

Article

Reasonable selection and diversification of ornamental garden plants in Jiangsu and Zhejiang area

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Abstract: The geography and climate environment in Jiangsu and Zhejiang area of China is suitable for most of the plant's growth, so when choosing ornamental garden plants, in addition to on the basis of the local natural environment to choose appropriate plants wisely, and ensuring the ornamental garden plants can adapt to the natural environment in Jiangsu and Zhejiang area, but also give full consideration to the diversity and coordination of ornamental garden plants in selection and configuration. It should follow the principal of "Appreciate flowers in spring, enjoy shade in summer, observe color in autumn, and have green in winter", so that the view is do the four seasons, and each view is different, each has his strong point. It can take full advantages of the aesthetic characteristics of ornamental garden plants, create a more beautiful environment. The research mainly analyzed the landscape function of ornamental garden plants and discussed the problem of ornamental garden plants selection and configuration for in Jiangsu and Zhejiang area. On the basis of following the principle of ornamental garden plants selection and configuration, the author put forward the strategy of the ornamental garden plants configuration in Jiangsu and Zhejiang area, in order to provide certain reference for optimizing the selection and configuration of ornamental garden plants in Jiangsu and Zhejiang area.

Keywords: Jiangsu and Zhejiang area; ornamental garden plants; diversification of configuration

1. Introduction

In modern urban landscape design, plants are the main component, but also the only elements with vitality in the garden. The use of ornamental plant elements can fully reflect the vivifying urban landscape space, and show the four seasons of different forms of change, thereby playing a great positive role in enriching the urban landscape. In the traditional urban landscape design, it is generally believed that the method of landscape design is creating hierarchical landscape by using trees, shrubs, herbs and vines. Combining plant form, color or line and matching different styles of landscape, landscape design provides good surroundings for people to relax and enjoy [1]. Modern urban landscape design has made a deeper elaboration on the traditional design concept, pointing out that the purpose of using urban ornamental garden plants on landscape design is not only to create the artistic visual effect, it should also include ecological landscape, cultural landscape or deeper meaning.

To create a more comfortable city environment, so as to achieve the purpose of improving the present situation of China's urban environment, it is important to enhance the application of ornamental garden plant in the city, and give full play to the role of garden plants, such as ecological function, social function, as well as the production function and beautification function to improve quality of urban greening

in the urban landscape design. Ornamental garden plants are the main part of urban landscaping in China. They can provide a natural barrier for the city, beautify the city environment, purify the city air, prevent various natural disasters and benefit a lot, so they are closely related to our production and life [2].

2. Problems

The selection and configuration of ornamental garden plants in China are deeply influenced by the world. Many designers will copy the more successful garden design, which leads to the disadvantages of the urban garden construction falling into the pattern. For example, many cities will plant large areas of lawns with sculptures, as well as uniform street trees on both sides of the street. From the perspective of natural environment, different natural environments have corresponding plant communities suitable for growth. When choosing ornamental plants, appropriate species of ornamental plants should be selected according to local geographical characteristics and natural environment characteristics [3]. When choosing ornamental plants in most cities of China, they are more inclined to choose the arrangement pattern of herbs, trees and shrubs that are independent, orderly, single and large area, and pay attention to artificial beauty. A combination of herbs, trees, and shrubs can create a more stable habitat, but is rarely used. Ornamental garden plants can photosynthesize and provide sufficient oxygen, which has a lot of environmental benefits, such as beautify and purify the city, stabilize the soil, prevent the harm of sand and so on, so ornamental horticultural plants are an important part of the city landscape. The principle of seasonality, diversity and adapting measures to local conditions of garden plant resources configuration should be considered in the garden landscape design, so that garden plants can play a greater role.

Plant growth is established on the basis of certain characteristics, and is the results of plants to adapt to the environment, adapt to the soil, adapt to the climate. So any plant that grows well is a product of the interaction between its characteristics and its environment. But in the actual urban gardening design, in order to construct the plant species richness and uniqueness, people always blindly introduce some foreign rare plant species, which tend to violate the local climate, soil, water, such as the actual situation. These aliens are hard to adapt to the local climate, soil and other environment, and the survival rate is very low, which leads to the waste of city gardening costs. Because these alien species are not adapted to the climate, they cause many diseases, but also may affect the growth of local plants. In addition, during the process of urban landscape design, landscape design staff need to fully understand the plant growth environment, and the characteristic of plants. During plant configuration, if two kinds of plants that are mutually compatible are planted together, plant growth will be affected, such as the clove will wither immediately besides Lily of the valley. Plants have higher requirements for the growth environment, if the growth environment problems will also cause damage to the plant itself. The plant in the process of growth will be affected by a variety of external factors, such as pests and diseases, will also affect the plant and landscape [4].

3. Strategy

In the selection of plant species in urban landscape design, local plants should be chosen first, because they are familiar with the local environment, soil and climate, and have strong adaptability. Once planted, the forest can be formed quickly without special maintenance, and there is no need to invest heavily in later maintenance. And the use of native species can effectively protect the local cultural landscape characteristics. When selecting alien species, we should not blindly choose plant species in pursuit of novelty and diversity. Instead, we should give full consideration to the local climate, hydrology, soil and other practical factors and choose plant species with similar growth habits, which will help to improve the survival rate of plants and improve the quality of urban landscape design.

When we choose ornamental garden plant in Jiangsu and Zhejiang area, we must conform to the principle of diversity. In addition to ensure that a variety of configurations, enriching plant species of the city at the same time also need to conform to the principles of landscape design, so as to promote the overall ecological stability of the urban environment, and help to create the coordinated development of urban landscape [5]. Therefore, when choosing ornamental garden plants to beautify the urban environment, the selection and configuration of plant resources can be in accordance with the principle of diversity. Herbs, trees and shrubs can be matched with gardening plants. Besides, we should fully consider the seasonal plants, and pay attention to the four seasons of color, mutual set off, in order to rich landscape color, increase the coverage of vegetation, make a full use of local plant resources, and avoid similar to other city landscape, to create a different style of urban landscape image. Therefore, it is necessary to make a full use of seasonal garden plants to create a variety of urban landscape. It can be seen from the seasonally suitable ornamental garden plants and their ornamental value (Table 1). Each season has different landscape characteristics. “Appreciate flowers in spring, enjoy shade in summer, observe color in autumn, and have green in winter” is the principle that needs to be adhered to in urban landscape design. In addition, certain types and quantities of flowering shrubs, ground cover plants and bird-loving plants can be arranged to provide good living conditions for natural enemies of diseases and pests and form a stable habitat community structure of urban ecological environment [6].

Table 1. Suitable ornamental garden plants and their ornamental value in Jiangsu and Zhejiang.

Season	Spring	Summer	Autumn	Winter
Suitable Plants	Cherry blossom	Camphor	Osmanthus	Cycas revoluta
	Peach blossom	Magnolia	Acer monoos	Bamboo
	Chinese redbud	Weeping willows	Acer palmatum	Wintersweet
	Hydrangea	Albizzia julibrissin	Redflowered loropetalum	Pinus elliottii
Ornamental value	Peony	Gardenia	Smoke tree	Five-leaved pine
	Banana shrub	Jasmine	Ginkgo	Green grass
	Enjoy the flowers	Enjoy the flowers and leaves	Enjoy the flowers and leaves	Enjoy the flowers and leaves

4. Epilogue

The climate and environment are superior in Jiangsu and Zhenjiang area, so it is suitable for the growth of the vast majority of garden plants. In the selection and configuration of ornamental garden plants, not only to combine the local geographical characteristics and environmental conditions to fully consider, adjust measures to local conditions of ornamental garden plant selection, but also pay attention to ensure gardening the diversity of ornamental plant configuration and coordination development, reasonable use different gardening characteristics of ornamental plants to build with urban characteristics, the sustainable development of urban gardening landscape.

Conflict of interest: The authors declare no conflict of interest.

References

1. Dehnen-Schmutz K, Touza J, Perrings C, et al. The Horticultural Trade and Ornamental Plant Invasions in Britain. *Conservation Biology*. 2006; 21(1): 224-231. doi: 10.1111/j.1523-1739.2006.00538.x
2. Hernandezapaolaza L. Reuse of waste materials as growing media for ornamental plants. *Bioresource Technology*. 2005; 96(1): 125-131. doi: 10.1016/j.biortech.2004.02.028
3. Liu J, Zhou Q, Sun T, et al. Growth responses of three ornamental plants to Cd and Cd–Pb stress and their metal accumulation characteristics. *Journal of Hazardous Materials*. 2008; 151(1): 261-267. doi: 10.1016/j.jhazmat.2007.08.016
4. Zheng AQ. Plant configuration and plant landscaping in landscape design. *Residential and Real Estate*. 2020; (32): 178-179.
5. Noman A, Aqeel M, Deng J, et al. Biotechnological Advancements for Improving Floral Attributes in Ornamental Plants. *Frontiers in Plant Science*. 2017; 8. doi: 10.3389/fpls.2017.00530
6. Jiang JW. Selection and allocation optimization of ornamental horticultural plants in central Plains of China. *Molecular plant breeding*. 2020; 18(20): 6915-6920.