

Characteristics of Hydrangeas and their usage at Japanese gardens in Kamakura area

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Annotation. The features of planting hydrangeas in the Kamakura region have been studied. Hydrangeas have been planted since ancient times, but they were not planted very often in traditional gardens. After World War II, mass plantings of hydrangeas spread rapidly. They are usually informal gardens rather than gardens. The individual features of the design of the plantings were revealed. Meigetsuin Temple: One blue color for one variety. Temple of Hasedera: rich variety of cultivars. Kosokuji Temple: Planting pots along the garden path. Goryo Shrine: Planted along the railroad. One of the common points is that hydrangeas are commonly seen when traveling on foot or by train. Visitors enjoy the landscape from different perspectives.

Keywords: Hydrangea, Japanese garden, Sequential landscape, Kamakura area

Характеристики гортензий и их использование в японских садах в районе Камакура

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Аннотация. Изучены особенности посадки гортензии в районе Камакура. Гортензии культивируются с давних времен, но в традиционных садах их использовали не так часто. Массовые посадки гортензий быстро распространились после Второй мировой войны, особенно в неформальных садах. Выявлены индивидуальные особенности дизайна в посадках гортензий: 1) Храм Мейгецуин: единый синий цвет для одной разновидности; 2) Храм Хаседера: богатое разнообразие сортов; 3) Храм Косокудзи: приставная культура вдоль садовых дорожек; 4) Святилище Горё: посадки вдоль железной дороги. Одним из общих моментов является то, что гортензии обычно наблюдаются при движении пешком или в поезде. Посетители наслаждаются пейзажем с разных точек обзора.

Ключевые слова: гортензия, японский сад, последовательный ландшафт, область Камакура

1. The form of Hydrangea flowers

Hydrangeas include several species. *H. macrophylla* and *H. serrata* (or *H. macrophylla* sebsp. *serrata*) are popular in Japan. *H. m. f. macrophylla* is horticultural cultivars delivered from *H. m. f. normalis* which is native to Japan. The “f. normalis” have both monoclinous flowers and ornamental flowers, while “f. macrophylla” have only ornamental flowers and doesn't have monoclinous flowers (Fig. 1). The ornamental flowers have large calyxes and no more produce seeds.

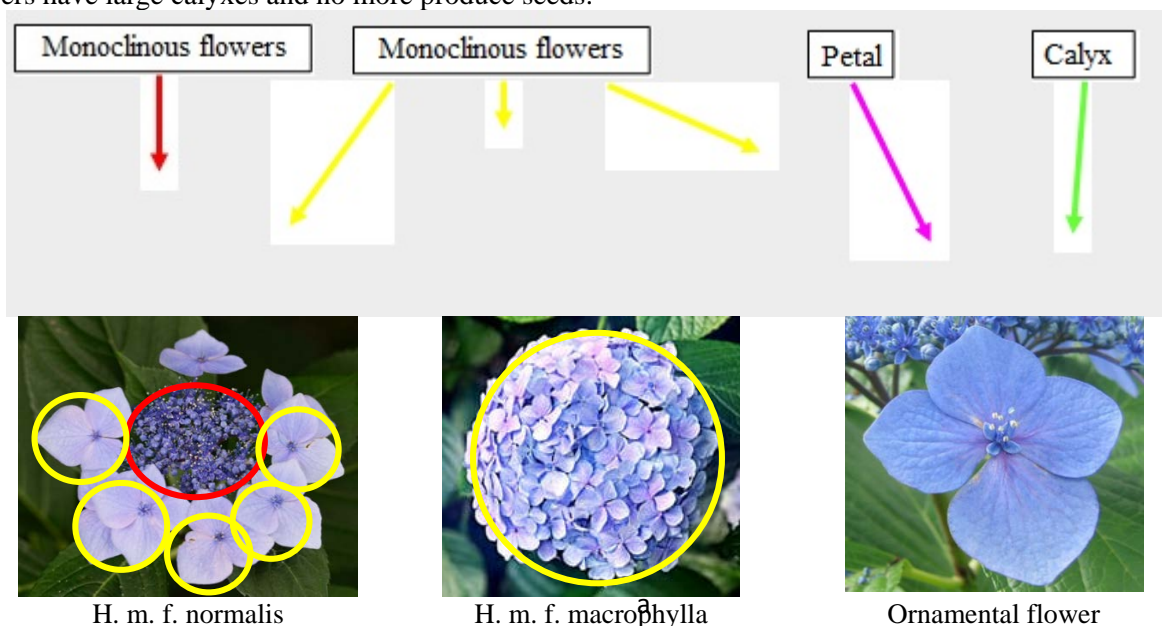


Fig. 1 The formulas of Hydrangea flowers

2. The color of Hydrangea flowers

Many of Japanese may consider the color of hydrangeas to be blue. While peoples of western countries may consider it to be pink. In Japan, acid soil is popular because there is much rainfall. While alkaline soil is popular in western countries. The hydrangeas grown on the acid soil have blue flowers and those grown on the alkaline soil have pink flowers. An easy experiment to show the effect of acidity on the color of the flower was planned. A calyx was cut and lemon juice was dripped on it. The color of calyx was changed from blue to pink (Fig. 2). This experiment is easy and may be nice to show visitors of botanical gardens. The mechanism of color change can be explained as follows (Fig.3). Where the soil is acid, Aluminum ions dissolve in the soil and are absorbed by plants. The Anthocyanins in flowers are combined with aluminum ion and colors blue. While after lemon juice was dripped, the aluminum ions left from anthocyanins and color changed to pink. Some cultivars are sensitive to acidity. But others are not so sensitive and keep their original colors regardless of soil acidity.

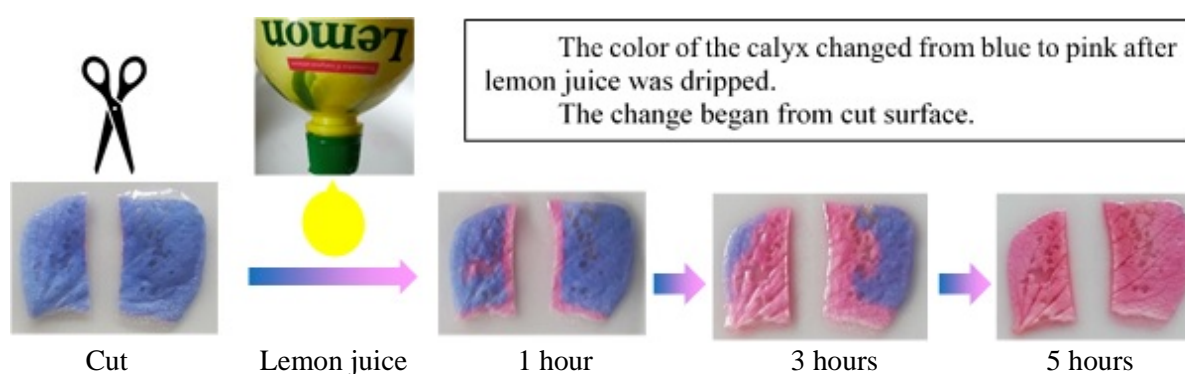


Fig. 2. The change of calyx color after lemon juice was dripped

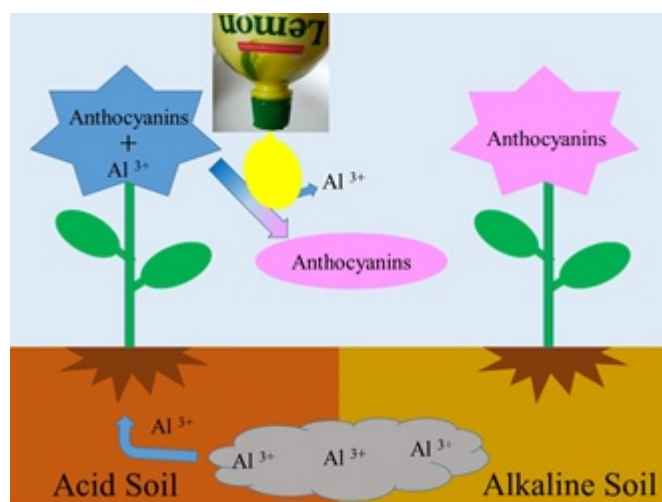


Fig. 3. The mechanism of calyx color change

Apprication of the following materials promote blue color of hydrangea flowers.

- Aluminum sulphate
- Ammonium sulphate
- Potassium sulphate
- Potassium chloride
- Abundant water

While Excessive application of Phosphoric acid may suppress blue color.

3. The history of hydrangea planting in Japan

Hydrangea is written in poems at latest around 700AD. There are two poems in famous old poetry collection named “Manyo-shu”, which literally means a collection of ten-thousand leaves. The oldest one among the known pictures on which hydrangeas are drawn may be “Pine tree and Hydrangea” drawn by Eitoku Kano (1543-1590)¹. There are pictures of hydrangeas after that era. But the number is not so many comparing to the other popular plants. Hydrangeas are appeared on some books for horticulture in 17th century such as “花壇網目”(1664) and “花壇地錦抄”(1696). While descriptions of hydrangeas can hardly be found in the literatures written about plants of traditional Japanese gardens².

It is supposed that the hydrangeas have been planted in gardens of popular houses from old periods. But it may be said that hydrangea had not been so popular in traditional formal Japanese gardens. Nowadays hydrangea is popular plants and there are many famous sightseeing places with hydrangeas in Japan. The mass planting of hydrangeas was rapidly spread after WWII. One of the reasons may be that the new cultivars of hydrangeas which are bred in foreign countries after imported from Japan by Siebold, a famous scholar, and other persons from 19th century. One more reason may be that some temples in Kamakura area began to plant many hydrangeas in their precincts. A temple official told the reason at a TV interview that they planted hydrangeas on the slope to protect from erosion. Kamakura is famous sightseeing place and there are many visitors to the temples. Then the hydrangeas attract much interest from peoples. Then mass planting of hydrangeas spreads to the other temples, shrines, private gardens, public parks, etc.

4. Hydrangeas in Kamakura area

Nowadays, there are many places which are called as Hydrangea temple or Hydrangea shrine. Hydrangea festivals are held here and there. Kamakura area is special famous among them. Kamakura used to be the capital of Japan since 1185 to 1333. There are many sightseeing visitors there. The characteristics of hydrangea planting in Kamakura area were studied.

(1) Meigetsuin temple

Many hydrangeas were planted in front of the gate to the inner precinct. Most of them is single cultivar “Himeajisai”. The flower color is blue and a catch phrase of this temple is the Meigetsuin blue.



Hydrangea in front of the gate



There is no hydrangea in the inner garden

Fig. 4. Planting in the precinct of Meigetsuin temple

(2) Hasedera temple

Mass planting of hydrangeas and walking pass are placed in the slope behind main precinct.



Mass planting of hydrangeas on the slope and walking path in it



You can watch the ocean from upper part of the slope



Many hydrangea varieties are printed and advertised

Fig. 5. Hydrangeas in the precinct of Hasedera temple

This temple plants many hydrangea varieties. Some varieties bred by own temple are included. The appeal point of this temple is variation of cultivars.

Meigetsuin and Hasedera may be the most famous Hydrangea temples. The contrast of strategies of hydrangea planting is interesting. Meigetsuin persists single color and Hasedera persists variations.

(3) Kosokuji temple

Several hundred pots planted Hydrangeas are settled along the garden path in the season (Fig.6).



Fig. 6. Pot planting of hydrangeas at Kosokuji temple



Fig. 7. Hydrangeas along railroad

(4) Goryo shrine

Hydrangeas planted in pots are arranged along the railroad of the train. In addition to this shrine, there are planted many hydrangeas along this railroad. Many visitors enjoy the view from the train (Fig.7).

(5) Some other decorations by hydrangeas at the temples in Kamakura area

In addition to regular planting, hydrangeas are decorated in various ways. For example, there are found hydrangeas in flower arrangements into bamboo culms, floating in the Buddhist Monk's bowl, the drawing of the "Ema" which are wooden plaques that people write their prayers or wishes on (Fig.8).



Fig. 8. Decoration by hydrangeas at temples in Kamakura area

(6) Common points of the Hydrangea planting in Kamakura area

Hydrangeas are usually planted in surrounding spaces rather than central places or inner gardens.

Hydrangeas are usually planted along garden paths or railways so that people enjoy sequential landscape while walking or riding on trains.

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