



# 中国常见贸易兰花识别手册

## *Identification Manual for Orchids Common in Trade in China*

中华人民共和国濒危物种进出口管理办公室  
中国野生植物保护协会兰花保育委员会

主 编



中国林业出版社

# 中国常见贸易兰花识别手册

---

中华人民共和国濒危物种进出口管理办公室 主 编  
中国野生植物保护协会兰花保育委员会

中国林业出版社

## 图书在版编目 (CIP) 数据

中国常见贸易兰花识别手册/中华人民共和国濒危物种  
进出口管理办公室,中国野生植物保护协会兰花保育委员  
会编.—北京:中国林业出版社,2008.7

ISBN 978-7-5038-5086-8

I. 中… II. ①中… ②中… III. 兰科—花卉—识别—  
中国—手册 IV. S682.31

中国版本图书馆 CIP 数据核字 (2007) 第 152598 号

出 版 中国林业出版社  
地 址 北京市西城区德内大街刘海胡同 7 号  
邮政编码 100009  
网 址 [www.cfph.com.cn](http://www.cfph.com.cn)  
E-mail [cfphz@public.bta.net.cn](mailto:cfphz@public.bta.net.cn)  
电 话 010-66184477  
发 行 新华书店北京发行所  
设计制作 北京佳虹文化传播有限责任公司  
印 刷 北京新华印刷厂  
版 次 2008 年 7 月第 1 版  
印 次 2008 年 7 月第 1 次  
开 本 128mm × 213mm 1/32  
印 张 8  
定 价 88.00 元

# *Identification Manual for Orchids Common in Trade in China*

---

## **Co-editorial Units**

The Endangered Species Import and Export Management Office of  
the People's Republic of China,

Orchid Conservation Committee, China Wild Plant Conservation Association

China Forestry Publishing House

# 中国常见贸易兰花识别手册 编辑委员会

**主编单位** 中华人民共和国濒危物种进出口管理办公室  
中国野生植物保护协会兰花保育委员会

**赞助单位** 嘉道理农场暨植物园赞助部分出版费

**主 编** 赵学敏

**副 主 编** 陈建伟 郎楷永 萧丽萍 刘仲健

**执行主编** 于永福

**编 委** (按汉语拼音顺序排列)

范志勇 龚立民 李晓清 孟 沙 孟宪林 万自明  
巫宗泽 袁继明 翟保国 张 旗 张 月 张志忠  
周亚非 周志华

**编写人员** (按汉语拼音顺序排列)

方 艳 黄晓珍 鲁兆莉 于永福 袁良琛 翟保国

**Co-editorial Units**

The Endangered Species Import and Export Management Office of the People's Republic of China  
Orchid Conservation Committee, China Wild Plant Conservation Association

**Sponsor**

Kadoorie Farm and Botanic Garden Corporation sponsored a part of the publication cost

**Editor in-chief**

Zhao Xuemin

**Deputy Editors in-chief**

Chen Jianwei, Lang Kaiyong,  
Gloria L.P.Siu, Liu Zhongjian

**Executive Editor**

Yu Yongfu

**Members of the  
Editorial Committee**  
(in alphabetical order)

Fan Zhiyong, Gong Limin, Li Xiaoqing,  
Meng Sha, Meng Xianlin, Wan Ziming,  
Wu Zongze, Yuan Jiming, Zhai Baoguo,  
Zhang Qi, Zhang Yue, Zhang Zhizhong,  
Zhou Yafei, Zhou Zhihua

**Editors**  
(in alphabetical order)

Fang Yan, Huang Xiaozhen, Lu Zhaoli,  
Yu Yongfu, Yuan Liangchen, Zhai Baoguo

由中华人民共和国濒危物种进出口管理办公室和中国野生植物保护协会兰花保育委员会共同主编的《中国常见贸易兰花识别手册》在即将出版之际,邀请我作序。我阅读着这部由专家、学者和兰花保护管理工作精心编撰的书稿,被这些科研人员和保护管理工作对兰花保育事业的由衷热爱所感动,他们几十年如一日地潜心钻研兰花的遗传学特征,为后人研究甄别兰花品种提供了良好的教材。为鼓励他们今后继续搞好兰花保育乃至对整个野生动植物保护事业做出更大的贡献,我欣然为该书作序。

兰科植物俗称兰花,是有花植物中最大的家族之一。全世界约有700余属20000多种。兰科植物具有重要的生态价值,它像其他动植物一样,是生物多样性链条中的一个重要环节和组成部分,在植物系统演化中占有十分重要的地位。兰科植物具有重要的经济价值。它作为观赏花卉,比如蝴蝶兰、大花蕙兰、石斛等,以其色彩艳丽、花形独特而为世人所珍爱,成为花卉中的奇葩;它作为药用植物,比如石斛、白及等,是重要的中药材,而且在现代医药中发挥着越来越重要的作用。兰科植物的开发利用已成为当代生物产业中的一个产业。

我国是兰科植物的重要分布国,兰花资源十分丰富,野生兰科植物达170余属1200多种。其中许多经济价值较高的为我国特有种。长期以来,由于盲目采集和不合理的开发利用,特别是过度的国际贸易,导致野生兰科植物资源遭受严重破坏。尤其是兜兰类和国兰中的地生种类,更是遭到灭绝性的破坏。野生兰科植物已成为珍稀的濒危植物而受到国际社会的高度关注。为此,《濒危野生动植物种国际贸易公约》(CITES)将所有兰科植物种列入公约附录,实施严格的管理措施。

中国政府十分重视兰科植物的保护和管理。1980年我国正式加入CITES后,按照公约的规定,对兰科植物的进出口实行了严格的管理。1996年,国家颁布了《中华人民共和国野生植物保护条例》,对野生植物的保护和管理做出了明确的规定,为野生植物的保护和管理提供了法

律基础。2000年,国家正式启动了“全国野生动植物保护及自然保护区建设工程”,将兰科植物列入十五大重点保护物种工程项目,实行优先保护,并取得了积极的成效。为了防止过度的国际贸易对野生资源的影响,1998年,中华人民共和国濒危物种进出口管理办公室和海关总署联合制定了《进出口野生动植物种商品目录》,将所有兰科植物种列入其中,实行允许进出口证明书管理,海关凭证检查监督,严厉打击了走私犯罪活动,有效地防止了野生资源的流失和破坏。

我国兰花人工栽培具有悠久历史,被称为“国兰”的春兰、建兰、墨兰、寒兰、蕙兰早在古代就有大量的栽培,并形成了中国独特的兰花文化。近些年来,随着国外杂交兰花品种和技术的引进,兰花人工栽培业迅速发展,国内市场活跃,进出口贸易激增,我国已成为世界兰花的主要生产和消费国家之一。

为了加强兰科植物进出口管理,方便海关和执法部门查验监督工作,根据我国兰科植物的贸易特点,本书介绍的222种(包括杂交种)兰花大多数是国际贸易中的常见物种,另外,还选择介绍了部分虽少见于国际贸易,但走私较为严重或国内利用较多的物种,以便于对比鉴别。

本书文字描述简洁,图片特征典型,介绍了物种的形态特征、生物学特性、分类、分布及保护级别等,通过查阅对照,可以较快地对有关物种进行鉴别,从而便于有关部门和人员进行现场查验工作,同时,本书图文并茂、通俗易懂,不失为执法培训、宣传教育的好教材。希望该书对加强兰科植物进出口管理,认真履行国际公约,强化执法监督,促进我国兰科植物保护事业发挥应有的作用。

国 家 林 业 局 副 局 长  
中华人民共和国濒危物种进出口管理办公室 主 任

赵学敏



I am very thankful to and touched by the great work done by the various contributors to this book. This includes academics, experts and staff for conservation and management of orchids that are dedicated to and passionate on orchid research and conservation over the past decades. This book "*The Identification Manual for Orchids Common in Trade in China*", which is jointly compiled by the Endangered Species Import and Export Management Office of the People's Republic of China (the CITES Management Authority of China) and the Orchid Conservation Committee of the China Wild Plant Conservation Association, formed a very good reference material for rapid identification of common orchid species in trade. I take this opportunity to compliment their great efforts and encourage them to carry on the good work on orchid conservation in future.

Orchids are members of the Orchidaceae which is one of the largest families of flowering plants in the world that comprises about 20,000 identified species in about 700 genera. Orchids have an important ecological value. Similar to other animals and plants they are an important part of the biodiversity system, and have an important position in plant evolution. Orchids also have important economic value both as ornamental plants such as the colourful, peculiar and unique Moth Orchids, Cymbidiums and Dendrobiums, as well as medicinal plants such as *Dendrobium* spp. and *Bletilla striata* that are important herbal medicine in the modern Chinese medicine practices. The use of orchids is indeed becoming an important part in the biological industry nowadays.

China is rich in orchid resources and is also important in terms of orchid distribution. There are about 1,200 species of wild native orchids in about 170 genera in China, of which some are of high economic value and are endemic to China. However, due to long term over exploitation and unreasonable utilization, especially in international trade, wild orchid

resources has suffered substantial set back. Among which many of the native *Paphiopedilum* spp. and terrestrial Chinese *Cymbidiums* are at the edge of extinction. Wild orchids have become a major concern for protection in the international community as many of them are rare and endangered worldwide. Therefore all species of wild orchids are included in the CITES Appendices for straight management procedures.

The Chinese Government is extremely concerned over the protection and management of orchids. China has rectified CITES since 1980 and we have been regulating the import and export trade of orchids according to the straight requirements of CITES. In 1996 the "China Wild Plant Protection Ordinance" was passed. This Ordinance set aside clear regulations for the protection and management of wild plants, which provides the legal basis for the protection and management of wild plants. China has started the "National Wildlife Conservation and Nature Reserve Construction Programme" in 2000. Orchidaceae plants were put into one of the 15 key wildlife protection groups for priority actions and has made some positive results to date. In order to minimize the impact on native plant resources by excessive international trade, the Endangered Species Import and Export Management Office of the People's Republic of China and the General Administration of Customs jointly compiled the "List of Wildlife Commodities for Import and Export" in 1998. All orchid species were included into the List and their import and export trade were regulated by a certification system which is monitored by the Customs. Smuggling of wild plants was straightly prohibited and thus the damage and loss of wild plant resources were effectively prevented.

There has been a very long history for the cultivation of orchids in China. In particular the large scale cultivation of "Chinese *Cymbidiums*" such as *Cymbidium goeringii*, *Cymbidium ensifolium*, *Cymbidium sinense* (Ink Orchid) and *Cymbidium kanran* has been practiced ever since ancient China, which also nurtured a very special and unique "orchid culture" in China. In recent years, due to the introduction of orchid hybrids and the

hybridization technique from abroad, the orchid cultivation industry has rapidly developed in China. Both the domestic market and import-export trade have increased substantially in the recent past making China one of the major producers and consumers of orchids worldwide.

In order to strengthen the management of import and export trade, facilitate the Customs and other enforcement officers' monitoring and regulatory work, and base on the characteristic of orchid trade in China, we selected 222 species (including hybrids) of orchids into this *Identification manual*. The species included in this book are commonly seen in international trade. In addition, other species that may be less common in international trade but are more seriously threatened by smuggling or over exploited within the country are also included in order to facilitate identification.

In this book, relevant information of each species such as their morphological and biological characteristics, taxonomy, distribution and conservation status were illustrated by concise descriptions and photographs. With the aid of this *Identification manual*, it is easy for relevant enforcement officers to identify and verify species on the spot. Moreover, this book is easy to read and with plentiful photographs, which makes it a very good tool for the training of law enforcement staff as well as raising awareness and general education for the public. I sincerely hope that this book will make a contribution in strengthening the regulation of import-export of orchids, the implementation of international treaty, strengthening law enforcement and hence the protection of orchids in China.

Zhao Xuemin

Vice Minister, State Forestry Administration

Director General, the Endangered Species Import and Export  
Management Office of the People's Republic of China

( Translation by Lawrence K.C. Chau 翻译 / 周锦超 )

图1 兰花的结构



◆ 典型的兰花



◆ 花瓣



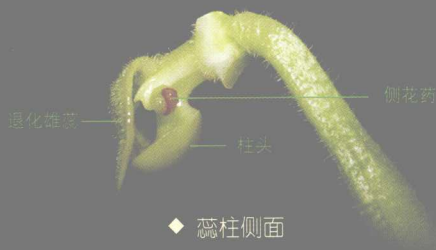
◆ 蕊柱和花粉块



◆ 萼片



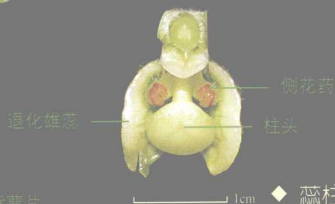
◆ 兜兰的花



◆ 蕊柱侧面



◆ 兜兰背面



◆ 蕊柱背面



◆ 兜兰侧面

2.有3片花瓣。其中一片称为“唇瓣”，其构造一般非常精巧，对兰花的传粉起着重要的作用，可作为传粉者的降落平台。

3.有3片萼片。有些种与花瓣在形状、颜色及质感上相似，有些种与花瓣却不相同。

花朵形状一般是左右对称。

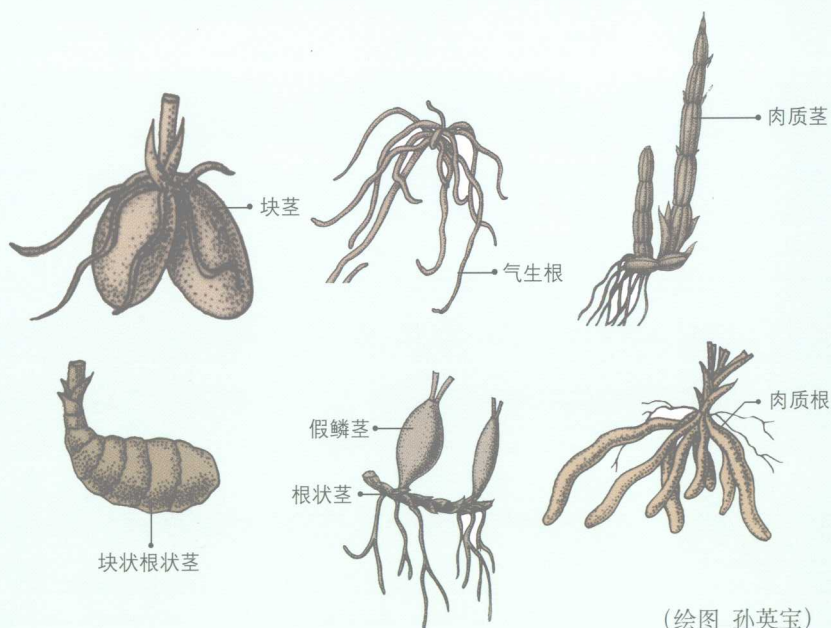
### 依据兰花的生长习性，主要可分作3大类

1.地生兰：生长于泥土上，如墨兰 (*Cymbidium sinense*)。

2.附生兰：依附在岩石或树干、枝条表面，从其生存环境中取得充足的阳光和养分，而不是从依附的活树中吸取养分，如美花石斛 (*Dendrobium loddigesii*)。

3.腐生兰：从朽木或其他有机物质中摄取养分，如虎舌兰 (*Epipogium roseum*)。

由于生长习性的不同，兰科植物也演化出不同的根、茎、叶等结构来适应其生存的环境 (图2)。

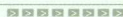


(绘图 孙英宝)

图2 兰科植物根、茎结构

# General Introduction to Orchidaceae Plants

---



## Orchidaceae Plants in the World

Plants of the Orchidaceae family are commonly known as orchids (Lan Hua). Orchidaceae is one of the largest families of flowering plants in the world. Although orchids occur naturally almost everywhere, from the tropics to temperate zones, and in both humid and dry climates, most of the group's diversity exists in the tropics. Over 100,000 hybrids and varieties produced by hobbyists and commercial growers since the 1850s.

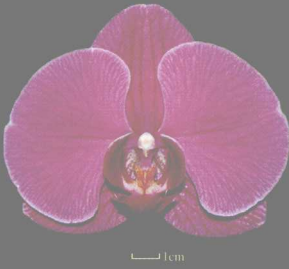
Many orchids are very beautiful and have attracted the fancy of people in both the East and the West since ancient times. The first batch of *Cymbidium* species from China, such as *C. ensifolium* and *C. aloifolium* were introduced to Europe at the beginning of the 18th Century. The exotic beauty of large and colourful orchid flowers from the tropics stunned plant lovers in Europe as early as the mid 18th Century. In fact, the first tropical orchid that flowered in England, at Kew Gardens, was *Phaius tankervilleae*, which was introduced from China in 1778. Nowadays, orchids with unique and colourful flowers are popular in international flower markets.

## Orchidaceae Plants in China

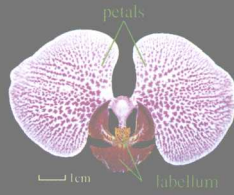
The diversity of orchidaceae is very rich and unique in China, as the country spans the tropical, sub-tropical and temperate zones. More than 1,200 species in about 170 genera recorded (of which about 400 species are endemic to China) so far, making Orchidaceae one of the top three families of flowering plants in China. China is also the distribution centre of the genera of *Cypripedium*, *Pleione* and *Holcoglossum*. Many of the wide orchids of China are famous worldwide. For example, some species and varieties of the genera *Paphiopedilum*, *Cypripedium*, *Pleione*, *Dendrobium*, *Cymbidium*, *Calanthe*, *Vanda* and *Aerides* etc. have high ornamental and medicinal values. In China, there has been a history of more than 1,000 years of cultivation and admiration of Chinese *Cymbidiums* (e.g. *Cymbidium goeringii*) since the late Tang Dynasty (circa 800 AD). Chinese *Cymbidiums*, which often appealed to elegance of educated people of that time, have now become very popular with orchid lovers from every strata of society. Of these, *Paphiopedilum armeniacum*, *P. malipoense*, *P. micranthum*, *Pleione forrestii*, *P. yunnanensis* and *Cymbidium sinense* (Ink Orchid) are the most well-known ornamental flowers all over the world. The "Zheng Lei Ben Cao" (A Diagnosis of Medical Herbs), which was published in the North Sung Dynasty (960 to 1127 AD) had the earliest wood engravings of medicinal orchids (*Gastrodia elata* and *Dendrobium* sp.) in China. As a result of field surveys and studies on wild orchids in the past 10 years, new to science species (e.g. *Anoectochilus nanlingensis*, *Bulbophyllum tianguii*) and new recorded genera and species (e.g. *Paphiopedilum helenae*, *P. spicerianum*) were found. Orchidaceae plants undoubtedly are a part of the valuable asset of natural resources of China, their fate rely on good conservation work, sustainable utilization and development, which is based on sound scientific researches.



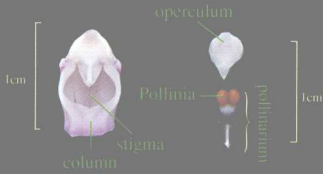
Figure 1. Flower structure of orchids



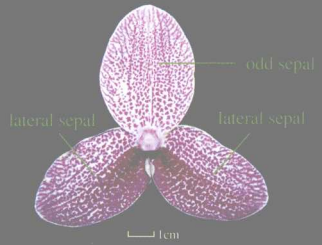
◆ A typical orchid flower



◆ Petal arrangement of a typical orchid flower



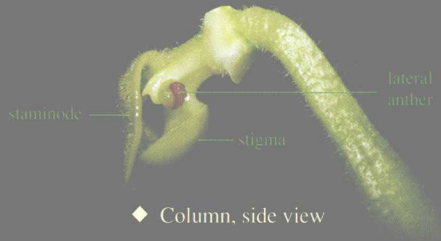
◆ A column and pollinia



◆ Sepal arrangement of a typical orchid flower



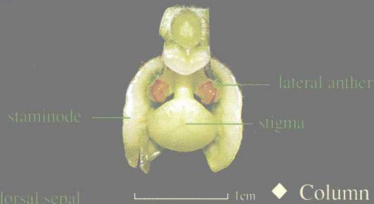
◆ An example of a slipper orchid flower



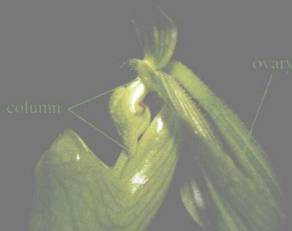
◆ Column, side view



◆ Slipper orchid flower, back view



◆ Column from below



◆ Slipper orchid flower, side view

## Identification of Orchidaceae Plants

Orchidaceae plants are distinguished from other flowering plants by their unique flower structure. The typical orchid flower possesses the following structures (Figure 1).

1. Column (sexual structure), the male and female reproductive organs united into a columnar structure.

2. 3 petals, one of them is called the Lip (or Labellum), which is highly specialized for functions such as providing a landing platform for insect pollinators. This structure often plays an important part in orchid pollination.

3. 3 sepals, some species may be similar to while others are different from the petals.

Each flower generally is bilaterally symmetrical.

## According to their growth habits, orchids can be divided into 3 main groups

1. Terrestrial Orchids-those grow in soils, such as *Cymbidium sinense*.

2. Epiphytic Orchids-those attach on rocks &/or tree trunks and branches, and take sunlight and nutrient from the environment to make their own food through photosynthesis, such as *Dendrobium loddigesii*.

3. Saprophytic Orchids-those obtain nutrient from decaying wood or other organic matter, such as *Epipogium roseum*.

Due to the differences in their growth habits, orchids have evolved different structures on their roots, stems and leaves to adapt to the living environment (Figure 2).

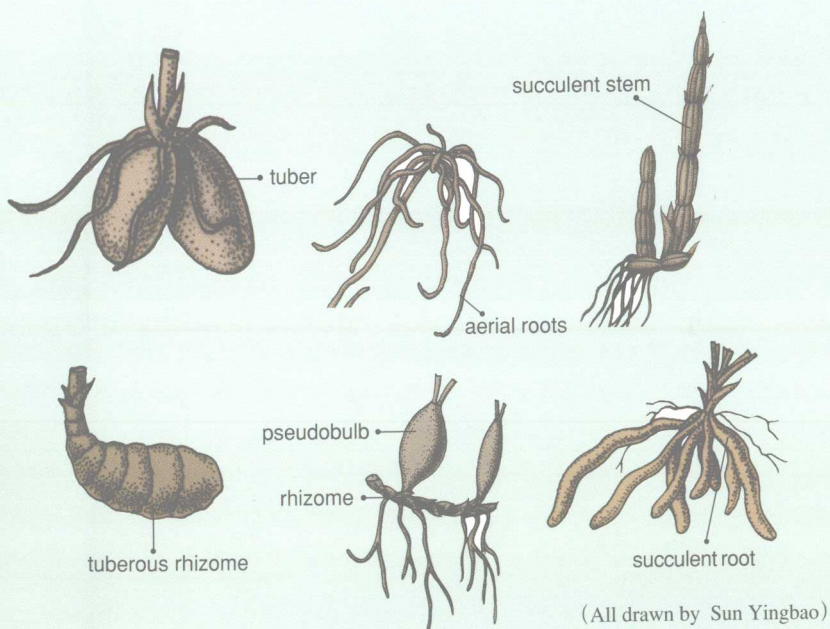


Figure 2. Roots and stems of orchids



# 兰科植物简介

□□□□□□□□

## 全球的兰科植物

“兰花”为兰科植物的俗称，这是全球显花植物中最大的一个科。野生兰花的生长几乎遍布全球，不论从热带至温带地区，还是在气候湿润或干燥地区，都能发现兰花的芳踪，但主要分布于热带地区。自1850年至今，经兰花爱好者及商业化的种植者悉心繁育出来的兰花杂交种超越100 000个。

千娇百媚的兰花吸引了古今中外人士的赞赏。早在18世纪初，已有第一批源自中国的兰属植物引种至欧洲，如建兰(*Cymbidium ensifolium*)及纹瓣兰(*Cymbidium aloifolium*)等。在18世纪中叶，欧洲引自热带、花大且艳丽的兰花更叫不少植物爱好者赞叹不已。事实上，第一种在英国(皇家植物园邱园)开花的热带兰花——鹤顶兰(*Phaius tankervilleae*)正是于1778年从中国引入的。现今，不少形态独特及色彩艳丽的兰花已享誉于国际花卉市场。

## 中国的兰科植物

中国跨越热带、亚热带及温带，兰科植物资源丰富而独特，是我国显花植物中三大科之一。已记录的有170多属，1 200多种，当中约有400多个特有种。中国更是杓兰属、独蒜兰属及槽舌兰属的分布中心。全国野生兰中不乏世界著名的花卉名种，例如兜兰属、杓兰属、独蒜兰属、石斛属、兰属、虾脊兰属、万代兰属及指甲兰属中的一些种和变种就有很高的观赏与药用价值。我国自唐朝末年(公元9世纪下半叶)，即距今1 000多年前已有规模化的国兰栽培(如春兰 *Cymbidium goeringii*)。国兰在深受大众赞赏之余，更被文人雅士视为高洁优雅的象征。杏黄兜兰(金兜/金童)、麻栗坡兜兰、硬叶兜兰(银兜/玉女)、黄花独蒜兰、云南独蒜兰及墨兰等更是举世知名的观赏花卉。北宋时期出版的《证类本草》留下我国最早的药用兰花(天麻和石斛)木刻图。经过近10年来科研人员不断的野外调查与研究，发现了不少新种(如南岭齿唇兰、天贵卷瓣兰等)及中国新记录属和种(如海伦兜兰、白旗兜兰等)。兰科植物确是我国珍贵的野生资源，必须建基于科学研究，有序地作出保育，可持续地利用与发展。

## 兰科植物的识别

兰科植物拥有独特的花形结构而有别于其他显花植物。典型兰科植物的花具有下列的结构(图1)。

1.蕊柱(有性结构):融合有雄性及雌性生殖器官的柱状结构。