suited as a name for this important fact, whose defining properties are clear and accessible.

Finally, three considerations counsel against the attempt to limit the meaning of masking to a central phenomenon: (1) The term is too widely current to allow such arbitrary restriction to gain acceptance. (2) In most cases of observed masking in the various sense departments we are still ignorant of the physiological mechanisms underlying the phenomenon. (3) In some cases (as in audition) masking has both peripheral[3] and central causes, and it is quite possible that occurrences at intervening synaptic junctions provide additional causal factors.

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A COMPREHENSIVE MORPHOLOGY OF SPHENODON

A SMALL group of New Zealand morphologists, headed by Dr. W. P. Gowland, of the anatomy department of the University of Otago, Dunedin, has undertaken the laudable project of completing, as far as possible, our knowledge of the morphology of Sphenodon.

Interest in this important reptile, now facing rapid extinction, has been so widespread that no one individual is in convenient position to collate the scattered literature and decide, single-handed, what needs most to be done in further research upon this form.

Dr. Gowland will therefore welcome suggestions from zoologists who are better aware of lacunae in their special anatomical and histological fields which investigations on this "living fossil" may fill. It is expected that the necessary specimens will be obtainable through the New Zealand government, which for some time has exercised a rigid protection of the species in an attempt, now apparently vain, to preserve it.

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SCIENTIFIC BOOKS

BIOCHEMISTRY

A Text-Book of Biochemistry. Edited by BENJAMIN HARROW and CARL P. SHERWIN. Published by W. B. Saunders Company, Philadelphia, 1935; 797 pages.

ADVANCED students of biochemistry will welcome this volume. It marks a new departure from the conventional form of text-book in this branch of science in that thirty authors, English and American, have collaborated in its production. Monographic in style, each chapter is a comprehensive review by an investigator actively contributing to the field which he is discussing. The presentation of biochemistry from so many different angles and the emphasis on recent developments is most stimulating to the research worker and graduate student. It is a type of text which may prove less adaptable to the needs of the unoriented beginner, since it does not show the unified development of the science as a whole nor the historical background of the earlier books. The range of subjects is sufficiently broad to permit a selection of suitable material for the usual medical school course which follows no single text.

One is impressed throughout the book with the broad growth and rapid assimilation in the past few years of chemical knowledge in the various biological fields. Three new subjects are introduced in the form of chapters on the living cell, on the biochemistry of bacteria, yeasts and molds, and on immunochemistry. About one third of the volume is devoted to a full description of the organic and physical chemistry of the carbohydrates, fats and nitrogenous compounds, and the balance to their functions and metabolism in the body. The importance of the recently established structural formulae and of new synthetic compounds is well stressed in the chapters on the sterols and related compounds, the vitamins, the animal pigments and the hormones. Although some of the sections seem to be too short to allow an adequate discussion of the material, notably those on nutrition, digestion, mineral metabolism, bone and functions of water, some of the longer chapters, such as the vitamins and carbohydrate metabolism, deserve mention for their clarity and completeness. In most cases the argument is well fortified by citations of original publications, and the bibliography of some 1,500 articles assures its place as a reference book.

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SEED SCIENCE

Seed Science for Japanese Agriculturists, Horticulturists, and Foresters. By MANTARŌ KONDŌ, director of the Ōhara Institute, Kurashiki, Japan. Yōkendō and Co., Tokyo. Vol. I, 1933, 469 pp., 43 illustrations. Yen 4.80. Vol. II, 1934, 835 pp., 358 illustrations. Yen 9.00.

IT may seem presumptuous for one who is ignorant of the significance of a single ideograph to attempt a review of a work in the Japanese language, but the

[3] H. Davis, *Jour. Acoust. Soc. Amer.*, 6: 207, 1935.

case is exceptional. Doubtless Dr. Kondō would have supplied a synopsis in English, with which language he is familiar, but this seemed unnecessary, partly because his long series of papers in German and English, on which his book is largely based, are at the reviewer's elbow and partly because the faithfully executed illustrations in the work, especially those showing the histological structure of seeds, are eloquent to a specialist in this field without referring to the text. Although the shelf-backs, title pages and main text of the two volumes are entirely in Japanese characters, the names of authors and the Latin names of species throughout the work are in Latin type, as are also the English, German and French references in the bibliography of 1,123 titles and the technical terms in the glossary and index.

Kondō, who studied with Wittmack at the University of Berlin, wrote his earlier papers and some recent ones in German, but during the past few years he has published in English a noteworthy series on methods of storing rice of bumper harvests so as to avert famine during lean years.

Nobbe's and Harz' standard books on seed science —"spermology," the lexicon equivalent for Samenkunde, sounds strange and is here avoided—have long awaited a reviser. Neither has been translated into English and no comprehensive work in our language has yet appeared. Kondō's work stands supreme, and all that is needed to make it available to the greatest numbers is an English translation.

A few years since, the writer of this review was honored by a short visit from Dr. Kondō, who was making a world tour via Siberia, Russia and Germany. While in Berlin, with oriental respect for the aged, his evenings were spent devotedly with his infirm teacher, Wittmack. One is reminded of the great Japanese bacteriologist who annually performed rites for the repose of the soul of his teacher, the immortal Koch, at the Shintoist shrine in his institute.

ANDREW L. WINTON

FOODS IN JAPAN

The Chemical Analysis of Food in Japan. By T. SAIKI, T. HIGUCHI, M. KONDŌ and K. MATSUZAWA. Third enlarged edition, 353 pp. Nankodo and Company, Ltd., Tokyo. 1934.

ON a recent visit to Japan, I had the privilege of renewing my acquaintance with Dr. Tadasu Saiki, an old student of Lafayette B. Mendel's at Yale, who is the director of the Imperial Government Institute for Research in Nutrition in Tokyo. There I learned among other interesting things that this institute has issued recently a third enlarged edition of a monograph which is almost unknown in America, but which should be of very great interest to food chemists and students of nutrition. This book, "The Chemical Analysis of Food in Japan," gives the chemical composition of a very large number of foods used in Japan (edible part, water, total nitrogen, protein, fat, carbohydrate, fiber, ash, water-soluble ash, water-insoluble ash, alkali value, alkalinity due to soda and potash, alkalinity due to lime and magnesia, P_2O_5, CaO, Fe_2O_3, NaCl, number of calories in 100 grams). It also contains tables giving the weight of food corresponding to 100 calories and the amount of water, protein, fat, carbohydrate, fiber and ash in 100 calories. It also gives tables of the calorific ratio of the constituents contained in 100 calories of food. The legends at the beginning of all tabulations are in English as well as in Japanese. The index gives the Japanese names in our alphabet as well as the Chinese characters or *kana*. There are also key tables giving the Japanese name in *kana* and characters as well as in our alphabet; also the corresponding English word, if there is an equivalent, and in the case of animal and vegetable products the Latin scientific name. All figures are of course in Arabic numerals. It is therefore a perfectly simple matter to use this book without any knowledge of Japanese whatever.

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SOCIETIES AND MEETINGS

THE NINTH ANNUAL FIELD CONFERENCE OF THE KANSAS GEOLOGICAL SOCIETY

MEMBERS and guests of the Kansas Geological Society participated recently in the ninth annual field conference, a geological excursion which extended from Iowa City, Iowa, to Duluth, Minnesota, and encompassed about 1,542 miles. The society, organized for purposes of geological research with special application to petroleum geology, inaugurated the field conferences in 1927. Its membership had expressed the desire to study in outcrop the several formations which, in daily routine, were customarily examined in well cuttings. In carrying out this purpose the members have visited and revisited the general peripheral localities of the western interior petroliferous province and the principal areas of local uplift, including the Ozarks, Arbuckle Mountains and the Black Hills. In completing the ninth annual field conference, the society now has added a few links to a chain of field investigation which extends from the general vicinity of Amarillo, Texas, along the foothills of the