

science does wonders in these days, and who knows but that ere long mental distances will be traversed with as much ease as physical ones? With this prospect in view we hope that in six years time the paper of the present volume will not have become so yellow as that of "The Nature of the Physical World": such books are worthy of better incarnation. HERBERT DINGLE.

Standardised Drugs

The British Pharmaceutical Codex, 1934: an Imperial Dispensatory for the Use of Medical Practitioners and Pharmacists. Pp. xxv+1768. (London: The Pharmaceutical Press, 1934.) 35s. net.

THE materia medica in use throughout the British Empire can be divided into two groups, those admitted to, and those excluded from, the "British Pharmacopœia", 1932. The second group is, on the whole, the more interesting, if only for the reason that the pharmacopœial drugs should be approaching the stage at which there is little more that can be said about their nature, composition and therapeutic value, though this is obviously not the case with such drugs as ergot and digitalis, whilst the unofficial drugs at the worst are declining into objects of historical medical interest, and at the best may be destined to attain pharmacopœial eminence in due course, or may even be the harbingers of therapeutic revolutions.

It was a public-spirited desire to provide authoritative information regarding this newer materia medica which led the Pharmaceutical Society to publish the first "Codex" in 1907 and to issue new editions in 1911, 1923 and 1934. Drugs steadily become more varied and more complex and, in preparing this fourth edition, it has been necessary to distribute the work among six committees of experts. The success with which the work of these committees has been blended into a harmonious whole is especially noticeable in the monographs on crude vegetable drugs, which are now brief but clear and well-balanced statements, giving all the information the practising pharmacist is likely to require. In spite of the recent activity in the chemical examination of vegetable drugs there remain a surprisingly large number with ill-defined components, or of which the activity cannot yet be assigned to any definite constituent.

Though the Food and Drugs (Adulteration) Act requires a drug to be of the nature and quality demanded by the purchaser, it provides no standard by which the quality is to be determined. In these circumstances, the "Pharmacopœia" has become a presumptive standard for each of the

drugs recognised in it, and it is no doubt hoped that the "Codex" will gradually acquire a similar position for the extra-pharmacopœial drugs it describes. Both the "Pharmacopœia" and the "Codex" are already accepted as legal standards in certain parts of the British Empire. Much work has obviously been done by the expert committees in providing the new "Codex" with standards "which experience has shown to be desirable as criteria of purity" and which "may be attained without undue difficulty or expense".

There are numerous appendixes, and special mention may be made of those on the determination of foreign matter in powdered vegetable drugs, hydrogen ion concentration, colloidal solutions and sterilisation, all subjects of outstanding importance in modern pharmaceutical practice.

The old "Pharmacological and Therapeutic Index" is replaced by a "Pharmacological Index" (Appendix xiii) divided into drugs arranged in accordance with (a) their pharmacological action, (b) their use for a specific effect in certain diseases, the latter including most of the modern drugs evolved by chemotherapeutic investigations, the recent contributions to vaccine and serum therapy and those due to biochemical work on vitamins, hormones, etc.

The most casual perusal of the volume impresses the reader with the amount and variety of analytical work now required in the manufacture and control of the enormous number of drugs and chemicals used in medicine, and it is not surprising that the Council of the Pharmaceutical Society should have considered it necessary to institute a post-graduate diploma in pharmaceutical analysis, for which, according to the official *Journal*, the first examination has been held recently.

The proofs have been read carefully, and there are very few printer's errors. The paper and the type have been improved, and the book opens fully and remains open, a desirable and not too frequent characteristic of books which, like this one, are intended mainly for reference.

T. A. H.

Vitalistic Biology and Education

Education and Biology. By J. A. Lauwerys, with the assistance of F. A. Baker. Pp. xvi+207+4 plates. (London: Sands and Co., 1934.) 5s.

MANY thoughtful biologists, both in schools of various grades and in colleges and universities, are becoming increasingly disturbed in their minds concerning the relation of their teaching to the ideals and wider issues of education. This unease is not merely a state to be resolved by the more widely spread inclusion of biology in the curriculum, desirable though this be: it has