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CONSERVATIONIST



URBAN LEGACY

Nurturing nature in city neighborhoods

by Lisa Garrison and Susan Maresca

At the southern edge of Jamaica Bay, a ten-thousand-acre ecosystem of salt marshes, tidal creeks, beaches and islands at the entrance of New York harbor, hundreds of volunteers raise native trees, shrubs and plants to increase biodiversity in the challenging urban environments of Gateway National

at the greenhouse, such as eastern prickly pear cactus (*Opuntia humifusa*) will eventually be planted along eroded back dunes and barrier beaches of Brooklyn and Queens and used to re-green local landfills.

Nearby, within Gateway's open grasslands, joyful sounds rise from a butterfly garden established by the Floyd Bennett Garden Association. In this chemical-free garden, youngsters learn about plant life cycles, migrating birds, ladybugs, bees and bats. In a crowning touch of magic, the association has erected a hummingbird trellis and nature bridge spanning a pint-sized, fish-stocked pond.

In Tribeca, one of the country's most expensive real estate districts, The River Project, a marine science field station, maintains a 20-year database of fish occurrences off lower Manhattan. Through its estuarium on Pier 26, visitors are introduced to hundreds of local fish and invertebrates living in Hudson River water circulating through a 3,000-foot network of piping and tanks. Audiences of up to 700 have attended *LIVE! From the Bottom of New York Harbor*, to observe marine night life on the mud bottom around the pilings of Pier 26 via interactive video feed provided by divers from Stevens Institute of Technology. The River Project's newest work (supported by the DEC's Harbor Estuary Program) is an online encyclopedia of vocalizations of New York



Students help with grounds keeping and native plant generation at Gateway Greenhouse Education Center.

Recreation Area. Launched by the Friends of Gateway nearly three years ago, the Gateway Greenhouse Education Center is helping to turn Floyd Bennett Field, NYC's first municipal airport, into a public space that includes extensive wildlife habitat and the return of native plant communities. Seedlings raised



Above: Young people seine for marine life at Beczak waterfront. Inset: A native blue crab.

Harbor fish, including oyster toadfish, cusk eel, and grubby sculpin.

Eighteen miles upstream, at Beczak Environmental Center in Yonkers, along a sandy beach and restored salt marsh, young people seine for the "Catch of the Day." They are partici-

pants in a program offered by Cornell Cooperative Extension (CCE) of Westchester County to high school students from Mount Vernon, led by CCE volunteers trained to serve as adult mentors to groups of youngsters from throughout the county.

In Chinatown schools and community centers, WORMS AT WORK, an education program of the Lower East Side Ecology Center, lets neighborhood children see for themselves how earthworms recycle table scraps and fallen leaves into nutrient-rich soil for growing plants. Such environmental education programs complement the Ecology Center's electronics recycling events, celebrating the under-

ground denizens that rejuvenate urban parks while teaching youngsters the value of waste reduction for creating a sustainable city.

Meanwhile, on a 3,500-foot "green" roof above a South Bronx elementary school, teachers, students and community members work beside scientists from the Gaia Institute to conduct bird and butterfly counts, germinate seeds and assess how stormwater removed from the combined sewer systems supports biodiversity and ecological productivity. A weather station on the roof feeds real-time data into classroom computers. Gaia mixed recycled expanded polystyrene with pectin, clay slurry and composted organics such as Christmas trees, to create rooftop soil made almost entirely from the waste stream, designed to hold twice its weight in water. As part of a broader Green Roof Initiative underway in the Bronx, the project is set to involve an intergenerational community in exploring how wildlife islands function in highly urbanized areas.



What each of these projects have in common is that they are all supported by the New York City Environmental Fund (NYCEF), now in its 10th year. Recognizing that managing and sustaining the city's extraordinary natural resources is a tall order, the fund was established in 1994 by NYSDEC and the Hudson River Foundation to foster active community stewardship of the city's waterways, shorelines, parklands, and open spaces. Through a program administered collaboratively by the two agencies, the fund has granted more than \$7.5 million since 1997 to 400 organizations from New York City and Westchester County. Annually the fund receives an average of 100 proposals, and has supported more than half of



Worms are used to make nutrient-rich compost at the lower East Side Ecology Center.



Above and right: Students sort through the "Catch of the Day" at the Bezak Environmental Center in Yonkers.

From the start, the fund's strong suit has been its connection with New York City communities, an outreach effort that spans the socioeconomic spectrum, and places special emphasis on neighborhoods at a distance from the city's larger flagship parks, and with small groups of people who can make a difference. The Fund's underlying environmental justice concerns have led it to nurture "friends groups" and underwrite efforts to ensure environmental benefits to parts of the city that have lacked access to natural areas. NYCEF also supports broader alliances working to revitalize neglected areas, including the Metropolitan Waterfront Alliance and the Bronx River Alliance (BRA) which recently broke ground on a 23-mile multi-use path that will run the full length of the river. NYCEF supports BRA's outreach to the numerous community groups within walking distance of the river.

Several other NYCEF initiatives complement the fund's ongoing grant making program. Last year, 50 New York City youngsters attended DEC summer

camp through a program administered by the Urban Park Rangers. NYCEF has also played a pivotal role in launching the New York City Environmental Education Afterschool Program, based on a partnership between United Neighborhood Houses, The After-School Corporation, and NYSDEC, with support from the National Fish and Wildlife Foundation.

Approximately two-thirds of 576 NYCEF grants awarded to date support environmental stewardship and education projects involving young people. This investment has, in turn, nurtured a growing network of organizations with a shared commitment to providing the next generation of urban youth with tools and resources to sustain natural resources. NYCEF projects for young people mix outdoor adventure, science, stewardship and service learning, to nurture



ecological citizenship in a city where nine million people share one watershed.

Through NYCEF projects, youth have conducted beach surveys, examined aquatic insects as indicators of stream health, experimented with alternative energy solutions to urban problems, sailed, planted salt marsh grasses and used GPS technology to conduct a street tree inventory. As they work to reclaim abandoned public parks and create wildlife habitat, participants see their efforts produce tangible results, improving both the environmental quality and distinct character of their communities. By learning to pay attention to what sustains life, rather than what destroys it, they are discovering new possibilities for civic engagement that lead not only to potential career paths, but to making a real difference in their neighborhoods.

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