

Company's plant boxes help temper Tokyo heat

5 x Midori aims to make the capital green and preserve species diversity

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Office thermostats in Tokyo will be set to 28 degrees this summer, meaning that workers in the city face a sweltering few months. While a relaxed dress code of sandals and Hawaiian shirts might help, there is a more colorful way to beat the heat: plant more greenery.

That is what 5 x Midori, a company seeking to return seasonal and native plants to Japanese cities, has been doing since 2004. Reducing the urban heat island effect, caused by a concentration of concrete, asphalt and other man-made materials, was just one of the objectives of the founder, Fumi Miyata,

when she set out to green the capital.

"More plants are the answer to a lot of problems — not only dwindling botanical diversity, but also global warming and climate change," Ms. Miyata said. A study at the University of Tokyo showed that having foliage around a building provided more oxygen and reduced the ambient temperature by as much as 1.5 degrees.

Unfortunately, beyond its larger parks, Tokyo lacks open green space, with playgrounds and sports fields covered with sand.

Ms. Miyata conceived the idea for 5 x Midori when her plans for a garden were thwarted because the land around her house was filled in with concrete. Although she admits that many people get around this problem by placing collections of potted plants on their balconies or porches and squeezing trailing plants wherever they can, she wanted more.

"There's practically no soil in Tokyo,"

she said. "Wherever you walk, the ground is always covered in concrete. I thought there must be people out there like me who want more greenery, but have no idea how to go about creating it."

Michio Tase, an architect who focuses on ecological solutions, helped Ms. Miyata design the simple system of interlocking wire mesh boxes that gave the company its name, which means "five times more greenery." When the boxes are filled with soil, plants can grow out of any of the five sides that do not touch the ground.

"The beauty is that you can put them anywhere and make structures or shapes to fit any environment," said Ms. Miyata. "We also used a highly absorbent soil, so they don't need frequent watering."

The boxes, which can be used to create hedgerows, benches and even steps, are called "satoyama" units, a refer-

ence to the botanically diverse woodlands that once covered Japan. Today much satoyama has been swallowed up by industrial and urban sprawl. As many as 25 percent of Japan's indigenous plant species face extinction.

"People don't realize that many Japanese species are dying out," Ms. Miyata said. "People are really shocked to hear that kikyō, one of the seven flowers of autumn, is on the brink of extinction. So we're trying to bring them back."

One way 5 x Midori is doing that is by working with the residents of Batto, Tochigi Prefecture, which is surrounded by woodlands. Ms. Miyata said that people used to clear weeds and undergrowth from the forest floor to encourage diversity by preventing stronger plants from dominating and allowing buried seeds to sprout.

Although the practice has largely died out, it has been revived in Batto by 5 x Midori, which uses some of the sprouted

plants in boxes in the city. Some profits from the sale of boxes are sent back to Batto to fund the next clearing session.

"We can increase botanical diversity while greening the city — it's a symbiotic relationship," Ms. Miyata said.

Increased greenery can also have an emotional effect, as Ms. Miyata points out: "Plants and flowers make people feel better in spirit and body. One study found that hospital patients who could see greenery through their window had a shorter stay and got better faster than those who didn't."

The boxes have spread through the city quickly, with satoyama units visible on roofs, walls and even parking garages. Ms. Miyata thinks this is proof of Tokyo's experimental attitude.

"This city is always in flux, and cutting-edge models are always being tested out," she said. "I think more people are realizing how necessary greenery is in the city. This is just the beginning."