

to chemotherapy. Here we find a discussion not only of quinine and arsphenamine but also of the newer bismuth preparations, the various dyes which are employed for chemotherapeutic purposes and a study of antimonials, agents employed for antidysentery, gold compounds for intravenous use, chaulmoogra oil and esters, etc. The last two chapters are assigned to vaccines and non-specific protein therapy.

The work is up-to-date and contains a description of some of the latest drugs. Thus, for instance, under cardiac drugs we read of hexeton, cardiazol and coramin. Again, we find detailed accounts of avertin, amytal, uroselectan and other recent developments of pharmaceutical chemistry. There is a detailed description of the pharmacology of benzyl benzoate and of the benzyl esters as well as of benzyl alcohol and of some of its derivatives. Among the newer antiseptics, a section is devoted to mercurochrome although the author lays too much emphasis perhaps on the use of this drug as a chemotherapeutic agent for intravenous injection.

As is the case with almost every reference handbook, a number of errors of omission and commission may be noted in these volumes. Thus, for instance, the section dealing with carbolic acid poisoning is inadequate especially in regard to the latest methods of treatment in such cases. Again, we are surprised at the omission of Barger's name in connection with the chemistry of ergot and likewise with that of W. H. Howell in connection with heparin. The chapter on antipyretics is not very satisfactory. On the other hand, the author gives an unusual amount of space to the discussion of sparteine, a drug little used in the United States.

A valuable feature of Professor Zunz's work are the numerous tables and graphs scattered through its pages. An extensive bibliography is appended to each chapter. In this connection, we cannot refrain from remarking that many names familiar to Americans are not found in the bibliographies, while numerous other authors, more or less unknown to us, are cited. This, of course, is one of the invaluable advantages to be derived from the reading of foreign texts in scientific literature of any kind. A study of such works gives the student a more correct perspective of the subject as a whole. The scientific literature of any nation, while claiming to be impartial and to recognize no distinction of race, creed or color, is very often

tinted by the personal predilections of the powers that be in the higher educational institutions of that country. To use an expression of Dr. E. J. Dingwall, a psychologist, "This gives rise to a new witchcraft. The scientific manner of thinking is forgotten and the student is liable to accept conclusions because they are advocated by some person of prominence," or by some coterie of men who have arrogated to themselves the power of passing judgment on the works and productions of other non-political investigators. The monumental work of Professor Zunz will probably not meet with the unqualified approval of the Council on Pharmacy and Chemistry of the American Medical Association. Furthermore, as we glance over some of the more important chapters of these volumes, such as those on adrenaline, insulin, pituitary, opium alkaloids and heart drugs, for instance, we are surprised to find that credit for the fundamental discoveries on those subjects is not preëmpted even to a moderate degree by those exalted American pharmacologists whose names are usually quoted in this connection.

Because of the author's race, this important treatise will probably be relegated to the *Index Purgatorius* of the Nazis, or even consigned to the *auto da fé*, but in the opinion of the reviewer the *Éléments de Pharmacodynamie Spéciale* of Professor Zunz should be classed with the most invaluable reference books on the subject of pharmacology.—DAVID I. MACHT.

*The Pharmaceutical Syllabus.* Outlining the Course of Instruction for the Degree of Bachelor of Science in Pharmacy (B.S.Pharm.) 4th edition. Prepared and published by the National Syllabus Committee, representing the AMERICAN PHARMACEUTICAL ASSOCIATION, the American Association of Colleges of Pharmacy, the National Association of Boards of Pharmacy. The chairman is J. G. Beard; the Executive Committee is composed of R. A. Lyman, T. J. Bradley and A. L. I. Winne. The Subcommittee chairmen are: *Materia Medica*, H. M. Burlage; *Chemistry*, Glenn L. Jenkins; *Pharmacy*, E. Fullerton Cook; *Cultural and Basic Subjects*, R. P. Fischelis.

The *Historical Introduction* is complete and gives the organization of the several revisions. The Preface to the 4th edition states that "the Pharmaceutical Syllabus is intended to indicate the subject matter that schools of pharmacy may profitably teach and to set forth that

portion of the subject matter which should be required and that portion which may be looked upon as optional, as well as to indicate the minimum amount of time that should be spent in presenting such material to students. The Syllabus is intended as a guide to state board examiners in that it indicates the nature and extent of professional and applied knowledge that may have been included in the training of the graduate in pharmacy." The Syllabus, therefore, is of value to the members of faculties, board members and students.

The names of those who, in addition to the Committee, shared in the revision of the Syllabus are given and appreciation is expressed for their services.

The sections are represented in Professional and Allied Subjects, Basic Subjects and State Board Examinations and every subject is classified as Required or Optional and a statement is made which sets forth the minimum number of clock hours necessary for its proper presentation. The schedule is of value in giving information regarding the subjects of the curriculum and while there may be differences of opinion regarding the classification of some of the subjects and the number of hours devoted, the purpose of the Syllabus is to be suggestive and helpful and "not designed to interfere with such flexibility in courses of study and freedom in methods of instruction as ought to exist in schools of pharmacy."

The discussions, suggestions and general information found in Section III give information of value for the preparation of state board examinations. Chairman J. G. Beard has ably directed the work of the Committee and the coöperation of the members has resulted in a

Syllabus which is not only useful and helpful, but reflects credit on pharmacy. The book is well bound and printed. Size 6" x 9", bound in cloth, 168 pages. The sale price for single copies is \$2.25, post-paid; for five or more copies \$2.00 each post-paid, and may be obtained from Chairman J. G. Beard, Chapel Hill, North Carolina.

*Swedish Apotekarkalender* for 1932, edited by O. KULLBERG. This publication of 424 pages + is bound in half-leather, printed on paper which shows half-tone prints to advantage. Of outstanding value are the half-tones of Swedish pharmacists, about 1500, accompanied by brief biographical sketches of Swedish pharmacists. The *Kalender* serves a useful purpose not only for Swedish pharmacists but for pharmacists everywhere and the AMERICAN PHARMACEUTICAL ASSOCIATION is indebted to its honorary member, Dr. Knut Magnus Sjöberg, of the Swan Pharmacy, Stockholm, for a copy of this valuable publication and thanks are extended to him. A sketch with accompanying half-tone appears on page 325 and additional data regarding his many activities and honors are given on page 416, among the notices reference is made to his honorary membership in the AMERICAN PHARMACEUTICAL ASSOCIATION.

*The Canadian Formulary*. Notice was given of the Formulary in the April JOURNAL and reference should have been made to the report by Prof. R. O. Hurst in the February issue, page 160. This answers the purpose of a review. In the "Reference Companion" of about 30 pages, a number of the formulas in this section correspond with those of the N. F. V.

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#### RECENT USAGE OF THE TERM "PYRETHRIN."\*

HAROLD H. SHEPARD.<sup>1</sup>

An unfortunate confusion in the use of the term *pyrethrin* exists in the literature of plant chemistry. Buchheim (1) in 1876 proposed the word to designate the active principle in the root of *Anacyclus pyrethrum* (Linn.), or pellitory of medicine. Because *Pyrethrum* was for a long time also the generic name of plants which are the source of insect powder, the term *pyrethrin* and other derivatives of the name *Pyrethrum* have been used recently for the active principles of that insecticide. A brief survey of definitions of *pyrethrum* in recent editions of various medical dictionaries shows that a real confusion, or considerable ambiguity, of terms exists. A few facts concerning the nature and source of pellitory and of insect powder, as well as the history of the term *pyrethrin*, will help in making clear the reason for the existence of such a condition.

*Anacyclus pyrethrum* (Linn.) De C., belonging to the Compositæ, is commonly known as

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