of children as affecting the digestion of their food. It would be well if all parents could be made to heed the author's suggestions in regard to thoughtlessness in rebuking children at the table and the almost cruel practise of forcing them to eat what they dislike. The statements that "there is an element of hypocrisy in the attitude of parents who are selecting precisely what they please to eat while compelling little children to swallow food which repels" and "to oblige a child to finish a plateful of food against its inclination may be crass brutality" are forceful and should be heeded by those who have the care of the physical development of children.

The reader can but wish that the author had been more free in the use of cuts, for those which are given are very helpful.

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Studies in Radioactivity. By W. H. Bragg, M.A., F.R.S. Macmillan. 1912. Pp. x + 196. $1.60.

Physics owes to Professor Bragg two of the most important of its recent advances. He first conceived and successfully carried out experiments on the "range" of corpuscular radiations and on the "stopping power" of different substances for these radiations. These experiments, with those on scattering, which inevitably followed, have been chiefly responsible for such additions as have recently been made to our knowledge of the internal structure of the atom. The first 10 chapters—104 pages—of the book in hand are taken up with a presentation in clear, non-mathematical language, of the present status of our knowledge of "range," "stopping power," "scattering" and "ionization" as these terms apply to the α and β particles. This material, culminating in C. T. R. Wilson's beautiful photographs of the tracks of α and β particles, probably marks the end of the conception of the positive charge of the atom as a uniform sphere of positive electrification. It seems to demand instead some sort of a Saturnian atom.

Bragg's second important contribution has consisted in the amassing of evidence for the inter-convertibility of β rays and X rays, or β rays and γ rays. This evidence is presented in the second half (pp. 104–196) of his book, which deals wholly with studies on the nature of X and γ rays. That this evidence is exceedingly convincing admits of no dispute, but that it can be successfully interpreted in terms of a neutral pair theory is more than doubtful. Indeed so rapid have been the strides made during the past year in establishing the essential identity of X rays and light that I fancy that Professor Bragg himself would today interpret all his results in terms of an ether pulse theory instead of a neutral doublet theory, but it would have to be an ether pulse theory of the J. J. Thomson sort, in which the energy remains localized in space instead of being distributed uniformly over the wave front. For a clear statement of the apparent necessity for some sort of a localization of radiant energy in the wave front the second half of Professor Bragg's book could scarcely be excelled. One might wish that the author had brought out more emphatically the parallelism between the behavior of X rays and ultraviolet light, for it is in this parallelism that the chief argument against the neutral doublet theory is found.

The book is invaluable to every student of the absorbing problem of the nature of radiant electromagnetic energy.

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BOTANICAL NOTES

POLYSTICTUS VERSICOLOR AS A FOOD PLANT

In the course of some investigations made by Professor M. R. Gilmore in August, 1912, on the knowledge and use of the indigenous plants by the Dakota nation of Indians, the economic botany of the Dakotas, he learned of the use of *Polystictus versicolor* as a human food. The Dakota name is *Cha*^{n} *na*^{n} *pa*,[1]

[1] The raised n signifies a vanishing sound something like the French n.