

Bionest Garden

Genki Terasawa – Landscape, Gardening
and Greening Course
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1. Introduction

I had an internship at a park and learned about Bionest.

For my graduation project, I decided to make use of this experience to create a Bionest.。

Bionest is a composting structure that aims to reduce the cost of processing plant materials such as pruned branches and to utilize them as a resource.

The name “bionest” is a combination of “bio = life” and “nest = nest,” since plant-generated materials such as pruned branches, and tree trunks about the size of an arm are combined to form a shape like a bird's nest.

Installing bionests is ecological and environmentally friendly because it eliminates the need to transport and dispose of plant waste.

The production method begins with transporting pruned branches to the location where the bionest is to be produced and adjusting the length of the material.

A central stake is driven into the ground using a measuring tape (convex).

And branches (about 30 cm in diameter) are placed as the base, and from the second level, smaller branches about the size of an arm (10-15 cm) are piled up.

During the production process, we need to check from time to time from a distance to make sure there are no gaps between branches.

Then, if necessary, the gaps may be filled with thin branches.

The bionest is completed when its height is about knee (about 60 cm).

2. The first work, “Shogo-ki”.

As this was the first bio-nest work, it was a small-scale, and the basic shape was circular (2 m in diameter).

The “first tree” was placed in the Parking Lot 2, where pruned branches are easily accessible and fallen leaves are easy to dispose of.

The title was taken from the Japanese word “syogo-ki (機),” meaning “first model,” and since the work was made of tree branches, it was titled “syogo-ki (木),” meaning “first tree,” a pun on the Chinese characters for ‘model/work’ and “tree,” which have the same pronunciation in Japanese.

(Photo-1).

3. The 2nd work “CUTIE NEST”

As for the second work, I created one size larger than the previous one with 3 meters in diameter, right behind the first work.

I wanted to make the work “cutie,” as in the title, a pretty one, so I used freshly pruned and lively leaves instead of dead ones.

This time thicker branches are used after reflecting on the first work, which used many thin branches and required a large amount of material, which made it easy to collapse.

In addition, the surrounding trees were pruned to create a “Garden of Bionest” (Photo-2).

4. The 3rd work “OVAL NEST”

The first and second works were circular, so I wanted to try square and triangle shapes, but considering the ease of production and use, I chose to install an oval-shaped bio-nest (3 m short axis, 4 m long axis) in the Parking Lot 2. Since it was a larger work than previous ones, it easily collapsed. After much trials and errors, thick pruned branches were used for the base (Photo-3).

5. The 4th work “Crape Myrtle Bionest”

I named this work “Crape Myrtle Bionest” because it was made use of the branches of the beautiful and smooth trunk skin of the Crape Myrtle tree.

The branches were hard and took a long time to cut, and they were already bent, making them difficult to assemble.

The diameter is 4 m, and the installation site is behind the practice building (Photo-4).

6. The 5th work, " Workshop Bionest"

The title of this fifth work is “Workshop Bionest” because it was produced in a workshop.

The workshop started at 9:30 a.m. on Sunday, December 22, 2024, at “Ikoi-no-oka Park” (Kani City, Gifu Prefecture) with five members of the Katsuragaoka Residents’ Town Development project, Prof. Aida, and me, 7 people in total.

Following explanations, pruned branches were transported from the branch storage area in the park to the installation site.

After cutting the branches to about 60 cm, we all assembled it, using the tips from my previous four works.

This time, the work was 3 meters in diameter.

At first, we expected it to extend into the afternoon, but it was completed in about two and a half hours, earlier than planned.

After the completion of the work, some participants remarked, "Next time, we would like to prepare the materials and try it by ourselves. (Photo-5).

7. Summary

Bionests contribute to ecosystems and the environment, such as providing habitat for insects.

They also promote resource recycling and return to the natural environment.

By installing artistic objects in the form of bionests, the space can be turned into a "bionest garden".

By incorporating workshops, opportunities can be provided for local people and children to learn about environmental education.

By collaborating with local people, we are sure to communicate with them, leading to further new discoveries and friendships.

[Notes] This work was applied to the 51st National Landscape Architecture Design Competition.



Photo 1 The first work
"Shogo-ki"



Photo 2 The 2nd work
"CUTIE NEST"



Photo 3 The 3rd work
"OVAL NEST"



Photo 4 The 4th work
"Crape Myrtle Bionest"



Photo 5 The 5th work
" Workshop Bionest"