

Section 6 amends the definition of "narcotic drug" for the purposes of the narcotic drugs import and export act in order to permit the importation into this country of decocainized coca leaves. The reasons for this provision are stated elsewhere in this report.

In order to aid the Secretary of State in discharging international obligations of the United States concerning the traffic in narcotic drugs, the Secretary of the Treasury, under Section 7 of the Bill, is authorized to cooperate with the Secretary of State.

In compliance with Paragraph 2a of Rule XIII of the Rules of the House of Representatives, changes in existing law made by Section 6 of the Bill are shown as follows: Existing laws proposed to be omitted is inclosed in

brackets; new matter is printed in italics; existing law in which no change is proposed is shown in roman.

(a) The term "narcotic drug" means [opium, coca leaves, cocaine], *opium or coca leaves, or any compound, manufacture, salt, derivative, or preparation [of opium, coca leaves or cocaine] thereof, except that such term shall not include (1) coca leaves which do not contain cocaine, ecgonine, or any salt, derivative or preparation from which cocaine or ecgonine may be synthesized or made; (2) any salt, derivative or preparation of coca leaves which does not contain cocaine, ecgonine or any ingredient or ingredients from which cocaine or ecgonine may be synthesized or made.*

BOOK NOTICES AND REVIEWS.

Applied Pharmacology. By A. J. CLARK, Professor of Materia Medica and Pharmacology in the University of Edinburgh; Third Edition, Philadelphia, P. Blakiston's Son & Co., Inc., 1929, 529 pages.

The textbook before us commands the special attention of every one acquainted with pharmacology because it is written by the successor of A. Cushny, formerly professor of pharmacology at the University of Edinburgh and the author of what has been for many years the most widely used text on pharmacology in England and America. It is interesting to compare the treatment of the same science by Cushny and his successor.

Even a superficial examination of the compact, well-printed book of some five hundred pages reveals that the writer has attempted to give a succinct and, at the same time, up-to-date presentation of his specialty. A closer examination of the reading matter, however, discloses what is to be expected in case of every textbook in any department of science, that while "Applied Pharmacology" may be extremely up-to-date in some respects, it is regrettably inadequate in others and particularly when treating of matters with which the author has not had first-hand experimental acquaintance.

The method of classification in the present textbook is almost entirely a physiological one and follows the lines laid down by the well-known German work of Meyer and Gottlieb rather than those indicated by Cushny. The physiological subdivision of the various topics obviously presents many advantages, especially

from the practical standpoint of therapeutics. On the other hand, it has its disadvantages because, under the circumstances, the treatment of some of the most important drugs must be scattered through the book. Thus, for instance, we find opium and morphine discussed piecemeal in at least four different chapters. Morphine is described in Chapter IX together with aliphatic narcotics. It is classed with delirifacient and habit-producing drugs in Chapter X. The opium alkaloids crop up again in the discussion of the pharmacology of the alimentary canal, Chapter XIII, and, once more, another cardinal indication for the therapeutic use of morphine and the related alkaloids requires treatment in Chapter XVIII, which deals with the pharmacology of respiration.

Clark's pharmacology embodies in its text, to the great gratification of the reviewer, several chapters on subjects of paramount importance, which have hitherto received but scant consideration in most of the recent textbooks of pharmacology. Perhaps the most important of these is Chapter XXVII which devotes sixteen pages to the pharmacological action of radiations. This subject, which we may term "photopharmacology," is, in our opinion, destined to play a greater and greater rôle in the development of pharmacological science. Here we have a brief but excellent description of the electro-magnetic radiations, ultraviolet light, radium radiations and X-rays, action of various radiations on living tissues, malignant growths, etc., and a general discussion of the therapeutic

applications of radiations, including heliotherapy, radiant heat and diathermy. Another novel and much needed chapter is that dealing with the pharmacology of the skin, which touches upon skin allergy, absorption of drugs through the skin, burns, depilation, new and interesting pharmacological properties of thallium, etc. Chapter XXIV, comprising nearly thirty pages, is devoted to endocrine glands. An attempt is made to present the latest knowledge on the subject but, of course, the author not being familiar with all the phases of the subject, presents some of them in a manner not quite satisfactory to those specializing along these lines. Here we have a discussion of the thyroid hormone, the parathyroids, insulin, active principles from the suprarenal glands, and finally, a discussion of the hormones of the ovary and testes. The writer seems to have been swept away by the undue emphasis recently laid on the follicular hormone at the expense of corpus luteum. The pituitary gland is treated partly in this chapter and partly in another dealing with action of drugs on the uterus. In connection with the special chapters, which are an excellent feature of the book, mention must also be made of the one on vitamins, that dealing with the actions of products of protein breakdown, and of the chapter entitled, "Inorganic Metabolism," which describes the inorganic ions necessary for life, the subject of water balance, etc.

To turn to the main body of the book, the first and second chapters deal with disinfectants and antiseptics. An attempt is made to cover briefly all the chemicals which have been used for such purposes and the author has included in his consideration of the subject some of the latest dyes, mercurials and other antiseptics introduced into medicine. Curiously enough, the use of chaulmoogra oil in leprosy is introduced in the second chapter although it belongs more logically to Chapter III, which deals with specific therapeutics. By specific therapeutics, Clark really means the great subject of chemotherapy to which Chapters III, IV and V are devoted. In Chapter III arsenic is considered from every point of view and, more particularly, in relation to the treatment of syphilis. In Chapter IV there is a description of mercury, bismuth and antimony employed as chemotherapeutic agents. Here also reference is made to iodides, Bayer 205, and several other drugs. In Chapter V the author presents an excellent but unfortunately rather brief discussion of quinine

and emetine. The up-to-date tenor of the book is revealed by the fact that even such a new drug as plasmoquine is given some consideration. Following the treatment of chemotherapeutic agents is a chapter on anthelmintics.

With Chapter VII the writer begins a discussion of drugs acting on the central nervous system. Here twenty-two pages are devoted to alcohols and contain much useful information, the subject being treated throughout in a thoroughly impartial, scientific manner. Chapter VIII is devoted to the general anæsthetics, including ether, chloroform, nitrous oxide, ethylene and combined anæsthesia. The treatment of anæsthetics embodies a great deal of new and extremely valuable information, not only of pharmacological but of physiological and biochemical nature as well. Chapter IX deals with depressants of the central nervous system and mixes together rather illogically a treatment of such diverse pharmacological agents as magnesium, bromides, analgesics, the aliphatic narcotics (such hypnotics as chloral, sulphonal, luminal, urethane, veronal) with morphine and hyoscine. For those who are not particularly interested in the therapeutic aspects of pharmacology, this conglomeration is a hard one to swallow. In Chapter X, entitled, "Stimulants and Habit-Producing Drugs," to the amazement of pharmacologists of the older school, are lumped together strychnine, camphor, cocaine, morphine, alcohol and hashish, with tobacco thrown into the bargain. In Chapter XI is given an excellent presentation of local anæsthetics embodying a great deal of recent work and their comparative efficiency as well as toxicity. We note with gratification a reference to the most important article on local anæsthetics compiled by the Committee of the American Medical Association under the chairmanship of Dr. Emil Mayer, whose name, incidentally, is spelt incorrectly in the literary references on page 198. Chapter XII, "Specific Action of Drugs on Nerve Endings and Counter-Irritants," is another which will grate upon the nerve endings of certain classical pharmacologists. It is certainly far-fetched, however useful it may be from the therapeutic point of view, to discuss the whole subject of sympatico-mimetic drugs such as adrenalin, ergotoxine, pilocarpine, physostigmine, atropine, hyoscine, choline, etc., with cantharides, mustard and other counter-irritants and rubefacients and append to the foregoing a brief

paragraph on aconite and a few pages on the pharmacology of the eye and of glaucoma.

One of the finest portions of Clark's "Applied Pharmacology," are the three chapters dealing with the pharmacology of the alimentary canal. These are well worth reading and comprise the latest scientific, pharmacological and therapeutic contributions on the subject, beginning with the functions of the salivary glands, and emetics, passing to the treatment of gastro-intestinal secretions and motility, and concluding with the complete pharmacological discussion of the effects of purgatives, sedatives and other drugs affecting the intestines. Of equal excellence are the two chapters devoted to the pharmacology of the circulation, the first of which, Chapter XVI, deals more particularly with the therapeutics of the heart, and the second with the effects of drugs on the blood vessels. Here, again, some of the latest scientific information on the subject is incorporated. The pharmacology of the respiration is taken up in Chapter XVIII and a large part of this chapter is devoted to a discussion of the fundamental physiological laws governing the respiratory function which must always be considered before a study of respiratory pharmacodynamics. Chapter XIX contains the usual treatment of the pharmacology of the kidneys, including a consideration of diuretics, kidney irritants, action of digitalis on the kidneys, relation of internal secretions to kidney function, etc. Chapter XXI gives a brief account of the principal drugs acting primarily on the uterus.

Considered as a whole, "Applied Pharmacology" is one of the best textbooks for its size written on the subject of pharmacology based primarily on experimental investigations. It is up-to-date; its style is very attractive; the illustrations, tables and graphs are novel and illuminating; and a carefully selected list of references, while not comprehensive, will be found useful by the student of a subject which is yearly gaining in importance.—D. I. M.

Colloid Chemistry, Principles and Applications, JEROME ALEXANDER, M.Sc. Third Edition, pages x + 270. D. Van Nostrand Co., Inc., N. Y., 1929. Price \$3.00.

This work is a revision of two previous editions, brought to date by the inclusion of the most recent developments in Colloid Chemistry. Even though encyclopædic in its scope, the book is at best only a popular presentation of the subject. The variety of titles dealing with the practical application

of the basic concepts of Colloid Chemistry is such that each receives but scanty treatment.

The text material is divided into 14 chapters; the appendix contains 16 pages devoted to Experimental Suggestions or Laboratory Manual, also a bibliography of English, German and French reference material. A brief glossary is also given, and the index is divided under the heads of Authors and Subjects.

Authoritative references are parenthesized throughout the reading matter instead of being appended as footnotes. The writer waxes poetical throughout the work and has quoted and invoked all and sundry from Shakespeare up to the moderns. In short, one who approaches this volume with anticipations of securing technical data in a straight-forward scientific manner is doomed to disappointment.

The book is a unit of the Industrial Chemical Monographs recently inaugurated under the editorial supervision of E. W. Lee Lewis and H. E. Howe.—SIMON MENDELSSOHN, Cincinnati, Ohio.

NARCOTIC CONTROL DRIVE WORRIES SWISS PRODUCERS.

Significant comment on the attitude of Swiss manufacturers of narcotics toward efforts to curtail illicit traffic in these drugs is contained in the following item which appeared in the *New York Times* as a wireless dispatch from Geneva:

A round-up of drug traffickers by the London police, combined with recent restrictive measures taken in America, is causing great anxiety to the wealthy proprietors of the big chemical factories at Basle, which supply 55 per cent of the world's drugs, especially cocaine and heroine.

The drugs, which are smuggled by groups with which they have no connection into North and South American ports on special subsidized vessels, are disguised in many ways and distributed on a large scale to the principal dealers, who in turn engage a small army of men and women of the underworld to keep night clubs and disorderly houses well stocked.

The Swiss government, owing to the inadequacy of existing regulations, has little control of Swiss drug exports, but a new and stricter law is under consideration as a result of protests from other nations. It is estimated that the drug traffic produces a profit of 700 to 800 per cent.