Book review

Medicinal Plants of the World

by Ivan A. Ross, Humana Press, 1999. $99.50 (432 pages, hardback) ISBN 0-89603-542-5

For thousands of years man has relied upon plant species for the preparation of medicines and, even today, it is estimated that three quarters of the world's population depends upon traditional medicines for the treatment of diseases. With the proliferation of modern synthetic drugs in the 1960s, interest in natural products as a source of therapeutic agents declined. However, in recent years, interest in medicinal plants has revived. This is not only because they have yielded some new and important drugs – such as the anticancer agent taxol (from the Pacific Yew, *Taxus brevifolia*) and the antimalarial artemisinin (from the Chinese herb, *Artemisia annua*) – but also because of the increasing popularity of 'alternative' or 'complementary' medicine. Many plant species are used in herbal preparations, but for many of these very little is known about their efficacy or, perhaps more importantly, about their toxicity. In this context, the relevance of *Medicinal Plants of the World* is easily appreciated, as the author has written with the intention of providing scientific and clinical information on a selection of 26 plant species that are used throughout the world in traditional medicine.

Species breakdown

Several of the chosen species are very well known. Some are used for food; for example, *Carica papaya* (paw-paw), *Mangifera indica* (mango), *Manihot esculenta* (cassava), *Persea americana* (avocado) and *Psidium guajava* (guava). Others have culinary uses as flavours and spices, such as *Allium sativum* (garlic), *Curcuma longa* (turmeric) and *Tamarindus indica* (tamarind), while another, *Aloe vera*, is best known for its use in cosmetic preparations. However, as is well illustrated in this book, the above species also have a surprisingly large number of medicinal uses and pharmacological activities. Most of the remaining species described are best known for their medicinal properties, although a few, such as *Momordica charantia* and *Hibiscus sabdariffa*, have edible parts and *H. rosa-sinensis* is an ornamental plant. Several species are known for their toxic effects, for example, *Abrus precatorius* (prayer-beans), *Jatropha curcus* (physic or purging nuts) and *Phyllanthus niruri*. *Catharanthus roseus* (Madagascan periwinkle) is the only species included which is a source of pharmaceuticals (vinca alkaloids), but these are not discussed as the book considers only traditional uses and the pharmacology of crude extracts. The remaining species described are *Annona muricata*, *Cassia alata*, *Cymbopogon citratus*, *Cyperus rotundus*, *Lantana camara*, *Macuna pruriens*, *Moringa pterygosperma*, *Portulaca oleracea*, *Punica granatum* and *Syzygium cumini*.

Presentation

For each species, information is presented in an encyclopaedic fashion and divided into the following sections: common names, botanical description, origin and distribution, traditional medicinal uses (arranged by country), chemical constituents, pharmacological activities and clinical trials. The sections comprising traditional medicinal uses and pharmacological activities and clinical trials are well referenced and the comprehensive bibliography contains >1500 references. The exhaustive lists of chemical constituents do not indicate which ones are responsible for the biological activities; the parts of the plants where they are found is given and, in some cases the amounts present, but no bibliography is included. Species are illustrated by small, attractive colour plates (although *M. esculenta* appears in the plate labelled *C. citratus*), and the book also includes a useful introduction to plant morphology illustrated with line drawings. There is a glossary of botanical and medical terms as well as a cross-reference of common names and the countries in which they are used. However, in common with many books on medicinal plants, there is no comprehensive index so that to find, for example, plants with antidiabetic activity it is necessary to look through each chapter in turn.

As only 26 species are described, this publication is clearly not a comprehensive information source on medicinal plants but will, however, be especially useful to those who have a particular interest in one or more of the plants species included. This volume is intended to be the first in a series and it is to be hoped that it will become a valuable reference source in the future.

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