance of plant *A* seemed to me to closely resemble that of *arbutus*, with which he is also familiar. It did not seem to be the case that we both perceived the same odors but, having different preferences, dignified the one which we liked with the term fragrant. Rather the facts indicated that he was insensible to the odors in the flowers of *A* while I was insensible to odors in those of *B*. We repeated the tests many times under various conditions with the same results. He never was able to perceive any fragrance from *A* while, except upon a few occasions when I detected a slight odor such as he had described, I was unable to find any fragrance in his favorite.

In addition to ourselves, others in the community were tested for their reaction to fragrance in our plants *A* and *B*. The later tests were made in October. Due perhaps to the lateness of the season or to other conditions, the few remaining flower clusters then produced by plant *A* were not always fragrant.