

Summary

Yangmingshan Qianshan Park weaves together several layers of historical, ecological, and productive landscapes into a quilt of patches. As a series of careful addition, subtraction and renovation of the existing condition, it utilizes environmentally friendly construction methods while taking advantages of modern engineering. In the construction process, large machines and tools were avoided to reduce the impact on the environment, and maintain biological habitats. The separation of spring water from the creek water has created a water system that catalyzes ecological processes, increases the crop production downstream and improves the livelihood of these farmers. It also restored the historical landscape of the terraced rice fields. The benefits of this project have expanded to the entire Yangmingshan area. Moreover, the pergolas designed according to the characteristics of the environment have raised the green cover rate while providing better recreation to the public. The removal of the redundant trails and facilities accumulated throughout the decades makes more room for wildlife habitats. Qianshan Park as a whole improved ecological environment has attracted more people to use the park. Overall the design re-established the bonding between cultural and ecological processes that once connected the city and the national park have re-established its importance as a gateway park to Yangmingshan National Park.





Bright pearl of Asia

Once a large lake at the foot of Yangmingshan, the capital city Taipei used to be a place with a beautiful landscape and rich in ecological resources. A rare national park located next to a large city, Yangmingshan had lost its original green role with the development of the city. As such, the organizer Taipei City Government endeavor to collaborate with the enthusiastic design and construction team, and the participating civic groups to amend the loss. They have finally achieved historical, humanistic and ecological results and created high environmental value to make the park a bright pearl in Asia.





Site Study

This site is located at Beitou District in Taipei, where Yangmingshan National Park meets the city area. The area covered in this project is 43,941 square meters.







1. Historical background

Yangmingshan was formerly known in Qing dynasty as Caoshan (Grass Mountain in Mandarin). It is said that local aboriginal Ketagalan tribe had developed the sulfur-refining technology before the great earthquake during Emperor Kangxi's rule in the 17th century. In the early 20th century, Japanese set up here numerous parks, hiking trails, hot springs and leisure facilities. Established in 1985 as one of Taiwan's tourist attractions, Yangmingshan National Park preserves the only complete volcanic landscape in Taiwan.

2. Hydrological characteristics

The Pine Creek runs through the park and makes a deep cut in steep slopes, giving a rich and varied topography.

3. Geological characteristics specific to Yangmingshan

This area mainly consists of sedimentary rocks and igneous rocks.

4.Topography

The topography at this site ranges from 150 to 500 meters in elevation. With multiple rivers running through the site, it contains undulating slopes, valley and terraces.

5.Species richness

It is home to 122 species of birds with Taiwan blue magpie as the most representative one, 30 kinds of mammals, such as Taiwan macaque and masked palm civet, and 168 species of butterflies and 54 species of reptiles.

6. Analysis of vegetation

Yangmingshan accommodates more than 100 species of plants, including mosses, ferns and orchids. According to the survey, a total of 126 species of plants in 53 families were recorded. Special plants in Qianshan Park include moss, camellia, oldham azalea, Taiwan alpine rhododendron and many protected trees, including autumn maple tree.



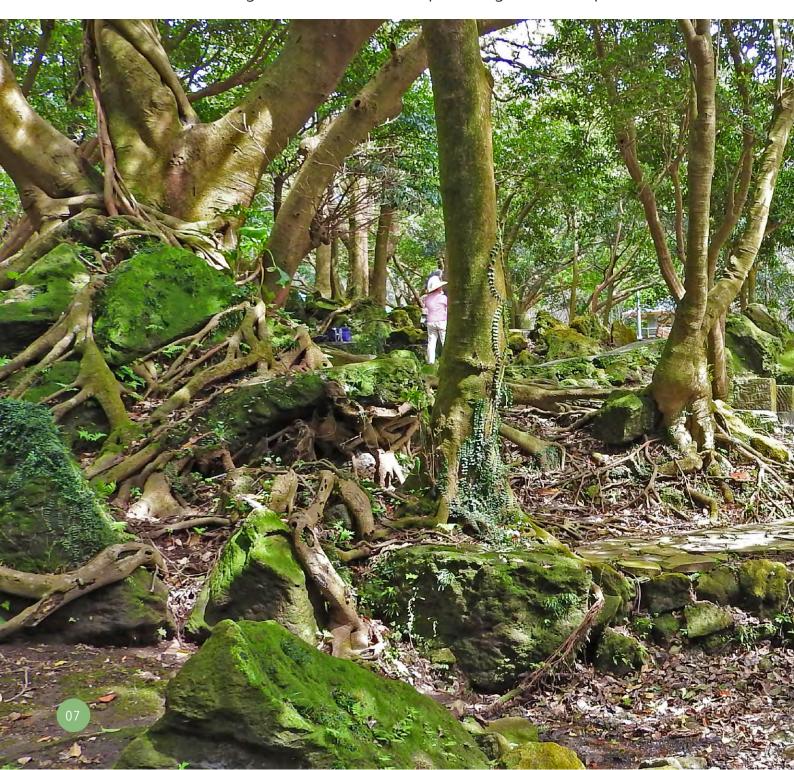
Project Outstanding Values

1. Traditional practices hand in hand with modern technologies

In extension of the historical value, modern technologies and environmentfriendly approaches were introduced to make it an effective work. A Japanese craftsman was invited to instruct how to revitalize and enhance the original design factors. The original impervious surface was replaced by pervious pavement to prevent long-term ponding,

2. Humanistic value

It is an all-age park that contains natural ecology and quality humanistic garden. For the sake of the natural ecology, conventional techniques were adopted to retain and reinforce the idea of the original design, integrating the artificial facilities into the natural environment and adding functions without compromising the landscape.



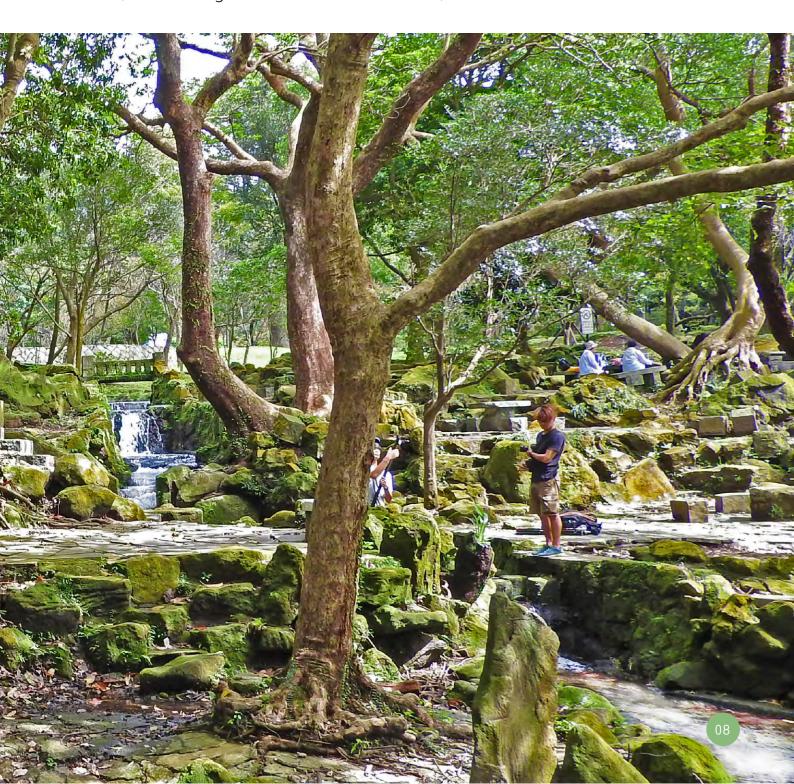


3. Ecological value

The water separation system effectively improved the polluted water in Yangming Lake. The natural water conservation slopes have increased the habitat and hidden space for benthic biological ephemera and constructed a more complete biological food chain to increase biodiversity, functioning as an ecological corridor connecting the city and the

4.Industrial value

The separation of Pine Creek from the white sulfur spring water system has improved the water quality of the community terraces downstream and restored the functions of a wetland, increased agricultural and tourist benefits, and other benefits such as water

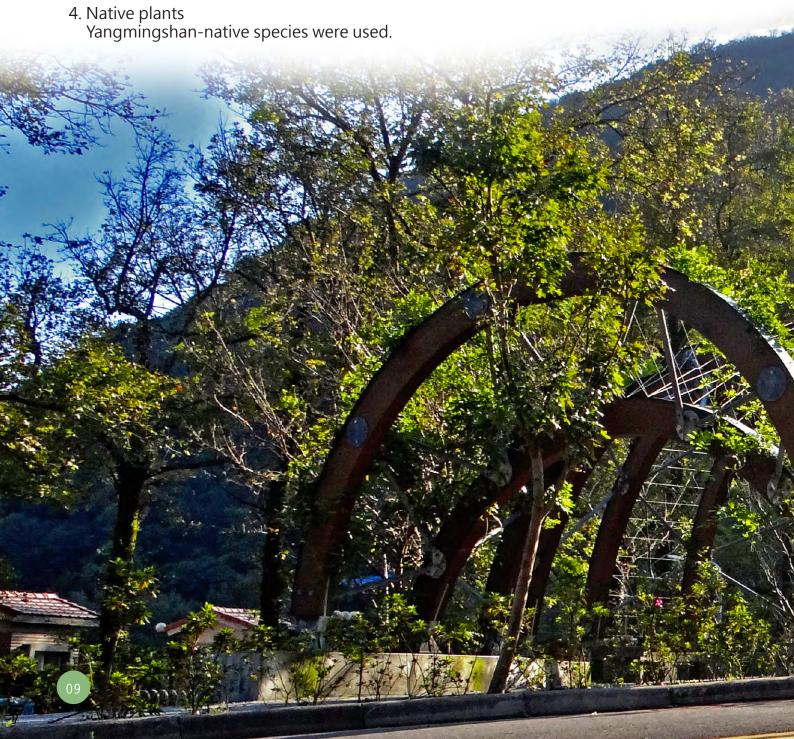


Basic Design Principles

Ecology/sustainability Subtraction/landscaping Renewal/creation Restoration/revitalization

Material used for construction

- 1. Rock Existing rock arrangements were used.
- 2. Wood Weather resistant wood was used.
- 3. Metal Sulfur-resistant metal pieces were used.





Environmental Restoration Practices

- 1. Rearrangement of water systems: The creek water and spring water have been separated to create great waterscape, improve bathing comfort and increase crop production.
- 2. Rearrangement of green system: Trees were thinned and unnecessary facilities were removed to display different levels of plantation.
- 3. Rearrangement of open space: A simplified trail system was built to connect small open spaces and facilities.
- 4. Activity system: The hot spring baths are regarded as the primary activity while sightseeing, walking, fitness, and meditation as secondary.





Design Features

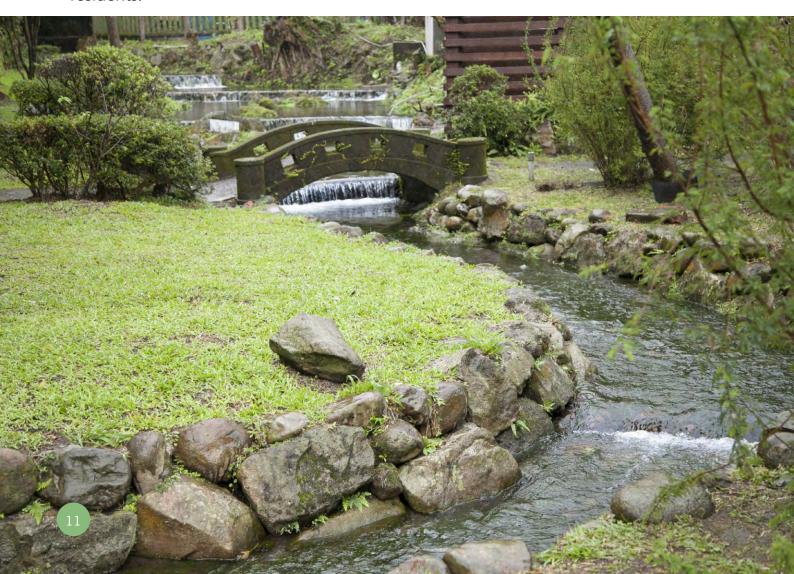
1. Rectification and revitalization of the streams and waterways

The original mixture of creek water and spring water in the park and the spring pipeline that blocked the drain damaged the landscape as well as impacted the downstream irrigation water. To preserve and maintain the water environment in this area, the water systems were rearranged and divided, the sludge in Yangming Lake was removed and the clear water was channeled into the lake, after communicating the idea with local residents.

The systemization, purification, eco-friendliness and beautification of the water system in Qianshan Park not only create a beautiful waterscape, but also allow the surrounding crop production possible with increased yield, such as paddy rice, water bamboo and cabbage, since the irrigation water is no longer polluted by the hot spring water. The fascinating terraces in the past are expected to re-appear in the future.

2.Beautification of the landscape surrounding Yangming Lake

The circular veranda of the strolling-style landscape garden was built beside the lake. Lakeside railings and seats that match the overall design were installed to enhance safety and comfort. Removal of the lake mud and the arrangement of the lake isle brought back the former glory of the Turtle Isle. A wooden structure added to the foot bath outside the male and female bathhouses as a resting space makes a great waiting corner. The improved lake landscape has raised the environmental awareness of the surrounding residents.





3. Frequent use of trails, waterways, the green belt and facilities after subtraction and integration.

Significantly simplified and integrated trails and facilities restored the orderliness of the originally natural garden in Qianshan Park. The improved space has increased the utilization rate and attracted more tourists to Qianshan Park so that it can function as an outpost of Yangmingshan National Park.

4.Small, light and ecology friendly structures to fit in the existing environment.

(1)Pergola

Four new pergolas, including wisteria pergola, waterfront pavilion, male bathhouse pergola and female bathhouse pergola, added in this project were all made up of light wooden structure to echo the elements of the landscape. Honey plants on these pergolas increase the green cover rate and attract butterflies in ecological perspective.

(2) Rock formation

Rock formations were used in this project to improve the landscape in the park. The on-site existing rocks were re-used in ecological engineering methods to be integrated into the environment and maintain the historical landscape.

5. Civil participation

- (1) Contribution to landscape education (Participation of teachers and students from Private Chinese Culture University)
- (2) Participation of local residents and community (Participation of QuanYuan Li)
- (3) Preservation of old trees and establishment of tree records
- (4) Tours guided by the landscape designer





Local Community Feedbacks

- 1. The number of tourists here has increased significantly on weekdays. The first bus to the park in the morning is usually full of passengers.
- 2. The quality of life in the neighborhood, dormitories and nursing houses has improved.
- 3. The convenient walking space benefits not only people in the neighborhood, but also the citizens of the great Taipei
- 4. Throughout the year, tourists are attracted here for different flowers in blossom.







