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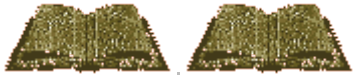
Book Reviews: Popular Books Section



(Page 3 a)



FEATURED BOOK : REVIEW 1

AUTHENTIC INFORMATION WITH GOOD PICTURES

Rating : 9.5
★★★★★★★★★½
(9.5/5)

[Review 1] [Main Page] [Review 2]

Medicinal Plants in Vietnam (WHO Regional Publications - Western Pacific Series No 3) , Paperback, 5.5" x 8.5".
World Health Organization Regional Office for the Western Pacific, Manila, Publication Date 1990, i - xxix and 410 pages, ISBN 92 9061 101 4: Price: Sw.fr. 45.00

Medicinal Plants in the Republic of Korea - Information on 150 commonly used medicinal plants (WHO Regional Publications - Western Pacific Series No 21) Compiled by Natural Products Research Institute, Seoul National University, Paperback, 5.5" x 8.5".
World Health Organization Regional Office for the Western Pacific, Manila, Publication Date 1998, i - ix and 316 pages, ISBN 92 9061 120 0: Price: Sw.fr. 42.- Price for Developing Countries : Sw.fr. 29.40

WHO's Catalogue of Publications

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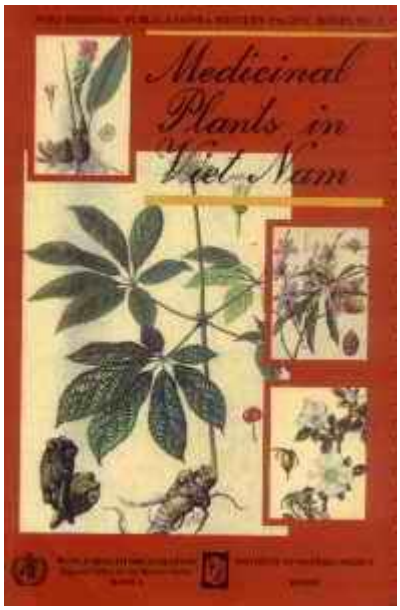
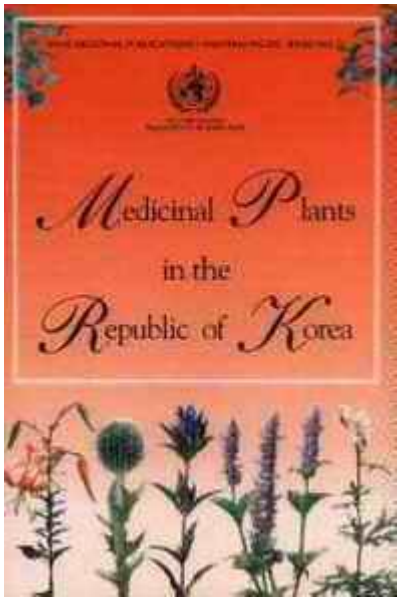




Both these books are from the *World Health Organisation's Western Pacific Series* and since they cover roughly similar geographic areas are ideally reviewed together. Furthermore both books have a similar format and style. Both discuss medicinal plants of that country in an alphabetical order using the botanical names. Each plant is given one page of text and one page of illustrations. In the case of Korea the illustrations consist of colour photographs whereas for Vietnam these consist of full-page colour drawings.

The WHO regional office for the Western Pacific is one of six regional offices throughout the world, each with its own programme geared to the particular health problems of the countries or areas it serves. Publications are in English and in French. Other books in this series are *Medicinal Plants in China* and *Medicinal Plants in the South Pacific*.

Herbal medicine

In spite of advances in technology and advances in Western medicine herbal remedies have not gone away. Indeed they are making a comeback in a big way. Take for instance Korean ginseng and

Gingko biloba. Both these herbal products are household names in the West. Highly refined extracts of medicinal plants are easily available in the Western world often on mail order.

Medicinal Plants in Vietnam

The original version of this book was published in Vietnamese and was prepared under the guidance of Professor Nguyen Van Dan, Vice-Minister of Health of Vietnam and Professor Doan Thi Nhu both former directors of the Institute of Materia Medica.

As the authors' note informs us nature has blessed Vietnam with a great variety of medicinal plants. This reviewer was privileged to see some of these plants on sale at markets in Ho Chi Minh City and in Hanoi during a visit to Vietnam. Surveys have revealed 1863 species of medicinal plants in Vietnam. The book presents 200 medicinal plants ranging from Abrus precatorius to Zizyphus mauritiana.

The aim of the publication is to help the reader identify medicinal plants easily and thereby pass information to those interested in their collection and use. With the translation of the book into English the authors hope that there will be exchange of information on the use of medicinal plants between Vietnam and other parts of the world particularly those countries where the same plants can be found.

The book is in three parts. Part one gives a general introduction to the multidisciplinary research that has been undertaken on medicinal plants. This is a short section running into ten pages. Part two is the main part and presents common and valuable species of wild and cultivated medicinal plants in alphabetical order of their botanical names. Part three is an index which gives the botanical names as well as the common English and Vietnamese names.

Gyan Fernando was the obvious choice for us as an expert reviewer for these two books. Not only is he an accomplished forensic toxicologist (and pathologist), he has a deep interest in medicinal and toxic plants, and has been to almost every country of the world exploring native plants (Dr. Livingstone, I presume!). Here in these two photographs he is seen playfully cavorting in Vietnam.
Left: On a tour of Vietnam Gyan displays considerable foresight and intelligence on his part by first trying out his size11 boot at the entrance to a Cu-Chi tunnel!
However, to his dismay he discovers that years of Western-style living and a fat money belt has considerably distorted his girth and his foot size is actually immaterial! Here he is seen doing his best to look slim and agile like a Vietcong by donning a Vietcong hat. Note the slim Vietnamese guide standing by to attend to extrication procedures. The black object on the ground is the moneybelt (right).





The first part covers topics such as acclimatisation and cultivation of medicinal plants, drug development from plants, utilisation, drying, processing and storage of medicinal plants. The scale of the research is staggering. One thousand eight hundred and sixty three (1863) plant species in 238 families have been identified and nearly 8000 specimens of 1296 species have been collected. Over 1000 species have been listed in an index giving the flowering period of each species. A list of about 1000 folk remedy prescriptions has also been compiled.

Vietnam is blessed with a long coastline, mighty rivers such as the Mekong and mountainous regions. Three quarters of the area of Vietnam is mountainous or forest covered. The 2500Km of coastline yield nearly 300 species of seaweed. As the book informs us indigenous drugs are available everywhere - in the sea, in the forests or in the immediate vicinity of dwellings. Furthermore 260 foreign species have been introduced to enrich the medicinal plant resources of the country.

The plants

The plants described in part two forms a formidable list. Some of the species are easily identified from their botanical names. Even those living in the Western world would recognise *Allium, Citrus, Datura, Nerium, Papaver, Solanum* and *Strychnos*. I do not propose to discuss every plant in this book but the following are my favourites having known them from my childhood in the tropics.

Abrus precatorius

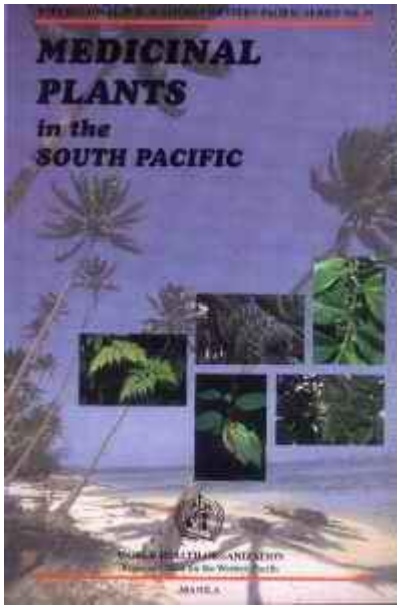
Abrus precatorius is a leguminous plant known as Jequirity in English. It is known for its distinct red and black seeds usually made into necklaces in the tropics. The seeds are highly toxic but in

Vietnam the roots, stems and leaves are used in the treatment of various ailments from coryza to viral hepatitis. The seeds are used externally as a poultice on boils.

Areca catechu

Areca catechu is the so-called Betel-nut palms (Areca nut) the seeds of which are chewed with "Betel" (Piper betle) leaves and contain arecoline. Arecoline is mildly hallucinogenic.

Plants in Western Medicine



The following plants feature/have featured in Western medicine at one time or the other:

& *Atropa belladonna*: Atropine in anaesthetics and as antidote in organophosphorus poisoning
& *Cassia senna*: Senokot the laxative
& *Chondrodendron tormentosum* (curare): Tubocurarine, as a muscle relaxant in anaesthesia
& *Cinchona spp*: Quinine, as an antimalarial
& *Datura spp*: Scopolamine in anaesthesia
& *Digitalis purpurea*: Cardiac glycoside Digoxin
& *Dryopteris felix-mas*: Antihelminthic against tapeworm
& *Erythroxylon coca*: Cocaine, as a haemostatic agent in nosebleeds
& *Eugenia caryophyllus*: Clove oil, used in dental treatment
& *Hyocyamus niger*: Hyoscine, premedication for anaesthesia, mydriatic (dilatation of pupil)
& *Oenothera macrocarpa* (Evening Primrose): Gammolenic acid, for eczema
& *Papaver somniferum* (poppy): Morphine
& *Pilocarpus spp*: Pilocarpine, mydriatic
& *Rauwolfia serpentina*: Anti-hypertensive drug Reserpine
& *Ricinus communis*: Castor oil as a purgative
& *Salix alba* (willow): Aspirin
& *Vinca rosea*: Vincristine, as an anti-mitotic in treatment of leukaemia

Centella asiatica

Centella asiatica tastes like parsley and is used as a salad leaf in the reviewer's native country of Sri Lanka. It is known as "Gotukola" in the Sinhalese language and under this name it is used in Britain as an herbal remedy.

Nelumbo nucifera

Nelumbo nucifera is the sacred lotus, which is associated with Buddha and produces beautiful flowers. The seeds are considered to have medicinal properties.

Piper betle

Piper betle is a very familiar plant in Asia and is responsible for the red stains on pavements! Betel leaves are chewed with areca nut and the resulting red juice is spat out usually without due regard for others. Betel chewing is responsible for the high incidence of oral cancer in this part of the world.

Piper nigrum

Piper nigrum is the familiar black pepper and *Punica granatum* is the pomegranate.

Ricinus communis

Ricinus communis is the well-known castor oil plant, which is in the news these days because of the suspected use of ricin by terrorists. The seed oil is the familiar laxative castor oil. Ricin is found in the seed residue.

Other plants of interest

Other plants of interest to westerners include *Rauwolfia cambodiana* or the Cambodian rauwulfia, which is of course a relative of the common *Rauwolfia serpentina* from which the anti-hypertensive drug Reserpine was derived. The plant grows wild in Vietnam and is endemic in the mountains of the southern region. The root bark is used in the treatment of hypertension and psychoses.

Of the four books "Medicinal Plants" books reviewed in this issue, the book on Vietnamese Medicinal plants is the only one that does not give real photographs; they are drawings. But as can be seen here, the drawings are life-life. The top picture is from page 180 showing Longan (used in neurasthenia, insomnia, amnesia and mental deficiency). The picture below is from page 308 showing "Many-flowered knotweed" (used in renal and hepatic hypofunction, neurasthenia, dyspepsia, hypogalactia, rheumatism, lumbago, spermatorrhoea, leucorrhoea, hematuria and bloody stools)





There is of course *Thevetia peruviana* or the yellow oleander, a common plant in the tropics, which yields the cardiotonic glycoside thevetin. Thevetin is extracted from the seeds.

An unusual inclusion is *Zea mays* or Maize. Apparently maize "silk" (styles with stigmas) is used as a diuretic in heart disease.

The book measures 14 x 21.5 cms and has been printed in Hanoi. The paper is of good quality and coated but the typeface shows signs of ageing. This is however a minor criticism.

Medicinal Plants in the Republic of Korea

According to the introduction to this book there are over one thousand species of medicinal plants that have been used traditionally in Korea and traditional Oriental medicine is still practised throughout the country. Korean pharmacology is thought to have originated from old traditional pharmacology and is therefore many centuries old.

This book describes 150 species of medicinal plants commonly used in Korea. The book originates from Seoul and therefore represents the Republic of Korea.

The plants are listed in alphabetical order using the botanical names. The format for describing each plant is first the botanical name followed by the Korean name and the English name. The parts of the plant used are then listed followed by a list of traditional uses. There then follows a description of the plant in botanical terms, its habitat, distribution, bioactivities, chemical components and finally a list of references.

The information regarding the traditional uses is taken solely from the traditional medicinal literature and their effectiveness has not been established by modern scientific means.

A useful index is included which gives not only the botanical names but also English and Korean names.

Again the plants described form a formidable list. Surprisingly, there is very little overlap with the Vietnamese plants especially since Vietnamese culture is largely influenced by Chinese traditions.

The plants

As before I have selected plants that I have some familiarity with.

Aconitum koreanum

Aconitum koreanum should be familiar to most as it contains the alkaloid aconitine, which is an analgesic. The plant is traditionally used for chills and articular pains.

Agastache rugosa

Agastache rugosa is a perennial herb and belongs to the family of herbs known as hyssop. It is traditionally used in Korea for the treatment of acute gastritis, vomiting and diarrhoea.

Albizia julibrissin

Albizia julibrissin is a mimosa and is used for the treatment of neuralgia and headaches.

Chaenomeles sinensis

Chaenomeles sinensis is Chinese quince and is cultivated for its fruit. The fruit is used for the treatment of asthma, common cold and as a protective agent against liver disease.

Genitiana scabra

Genitiana scabra is the familiar gentian and traditionally used in anorexia, dyspepsia and liver diseases.

The above two pictures are from page 122 of the Korean Medicinal Plants book. The top picture shows the plant (Fox nut), while the lower the seeds of foxnut used as medicine (for weakness, spermatorrhoea and leucorrhoea)





Ginkgo biloba

Ginkgo biloba is well known even in the Western world where in recent times it has enjoyed an unprecedented popularity amongst herbalists.

Glycine max

Glycine max is the familiar Soya bean traditionally used for furuncles, lumbar vertebral pain and as an expectorant. Interestingly the sprouts show oestrogen like activity.

Paeonia suffruticosa

Paeonia suffruticosa is a member of the Peony family, which is an ornamental plant in the Europe. The root bark is considered to have medicinal properties.

Panax ginseng

Panax ginseng or Korean ginseng is also well known in the West.

Viscum album

Viscum album was a surprise entry for the reviewer as this is the familiar mistletoe. Mistletoe is a parasitic plant and is associated with Christmas. In Korea the leaf and the stem are apparently used as an antihypertensive agent as well as for the treatment of stomach cancer. The bioactivity data does include a hypotensive action.

The above two pictures are from page 300 of the Korean Medicinal Plants book. The top picture shows the plant (Common jujube or Chinese jujube), while the lower the fruit used as medicine (for pain, cough, pharyngitis, bronchitis, anorexia, dysosmia and for corn of foot)





Other plants of interest

Other plants of interest include *Dryopteris crassirhizoma* or Crown-wood fern, which is traditionally used as a parasiticide against tapeworm and hookworm. Older readers might remember the use of *Dryopteris felix-mas* as a treatment for tapeworm in western medicine many years ago.

A species of Hibiscus, *Hibiscus syriacus* is mentioned as a cure for dysentery and abdominal pain. The active part of the plant is the bark.

Ipomea nil a type of Morning Glory is recommended as a laxative and a contraceptive the active part being the seed.

There are many more interesting plants.

An index giving cross-references between botanical names English names and Korean names is included.

The photographs, which are all in colour, are excellent and have been reproduced well. The pictures were taken between 1994 and 1996 in various regions of Korea under natural conditions during the flowering or fruiting season. This makes it easy to identify the plants. In some of the pictures it is difficult to work out the size of the seeds and a scale would have been helpful. The book measures 14 x 21.5 cms. There is no mention of the printer but the print quality is good. The paper is of good quality and coated.

Both books carry a warning that some plants are extremely poisonous and the books are meant for educational and reference purposes. Self-treatment is not recommended and could be dangerous.

Who would benefit from these books? Apart from botanists and naturalists I would think that these books would be of use to practitioners of herbal medicine, pharmacologists of the traditional as well as the modern kind, pharmaceutical developers and pharmaceutical companies. These are a few I can think of. Eco-tourists travelling to this part of the world would also benefit from these books.



-Gyan Fernando
Dr Gyan C. A. Fernando is a native of Sri Lanka and is familiar with plants used in Ayurvedic remedies. He now works as a Forensic Pathologist in Devon, England.

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Reviews by V.V.Pillay of India[China, Vietnam, Korea and South Pacific Medicinal Plants]