Restoring Our Urban Environments

Growing the Seeds for Land Revival

While the necessity to conserve and protect nature and open space is now recognized by most people, the restoration of degraded land in urban areas still remains a widely unknown concept.

We urban dwellers are all too acutely aware of those lifeless stretches of land that surround us: former landfills, industrial or transportation sites, coal mines, dumping grounds of all sorts…more than an eyesore, these sites are ecological disasters, threatening the physical and mental health of residents.

For over a decade, a Rutgers professor has been literally sowing the seeds of revival and bringing degraded land sites back to life, reaping the fruits of an ecological science experiment conducted in New Jersey in 1994.

After a sewer pipe had broken in a suburban area near New York City, Dr. Steven Handel was called to the rescue. The challenge was to change the landscape, while ensuring that maintenance costs would be kept to a minimum. Sustainability was a major concern. So Handel and his team of students started a pilot project aimed at reestablishing the natural process of life in the area.

After covering the ground with soil brought from a nearby building site and topping it with compost, they planted berry trees and bushes on a small patch of land to attract birds. Birds carry and disseminate seeds from nearby forests. The seeds in turn become trees and attract more wildlife. Seed traps were placed under the initial trees to measure the quantities brought by the birds. Results far exceeded expectations, both quantitatively and qualitatively. More than a decade later, what once was a wasteland has now grown into a lively open space. Patches of trees have gradually expanded, along with wildlife habitat. Bees also moved in and pollination brought biodiversity into the area.

"Ecosystem services," as Handel affectionately dubs his expert science, brings us an array of free, low-maintenance benefits thanks to natural ecosystems: the purification of air and water; the mitigation of droughts and floods; the generation and preservation of soils; the cycling and movement of nutrients; and a partial stabilization of climate.

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Since the Fresh Kills experiment, Handel has worked on a number of key urban restoration projects, with leading landscape architects; namely the new Brooklyn Bridge Park in New York City, the Olympic park for the Beijing Olympics, and currently the new Orange County Great Park in Irvine, California.

Handel's work has been made possible thanks to the generous support of Rutgers alumni and friends. If you, too, would like to help advance the research conducted by Handel's team, disseminate his practices, and train new generations of land restoration specialists, please contact The Office of Development at 732-932 9000, ext. 576 or development@sebs.rutgers.edu.

For more information, visit us at www.sebs.rutgers.edu/development.

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