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Innovative Application of Ecological Civilization Concept in Urban Wetland Landscape Planting Design

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ABSTRACT. *Wetland parks, guided by the advanced ecological thought of "use in protection, protect in utilization", are playing a more and more important role in modern ecological garden landscape, in which plants, as an important part of wetland landscape design, are also given considerable attention. By consulting a large number of domestic and foreign related literature, this paper elaborates the plant landscape design of wetlands, urban wetlands, urban wetland parks, urban wetland parks and urban wetland parks in detail. In-depth analysis of urban wetland parks from the comprehensive evaluation of plant landscapes, the theory, techniques and models of plant landscape design. From the control planning of the plant landscape in each protected area, the construction of the zonal vegetation landscape of the core protection circle is emphasized, and the probiotic-type wetland plant configuration model is designed to protect and attract animals, thereby increasing the diversity of wetland animals. Through these methods, we can create a city wetland park that can freely "breath", and finally build a wetland city where the world, the people, and the harmonious symbiosis.*

KEYWORDS: *Ecological Civilization Concept; Urban Wetland; Plant Landscape Design*

1. Introduction

For a long time, people have realized that wetland is one of the richest biodiversity ecological landscape in nature and one of the most important living environments of human beings. Plant is one of the basic components of ecosystem and one of the important factors of landscape vision [1]. Although urban wetlands are rich in resources, they are facing serious threats. Therefore, the construction of wetland parks is more and more popular. With the rapid development of our society and the enhancement of environmental awareness, all walks of life have set off a wave of environmental protection. Under such circumstances, the concept of ecological civilization as an important part of environmental protection is also

expanding its application scope, including the application of plant landscape design in urban gardens [2]. The choice of plants plays a finishing role in the design of the entire wetland park. Plants constitute spatial changes, temporal changes and color changes, which are reflected in the diversity of landscapes. The quality and aesthetic value of environmental development are also increasing [3]. With the acceleration of urbanization, although humans have brought rapid development in material civilization, over time, the greenhouse effect caused by greenhouse gases and excessive vegetation reduction have resulted in land desertification, soil salinization, and water and soil. Loss of ecological and environmental disasters.

Whether it is a natural wetland or a constructed wetland in the city, it is one of the most biologically diverse ecological landscapes in nature and one of the most important living environments of mankind. It is called the "heart of the earth". In fact, the restoration of wetland functions and landscapes by wetland plants is the most direct, and the planning and design of a successful wetland park has played a crucial role in the planning and design of plant landscapes [4]. In the construction of urban wetland park green space, plants are the main factor. The quality of plant landscape is directly related to the overall landscape quality of urban wetland parks. The application of different design techniques is particularly important for the creation of reasonable wetland plant landscapes [5]. The application of the concept of ecological civilization in urban landscape design can improve the effectiveness and environmental protection of urban greening in China to the greatest extent. Protecting wetlands is of great significance not only to wetland ecosystem, but also to the construction of urban wetland network and the construction of ecological cities in the north. In this paper, combined with the Urban Wetland Park plant landscape design case, through the theoretical and practical research ideas, summed up the effective plant design methods. To provide a new way to solve the problem of urban ecological diseases, and to provide suggestions for the construction of an ecologically livable city.

2. Study on Plant Landscape Design of Urban Wetland

The principle of naturalization requires the use of current and local plant species for plant landscape design, and the natural landscape features (Figure) through the matching of plants in the grassland. It reveals the complexity of the landscape and is a representation of the diversity of biological composition at the landscape level. Landscape diversity can be divided into landscape type diversity, plaque diversity and pattern diversity. At the cross level, the warp and weft make up the fabric we live in, but this is not a simple two-layer fabric, it is composed of a myriad of different layers [6]. How these layers interweave determines whether the result will be a coherent fabric or a dysfunctional mess. A stable plant community structure has been formed, which is a good reference for wetland plant landscape design. Learning and simulating natural plant communities is a model to maximize the ecological benefits of wetland plants. Temperature restricts the growth and distribution of plants, but also affects the appearance characteristics of plants. Especially in winter, the plant landscape of cattail and reed constructed wetlands is

largely affected by the withered and yellow surface of plants. Therefore, the North should choose evergreen conifers to isolate dust and sand. In autumn, if a large number of Red-leaf plants are planted in the north, on the one hand, they can give people a visual aesthetic feeling, on the other hand, deciduous leaves can also play a role in increasing soil nutrients.

Figure. 1 Naturalized urban wetland park

The ecological principle requires that the plant's ecological function be maximized by perfecting the combination of artificial and natural plant design methods. Through the selection of plants and the determination of the proportion of plant communities. Consider more the number of different landscape types in the landscape and the proportion of their area; plaque diversity refers to the diversity and complexity of the number, size and shape of plaques in the landscape. Expressing nature in form, based on the artificial environment that introduces nature into the city. But it only changed people's aesthetic taste of the garden form, and did not change the artistic standard of landscape design [7]. Different ecological environments promote the emergence of different plant landscapes. When simulating natural plant landscapes, the most important thing is to summarize the community characteristics and redesign them with local plant materials. While meeting the ecological requirements and purifying the water body, a beautiful landscape composition is formed (Figure 2). The aquatic plant landscape presents a relatively single feature in terms of plant type, color system and rich aquatic plant landscape. In the selection of plants, we should choose different plants according to different areas, such as broadleaved plants, although they can maintain soil moisture and can play a better effect of dust and sound insulation. On the other hand, increasing the greening coverage of urban building walls will greatly increase the urban greening coverage area, reduce the exposed area of reinforced concrete in urban buildings, reduce the heat island effect caused by "cement city" to a large extent, and improve the urban climate.

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Figure. 2 Demonstrate the individual beauty and group beauty of plants in the natural habitat of wetlands

In the urban garden plant landscape design, in order to better apply the low-carbon concept, the form and structure of the plant must be fully considered. The community type of the tree is different, and the carbon-fixing capacity is also obviously different. Therefore, the staff must combine The actual situation of the garden, rational allocation of plants. The maximum biomass of plant communities is an important indicator of the health of wetland ecosystems and also represents the relevant stage of wetland succession. The relationship between competition and survival of the fittest in nature is everywhere. In the long-term natural succession process to achieve the best state, the animal, microbes to build a rich natural habitat, while providing a guarantee for their living environment. It can be compared to a complete form, a whole composed of individuals, the effect of which exceeds the sum of the effects of the individual bodies. Integrity means that each element can only be reflected by its position in each element in relation to its surroundings. Through rational design to reduce the damage to nature, in order to protect the current good ecosystem. Formal natural design is not necessarily ecologically scientific. Water is the soul of wetland, and wetland is the carrier of water. Therefore, water is an important part of wetland plant landscape and the basis of plant landscape design in urban wetland parks. Staff pay attention to the rationality of the main landscape plant allocation, choose the Bush as the main landscape allocation, and it is appropriate to use metasequoia, cypress and other tree species, and in order to ensure the coordination of the main landscape, select a single tree species in the allocation, design the difference between each plant spacing, and plant volume also has differences.

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3. Plant Landscape Design Concept of Urban Wetland Park

On the basis of following the concept of ecological civilization put forward, combined with new plant landscape design ideas. So that it can grow freely in the design site, through the diversity of its species, build a stable ecological balance system, to achieve the regulation of the surrounding urban environment and ecology. Therefore, the design of plant landscape in urban wetland parks not only meets the basic functional needs, but also carries out artistic treatment. To establish a scientific design ethics, human beings are an integral part of nature. They can not survive without nature, but they must limit the harmful behavior of human beings to nature, and shoulder the responsibility of maintaining the natural environment. "The win of the wetland, the water alone", the construction of the wetland plant landscape needs water, the interaction of water, sky and shore plants, and the reflection of the trees and water on the shore, forming the beauty of the wetland landscape. Due to the different site conditions and plant resources of each urban wetland park, it is necessary to make the plant landscape design more reasonable and make full use of its resources. Try to ensure the richness of the forest type and the canopy level, and match the evergreen tree species with the deciduous tree species to achieve the maximum green amount and ecological benefits.

The construction of wetland parks should focus on providing a healthy ecological balance environment for animals and plants inside and outside the waters, and introducing animal rivers to allow animals to enter the wetland environment by natural succession. Let the plants in the wetland park not only have the function of beautifying the environment, but also have the functions of purifying water bodies, conserving water sources, flood control and drought resistance, and economic production. To a certain extent, it will cause people to exert mental stress and nervousness, while soft landscapes such as a large number of plants in urban wetland parks can soften. Bringing relaxation and relief to the people living in the city. Different ecosystems or landscape elements have more active energy flow and logistics, rich species and higher productivity, so the ecological design of cooperation with nature needs to make full use of the edge effect between ecosystems to create rich landscape. Groups of tree species are planted to form a multi-layer forest of trees and shrubs. They are planted in scattered patterns, high and low, front and back, at the edge of the space, forming a beautiful skyline and pleasant scenery. We should not destroy the laws of nature and break the original balance of nature in order to meet the aesthetic standards of tourists. Avoid natural or man-made interference to protect and restore the original ecosystem of wetlands.

The combination of many kinds of plants not only forms a rich and patchy effect pool, but also promotes the evolution of water pollutants to achieve complete or semi-complete self-circulation of the ecosystem. We should follow the original ecological design technology theory and combine the new concept of plant design ideas for ecological design to maintain the stability of the ecosystem. The urban wetland park plant landscape ecological design will be carried out according to local conditions, and the “wet natural habitat” landscape of the urban wetland park will

be created. It contains a rich variety of creatures. Designs that work with nature should respect and preserve their diversity, and the deepest meaning of eco-design is to design for biodiversity. At the same time, attention should be paid to the integration of the idea of "blank" in Chinese landscape painting, so as to leave the water surface in the appropriate location near the trestle, bridge, Pavilion and pavilion, and building, without planting aquatic or wet plants, so as to achieve the function of living space. It can assist in the design of wetland plant landscape with agricultural interest and Flower-sea characteristics. Create a wetland plant ornamental area with unique urban characteristics. Planting uniform sunflowers and rapeseed flowers in wetland plots will shake their heads as the sun moves; the rich and varied plants in the field create the best place for aquatic creatures to live in recreation; the fish swimming in the clear river water is the children's favorite, showing the vigor of the park (see Figure 3).

4. Conclusions

This thesis, through the in-depth study of the plant landscape design of the urban wetland park, combined with the research dynamics of the subject at home and abroad, clarified the purpose and significance of the research, and developed the research methods and technical routes. In the design of the plant landscape of the urban wetland park, a perfect evaluation system is conducive to improve the operability and scientific design. Pay attention to the use or restoration of plant species of the original natural wetland ecosystem, construct the original vegetation system, etc. and find out the main problems existing. The planning and design of the plant landscape during the planning process did not attract enough attention. The plant landscape design of Urban Wetland Park is based on protecting the original wetland ecological environment and restoring the wetland species community, making the best use of local and local materials, combining with local cultural traditions, to form a natural eco-tourism landscape with regional characteristics and beautiful. At the same time, according to the actual environmental conditions of plants, wetland parks are divided into water surface, terrestrial, landscape architecture, Garden Road and terrain types to analyze the plant landscape design methods of urban wetland parks. It is of great practical significance to adopt natural disposition to meet people's living environment needs and alleviate the adverse effects of environmental pollution.

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