

The pharmacology of the alkaloids has been adequately reviewed, much of the exact work being of recent date. This section has been read critically by Dr. White and will be useful alike to the chemist and the pharmacologist. The importance of such work reaches beyond the confines of the 'pure' pharmacologist on account of the comparatively modern endeavours to relate pharmacological action with chemical and physical properties and thus with molecular structure; that is, chemotherapy in its widest sense not limited by the hampering definition of being concerned only with those products which attack an invading organism. Dr. Henry has directed attention to this aspect of the problem by reference to the work on esterified amino-alcohols as cocaine substitutes in local anaesthesia and to the modified cinchona alkaloids. Such work attracts both the pharmacologist and the chemist, and hence it is a great convenience and help to have chemical and pharmacological summaries and references treated in a single book.

Even a work of this size is inadequate to deal

with all facts of alkaloidal work, and some selection was imperative. In this connexion Dr. Henry has rightly chosen to deal very briefly with the methods of extraction from the plants and has been content to refer to the more important papers concerned with the chemical and biological determination in plants and plant extracts. Sufficient references are included to help those interested in this aspect of the subject.

The value of such a work as this depends largely upon the bibliography: this is remarkably complete and includes references published little previous to the date of issue. Numerous tests for the presence or absence of references were made, but in no case was the book found wanting.

In conclusion, this work forms a perfect reference book in its subject, and even if criticism were possible, to criticize would be an act of sheer ingratitude. The enormous amount of work involved in the collection, correlation and interpretation of the huge mass of material available represents scholarship of a high order.

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STRUCTURE AND FUNCTION

Life and Living

By Frederic Wood Jones. Pp. x + 268. (London: Kegan Paul and Co., Ltd., 1939.) 10s. 6d. net.

THOSE who have had the opportunity of admiring Prof. Wood Jones's facility and effectiveness as a lecturer will be grateful to him for the publication in a book of some of his recent public lectures. His style of lecturing is particularly well adapted for reproduction in the form of written essays, and these make exceptionally pleasant reading.

While dealing with a variety of subjects, the lectures concern themselves mainly with problems of medical education, and with biological problems raised by the consideration of the relation between structure and function. Biologists who have devised theories to explain the structural organization of living creatures have usually appreciated the difficulty of linking structure and function in a common theory of causation. These contrasting aspects of biological study have in the past, indeed, led to an artificial separation of the two scientific disciplines anatomy and physiology, and this again has inevitably encouraged a somewhat dualistic conception of living organisms. Prof. Wood Jones is intent upon the destruction of such an illusion, and would re-orientate the teaching of anatomy so as to stress the fact that structure is only the ultimate expression of function.

Prof. Wood Jones's own views are frankly Lamarckian. For him the precision and consistency with which structures, developed in embryonic life, are adapted for their ultimate function are not intelligible unless the inheritance of acquired characteristics is postulated. Yet even he finds remarkable instances of a disharmony between structure and function. The formation of a median vagina in marsupials, according to his interpretation, was a last-minute effort on the part of Nature to avert a catastrophe which was nearly brought about in metatherian evolution by the fact that the initial vaginal canals were too small to allow parturition to occur. He conceives, also, that by some sort of morphological accident the vertebrate eye during early phylogenetic development became caught up with the infolding medullary tube and inadvertently buried. By good fortune, however, it managed to "struggle" towards the surface again, but only at the expense of becoming inverted, and therefore less perfect as a piece of apparatus than it might have been.

Such instances are here quoted to illustrate the fertility of the author's mind, a fertility which expresses itself in many original ideas and novel interpretations. We cannot but feel that all biologists and many other scientific workers will derive very considerable pleasure and intellectual exercise from reading these lectures.