

BOOK REVIEW

An Introduction to Phytopharmacy: by M. S. F. ROSS and K. R. BRAIN. Pitman Medical, 1976. £7.00.

The subject of pharmacy has traditionally been divided into four major teaching areas in the undergraduate curriculum—pharmacognosy (naturally derived drugs or adjuvants used in the preparation of medicines), pharmaceutical chemistry, pharmaceuticals (broadly, the preparation of drug substances into medicines) and pharmacology (the action of drugs on living organisms). The authors point out that the boundaries between these subject areas are now ill-defined and such subjects as biopharmaceutics and pharmacokinetics in fact straddle the traditional divisions. In an attempt to meet this situation, in the context of pharmacognosy and to produce some integration with other pharmaceutical subjects, the authors introduce phytopharmacy as “a subject that considers the reciprocal relationship between plants and drugs”, and includes a study of plants that act as drugs as well as drugs that act on plants. The text of this book abandons the current encyclopaedic form of pharmacognosy textbooks and is presented in what the authors hope is a more readable form. In my view, the aims are very commendable and the concept is interesting. They divide the book into two parts; the first dealing with plants and their constituents, the isolation of drugs, drug variability and the search for novel plant drugs covers some 90 pages. The second part, 193 pages of text liberally supplied with chemical formulae, groups plant drugs into pharmacological divisions so that, for example, there are chapters on such topics as drugs acting on the central nervous system, cardiovascular system, respiration etc., but there are also chapters on compounds classed as steroid hormones, antibiotics and vitamins. In order to fulfil the terms of reference for the book, a chapter on crop protection agents is included.

Inevitably one must ask whether the book fulfils the objectives set out by the authors, and it is my belief that it does not. In attempting to produce a book which can be easily read, it is obvious that much factual matter must be

compressed, but in this book some areas are reduced to a meaningless level as illustrated by the botanical section which includes taxonomy (12 pages, approximately half are illustrations) and plant metabolism (half a page). To some extent brevity can be overcome by giving pertinent references at the end of each chapter and this the authors have done, but in some instances the references are either totally inadequate (anthraquinones warrants one reference, ‘The Biology and Chemistry of the Umbelliferae’) or else they are books which students may well experience difficulty in obtaining. The chapter on natural toxic agents, for example, can be used to illustrate faults within the book, since the brief section on toxic plants (2 pages) does not mention a number of common British garden plants (e.g. lupins, laburnum, delphinium), while the section on toxic animals should be omitted by the very subject definition and title chosen by the authors. There are too many errors and inconsistencies within the book, particularly in the many incorrectly drawn chemical formulae, e.g. barbaloin, cardenolide, narcotine, protopine, quinine, reserpine, strychnine, tubocurarine, to name not all. Some statements are out-of-date; for example, it is said that cannabis “when grown in temperate climates, does not normally produce large amounts of active principles” (page 121) and the biosynthetic scheme presented for reserpine (page 111) is based on Woodward’s early postulation. Finally, the chapter on crop protection agents is uncritical in its approach and does not deal with the question of toxicity to animals, an area which a practising pharmacist would be expected to have some knowledge. I like the concept of the book, but for the reasons given above, I cannot recommend it to Pharmacy undergraduates nor indeed to any other interested person who would like to be able to read something about these fascinating drugs which are either derived from plants or which affect the life and growth of plants.

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