

Zeitschrift: Asiatische Studien : Zeitschrift der Schweizerischen Asiengesellschaft = Études asiatiques : revue de la Société Suisse-Asie

Herausgeber: Schweizerische Asiengesellschaft

Band: 50 (1996)

Heft: 1

Artikel: The Ten Bamboo Studio : an attempt to identify the flowers and the fruits

Autor: Reubi, François

DOI: <https://doi.org/10.5169/seals-147243>

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THE TEN BAMBOO STUDIO. AN ATTEMPT TO IDENTIFY THE FLOWERS AND THE FRUITS

François Reubi, Lausanne

Introduction¹

"No book of equal fame has been so little studied in a critical manner". This statement made in 1951 by R.T. Paine still holds true.² The work, *Shizhuzhai shuhuapu* (*Treatise on the paintings and writings of the Ten Bamboo Studio*), was published in 1633 for the first time. It consists of 8 volumes containing a total of 158 woodcut pictures, 38 ink studies and 140 short poems in xylography. A large number of new, recut editions appeared during the 18th and 19th centuries. In Western countries, the book remained practically unknown for almost 300 years. The first paper devoted to Chinese color prints was written in 1907 by Binyon.³ A few facsimile reproductions were issued in 1921 by the Marées-Gesellschaft, in 1940 and 1970 by Tschichold and in 1963 by Michaelis.⁴ Several illustrated papers and monographs discussed the history, the technique and the artistic significance of the Chinese woodcuts.⁵ Most important was the study per-

- 1 Acknowledgements. I am grateful to Professor G. Lang, Professor O. Hegg, Mr. R. Keller and Mr. B. Sansonnens for valuable advice in botanical matters. I also want to thank Mrs. Hua Chun, Mrs. Tardieu-Gao Fei, Mrs. Fumiko E. Cranston, Professor J.F. Billeter and Dr. Wu Tung for their help in transcribing cursive calligraphy.
- 2 Paine, R.T. Jr.: *The Ten Bamboo Studio*. Arch. Chin. Art. Soc. Am. 5,39-56, 1951.
- 3 Binyon, L: "A note on colour-printing in China and Japan." *Burlington Magaz.* 11,31,1907.
- 4 Marées-Gesellschaft: Portfolio with 15 facsimile reproductions. Text by O. Fischer. Editions Ganymède, Paris, 1921. Tschichold, J.: *L'estampe chinoise ancienne en couleurs*. Editions Holbein, Basle, 1940. *Die Bildersammlung der Zehn-bambushalle*. Rentsch Verlag, Erlenbach-Zürich, 1970. Michaelis, E: *Kunst des Ostens. Sammlung Preetorius*. Atlantis Verlag, Zürich, 1963
- 5 Kurth, J: *Der Chinesische Farbendruck*. Schulz. Plauen, 1922. Bondy, W: *Das Bilderalbum der Zehn-bambushalle*. Veröffentlichungen des Kunstarchives 29, Berlin, 1926. Sirén, O: *A History of Later Chinese painting*. Medici Society, London, 1938. Fribourg, J: "Gravure sur bois". In *Arts de la Chine*, vol. 3, Office du

formed by R.T. Paine⁶, who compared several early and late editions and proposed a classification of the prints. This classification has been used up to the present time in all publications dealing with the *Ten Bamboo Studio*. Its frame is the following:

Volume	I	Miscellany. 20 pictures, 20 poems
	II	Orchids. 18 pictures, 22 ink studies, no poem
	III	Bamboo. 20 pictures, 6 ink studies, 20 poems, 1 index
	IV	Plums. 20 pictures, 20 poems, 1 index
	V	Round fans. 20 pictures, 20 poems
	VI	Stones. 20 pictures, 20 poems
	VII	Fruits. 20 pictures, 20 poems
	VIII	Birds. 20 pictures, 20 poems

Paine gave every print a number and proposed a title. Presumably he did not read the accompanying poems. His titles reflected a personal interpretation. Sometimes he put a question mark.

Chinese artists frequently wrote a short poem on their paintings. In the *Treatise of the Ten Bamboo Studio*, however, the poems were printed on separate double-pages and have not been written by the painters themselves. Hundred and twenty three different calligraphers participated in the work, consisting of 63 quatrains (*jueju*), 63 8-lines regulated poems (*lǚshī*) or double-quatrains, and 14 other forms. Among the 140 poems, 91 bear a title corresponding to the subject of the picture. In another group of 38, there is no title, but one or several lines refer more or less explicitly to the subject. Only in a small group of 11, the poems seem to bear no relationship to any of the prints.

In contrast to the pictures of the *Ten Bamboo Studio*, which have been discussed in several publications, nobody seemed to be interested in deciphering and reading the poems. As they had never been translated into a Western language, I felt encouraged to undertake this work.

In the course of my translations, I met an unexpected difficulty. Since the poems had been printed on separate pages, they could easily have been mixed up during the process of mounting. This actually happened to the

Livre, Fribourg, 1964. Vedlich, J.: *Die Holzdrucke der Zehn bambushalle*. Liber SA, Fribourg, 1979.

6 Paine, R.T.: op.cit. p.39-56.

1817 edition I was using for my translations and to many other sets kept in museums or in private collections. Whenever a poem without title did not specifically refer to the subject of a print, it was impossible to decide which picture it was supposed to accompany. Since apparently there is no complete, undisturbed edition extant, on which one could rely for comparison, I chose to examine a large number of good editions and to follow the sequence found in a majority of them. I had the privilege to study 8 sets kept in Boston and Cambridge, Mass.⁷ These editions were: 1) at the Harvard-Yenching Library, Cambridge, 4 Chinese editions dated 1643, 1715, 1817 and 1879, and 2 Japanese editions dated 1878 and 1882; 2) at the Arthur M. Sackler Museum one 18th-19th-century Chinese edition; 3) at the Museum of Fine Arts in Boston one early (1633?) Chinese edition. None of these sets is really complete and undisturbed. However, I usually found good agreement between a majority of sets. Therefore, the observed consensus enabled me to assign to most poems the correct placement. Three exceptions, in which the poem obviously does not correspond to the picture (see below), suggest that errors in mounting already occurred in the earliest editions, and were never rectified in later copies.

Assuming that most pictures and most poems were correctly matched, it was interesting to compare the titles suggested for the pictures by Paine, with the titles, if any, and/or the descriptions given by the poems. Drawing my attention to the plants, flowers and fruits, I found quite a number of discrepancies. In such cases, it appeared from botanical considerations that the poet's interpretation was usually correct. We may assume that the calligrapher, who worked in close connection with the painter or the engraver, was better informed about the nature of the represented subject than we may be almost 400 years later. However, in 3 instances he probably made a mistake (see below).

The purpose of this paper is to attempt a correct identification of the plants, flowers and fruits depicted in the Treatise. I shall follow Paine's

7 I am deeply indebted to Mrs. Fumiko E. Cranston, Research Associate in Asian Art at the Arthur M. Sackler Museum, who arranged my visits at these three institutions and helped me in every possible manner. I also would like to thank Dr. Wu Tung, Curator of Asiatic Art, Museum of Fine Arts, Boston, and Mr. Sydney Tai, Director, Harvard-Yenching Library, Cambridge, Mass.

classification in discussing some of the controversial issues. Volumes II and VI, which raise no identification problem, will be left out.

Volume I - Miscellany

In this volume, 15 prints represent trees, flowers or fruits, in 4 instances associated with birds.

Plum vs apricot. No. 3 was given by Paine the title "Swallow on a plum branch", by Bondy⁸ "Swallow on a apricot branch". The poem is entitled *xing yan*, apricot and swallow. Although the morphology of the flowers is somewhat ambiguous, it seems reasonable to accept the poet's interpretation.

Aster vs chrysanthemum. For no. 7, Paine proposed "Begonia, grasses and aster (?)". The poem notes that the begonias are in the company of *ju* (II). Whereas nowadays *ju* means chrysanthemum, and aster is usually called *ziyuan*, there was in the 17th century no sharp distinction between the two and *ju* was sometimes used for the whole family of Asteraceae. Furthermore, the small, wild chrysanthemum (*Chrysanthemum indicum* L.), which is probably the kind of flower depicted on no. 7, is called "China aster" by some sinologists.

Prunus vs crabapple (?). According to Paine, no. 8 shows 2 birds on a prunus branch. The meaning of the equivocal term "prunus" is not clear. It cannot mean *mei* (*Prunus mume* Sieb. et Zucc.), always called "plum" by this author. The simultaneous presence of flowers and leaves would rule it out anyway. Maybe it is crabapple (*Malus spectabilis* (Borkh.) Lichonos).

Mallow vs hibiscus. See below, p. 102

Old stump vs box-thorn. The title of the poem associated with the tree called "old stump" by Paine (no. 14) is *gouqi*, box-thorn, *Lycium chinense* Mill. (Solanaceae). *Lycium* is a bush with numerous, long, very slender branches. Apart from the elongated red fruits, formerly used as a medicine, *lycium* has nothing in common with the old stump depicted on the print (Fig. 1), whose identity remains uncertain. Since the poem is said to have been composed by Liu Yuxi (772-842) "in praise of the lycium of the Kaiyuan monastery", it was not written with the picture no. 14 in mind; it

8 Bondy, W: op.cit. p.11.

was just taken over by the calligrapher, who either misinterpreted the picture or did not feel concerned with such relationships.

Litchi nuts. See below, p. 101

Volume II - Orchids

There are no poems accompanying the pictures. The 40 items include 18 full page pictures, which bear an inscription referring to the artist and indicating whether the orchid is a *lan*, a *hui* or a *jianlan*.

lan is the general term for orchid and, when used without further specification, usually means *Cymbidium virescens* Willd. (*C. goeringi* Reichb. f.). It is an extremely fragrant plant with only one flower on each stem. It is also called mountain or spring orchid.

hui or *huilan* is *Cymbidium pumilum* Rolfe. The stem is slender and bears 5-8 flowers, which are less fragrant. The plant is considered more common than the *lan*. It is also called summer orchid.

jianlan is *Cymbidium ensifolium* L. and is characterized by stiff and straight leaves ("ensifolium" means "swordlike leaves"). There are also several flowers on each stem.

The 18 pictures in volume II include 4 *hui* (called by Paine "slender orchids"), 2 *jianlan* ("erect orchids") and 12 *lan* ("orchids").

Volume IV - Plums

With one exception (no. 9), all prints in this series represent *mei* plum trees, *Prunus mume* Sieb. et Zucc. (Rosaceae), alone or in association with chrysanthemum, bamboo, pine, narcissus, orchid, camellia or apricot.

Allspice (?) vs *wax plum*. The flowering branch on print no. 9 (Fig. 2) could not be identified by Paine, who wrote "allspice?". Fribourg⁹ thought it was winter jasmine. Neither interpretation is correct. The index to volume IV clearly indicates *lamei*, *Chimonanthus praecox* (L.) Link (*C. fragrans* (Loisel.) Lindl.), wax plum or winter-sweet, belonging to the Calycanthaceae. Although this bush is not a *Prunus* species, it was formerly considered a sort of plum tree.

9 Fribourg, J: op.cit. p.318.

Volume V - Round fans (Table 1)

Magnolia. Quince blossoms vs crabapple flowers (Fig. 3). No. 1 was entitled by Paine "Magnolia and quince (?) blossoms". The poem bears the title *yu tang*, which obviously means *yulan*, magnolia, and *haitang*, crabapple. The picture does not allow a clear differentiation between quince (*mugua*, *Cydonia* species) and crabapple (*Malus spectabilis* (Borkh.) Lichonos). However, since Chinese painters have often depicted crabapple flowers, and the iconographic features of the print are consistent with this tentative identification, we may follow the indications of the poem.

Magnolia is easily recognizable. It is more difficult to find out which species is represented, since at least 10 of them are known as *yulan*. Presumably it is *Magnolia denudata* Desr. (*M. conspicua* Salisb.) or *Magnolia grandiflora* L.

Litchi nuts vs box-myrtles. See below, p. 101

Lingzhi fungi (Fig. 4.). For the nos. 10 and 20, Paine used the general term "fungi". But the species can be readily identified. This kind of mushroom was extremely prized in old China and has been often reproduced under the name of *lingzhi* or simply *zhi*, larch agaric, *Fomes japonicus* (Fr.) Sacc.

Mallow vs hibiscus. See below, p. 102

Sweet olive blossoms vs osmanthus. See below, p. 102

Juniper tree (Fig. 5). For the picture no. 19, Paine indicated "twisted tree". The title of the poem is *kuai*, Chinese juniper tree, *Juniperus sinensis* L. (Cupressaceae). The characteristic features of the twisted tree are obviously those of a juniper, a favourite subject to many great painters like Shen Zhou and Wen Zhengming.

Volume VII - Fruits (Table 2)

Tangerines vs apricots. Whereas Paine proposed for no. 6 "Branch of tangerines" (?), Kurth¹⁰ and Fribourg¹¹ considered the fruits to be apricots. The poem entitled *xing*, apricot, *Prunus armeniaca* L., proves them right, in agreement with the iconography.

10 Kurth, J: op.cit. p.36.

11 Fribourg, J: op.cit. p.312.

Asian apples (Fig. 6). For no. 8 Paine proposed "Branch of apples(?)". Tschichold¹² took the fruits for persimmons and Vedlich¹³ for tangerines. In fact, they are, according to the title of the poem, what the Chinese call *huahong*, Asian apples, *Malus asiatica* Nakai. These small apples are nicely coloured, but rather tasteless, so that the poet felt justified to write: "Their colour is to be preferred to their taste".

Lotus sprouts vs cock's heads. For no. 10 Paine proposed "Lotus leaf, root and sprouts". Leaf and root are correct, but sprouts are not. The title of the poem gives the clue: the two "sprouts" are in fact *jitou* capsules filled with large seeds (Fig. 7). *jitou* or *qian* means cock's head, *Euryale ferox* Salisb. (Euryalaceae). It is a leguminous water plant, whose edible seeds were much prized in old China as an invigorating food stuff. *jitou* was correctly identified by Bondy in 1926.¹⁴

Oranges vs tangerines. The Chinese nomenclature for the various Citrus fruits is rather confusing. Nowadays, people preferentially use *cheng* or *gan* for orange (*Citrus sinensis* (L.) Osbeck and *ju* (I) for tangerine (*Citrus reticulata* Blanco). It is likely, that in the 17th century, all these terms were used more or less indifferently. It is regrettable that they never were applied specifically to certain species. It would seem, therefore, that for differentiating tangerines from oranges, it is safer to rely on their morphology rather than on the accompanying poem. For instance, the two prints VII/9 and VII/11 show tangerines: they are called *cheng* in the first and *ju* in the second of the two poems.

Apricot vs ginkgo. No. VII/14 was considered by Paine and other authors to represent an apricot branch. However, on careful examination, apricot is ruled out by the aspect of the leaves (Fig. 8). They are bilobate, fanlike, with the nerves in a radial arrangement: they are characteristic for the maidenhair tree, *Ginkgo biloba* L. (Ginkgoaceae). Typical is also the yellow, plumlike, single fruit. Confirmation is provided by the title of the poem, *yinxing*, ginkgo. Although it literally means "silver apricot", the ginkgotree has nothing in common with apricot, *Prunus armeniaca* L.

12 Tschichold, J: op.cit. (1940), Fig. 8.

13 Vedlich, J: op.cit. p.16.

14 Bondy, W: op.cit. p. 18.

(Rosaceae). It is the last survivor of a class of gymnosperms flourishing 150 millions years ago.

Oranges vs xiangyuan or grapefruits. No. VII/18 was described by Paine as "Three oranges on a stand" (Fig. 9). These very large fruits might actually represent oranges. Nevertheless, since the associated poem is entitled *xiangyuan* (I), the meaning of the latter should be discussed briefly.

In Needham's chapter on Citrus fruits¹⁵ and in most of the large dictionaries, *xiangyuan* (I) is the translation of both "citron" and "*Citrus medica* L. var. *vulgaris* Risso". Citron, the largest of the Citrus species, has an elongated shape, its yellow skin is very thick, its surface is embossed and irregular. Obviously, the 3 fruits on the stand cannot be citrons. Since the poet was certainly not an expert in botany, and the semantic uncertainties in this field were considerable, the meaning of *xiangyuan* (I) was perhaps not entirely clear to him. Another possibility might be a faulty homonymy due to homophony: According to Needham, *xiangyuan* (II) is the name of a hybrid of the pomelo with the Yichang orange. Presumably, this hybrid, which is no longer cultivated in the present days, looked very much like grapefruit¹⁶. This interpretation would be consistent with the aspect of the fruits on the print. We might assume that the poet made a mistake, using a rare word instead of a very common one.

Bitter cucumber, snake gourd vine (Fig. 10). According to Paine, no. 19 represents a snake gourd vine. The texture of the fruit, with the split coat and the red flesh, and the shape of the leaves of the twinning plant around a pole of bamboo, are characteristic for *kugua*, bitter cucumber, *Momordica charantia* L. Another possibility would be *shegua*, snake gourd, *Trichosanthes anguina* L., also belonging to the Cucurbitaceae. In this case a comparison with the title of the poem is frustrating, since obviously an error in mounting took place. In most editions, this picture (if not missing) is accompanied by a poem entitled *jin lizhi*, elegant litchi nuts, presumably belonging to print I/20.

15 Needham, J: *Science and Civilisation in China*, section 38, Botany, Cambridge University Press, Cambridge, 1986, p. 370-376.

16 *xiangyuan* (II) is also mentioned by Mathew with the meaning of "a variety of lemon", suggesting a rather current confusion with *xiangyuan* (I).

Biqi nuts (Fig. 11). "Seven nuts and rock" was the title proposed by Paine for no. 20. A more specific name for the edible water chestnuts shown on this print is *biqi*, *Eleocharis dulcis* Burm. F. or *E. tuberosa* Schult. (Cyperaceae)¹⁷. Another Chinese name is *mati*.

Volume VIII - Birds

On 14 pictures the birds are represented together with flowers or flowering branches. Less frequently they are accompanied by bamboo, grass, trees, millet or an unidentified broad-leaved plant. Only 3 poems bear a title mentioning the nature of the associated bush.

Mallows vs hibiscus. See below, p. 102

Sweet olive blossoms vs osmanthus. See below, p. 102

Crape-myrtle (Fig. 12). For VIII/19 Paine simply wrote "flowering bush". The title of the poem, *ziwei*, which means crape-myrtle (*Lagerstroemia indica* L., Lythraceae), facilitates identification of the flowers. Their corolla consists of 6 crinkled, curled and twisted petals, attached to the calix by slender stalks. In the center, there are many stamens. The leaves, arising from a flexible twig, are 3-5 cm in length. The buds are almost spherical. Many of these features can be recognized on the print. They rule out any representative of the *Prunus* or *Malus* genus. Crape-myrtle has been depicted often by various painters.

Fruits and flowers appearing in more than one volume

Litchi nuts and box-myrtles (Fig. 13 and 14). According to Paine 4 pictures (I/20, V/5, VII/15 and VII/16 represent litchi nuts. His opinion was shared by the authors of all subsequent publications. However, careful examination of these prints reveals 2 different kinds of fruits. These are litchi nuts, *Nephelium litchi* Cambess (Sapindaceae), in I/20 and VII/16, as evidenced by the iconographic features and the poem to VII/16, which is entitled

¹⁷ Unfortunately, the english term "water chestnuts" is still used for 3 different water plants: *Euryale ferox* (*qian* or *jitou*) in F. Bray's translation (Needham J., Bray F.: *Science and Civilisation in China*, section 41, Agriculture. Cambridge 1984, p. 546); *Trapa natans* (*ling* or *ji*), beside "water caltrops" in most dictionaries; and *Eleocharis dulcis* (*E. tuberosa*), to which, in my opinion, the term should be restricted in order to avoid confusion.

lizhi. In contrast, the name of the fruits shown on V/5 and VII/15, as given by the title of the poem to no. V/5, is *yangmei*, box-myrtle or arbutus, *Myrica rubra* Sieb. et Zucc. (Myricaceae). The poem to VII/15 does not bear a title but offers a description of arbutus that could not fit litchi nuts: "Their flesh is like cinnabar or red sky, cool and slightly sour". Then the poet asks: "Who might compare them with litchi nuts?" In other words: despite a faint resemblance, they are not litchi nuts.

The iconographic features are more or less conventional, but they show distinct differences between the two fruits. For the litchi nuts (Fig. 13), the painter uses a network of confluent strokes, delineating small compartments, not unlike fishscales. The surface of the box-myrtle fruits is made up of small, dark red or purple dots on a pale red ground (Fig. 14), the leaves are smaller and narrower. We may mention that, in the *Mustard Seed Garden* painting manual, the same technique as in I/20 and VII/16 was used for the representation of litchi nuts¹⁸. On the print, an inscription praises "the fragrant jade and mermaid silk of the flesh, enrobed in a rough red shell".

Mallow vs hibiscus. In Paine's opinion the flowers depicted on prints I/11, V/11 and VIII/17 are mallows. Vedlich's¹⁹ interpretation of I/11 is peony. However, iconography and the titles of the associated poems indicate that they are *furong*, hibiscus, *Hibiscus mutabilis* L. (or *H. rosasinensis* L.). As compared with mallows (*jinkui*, *Malva silvestris* L.) and other *Hibiscus* species (like *Hibiscus abelmoschus* L., *qiukui*), the flowers have many more striated petals and the leaves show no deep indentations (Fig. 15). Thus the flowers are not mallows, although they belong to the same family (Malvaceae). *Hibiscus* flowers have been depicted very often by Chinese artists.

Sweet olive blossoms vs osmanthus flowers. The small flowers shown on the prints V/11 and VIII/14 were considered by Paine to be sweet olive blossoms. According to the accompanying poems, they represent *gui*, an equivocal term with 3 different meanings: sweet-scented osmanthus (*Osmanthus fragrans* Lour., Oleaceae), cassia or cinnamon (*Cinnamomum cassia* Blume, Lauraceae), and laurel (*Laurus nobilis* L., Lauraceae). Laurel is readily ruled out on iconographic grounds. For a definite differentia-

18 Reproduced in Fribourg, J: op. cit. p. 236, Fig. 160.

19 Vedlich, J: op. cit. p.40.

tion between cinnamon and osmanthus, the rendering of the small flowers is too sketchy, but the pointed, slightly twisted leaves are those of osmanthus. Cinnamon leaves are quite different: thick, stiff and ovaloid, with a very characteristic arrangement of the 3 main nerves, one in the center and two along the edges of the leaf. In favour of osmanthus are also the following facts: 1. Osmanthus grows in most parts of China (including Nanking, where the *Treatise* was compiled), whereas cinnamon is confined to the extreme south of the country. 2. During the autumn months, flowering osmanthus and hibiscus are often found side by side, as on print V/11.

Osmanthus was formerly called sweet-scented olive tree (*Olea fragrans*), so that Paine's denomination was correct. However, it is no longer in use and, since it can be misleading, it should be avoided. It is noteworthy that practically all translators of classical Chinese poetry have assigned to *gui* the meaning of cinnamon, as did also Couvreur. This is probably erroneous in many cases. Unexpectedly, Needham²⁰ adds to the confusion by writing: "cassia (*Osmanthus fragrans*)". We may finally mention that for the botanists the *Cassia* genus (*Caesalpinioideae*)²¹ has nothing in common with cinnamon.

Discussion

R.T. Paine's invaluable work remains the base of any study dealing with the Ten Bamboo Studio, but this author made no attempt to interpret the pictures in terms of scientific botany. Since his guesses were not always correct, it seems justified to compare them with the titles of the accompanying poems and the results of a critical, more careful examination of the pictures. In many cases the rendering of the fruits and flowers by the painter is so perfect, that their identification should raise no problems. Frequently confirmation is provided by the title of the poem. In other instances, the poem gives the clue to a somewhat unclear picture. When exceptionally title of the poem and subject of the print are not in agreement, this may have different reasons. In the case VII/19 (bitter cucumber on the print facing a poem on litchi nuts), an error in mounting is likely to have occurred. In no. I/14 (old stump facing a poem on box-thorn), the interpretation of the calligrapher may have been faulty; alternatively, he did not

20 Needham, J.: op. cit. p.362.

21 One officinal species (*Cassia senna* L.) yields the laxative Senna leaves.

consider necessary to comment specifically on the old stump: he preferred to introduce an old poem on lycium by a Tang artist. On the print VII/18, the calligrapher presumably did not know the exact meaning of the term *xiangyuan* (I).

My attempt to identify all plant species depicted in the Ten Bamboo Studio was not entirely successful. Several poems lack a title and/or do not provide a reliable description of the picture. In addition, the iconographic features themselves do not always display enough specificity. Nevertheless, once the necessary rectifications of identity have been carried out, the choice of fruits illustrated in volume VII provides an interesting insight into the preferences and the alimentary habits of the Chinese population at the beginning of the 17th century. Various species represent the Rutaceae: oranges, tangerines, Buddha's fingers, kumquats and perhaps a sort of grapefruit. Other very much prized fruits were cherries, peaches, apricots, Asian apples, pomegranates, grapes, persimmons, litchi nuts, box-myrtles, loquats, chestnuts, ginkgo and even bitter cucumbers. Finally we meet four water plants: lotus, caltrops, cock's heads and water chestnuts. Whereas many of the fruits listed in the first two groups were considered luxurious delicacies, the water plants played an important role as complementary foodstuffs; in old China, the rice, millet and wheat crops were not always copious enough to prevent widespread malnutrition.

It is not surprising that three entire volumes are devoted to the much admired orchids, bamboo and "*mei*" plums. These are three of the "Four wise ones". There is no volume dedicated to the fourth, chrysanthemum, but Paine²² has suggested that the section on Stones (volume VI) has a similar symbolic meaning. The ornamental plants include, apart from the plum, the other three symbols of the four seasons: tree peony, lotus, chrysanthemum. Also represented are: magnolia, crabapple, hibiscus, begonia, gardenia, camellia, narcissus, wistaria, crape-myrtle, osmanthus, juniper and pine tree. Finally the *lingzhi* mushroom, which was credited with extraordinary properties and called "plant of immortality", adds the never missing touch of Taoism.

To summarize, this study has shown, that, among 63 titles concerning plants (I do not take into account the orchids, the bamboo and the plums of volume IV), Paine's suggestions were incorrect in fourteen instances. In an

22 Paine, R.T.: op.cit. p.40.

additional group of six, he only used unspecific terms such as old stump or flowering bush. In two more instances he did not mention the flowers accompanying birds. My study resulted in a reliable identification of most of these 22 subjects, so that the achievements of the painters and engravers can be better appreciated.

Glossary

biqu	荸薺	mati	馬蹄
cha	茶	mei	梅 or 某
cheng	橙	mugua	木瓜
foshougan	佛手柑	ou	藕
furong	芙蓉	pipa	枇杷
gan	柑	putao	葡萄
gouqi	枸杞	qian	芡
gui	桂	qiukui	秋葵
haitang	海棠	shancha	山茶
hehua	荷花	shengua	蛇瓜
huahong	花紅	shi	柿
hui	蕙	shiliu	石榴
ji	茭	Shizhuzhai shuhuapu	十竹齋書畫譜
jianlan	建蘭	song	松
jinju	金橘	tao	桃
jinkui	錦葵	xiangyuan (I)	香櫟
jin lizhi	錦荔枝	xiangyuan (II)	香圓
jitou	雞頭	xing	杏
ju (I)	橘	xing yan	杏燕
ju (II)	菊	yangmei	楊梅
jueju	絕句	yingtao	櫻桃
kuai	檜	yinxing	銀杏
kugua	苦瓜	you	柚
lamei	臘梅	yulan	玉蘭
lan	蘭	yu tang	玉棠
lianpeng	蓮蓬	zhi	芝
ling	菱	zhizi	梔子
lingzhi	靈芝	zhu ju	朱橘
lizhi	荔枝	ziwei	紫薇
lizi	栗子	ziyuan	紫苑
lushi	律詩		

1	Picture's title suggested by R.T. Paine	Chinese title of the poem	Botanical term	Tentative identification	Common names in Western languages
1.	Magnolia and	yu (lan)	Magnolia denudata Desr. (M. conspiciua Salisb.)	magnolia, Magnolie	
	quince (?) blossoms	(hai) tang	Malus spectabilis (Borkh.) Lichonos	crabapple, pommier à bouquets, Schauapfel	
3.	Camellia and	cha	Camellia sinensis L.	camellia, camélia, Kamelie	
	plum	mei	Prunus mume Sieb. et Zucc.	plum, prunier, Pflaume(nblüten)	
4.	Cherries on a branch	yingtao	Prunus cerasus L.	cherries, cerises, Kirschen	
5.	Litchi nut branches	yangmei	Myrica rubra Sieb. et Zucc.	box-myrtles (arbutus), arbouses, Arbutus	
6.	Wild chrysanthemums	ju (II)	Chrysanthemum indicum L.	wild chrysanthemums, chrysanthèmes sauvages, wilde Chrysanthemen	
7.	Single pomegranate	shiliu	Punica granatum L.	pomegranate, grenade, Granatapfel	
8.	Lotus and	hehua	Nelumbo nucifera Gaertn.	lotus	
	gardenia	zhizi	Gardenia jasminoides Ellis	gardenia	
10.	Fungi on rocky ground	(ling)zhi	Fomes japonicus (Fr.) Sacc.	larch agaric, amadouvier, Lärchenschwamm	
11.	Mallow and	(fu)rong	Hibiscus mutabilis L.	hibiscus	
	sweet olive blossoms	gui	Osmanthus fragrans Lour.	sweet osmanthus, osmanthe odorant, duftiger Osmanthus (Duftblüte)	
12.	Plum branch	mei	Prunus mume Sieb. et Zucc.	plum, prunier, Pflaume(nblüten)	
14.	Two peaches	tao	Prunus persica (L.) Batsch	peaches, pêches, Pfirsiche	
17.	Pine tree and rocks	song	Pinus (species?)	pine, pin, Kiefer	
19.	Twisted tree and rocks	kuai	Juniperus sinensis L.	Chinese juniper, génévrier de Chine, chinesischer Wacholder	
20.	Orchid and	*lan	Cymbidium virescens Willd. (C. goeringi Reichb. f.)	orchid, orchidée, Orchidee	
	fungi		Fomes japonicus (Fr.) Sacc.	larch agaric, amadouvier, Lärchenschwamm	

Table 1: Identification of the plant species depicted on the prints of Volume V. A comparison with R.T. Paine's suggestions.

* Poem no. 20 bears no title but is a praise of the orchids. Fungi are not mentioned.

2a

Picture's title suggested by R.T. Paine		Chin. title of the poem	Identifi- cation*	Botanical term	Tentative identification Common names in Western languages	
1.	Two peaches		tao	<i>Prunus persica</i> (L.) Batsch	peaches, pêches, Pfirsiche	
2.	Dish of kumquats	jinju		<i>Fortunella margarita</i> (Lour.) Swingle	kumquats, Zwergpomeranzen	
3.	Three Buddha's fingers	foshou gan		<i>Citrus medica</i> var. <i>sarcodactylis</i> (L.) Swingle	Buddha's fingers, mains de Bouddha, Buddha-handfrüchte	
4.	Branches of cherries	yingtao		<i>Prunus cerasus</i> L.	cherries, cerises, Kirschen	
5.	Lotus pods and water caltrops		lianpeng ling, ji	<i>Nelumbo nucifera</i> Gaertn. <i>Trapa natans</i> L. (var. <i>bicornis</i>)	lotus pods, capsules de lotus, Lotusschoten water caltrops, macres, Wasserdisteln	
6.	Branch of tangerines (?)	xing		<i>Prunus armeniaca</i> L.	apricots, abricots, Aprikosen	
7.	Grapes	putao		<i>Vitis vinifera</i> L.	grapes, raisins, Trauben	
8.	Branch of apples (?)	huahong		<i>Malus asiatica</i> Nakai	Asian apples, pommes d'Asie, asiatische Äpfel	
9.	Tangerines and persimmon	cheng shi	gan, ju (I)	<i>Citrus reticulata</i> Blanco <i>Diospyros kaki</i> L.	tangerines, mandarines, Mandarinen persimmon, kaki, Dattelpflaume	
10.	Lotus leaf, root and lotus sprouts	ou jitou		<i>Nelumbo nucifera</i> Gaertn. <i>Euryale ferox</i> Salisb.	lotus root, racine de lotus, Lotuswurzel cock's head, euryales, Hahnenköpfe	
11.	Branch of tangerines	zhu ju		<i>Citrus reticulata</i> Blanco	tangerines, mandarines, Mandarinen	
12.	Branch of loquats	pipa		<i>Eriobotrya japonica</i> Lindl.	loquats, bibasses (nêfles du Japon), japanische Mispel	
13.	Branch of pomegranates	shiliu		<i>Punica granatum</i> L.	pomegranates, grenades, Granatäpfel	
14.	Apricot branch	yinxing		<i>Ginkgo biloba</i> L.	ginkgo, Ginkgo	
15.	Litchi nuts		yangmei	<i>Myrica rubra</i> Sieb. et Zucc.	box-myrtles (<i>arbutus</i>), arbouses, Arbutus	
16.	Branches of litchi nuts	lizhi		<i>Nephelium litchi</i> Cambess	litchi nuts, litchis, Litchipflaumen	
17.	Branch of chestnuts		lizi	<i>Castanea sativa</i> Mill.	chestnuts, châtaignes, Kastanien	

2b

Picture's title suggested by R.T. Paine		Chin. title of the poem	Identifi- cation*	Botanical term	Tentative identification	
	stand	xiangyuan	cheng (?) or: you (?)	Citrus sinensis (L.) Osbeck or: Citrus xiangyuan (hybrida)	Botanical term	Common names in Western languages
18.	Three oranges on				oranges, Apfelsinen	
	vine				pomelo hybrid related to grapefruit, pample- mousse, Pampelmuse	
19.	Snake gourd	**	kugua or shegua	Momordica charantia L. or: Trichosanthes anguina L.	bitter cucumber, concombre amer, Balsambirne snake gourd vine, serpent végétal, Schlangen- gurke	
20.	Seven nuts		biqi (mati)	Eleocharis dulcis Burm. f.	water chestnuts, châtaignes d'eau, Wasser- kastanien	

Table 2: Identification of the fruits depicted on the prints of Volume VII. A comparison with R.T. Paine's suggestions.

*Identification based on botanical features and indications given by the poem.

** In most editions the accompanying poem is entitled *jin lizhi*, presumably an error in mounting.

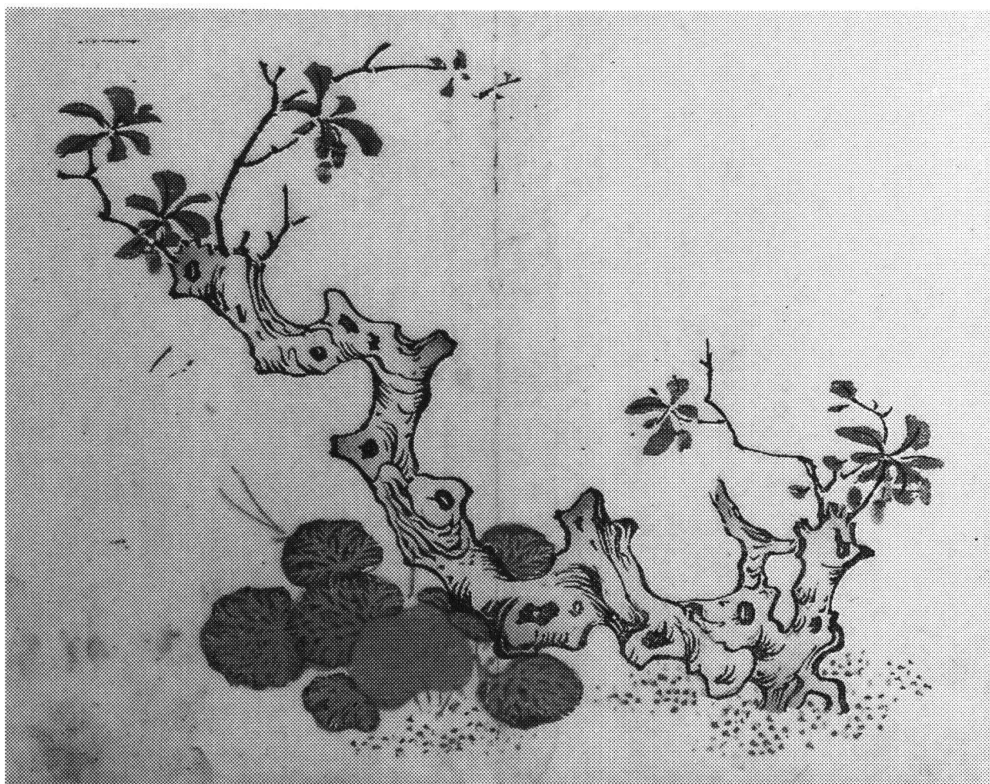


Fig. 1. Old unidentified tree - (I/14)



Fig. 2. Wax plum (*Chimonanthus praecox* (L.) Link - (IV(9)

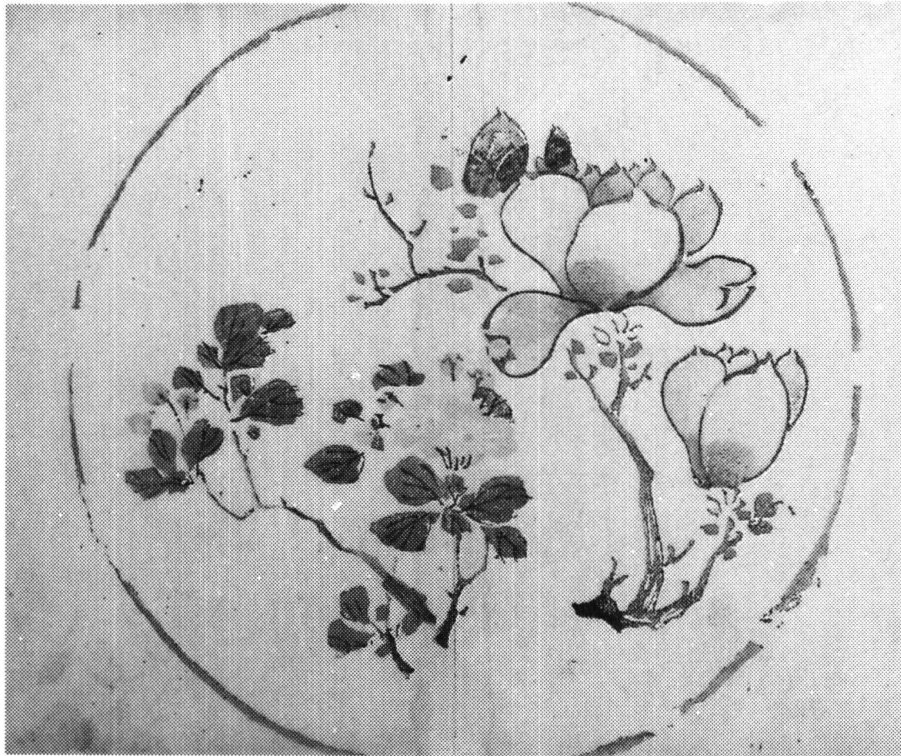


Fig. 3. Magnolia and crabapple flowers -V/1)



Fig. 4. *lingzhi-fungi* -(V/10)

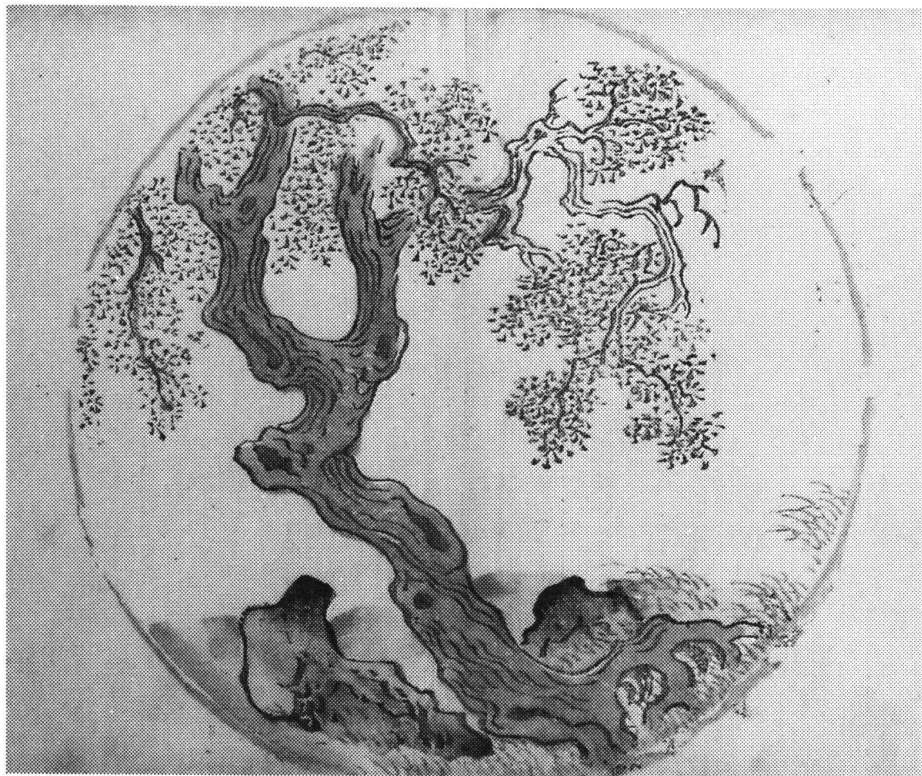


Fig. 5. Chinese juniper -(V/19)

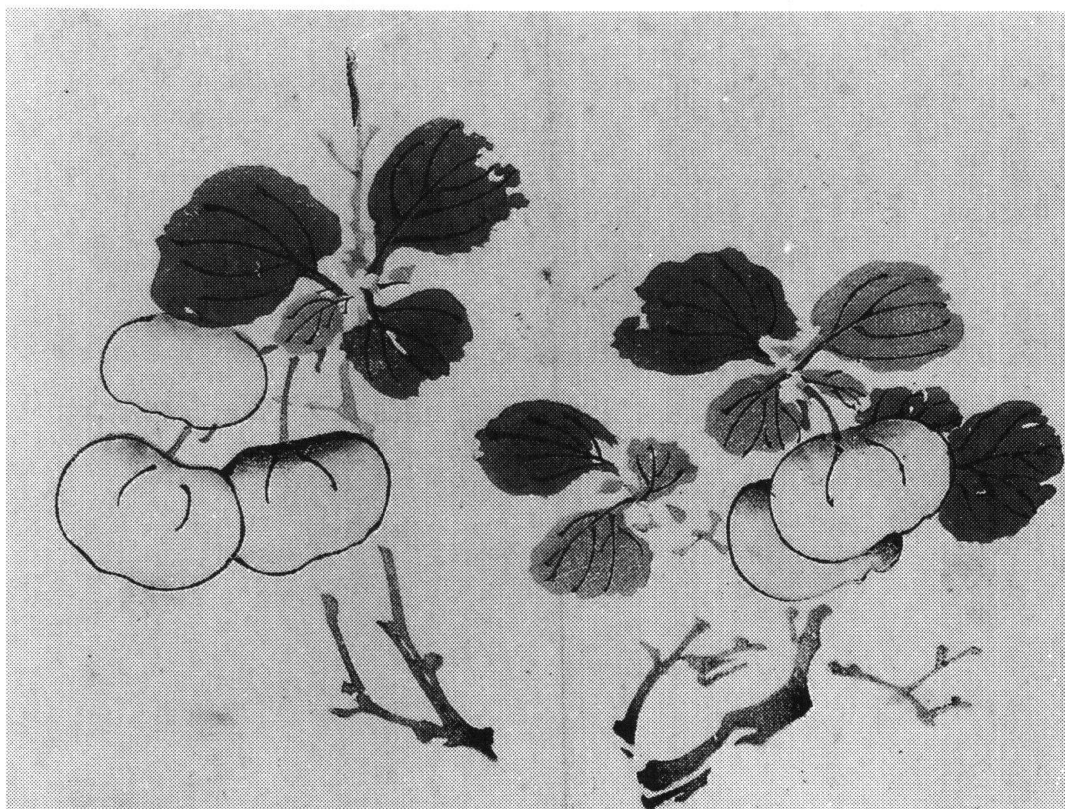


Fig. 6. Asian apples (*Malus asiatica* Nakai, *huahong*) -(VII/8)

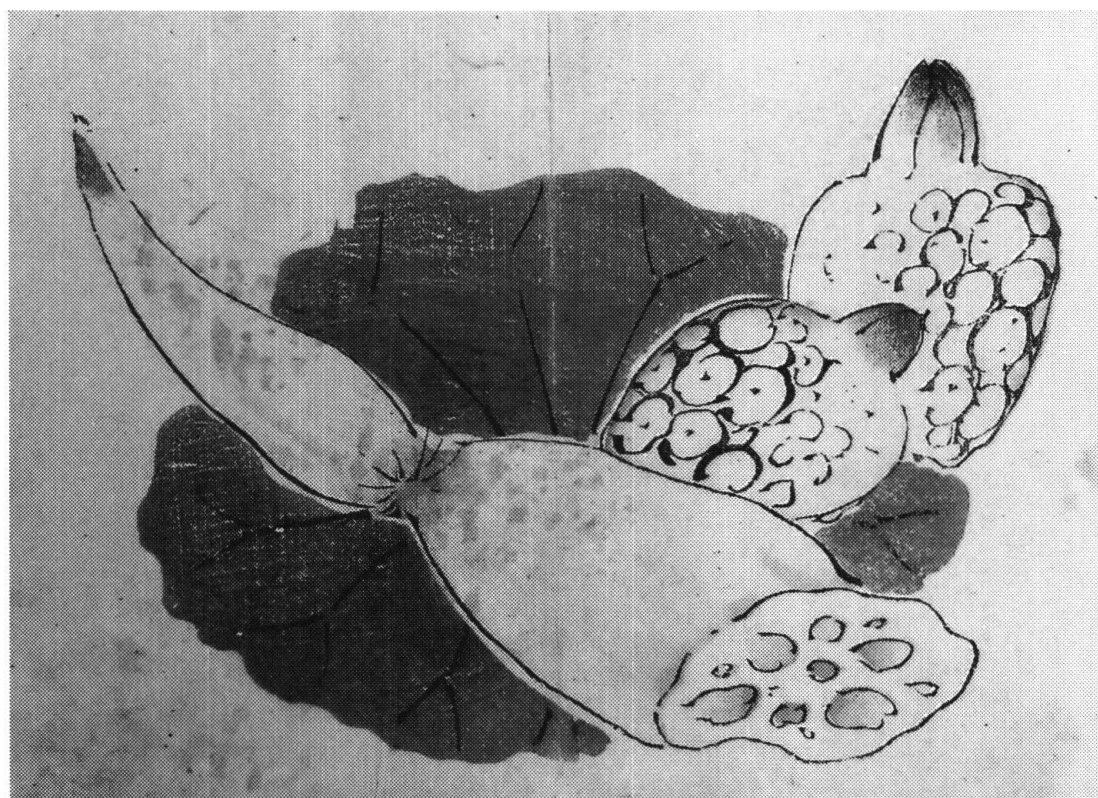


Fig. 7. Lotus leaf, root and 2 *jitou*-capsules (*Euryale ferox* Salisb. - (VII/10)

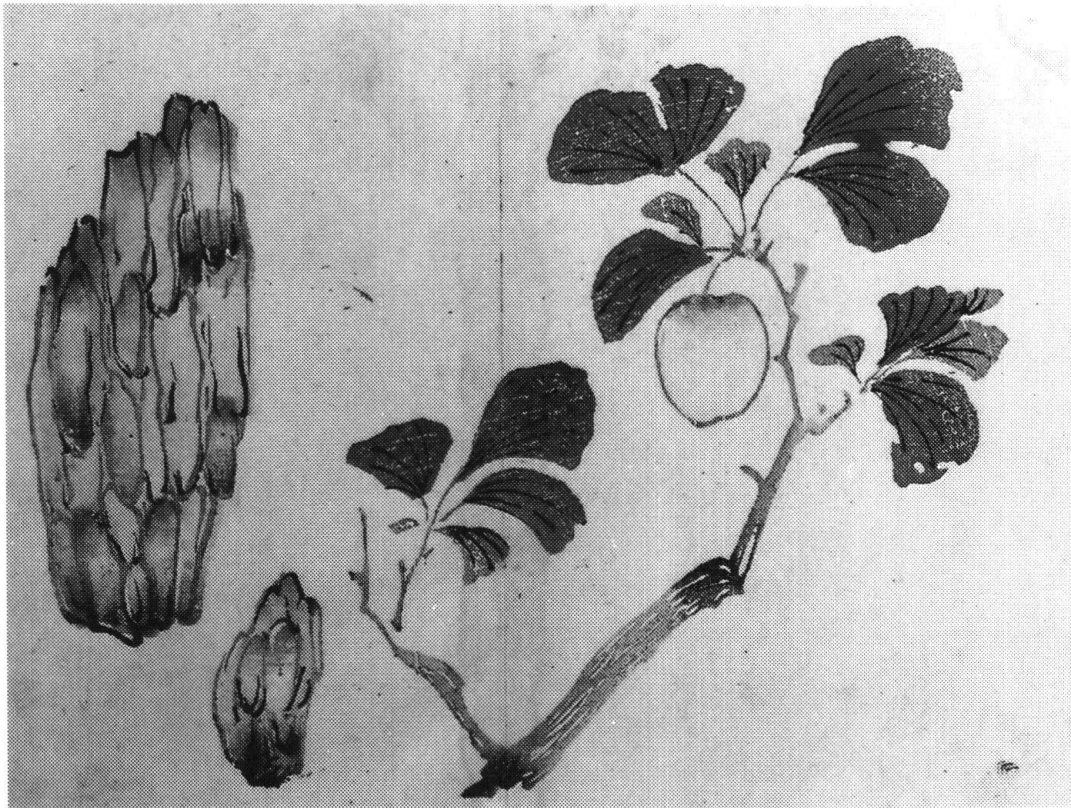


Fig. 8. Small branch of ginkgo -(VII/18)

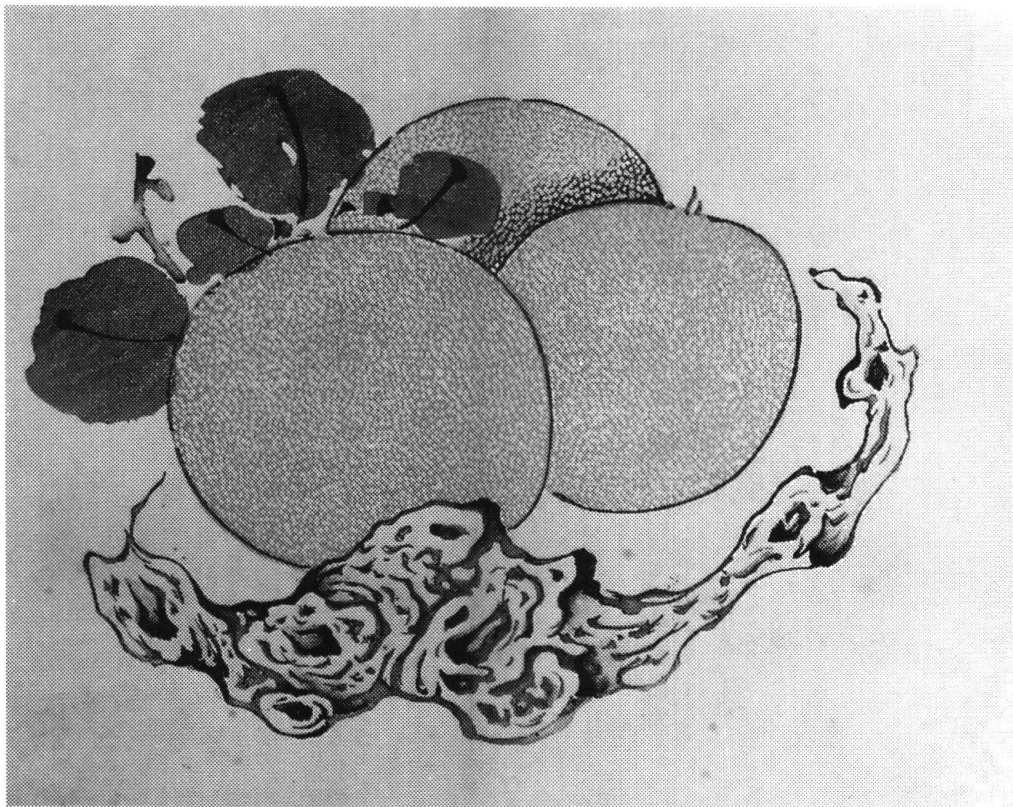


Fig. 9. Three oranges (or pomelo hybrids ?) -(VII/18)

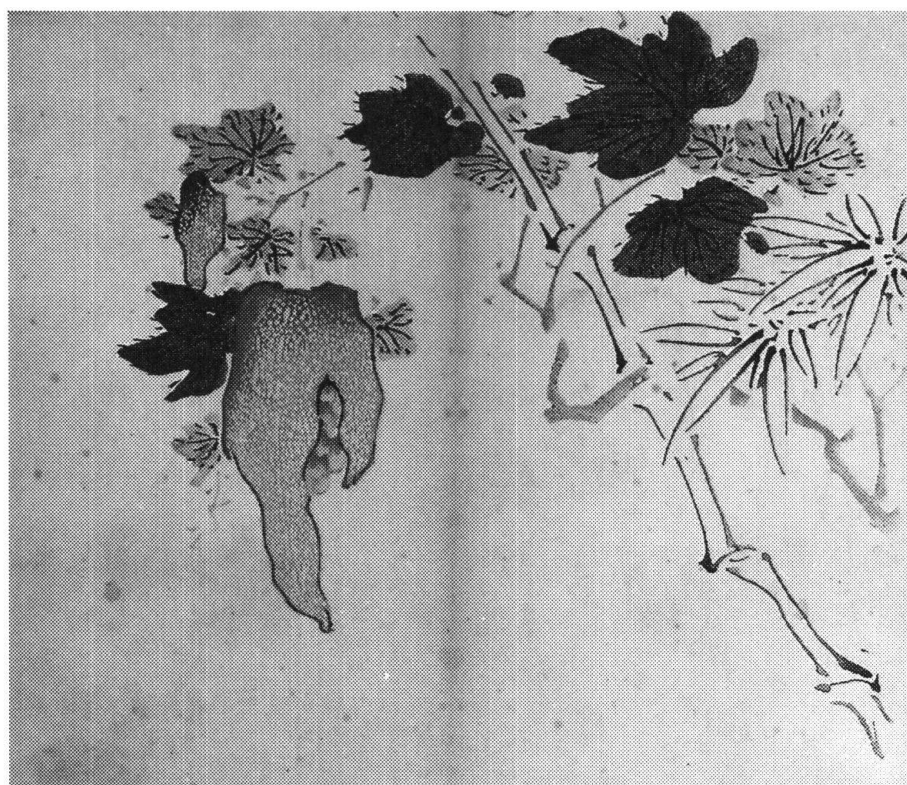


Fig. 10. Bitter cucumbers (or snake gourd vine?) -(VII/19)

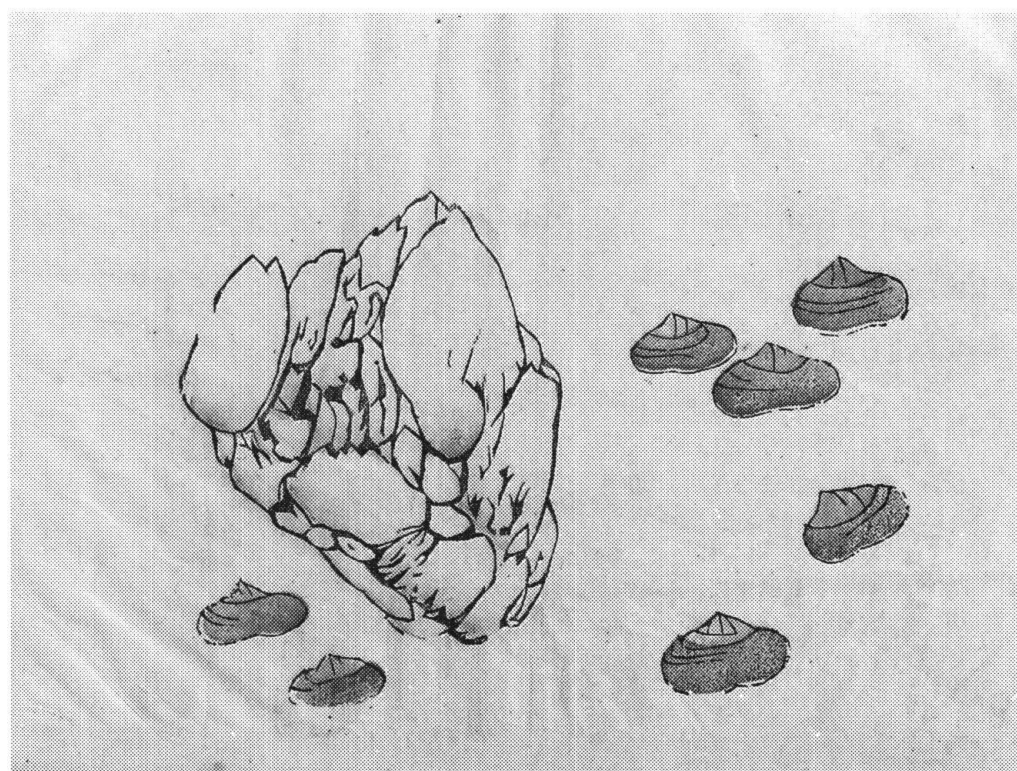


Fig. 11. Water chestnuts (*Eleocharis dulcis* Burm.f., *biqui*) -(VII/20)

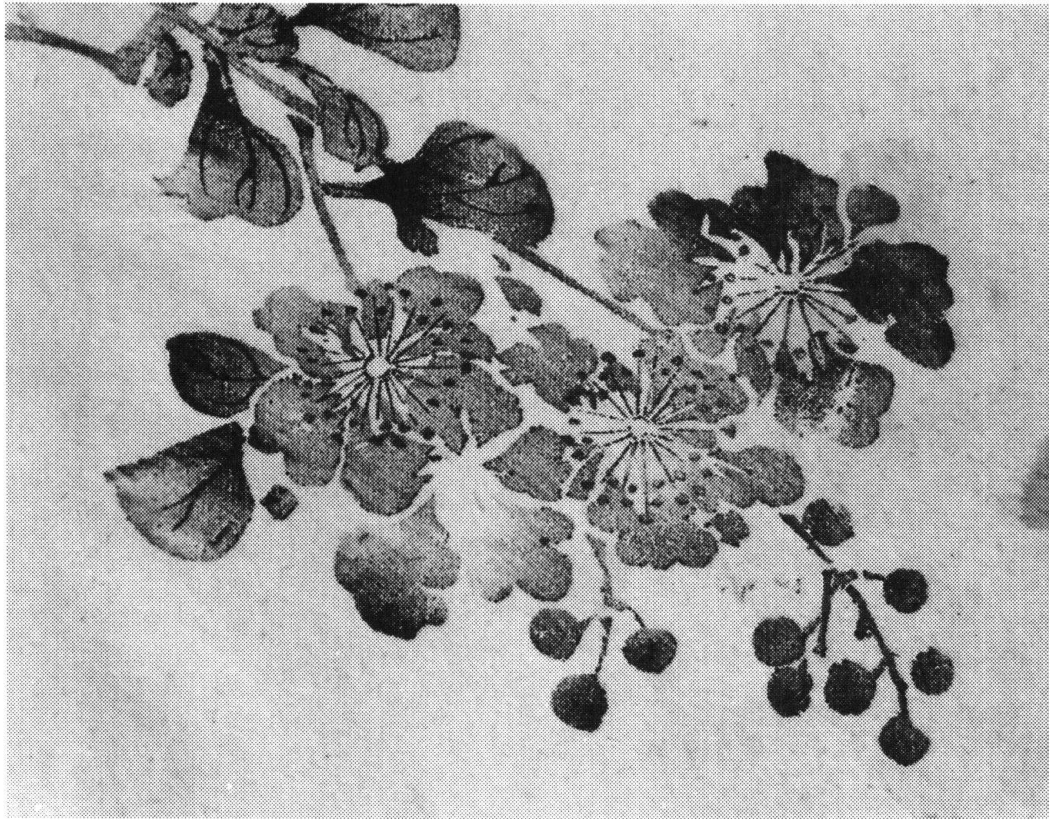


Fig. 12. Bird on a branch of crape-myrtle (*Lagerstroemia indica* L., *zi-wei*). Detail. -(VIII/19)

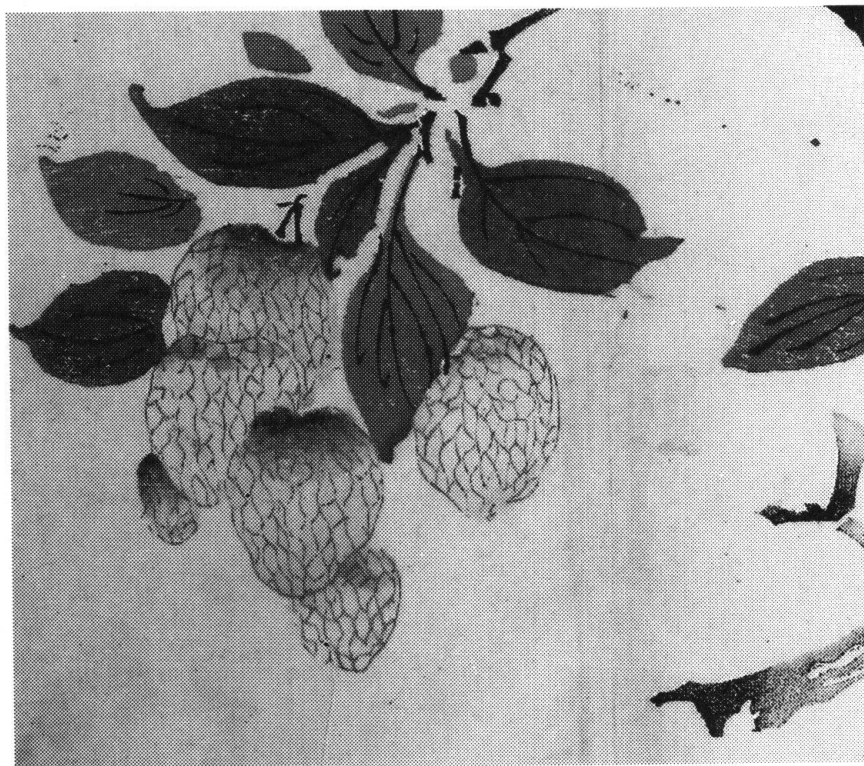


Fig. 13. Litchi nuts. Detail. -(I/20)

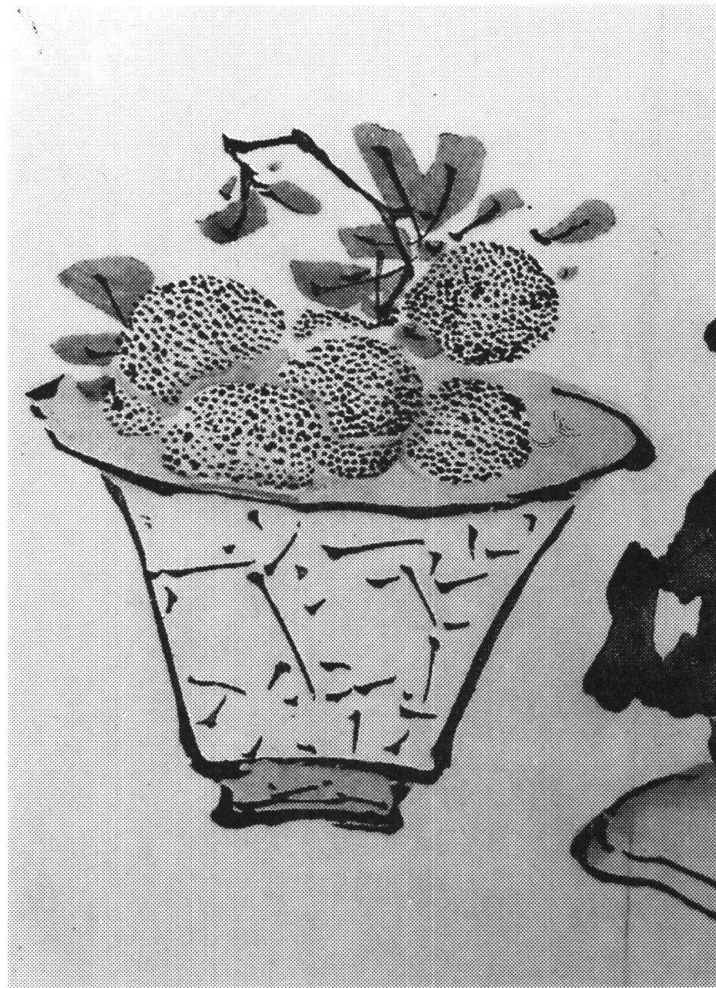


Fig. 14. *Arbutus* (*Myrica rubra* Sieb. et Zucc., *yangmei*). Detail -(VII/15)

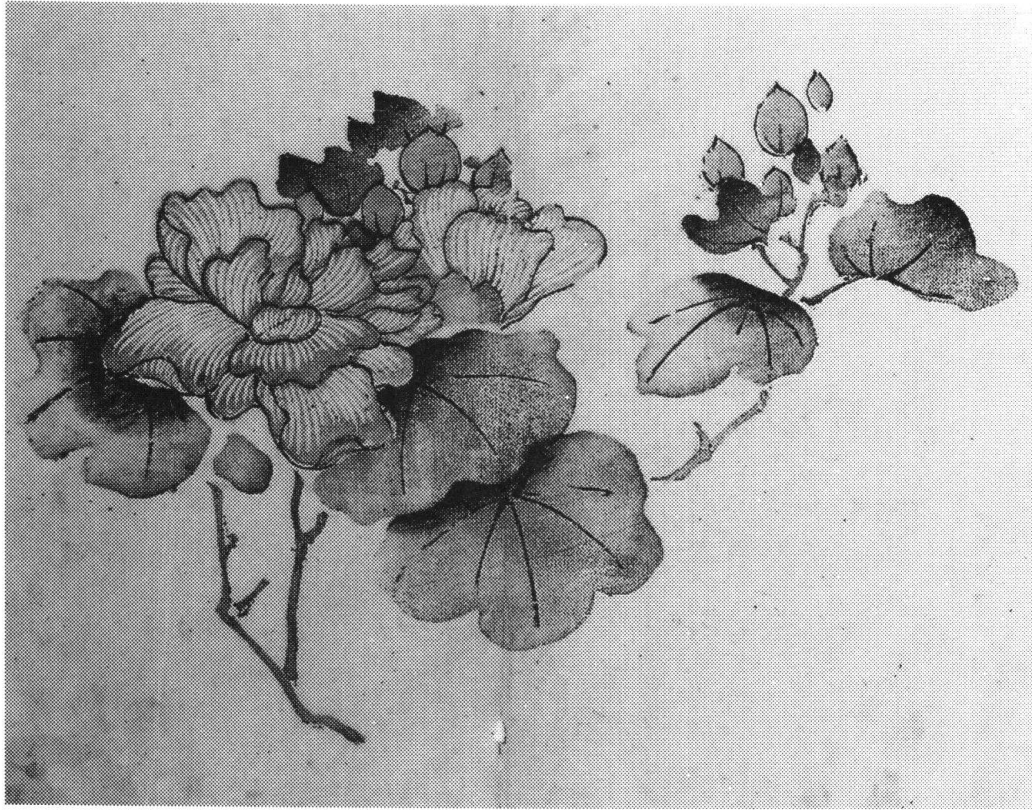


Fig. 15. Hibiscus (*Hibiscus mutabilis* L., *furong*) -(I/11)

Fig. 2 and 14 are from Fribourg, J.: "Gravure sur bois" in *Arts de la Chine*, Office du Livre, Fribourg, 1964, fig. 139 and 150. Fig. 9 and 10 are from Tschichold, J.: *Die Bildersammlung der Zehn bambushalle*. Rentsch Verlag, Erlenbach, 1970, fig. 19 and 20. The remaining illustrations are taken from a 1817 edition (private collection).