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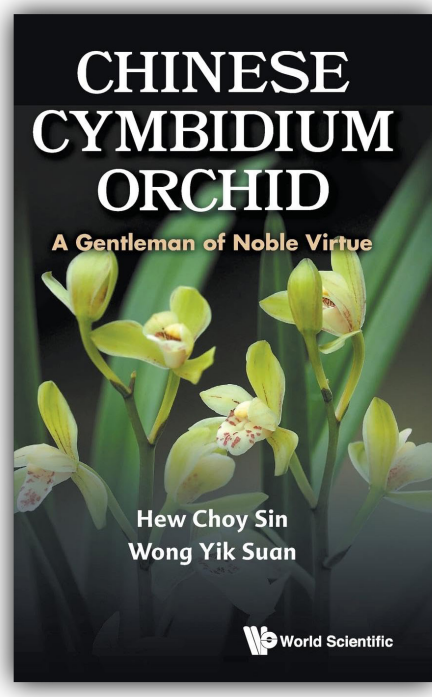
BOOKS

Chinese Cymbidium Orchid, A Gentleman of Noble Virtue, by Hew Choy Sin and Wong Yik Suan. World Scientific Publishing Co.,Pte., Singapore, 2023. ISBN 9789811263361. 180 pages, color photos. Hardbound. Price: US$78; GBP 70. Ordering: https://www.worldscientific.com



Orchids have been cultivated and appreciated in ancient China for at least 3,000 years. The renowned Chinese philosopher Confucius (551–479 BC) referred to *Lan* (Chinese cymbidiums) as the "*Gentleman of Noble Virtue*". In ancient China, *Lan* symbolized refinement, elegance, integrity, modesty, nobility, and purity. Early Chinese writings that mention *Lan* include:

- Shi-Jing (Book of Songs), the earliest collection of Chinese poetry, dating back to the 11th–7th centuries BC.
- References (p. 3 in book) from the Spring and Autumn (770–476 BC).
- Mentions in the Book of Rites (Li-Ji) during the Western Han era (206 BC–25 AD; p. 3).
- Poems from approximately 2,000 years ago (p. 3).
- Yong Lan by Tang Yanqian, composed late in the Tang Dynasty (ca. 900 AD; p. 8).
- References during the Song Dynasty (960–1279 AD; p. 8).
- Poems by the Song poet Huang Tingjian (1045–1127; p. 8).
- Accounts from the Ming Dynasty (1368–1644; p. 8).
- Descriptions from the Qing Dynasty (1644–1911; p. 8).

Additional information about *Cymbidium* cultivation in ancient China can be found in Table 1.1. There is some confusion regarding the dates due to differing uses of the terms "ni" and "lan" for

orchids and cymbidiums. This book addresses and clarifies this confusion in Chapter 1, titled "History of Chinese *Cymbidium*" which is well-written, detailed, and engaging without being overwhelming. The authors demonstrate a profound interest in the history and cultivation of orchids in ancient China, as evidenced by their earlier works (Hew, 2001; Hew, Arditti & Lin, 1997; Hew & Yong, 2006; Pan, Ye & Hew, 1997). Their scholarly expertise in both orchid research and library science is prominently displayed throughout the book.

It is impressive that the Chinese valued and cultivated orchids as far back as the 11th century BC, possibly even earlier. For context, other significant events around 1000 BC include:

- 1040 BC: Birth of David, future King of Israel.
- 1026 BC: Saul becomes King of Israel.
- 1020 BC: Destruction of Troy.
- 1000 BC: Advent of the Phoenician alphabet.
- 970–931 BC: King Solomon's reign.
- 371–287 BC: Theophrastus gave orchids the name we use today.

If evidence showing that orchids were cultivated in Greece at the same time as in China, it is yet to be discovered.

Cymbidium orchids have played a significant role in Chinese calligraphy, literature, paintings, and poetry. Chapter 2, titled "*Chinese Cymbidium and Chinese Culture*," explores these connections. For example, it discusses the *Doctrine of Modesty*, which states that Chinese cymbidiums must possess a fragrance that is "moderate, pure, and delicate" (p. 19). Additionally, there are specific color requirements for these orchids.

The book examines the influence of Confucianism, Buddhism, and Taoism on the selection, judging, and naming of Chinese cymbidiums. It presents this information in a way that is accessible to Western readers.

The enduring presence of *Lan* in Chinese poetry is exemplified by a poem by Zhang Heng (78–139 AC), a poet and astronomer. A translation (Hu, 1971, pp. 22–23) reads:

How elegant, O orchid of autumn!
The sweet smell, the yellow bud.
Though confined in shade;
Your beauty is beyond comparison.
As afar as the cloud. I suffer; O what!

At first glance, paintings of Chinese cymbidiums may seem simple, but this is far from the truth. To excel at painting these orchids, artists must deeply study and understand the plants and their ecology. A painting can only be considered excellent when there is a balance among the leaves, flowers, plants, and their environment. The book effectively clarifies this concept.

Additional factors to consider include whether the paintings are done on silk or paper, and if they are in color or black and white. The personality of the painter and their social or political activism also play a significant role. Much of Chapter 2 is dedicated to discussing the finer points and appreciation of *Lan* paintings, making this section both enlightening and engaging.

Like Ai Weiwei (b. 1957) today, several past painters clashed with high-ranking officials. The most famous among them is Zheng Banqiao (1693–1765), who wrote, "*My paintings of Lan, bamboo, and boulder are meant to comfort the hard-working masses, not to please those who lead a comfortable and leisurely life*." Zheng was not the only rebellious or politically active painter of *Lan* in ancient China, and Chapter 2 discusses several such artists.

Chapter 2 also covers calligraphy associated with *Lan*, its role in Chinese customs, its significance as a cultural symbol, and its representation on postage stamps. Much insight can be gained from this profusely illustrated and well-written chapter (pp. 17–52). However, I found it challenging to read because the presence of Chinese characters interspersed among the English text disrupted the flow of thought.

Modern taxonomy is introduced in Chapter 3, where the authors describe and discuss several species, including *C. ensifolium* (L.) Sw., *C. faberi* Rolfe, *Cymbidium goeringii* (Rchb.f.) Rchb.f., *C. kanran* Makino, and *C. sinense* Willd.

Western taxonomists named four of these species without acknowledging their Chinese origins and heritage. Combining their Chinese history with modern taxonomy offers a fascinating and instructive perspective.

- The type specimen of *Cymbidium goeringii*, found at elevations of 300–2200 m above sea level in China and one of the earliest known Chinese cymbidiums, was actually collected in Japan. It was named in 1852 by Gustav Reichenbach filius (1823–1889) in Germany, in honor of the German-Dutch bota-

nist, chemist, and plant collector Philipp Friedrich Wilhelm Goering (1809–1876).

- *Cymbidium faberi*, originating from Jiangzhe, was named by Robert Allen Rolfe (1855–1921), founder of *The Orchid Review* in the UK, after the German plant collector Ernst Faber (1839–1899). This species produces nine flowers per inflorescence, which earned it the old Chinese name "Nine Children Lan."
- Despite being described in the West, *Cymbidium sinense*, from humid inland forests in China, is aptly named to reflect its origins.
- *Cymbidium ensifolium*, found at elevations of 600–1800 m on temperate forest slopes in China, was popular in ancient China but named in Europe.
- The "Linnaeus of Japan", Tomitaro Makino (1862–1957), named *C. kanran* in 1902. Known as "The Cold Lan" because it blooms in the cold season, the name combines *kan* (cold in Japanese) and *ran* (orchid in Japanese). Another Japanese name for *C. kanran* is *Syunran,* as it also blooms in the warm spring. The species was brought into cultivation from southern China around 2,500 years ago.
- Each of these species has multiple forms and varieties. Their descriptions and illustrations (pp. 53–86) complete this well-rounded chapter.

The biology of Chinese cymbidiums is explored in Chapter 4 (pp. 87–120). The chapter begins by stating: "...Appreciation of Chinese cymbidiums can be summarized in four words 'Scent, Colour, Form, and Charm' " highlighting their distinction in leaf and flower structure, color, form, beauty, and fragrance. This sentiment was expressed as early as 1247 by the poet Wang Gui Xue in his book *Wang Shi Lan Pu,* published during the Song dynasty (960–1279):

> "*Bamboo has integrity but is short of flowers.*
> *Mei* [*plum blossoms*, Prunus mume] *has flowers but is short of leaves during flowering time.*
> *Pine has leaves when in flower but is short of fragrance.*
> *Orchid* (Cymbidium) *has leaves, flowers, and fragrance all at the same time*."

This excellence stems from the unique biology and physiology of cymbidiums, which share some characteristics with other orchids and *Cymbidium* species but also exhibit distinct differences. For example:

- Flowers are fragrant, but the intensity of the fragrance varies between species and cultivars (Zhang *et al.*, 2014).
- Leaves are often variegated, and plants are frequently selected for this trait.
- The structure of leaves and stomata is similar to other monocotyledonous plants, though variations in color and length can occur within a single species.
- Pseudobulbs are shorter than those of many other orchids.
- Roots are fleshy, unlike the roots of most terrestrial orchids.

The biological characteristics of Chinese cymbidiums are well-described, discussed, and explained in this chapter. The ancient Chinese do not appear to have propagated cymbidiums from seeds. It is unclear whether they recognized orchid seeds for what they were, as no ancient writings, paintings, or drawings depicting seeds, seed germination, or seedlings have been discovered to date. I hope that a thorough investigation of ancient Chinese texts about orchids will reveal relevant information.

Chapter 4 provides detailed information about fruits (referred to as pods on pages 108 and 109; they are technically capsules), as well as seeds and seed germination in Chinese cymbidiums.

In the past, the clonal propagation of Chinese cymbidiums was primarily achieved by dividing existing plants. This traditional method is still practiced today, alongside modern propagation techniques that are described in detail. The chapter effectively combines ancient and contemporary knowledge, resulting in a well-balanced and informative discussion.

Ancient Chinese *Cymbidium* growers were not aware of orchid mycorrhiza, but they recognized that the natural substrates where cymbidiums thrived contained elements that enhanced plant growth. Historical texts suggest that when collecting cymbidiums from the wild, it was important to also gather substrate debris, as this was deemed essential for successfully establishing the collected plants (for more information on ancient cultivation methods, see Hew, 2001). This practice continues to be relevant today.

At present, Chinese cymbidiums are extensively cultivated using modern methods. Chapter 5 (121–142) illustrates and discusses these methods and information on pests and diseases.

Chapter 6 (pp. 143–148) addresses the current prospects of Chinese cymbidiums. References are provided on pp. 149–154, and an index is provided on pp. 155–159.

I have several concerns to address. First, references numbered 44–89 on pages 152–154 are listed only in Chinese characters, making it impossible for those who do not read Chinese to understand their significance. Providing English translations would have been very helpful. Responsibility for this issue lies with the authors.

Second, the publisher opted for a page size of only 15 × 23 cm, which results in illustrations that are too small to discern details. For example, the 12 illustrations on page 100 measure only 3.3 × 2.5 cm each. The 18 illustrations on page 101 vary in size: 3.3 × 1.8 cm, 3.3 × 2.1 cm, 3.3 × 2.6 cm, 3.3 × 2.4 cm, and 3.3 × 2.5 cm. A larger page size, such as 21.6 × 27.9 cm, with fewer but larger illustrations per page, would have been preferable.

Third, not all illustrations in the book are printed or cropped well. For instance, an illustration on page 109 supposedly shows seeds measures only 5.5 × 5.2 cm, which is not large enough for clarity. The pinkish-purple background makes the white seeds appear like small pieces of string. On page 108, two fruits take up only 6.4 × 6.2 cm of an 8.9 × 7.0 cm image, wasting the remaining space with a black background. Similarly, a statue in Figure 2.26 on page 118 measures just 2.8 × 1.3 cm within a 4.8 × 5.9 cm photograph, leaving much of the image area unused. Better cropping could have provided larger and clearer details.

Lastly, on page 141, an image of a virus-infected leaf appears as indistinct bands of green and white, likely due to poor color printing. This is surprising and disappointing for a book published in Singapore, a country known for its high-quality publishing standards.

Professor (retired) Choy Sin Hew from the Department of Biological Sciences at the National University of Singapore is a laureate of the 1997 Singapore National Science Award, the country's highest honor for research scientists. Ms. Yik Suan Wong (Mrs. Hew), who holds a BSc in Biological Sciences and a Postgraduate Diploma in Librarianship, served as a librarian at the National University of Singapore before her retirement. The authors' expertise in their respective fields is evident throughout this book, making it a valuable resource for anyone interested in Chinese orchids.

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Disclosure: Professor C. S. Hew and I have known each other for approximately 50 years due to my frequent visits to the Botany Department at the National University of Singapore. During these visits, I collaborated on orchid research and publications with Professor Hew, Professor P. N. "Dhani" Avadhani (now retired), Professor A. N. Rao (the long-time excellent department head).

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