

Current Natural Sciences

BOTANY

Shanan HE, Zuoshuang ZHANG, Yin GU, Bing XIA,
Ruizhi CHU and Hong YU

Phytohortology

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Shanan HE, Zuoshuang ZHANG, Yin GU et al.

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Chapters 1-8, as Part One, are the "General Introduction and Fundamental Theories and Principles of Botanical Garden Science, PHYTOHORTOLOGY," and Chapters 9-11, as Part Two, are the text for "Individual Botanical Gardens."

Major achievements in botanical gardens, including research on plant introduction and acclimatization, economic plants, and environmental plants, were presented in this book. Principles and methods for plant conservation in botanical gardens were suggested.

Based on the achievements of the authors' studies of innovations in concepts, theories and practice on plant introduction and acclimatization, ex-situ conservation and stress cultivation of medicinal plants, and plant diversity conservation and utilization in cities were presented.

Owing to the importance of visualization, more than 2,000 pictures were selected for this book to show and transfer the information, thought, feelings, and inspiration that could not be expressed by words and text alone. In addition, there are introductions to more than 200 individual botanical gardens all over the world in order to allow readers to easily recognize those botanical gardens, and to deepen their feelings and understanding as well as to create the thought leap in their minds. Many of those pictures were especially provided by botanical gardens both domestic and abroad.

This book is appropriate for readers including those who work in botanical gardens, on plant conservation, for landscape and scenery areas and natural protected land, on city construction, on landscape art and architecture, in gardening and landscaping, on education, and policy makers and administration leaders.

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Shanan HE¹
Zuoshuang ZHANG²
Yin GU¹
Bing XIA¹
Ruizhi CHU¹
Hong YU¹

1 Institute of Botany, Jiangsu Province & Chinese Academy of Sciences
2 Beijing Botanical Garden

Responsible Editors: Jing WANG and Haiguang WANG

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The Scientific Term

PHYTOHORTOLOGY

Suggested by Academician and Prof. WU Zhengyi



Discussing about botanical garden with Prof. WU Zhengyi in Kunming in 2008.

Left: ZHANG Zuoshuang. Central: WU Zhengyi. Right: HE Shanan

千秋功业植物园

赠 中山植物园

李政道

二〇〇四年十月

BOTANICAL GARDEN, Benefiting Mankind Forever

With Compliments to Nanjing Botanical Garden Mem. Sun Yat-Sen
Tsung-Dao LEE
October, 2004



Meeting with Academician and Prof. Tsung-Dao LEE in Oct. 2004 in Suzhou City, China

About the Main Authors



Research Professor HE Shanán was born in Changsha, Hunan Province in 1932, and graduated from the Horticulture Department of Zhejiang Agricultural University in 1954. He has been working at the Institute of Botany, Jiangsu Province & Chinese Academy of Sciences (Nanjing Botanical Garden Mem. Sun Yat-Sen) for more than 50 years. He was the director of the botanical garden from 1983 to 1998. He is now the president of the International Association of Botanic Gardens (2001~2012), a member of the Species Survival Commission-Plant Conservation Subcommittee of International Union for Conservation of Nature, a member of the Botanical Garden Committee of the Chinese Academy of Sciences, and the president of Botanical Garden Branch, Chinese Society of Environmental Sciences. His scientific work has focused on the development of botanical gardens, plant conservation biology, plant introduction and acclimatization, medicinal plant resources, economic botany, pomology, and plant frost hardiness. He has visited more than 200 botanical gardens and institutions in more than 20 countries, and published more than 170 papers. He has received numerous honors and awards including the “Second Prize of the National Science &

Technology Progress Award,” the “First Prize” at Provincial and Ministerial level, etc. He is a well-known scientist in the international botanical community, and highly respected for his creative scientific spirit.

ZHANG Zuoshuang is a senior engineer, an expert enjoying special government allowances by the State Council. He was born in Laoting, Hebei Province in 1946. He engaged in landscape design for more than 40 years. He is now the director of the Beijing Botanical Garden, the director of the International Association of Botanical Gardens-Asian Division, a member of International Biodiversity Project-China National Committee, the president of Chinese Botanical Society-Botanical Garden Branch, and the director of China Biodiversity Conservation and Green Development Foundation-Botanical Garden Branch. He was awarded as State Advanced Worker of Greening and Landscape Construction, and he is the Consultant of Landscape in Shanghai and Langfang cities, etc. He has won more than 10 Provincial and Ministerial level Science and Technology Progress Awards. He has published dozens of papers and books such as *Design and Construction of Plant*



Landscape, Colored Atlas of Landscape Plants in China, The Rose in China, and other works. He has visited more than 60 botanical gardens in more than 30 countries. He is a renowned expert in the international botanical community.

Research Professor GU Yin was born in Kunshan, Jiangsu Province in 1932, and graduated from the Horticulture Department of Zhejiang Agricultural University in 1954. She is a member of the Chinese Society of Forestry-Economic Forests Branch. She has engaged in economic plant introduction and acclimatization and plant conservation in botanical gardens for more than 50 years. She is the foremost scientist working on the new economic plants and small fruit plants such as blueberries, blackberries, *Rubus*, etc. in China. She has visited the USA, Canada,



Poland, Germany, France, England, Italy, Denmark, Spain, Portugal, and other countries for academic communication and cooperation. She has published more than 100 papers and several works such as *Blueberries and Cranberries, Rare and Endangered Plants of China, Olive Acclimatization and Breeding*, etc.

ACKNOWLEDGEMENT

Authors appreciated Mr. John GORHAM, with the assistance of Associate Professor LIU Yulan, to go through and revise the English draft of all chapters prepared by others and to translate chapter 7. The final version was checked and edited by Professor HE Shanan and Professor GU Yin and they chaired the whole course of the translation work as well.

Explanation and Remarks on Publishing

1. This book is an original monograph on Botanical Garden Science. Quotations from other sources are clearly marked in the text. Primary reference works and related papers are listed at the end of each chapter. Photos and pictures are sorted by chapter.
2. There are more than 2,000 photos in the book. Other than the photos taken by the authors, all rest photos provided by personnel of Nanjing Botanical Garden Mem. Sun Yat-Sen are clearly marked with the name of the provider. The photos by courtesy of domestic and foreign botanical gardens are marked with the name of photographer and/or address of the provider. Only the address of the provider was marked when the author's name was unknown.
3. For consistency and brevity, the author citation of Latin names was omitted. The names of plants were basically subject to *Flora Republicae Popularis Sinicae*.
4. To minimize the length of place names, the words 'province' and 'autonomous district' are omitted. For example, 'Jiangsu Province' is shortened to 'Jiangsu' and 'Guangxi Zhuang Autonomous District' is shortened to 'Guangxi'.
5. During the development of this book, many colleagues working at botanical gardens in our country kindly offered their assistance. Valuable information and excellent photos are courtesy of domestic and foreign botanical gardens and their experts are very much appreciated. A complete list of names of those who have helped the authors with this work would be impossible to be shown because of the numerous personnel. We wish to thank all of them for their valuable input. In particular, Dr. LI Ya wrote the plant information management section in Chapter 3; JI Jinyu drew numerous graphs; HE Fan, LI Yajing, WEI Jiguang and XIA Ruhong helped in the manuscript processing. We gratefully acknowledge encouragement from academician HONG Deyuan, researcher LU Anmin, HU Qiming, ZHENG Zhong, ZHANG Lianquan, YU Zhizhou, XU Tianquan and GUAN Kaiyun, etc., during the publishing process.
6. As of the time this work was finished, the lead author has been working in botanical gardens for 50 years. Numerous teachers' and friends' help, advice, urgings, and expectations were treasured up in his memory and he has nothing to give them as a reward. This book is dedicated to teachers and friends who are concerned about botanical garden business. It is a pity that the old comrade, Party Secretary LI Ming, who threw herself into the construction of Nanjing Botanical Garden, passed away in the spring of 2003, and the book was completed without her valuable comments.
7. The authors especially appreciate a group of experts and assistants for their efforts in translating and editing the Chinese version of the book into the English version. The lead editors are Mr. GORHAM John, and Associate Prof. LIU Yulan. The assistants include XU Zenglai, LI Xinhua, WEI Jiguang, ZHANG Ming, ZHANG Yuchun, LI Mei, BAI Yiren and colleagues of the Translation and Editing Office, Chinese Agricultural Academy. Without their contribution it is impossible to have the book appearing in front of readers in English.





A bird's view of the famous Silisified Wood Garden in the world located in Fairy Lake BG, Shenzhen (Courtesy Shenzhen BG and by LIU Bijian)

Brief Introduction to the Book

The theory, methodology, technology, and achievements of research on botanical gardens worldwide are for the first time systematically reviewed and summarized, and form the foundation of Botanical Garden Science, **PHYTOHORTOLOGY**. Altogether there are 11 chapters.

- Chapter 1 Botanical Garden and Botanical Garden Science, PHYTOHORTOLOGY
- Chapter 2 The History of Botanical Gardens
- Chapter 3 Ex-situ Conservation in Botanical Gardens
- Chapter 4 Plant Introduction and Acclimatization in Botanical Gardens
- Chapter 5 The Greenhouse System in Botanical Gardens
- Chapter 6 Education in Botanical Gardens
- Chapter 7 Landscape Planning, Design, and Architecture in Botanical Gardens
- Chapter 8 The Operation and Administration of Botanical Gardens
- Chapter 9 Major Botanical Gardens in China
- Chapter 10 Characteristics and Review of World Famous Botanical Gardens
- Chapter 11 Major Botanical Gardens All Over the World

Chapters 1~8, as Part One, are the “General Introduction and Fundamental Theories and Principles of Botanical Garden Science, PHYTOHORTOLOGY,” and Chapters 9~11, as Part Two, are the text for “Individual Botanical Gardens.”

Major achievements in botanical gardens, including research on plant introduction and acclimatization, economic plants, and environmental plants, were presented in this book, and the authors have pointed out the direction and the way for botanical gardens to

serve the national economy. Principles and methods for plant conservation in botanical gardens were suggested. Based upon historical facts, the authors interpreted the dialectical relationship between “conservation” and “utilization”. In accordance with the true situation in China the “Developmental Strategy for the Chinese Botanical Garden System” was proposed. The use of modern information techniques for living collection records in botanical gardens was particularly discussed. The features and historical uniqueness of the development of greenhouses in botanical gardens both domestic and foreign were analyzed, and the role and the effectiveness of the demonstration of plant diversity in greenhouses were emphatically summarized. The particularity and foresight of scientific popularization (education programs) and tourism, as well as the complexity of operation and management in botanical garden, were discussed and concluded. The features of various art schools and styles in landscaping design, including ancient, modern, eastern and western were introduced and reviewed. The design and extent of landscape construction needed in Chinese botanical gardens were discussed.

Based on the achievements of the authors’ studies of innovations in concepts, theories and practice on plant introduction and acclimatization, ex-situ conservation and stress cultivation of medicinal plants, and plant diversity conservation and utilization in cities were presented.

Owing to the importance of visualization, more than 2,000 pictures were selected for this book to show and transfer the information, thought, feelings, and inspiration that could not be expressed by words and text alone. In addition, there are introductions to more than 200

individual botanical gardens all over the world in order to allow readers to easily recognize those botanical gardens, and to deepen their feelings and understanding as well as to create the thought leap in their minds. Many of those pictures were especially provided by botanical gardens both domestic and abroad.

This book is appropriate for readers including those who work in botanical gardens, on plant conservation,

for landscape and scenery areas and natural protected land, on city construction, on landscape art and architecture, in gardening and landscaping, on education, and policy makers and administration leaders.

This English version is translated from the Chinese version published in 2005. But, some new data and pictures are included to replace the original ones in order to present a little more updated information.

FOREWORD

A Review On This Book By Prof. WU Zhengyi

There are more than two thousand botanical gardens of various sizes and features all over the world. The oldest one (the Padova Botanical Garden), has existed for more than four hundred years, and the largest one, the Royal Botanic Gardens, Kew, has a living collection of more than forty thousand species of plants. Quite a few outstanding botanical research institutes are named as botanic gardens. While the history of botanical gardens in China is less than one hundred years, there are more than one hundred botanical gardens in China, and some are also local botanical research institutes. With all that being said, there has been no such discipline as “Botanical Garden Science” in the past four centuries, so that when Mr. HE Shan’an, et al., wrote this book on Botanical Garden Science, I would like to suggest a new term, PHYTOHORTOLOGY (or HORTOLOGY for short) had to be coined for this discipline in order to distinguish it from agriculture, silviculture, and horticulture. Why has no one in the world, aside from Chinese scholars, taken the initiative in writing a book on Botanical Garden Science? Personally, I believe it is because the development of botanical gardens has been so dynamic, comprehensive, and multi-faceted that no one has ever dared to pen such a book.

This book helps readers to recognize that the primary mission and major task of botanical gardens is the collecting of various types of living plants, with as many types as possible, from all over the world; conducting and registering the “census” of plants scientifically; and conserving plants and displaying them in the most beautiful way possible. In order to do so, we must make sure that the plants are able to survive and reproduce themselves in specific environments, and then to develop

and utilize these resources of species and germplasm. Such tasks are infinite, but we could and should “depict the infinite with the finite.” As a first step, a discipline should be created whose parameter is defined and described in the contents of the pages of this book. Let us celebrate this book, for it is the path that leads to discovering living treasuries.

“One would fail to see Mt. Lushan’s true face, when he is inside of the mountain.” In this sense, Botanical Garden Science is the most advanced stage of the development of botanical theory as it is combined with practice. Simply put, phytohortology is a study of the introduction of various wild plants from different places, including where they grow originally, so that they can grow and reproduce themselves unceasingly in an environment where all their needs are provided for. There is a lot to learn and a long way to go in this field, and this book takes us plant lovers, both scholars and laymen, back to a nature which is equally gorgeous, yet where human footprints are also seen collectively, in order to develop and utilize natural resources more and more properly, and to live in harmony with nature. I am now over ninety years old, and my eyesight is too deteriorated to read this book intensively. As a result, I could only read it briefly and came up with such a superficial review. I beg the author’s and readers’ pardon for that.

Based on the insights gained from over 40 years’ experience in establishing botanical gardens, as well as learning from over 240 famous botanical gardens around the world, the authors refined and sublimated the fundamental theories of the highly integrated and

multifunctional botanical gardens that will have long lasting benefits to mankind forever, in its primary methodology including scientific research, management, and popular science education, as well as the applied technologies involving, yet controlling invasive aliens, diseases and pests, into a science for the first time. Botanical Garden Science was established as an academic and systematic discipline, whose core is the fundamentals of how to conserve the diversity and reproducibility of plants. As a result, this book was born as the first and official introduction to the discipline of Phytohortology, which will also play a significant role in assisting and enlightening generations to come.

With the developmental history of botanical gardens all over the world as a background, and plant ex-situ conservation, introduction, and acclimatization as its key link, this book introduces the theories, methods, and techniques of Phytohortology to the readers systematically, comprehensively, historically, and dialectically. This book could be called an encyclopedia

of Phytohortology. Historically, gardens in China began with hunting gardens and water gardens such as “Ling-You Ling-Zhao”(灵囿灵沼) in the slave society, and imperial gardens such as “Shang-Lin-Yuan”(上林苑) and the “Fu-Li-Gong”(扶荔宫) in the most prosperous times of feudal society. However, these failed to evolve continuously into Chinese modern history. This book will promote and carry forward continuously the development of Chinese botanical gardens with the advantage of modern science and technology atop the foundation of development in ancient times. One of the unique characteristics of this book is that it is illustrated with more than 2,000 pictures which vividly show the readers various botanical gardens in the world. Some of those pictures were taken especially for this book. It is undoubtedly a fresh and dynamic textbook which is beneficial to its readers. It is such a pity that I, as the reviewer, could not enjoy reading the book in depth, because of my poor eyesight. In conclusion, this is a masterpiece, an excellent book that makes a great contribution to the botanical garden enterprise in the world.

《植物园艺学》评论

尽管世界已有两千多个大小不等,内容各异的植物园,其中最老的已年过四百,收集栽培世界活植物达四万种以上(英国皇家邱园),世界上不少有名的植物学研究机构,就以植物园命名;我国植物园历史虽不足百年,现已有百余之多,也有一些就是该地的植物学研究机构;然而四个世纪至今,世界上还没有出现过任何一种“植物园艺学”。有之,乃从贺善安先生等五人合著的“植物园艺学”始,无以名之,就以“Phytohortology”(也可简称“Hortology”)命名或许可以吧,为的是别于农 Agriculture, 林 Siloiculture, 园艺 Horticulture 等等。为何这样?个人认为可能是因为不断发展的植物园事业是如此的鲜活、复杂和丰富,以致无人敢动笔,而被我国学者捷足先登。从本书内容可以认识到植物园的主要任务和目的,是要把任何地区(乃至全球)、任何类群(乃至尽可能多的类群)的活植物集中起来,把“植口”科学登记起来,有效的保存下来,尽可能美妙地展示出来,首先让它们在特定的环境中活下来,繁衍下去,进而从中发展和利用这些物种资源乃至种质资源,保存下来,发展出去。这是一个无穷大的事业,我们就是要“以有涯无涯”,首先就要让它形成一个学科,而这个学科的“涯岸”就是本书各章的界定和所叙述的内容。我们将为此而欢呼,因为这个活宝宝库将有门径可寻了。

“不识庐山真面目,只缘身在此山中”。植物园学在这个意义上是植物学理论结合实际而发展的高级阶段。植物园学说白了就是把多种多样自然生长的植物,从各处也从本处引种过来,让它们各得其所,生生不已,样样俱全,这中间学问可大了。让这本书带我们这些植物迷(包括学者和大众)回到一个同样绚丽多彩,但更集中展现其带有类烙印的大自然的怀抱里,逐渐做到合理开发利用大自然,和大自然和谐共处。我已年过九十,没有足够眼力,去精读这本书,只能远观而粗评之,尚希作者和读者原谅。

作者们以四十余年建园的和向达 240 个以上的世界名园学习的心得,首次将“植物园”这一个高度综合的、多功能的“千秋功业”有关的基础理论、主要方法(包括科学研究、经营管理和科普教育)以及应用技术(直到入侵外来种和病虫害控制),提炼升华为一门科学,而使之学科化、系统化,从而上升到

基础理论,其核心就是如何保存植物的“生物多样性”和“可再生能力”。从而成为正式提出“植物园学”这门学科的第一本书,必将起到“佑启后人”的作用。全书以植物园在世界各国的历史发展为背景,以迁地保护和引种、驯化为纲,将植物园学的理论和技术系统地,全面地,历史地,辩证地介绍给读者,可以说是植物园事业的百科全书。将使我国植物园在中断了的奴隶社会的“灵囿灵沼”,封建社会极盛时期的“上林苑”、“扶荔宫”等等,在近代科学技术的基础上发扬光大。本书特点尤其在于 2000 余幅彩照,将全世界各式各样的植物园展现在读者面前,很多图幅是专为本书提供的,无疑这是一本有关读者的新鲜活泼的教材。可惜评论者因为年老患严重的眼病,不得遨游其间,深以为憾。总之,这是一本力作,也是本好书,对全世界的植物园工作也作出了贡献。

吴征镒

2006年2月20日

PREFACE

The modern botanical garden is originated from European culture. Up to now it has been a history of more than 400 years, but there is no comprehensive and systematic research or summarization of this field. In China the botanical garden system was begun in the early 1920s or 1930s, and it was introduced from the West along with other modern sciences and technologies. Thus, the Chinese botanical garden system has a history of less than one century, and its major developmental period was only the second half of that century with the founding of the People's Republic of China. There are more than one hundred botanical gardens in China. Compared with more than 2,800 botanical gardens total in the world, this is not insignificant, and the speed of growth is relatively rapid. Chinese botanical gardens gradually and thoroughly learned from the history, direction, and task of botanical gardens in the world. However, the direction and task of botanical gardens has also changed following the change of historical periods. In China the direction and task of botanical gardens is also a lively topic, and the discussion has never stopped. It is difficult to have a relative consensus among most people. Facing our ever-changing global situation, it is difficult for botanical gardens to regulate the direction of development for the time being.

It is necessary to study and to understand the history and the true nature of world botanical gardens in order to make wise policy decisions for the development of Chinese botanical gardens with a view to China's features and current status, to know the truth, and to delicately guide the way. A botanical garden is a kind of comprehensive scientific institute. The task for a botanical garden changes from one era to another, and from one region to another.

The size, style, and features of a botanical garden are unique to each one, and sometimes quite different from other gardens. In China recently, there have been some botanical gardens that have made their character and task diverge to a certain extent from the true purpose of a botanical garden. In fact, the garden's true purpose must never be altered.

There is a great amount of literature on botanical gardens in the world. But much only briefly touches on the true nature of the gardens, and the majority of those written material are merely either introductions to, or tour guide materials for, botanical gardens. Going through those materials, it is obvious for people to see that there were many "glories" and "low ebbs" in a great number of botanical gardens all over the world within the past several hundred years. "glories" are the achievements gained by botanical gardens, and "low ebbs" reflect the neglect from societies and communities that caused botanical gardens to have difficulties in maintaining themselves. The material covering the deep implications and challenges to botanical gardens is very slight and scattered up to now, and there is no single book with a serious, comprehensive analysis and summarization of botanical gardens. The aim of this book is on target for summarizing the costly experiences of the world's botanical gardens, and for searching out the internal and external reasons for the change of the botanical garden's features and task over the different historical stages. It also clarifies a series of basic and important facts about, and challenges to, the development of botanical gardens all over the world. These include "the source, flow, rise, and decline," as well as the relation of "the master, the assistant, the lead

singer, and the follower,” by observing the inner essence through the outward appearance. The strategy for the development of Chinese botanical gardens should be figured out based upon all these facts and conclusions, as well as upon the current practical situation in China.

The totality of comprehension, intersection, and uniqueness of scientific aspects, as well as the diversity of activities, the wide-ranging connection with people, and the directorial function in enlightening people to exist harmoniously with nature—all these are more and more clearly presented in this book’s analysis of the development of modern botanical gardens. Therefore, Phytohortology or Hortology (Botanical Garden Science), is becoming a branch of biological science, and an independent discipline. It is a new discipline highly interwoven with both the natural and social sciences.

Because of the issues of global ecological problems, botanical gardens have gained a greater concern for their functions in plant conservation and environmental protection. Nevertheless, the traditional and important role of botanical gardens in the exploration of new plant resources (especially wild plant resources), must never be abandoned. The guiding role of botanical gardens in scientific popularization and tourism cannot be neglected, either. More concerns have been thrown on botanical gardens because of their functions in the city’s ecology and landscape construction, and especially their support in improving city’s ecological construction by biodiversity and the knowledge of plant environments. Botanical gardens display and demonstrate the progress and history of the people’s civilization through their glorious plant heritage. Because of all these reasons, the botanical garden is far from the concept of “a place for plant introduction and acclimatization” defined simply during the 1960s or 1970s in China. It is considered as a specific field of plant science to be researched and developed.

Since Phytohortology possesses strong and broad comprehensiveness, it may have some overlap with other scientific disciplines. Although this is unavoidable, it should have its own specific field, and should not be too much overlapped with agronomy, forestry, horticulture, landscaping science, gardening science, tourism science and popular education, etc. This book’s primary focus includes the following: the botanical garden’s historical mission; professional function; roles of plant collection and conservation (especially ex-situ conservation); plant introduction and acclimatization; exploration and utilization of economic plants; construction of plant environment in cities; display of biodiversity; popularization of botany; and botanical garden master planning and design.

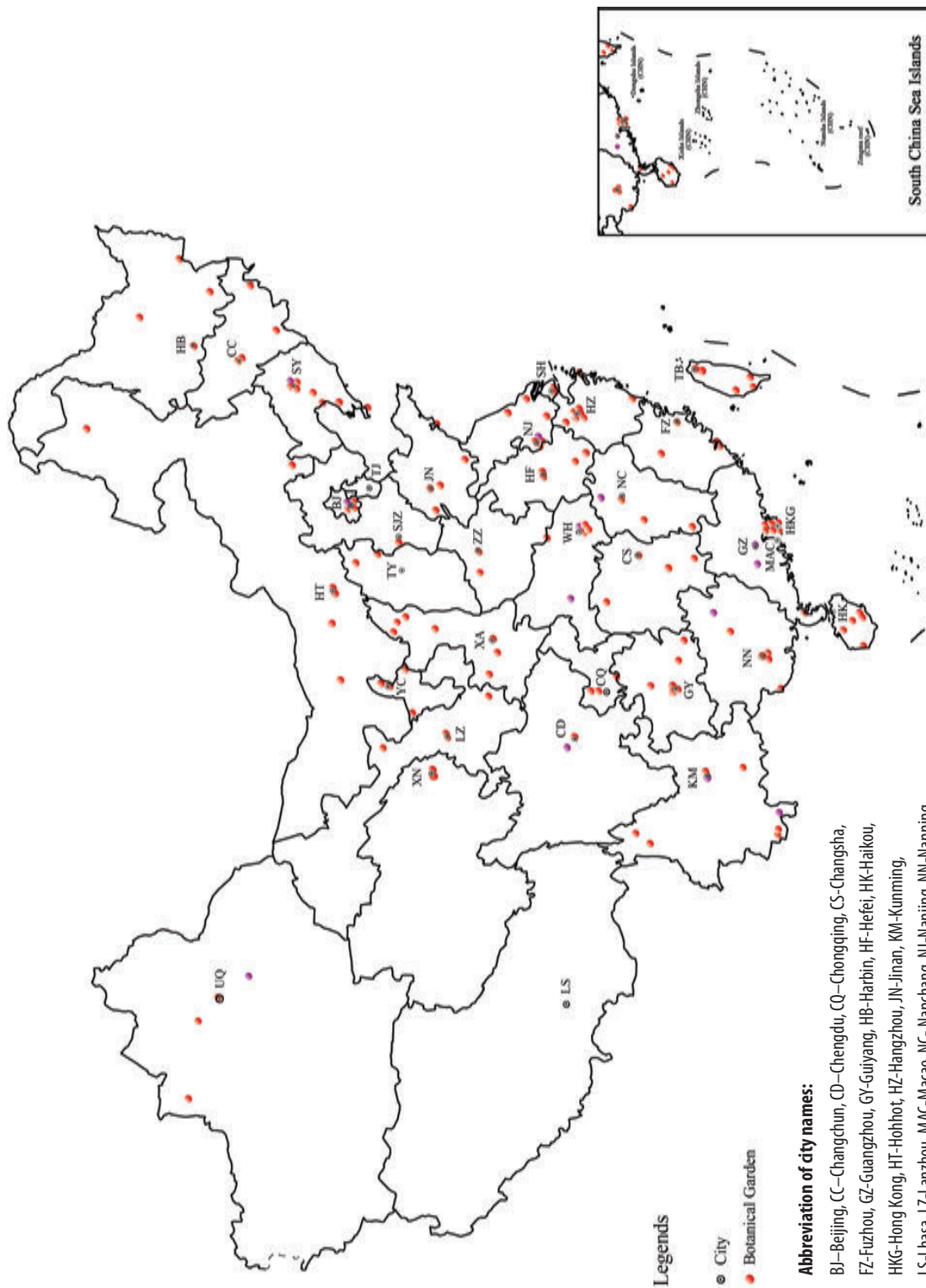
The book is titled PHYTOHORTOLOGY and it is a new term suggested by Chinese academician, Professor WU Zhengyi. Although most of the authors have been working in botanical gardens for more than 40 years even 50 years, and although some have held the leading position for 20 years or more, it is still a big challenge for them to recognize, understand, explain, and develop this new discipline. For this reason, it is important to study a great number of botanical gardens. Therefore, there are three chapters: 9, 10 and 11, that include more than 240 selected botanical gardens in this book to exemplify the information about botanical gardens around the world. Certainly, this number is still a small part, as there are more than 2,800 botanical gardens in total.

The authors would like to applaud the glories and innovations of botanical gardens worldwide with this book in the new century, and welcome comments on this book from their friends and colleagues.

HE Shan

December 10, 2015

The distribution of major botanical gardens in China*



*This distribution map is based on the data from the book *Botanical Garden Science* (in Chinese) published in 2005.

Abbreviation of Chinese Botanical Garden Names

Name	Abbreviation
Anhui Biological Institute Botanical Garden	Anhui I BG
Anji Bamboo Garden	Anji B BG
Anshan 219 Botanical Garden	Anshan 219 BG
Baoding Botanical Garden	Baoding BG
Baoji Botanical Garden	Baoji BG
Baotou Landscape Institute Arboretum	Baotou L Arb
Bayi Agricultural University Wild Economic Botanical Garden	Bayi WE BG
Beijing Botanical Garden, CAS	Beijing (I) BG
Beijing Education Botanical Garden	Beijing Edu BG
Beijing Medicinal Botanical Garden	Beijing M BG
Beijing Municipal Botanical Garden	Beijing (M) BG
Central South University of Forestry and Technology Botanical Garden	Central South F BG
Changbaishan Botanical Garden	Changbaishan BG
Changchun Forestry Botanical Garden	Changchun F BG
Changchun Zoo and Botanical Garden	Changchun Z BG
Chaozhou Botanical Garden	Chaozhou BG
Chengdu Botanical Garden	Chengdu BG
Chifeng Arboretum	Chifeng Arb
Chongqing Botanical Garden	Chongqing BG
Chongqing Flower Garden	Chongqing F G
Chongqing Medicinal Botanical Garden	Chongqing M BG
Chongqing Nanshan Botanical Garden	Nanshan BG
Chongqing Three Gorges Precious & Rare Botanical Garden	Three Gorges PR BG
Dalian Botanical Garden	Dalian BG
Dalian Yinggeshi Botanical Garden	Yinggeshi BG
Datong Botanical Garden	Datong BG
Daxing'anling Frigid-temperate Forestry Botanical Garden	Daxing'anling FF BG
Dengkou Psammophyte Botanical Garden	Dengkou Ps BG
Dezhou Botanical Garden	Dezhou BG
Dinghushan Mountain Arboretum	Dinghushan Arb
Dongfeng Forestry Botanical Garden	Dongfeng F BG
Dongguan Botanical Garden	Dongguan BG
Donghu Moshan Landscape Botanical Garden	Donghu ML BG

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Dujuancun Botanical Garden	Dujuancun BG
Fushan Botanical Garden	Fushan BG
Fuzhou Arboretum	Fuzhou Arb
Guangxi Liuzhou Karst Botanical Garden	Liuzhou K BG
Guangxi Medicinal Botanical Garden	Guangxi M BG
Guangxi Shishan Arboretum	Shishan Arb
Guilin Botanical Garden	Guilin BG
Guizhou Botanical Garden	Guizhou BG
Guizhou Forestry Academy Arboretum	Guizhou F Arb
Guizhou Kaili Arboretum	Kaili Arb
Guizhou Medicinal Botanical Garden	Guizhou M BG
Guizhou Xiaolongli Subtropical Alpine Botanical Garden	Xiaolongli BG
Guizhou Zunyi Arboretum	Zunyi Arb
Hainan Forestry Institute Arboretum	Hainan Arb
Hainan Tropical Economic Botanical Garden	Hainan BG
Hangzhou Botanical Garden	Hangzhou BG
Hangzhou Medicinal Botanical Garden	Hangzhou M BG
Hefei Botanical Garden	Hefei BG
Heilongjiang Forestry Botanical Garden	Heilongjiang F BG
Heilongjiang Shihe Arboretum	Shihe Arb
Hengchun Tropical Botanical Garden	Hengchun T BG
Hong Kong Kadoorie Farm & Botanic Garden	Kadoorie F BG
Hong Kong Ocean Park	HK Ocean P
Hong Kong Zoological & Botanical Park	Hongkong Z BP
Huanghe Tourism District Botanical Garden	Huanghe T BG
Huangshan Arboretum	Huangshan Arb
Huaxi Subalpine Botanical Garden	Huaxi Sa BG
Hohhot Arboretum	Hohhot Arb
Hohhot Botanical Garden	Hohhot BG
Hunan Forestry Botanical Garden	Hunan F BG
Hunan Forestry Institute Nanling Botanical Garden	Nanling BG
Hunjiang Arboretum	Hunjiang Arb
Jianfengling Tropical Botanical Garden	Jianfengling T BG
Jiangxi Forestry Academy Nanchang Arboretum	Nanchang Arb
Jiayi Arboretum	Jiayi Arb
Jigongshan Mountains Botanical Garden	Jigongshan M BG
Jinan Botanical Garden	Jinan BG
Jiuhuashan Botanical Garden	Jiuhuashan BG
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