

BOTANY

Ginkgo in China

By Cao Fuliang. 2007. China Forestry Publishing House, Number 7, Liuhai Hutong, Denei Street, Xicheng District, Beijing, China. 300 pages. 98 CNY.

Ginkgo is a genus of highly unique plants with one extant species, *Ginkgo biloba*, which is a long-lived, stress-tolerant, disease-, pest-, and fire-resistant dioecious tree, referred to as a living fossil by Charles Darwin in 1859. The only surviving member of its family, Ginkgo leaf was first mentioned in Lan Mao's book *Pharmaceutical Natural History of Southern Yunnan* (1436) in the Ming dynasty of China. Engelbert Kaempfer (1651-1716), a German botanist, firstly gave a scientific description of this species in his book *Amoenitatum exoticarum* (1712), and formly gave it its name according to a phonetic pronunciation of a Chinese or Japanese word.

It was reported that fossils recognizably related to modern *Ginkgo biloba* date back to the Permian, some 270 million years ago. The genus diversified and spread throughout Laurasia during the middle Jurassic and Cretaceous, but became much rarer thereafter. At the end of the Pliocene, Ginkgo fossils disappeared from the fossil record everywhere apart from a small area of central China where the modern species survived. Chinese people, especially the monks in history formally, have long cultivated Ginkgo, thereby contributing to its survival as a species. All the present Ginkgo trees originated from China and were introduced into Europe in the 1700s, and then spread to other continents.

Ginkgo not only has scientific value in terms of research on its evolution and genetic tenacity, but also its medicinal and ornamental applications. Ginkgo has been used in medicinal botanicals in China for more than 2000 years. Nowadays, more and more medicinal functions of its leaves and seeds are being extensively revealed by scientists all over the world, with a focus on the standardized *Ginkgo biloba* extract (GBE) being prepared from the dried green leaves. At present, Ginkgo has become one of the most common trees along the sidewalks in many cities of the world due to its urban tolerant traits and the beautiful shape and colour.

China is the hometown of modern Ginkgo trees. The small-sized natural Ginkgo populations were extensively distributed over different geographical areas of China. The cultivation area of Ginkgo covers wider re-

gions. The germplasm resource of Ginkgo is abundant. Ancient Chinese carried out preliminarily studies or observations on the trees. However, afterwards, there were not too many new studies in China due to the unstable or abnormal social and political situation. Since the 1980s, Chinese scientists have carried out a series of comprehensive studies on the trees. The book *Ginkgo in China* is a systematic summation of these studies. As well, the book collected and analysed other abundant information on the Ginkgo at home and abroad.

The book covers almost every aspect of the Ginkgo, such as its origin, evolution and taxonomy, history of cultivation and utilization, natural populations and cultivation areas, biological and ecological characteristics, cultivation techniques, exploitation and use of Ginkgo resources, genetics and breeding, and so on. Chapter one, is an outline of the Ginkgo's name, and its economic, ecological, social, cultural, scientific values, developmental status, and prospects; Chapter two covers the origin, evolution and taxonomy of the Ginkgo; Chapter three, the history of cultivation and utilization of the Ginkgo at home and abroad; Chapter four, the natural populations and cultivation regions of the Ginkgo; Chapter five: the biological characteristics of ginkgo; Chapter six, the cultivation techniques of ginkgo; Chapter seven, the comprehensive exploitation and utilization of Ginkgo resources; Chapter eight, the germplasm and breeding of the Ginkgo; Chapter nine, reputed varieties, strains or individuals of Ginkgo in China; Chapter 10, key areas of Ginkgo production; and Chapter 11, the development of the culture of the Ginkgo.

The book is well written with few errors, and can be easily understood by non-scientists. As a comprehensive book, it would be suitable for anyone who is engaged in various areas of research or application in relation to ginkgo. Hopefully, it would become a valuable reference for them.

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Comprehensive Monograph of Contemporary Medicinal Plants (Volumes I-IV)

By Zhao Zhongzhen, Xiao Peigen. World Book Publishing House, Number 137, Chaonei Street, Beijing, China. 2008. 4 volumes: total 2180 pages. 368 CNY Cloth.

In a broader sense, the medicinal plants referred to are not only the so-called traditional medicinal plants used for prevention and treatment of human diseases, but also the plant resources used as nutrients, hobby

materials, spices, coloring additives, pesticides and veterinary drugs and so on. The whole or parts of the medicinal plants can be used directly in treatment or as raw material in the pharmaceutical industry.

China is one of the countries with abundant resources of medicinal plants, and with the long history of use and cultivation. The discovery of medicinal plants was

the result of accumulation of experience and knowledge in the long-term production and life in ancient times. In China, literary records on medicinal plants might be traced to the Spring and Autumn Era (770 BC~221BC) or much earlier. Till the Ming Dynasty, the world wide famous comprehensive medicinal book *Compendium of Materia Medica* (Li Shizhen 1578), contained more than 1200 species of the medicinal plants.

Generally speaking, Chinese traditional medicine as a cultural treasure of China, together with Western medicine, plays an important role in human health care, and is the commonwealth of mankind. However, not all records in the traditional medicinal literatures were correct, and some of them were proved to be wrong or inaccurate with long-term clinical practices or scientific tests. Furthermore, some new pharmacological effects of these medicinal plants have been revealed, and some new medicinal plants have been gradually added to our knowledge. Therefore, the science of medicinal plants as an ancient and developing science needs systematic testing of the records in the traditional medicinal literature, and also needs a continual infusion of new knowledge or scientific findings. Actually modern medicine, or Western medicine, as a whole, has persistently absorbed a great deal of valuable experience and knowledge accumulated in the course of long-term clinical application and scientific research. However, the science of medicinal plants itself has been in the shade, and not summed up the progress of time.

The *Comprehensive Monograph of Contemporary Medicinal Plants* is divided into three parts and four volumes. The Chinese and English versions were published successively. The book collected information on more than 800 frequently used medicinal plant species from both China and abroad. Each entry of medicinal plant species includes Chinese, Latin and English names, main geographical distribution region, main morphological characteristics, medicinally effective

parts, chemical composition, pharmacological effects and the progress in clinical applications. Abundant diagrams are used to supplement the explanations. The book adopted the definition of the medicinal plant species in broader sense, to include not only the traditional medicinal plant species being used for a long time both in China and abroad, but also the new products made from the medicinal plants, natural health plant products, natural plant cosmetics, natural plant pigment, and so on.

The book reflects the results of the authors' in-depth investigations on these medicinal plant species for many years. On the basis of systematic compilation and analysis of the illustrations of the efficacies of these medicinal plants in the voluminous traditional medicinal literatures, the book introduced the latest medical progress in plant biochemistry, pharmacological, toxicological and clinical research. For each medicinal plant species mentioned, the authors also give pertinent comments and suggestions on sustainable exploitation and utilization, as well as safety in clinical applications. All these might contribute greatly to the clarification of the mechanism of the role of the traditional medicine plants, to the modernization of the science of traditional medicinal plants, and to guidance for future clinical applications.

The book is well written with few errors. Abundant illustrations help readers understand the explanations. The book is suitable for professionals who engage in plant science, pharmaceutical research, production, development, testing as well as sales staff or other persons who are interested in these fields.

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Book Review Editor's note: Continuing with our decision to investigate suitable websites and, if appropriate, include their reviews. I have written the following review. If others know of similar suitable sites and are moved to submit a review please contact me at r.john@rogers.com.

MushroomExpert.Com website

By Michael Kuo. 2008. <http://www.mushroomexpert.com/index.html>.

I recently wanted to identify a mushroom in my yard and, with help, thought it might be a Turkey Tail. On the web I found MushroomExpert.Com, a site developed by an Illinois English teacher and amateur mycologist, Michael Kuo. He is also the author of two conventional books; *Morels* (2005), and *100 Edible Mushrooms* (2007) [University of Michigan Press]. By following Dr. Kuo's keys and his "Totally True Turkey Tail Test" I confirmed I had a totally true Turkey Tail.

I was very impressed by the individual pages on each species – the field guide section. This section current-

ly covers 700+ mushroom species using identification keys. Each species has a web page with identification information, background material, habitat and some excellent photographs. Some of the photos are by the author, but there are many other contributors. The text is clear and easy to follow and shows a certain sense of humour. I smiled at phrases like "...let me say this as plainly as I can: *You are stupid if you eat this mushroom.*" It certainly gets to the point! There are web links to other mushroom sites, so you can see additional photos and read other versions of the species' characteristics [these were not as attractively displayed nor as well illustrated as Kuo's site].

Erratum The Canadian Field-Naturalist 126(4)

In response to the review of *Contributions to the History of Herpetology*. CFN 126(3): 344-345, the book's editor Kraig Adler pointed out (personal communication to FRC 12 May 2013): "Only one small correction. Mrs. Martof used a kitchen knife, not a gun. She told the police she slipped while cutting some pizza. But Bernie was stabbed up under his rib cage several times!"

Erratum The Canadian Field-Naturalist

It has come to our attention that sections of many of the book reviews by Li Dezhi and Qin Aili were copied from sources without attribution. The journal and the authors apologize for this oversight.