

## Local Seeds: Not for Food, But for Future

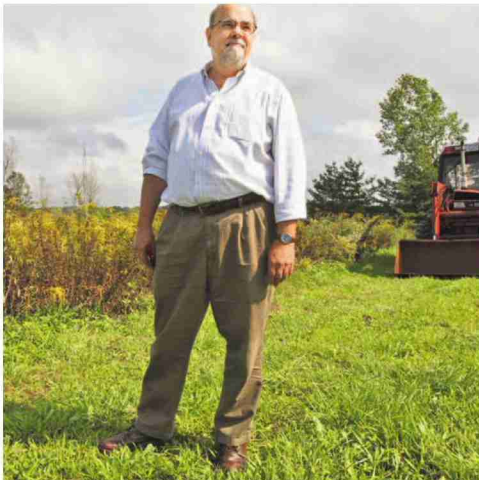
By LISA W. FODERARO

**A** SEED, to most people, is an inscrutable thing, a closed box waiting to be unpacked. But for Ed Toth, the director of New York City's native plant center on Staten Island, it is a wide-open window, with a view stretching back to the last Ice Age and forward into the future.

Mr. Toth, a botanist who has worked with the city's Department of Parks and Recreation for a quarter-century, is an updated, urbanized Johnny Appleseed, fired by the same spirit as those who champion locally grown food. He zealously advocates the use of not only native plants, but those propagated from seeds that were harvested as close to New York as possible.

Take the humble switchgrass, a summer perennial that is grown all over the United States, but in distinct regional populations. "They have been adapting to local conditions like temperature, water, soil and pollution for 10,000 years, since the glaciers retreated," Mr. Toth said. "Gradually, they are all diverging from each other. That's why it's so important to use seed from here — because it has all that ability

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RUTH FREMSON/THE NEW YORK TIMES

**MODERN-DAY JOHNNY APPLESEED** Ed Toth runs New York City's native plant center. to adapt."

Hoisting a canvas bag of locally sourced seed, one of scores in the seed

bank on the grounds of the Greenbelt Native Plant Center, Mr. Toth, 57, had the proud mien of a man displaying a prized quarry. "This really is like gold," he said. "It's not just a bag of Scotts seed from the corner hardware store."

Call it his Sermon Near the Mounds — that is, the four huge mounds of decaying garbage at the Fresh Kills landfill, not far from the old white farmhouse that serves as the plant center's headquarters. The landfill, once the world's largest, closed in 2001, and the parks department is now refashioning those piles into Freshkills Park, which will open in phases over the next 25 years.

Mr. Toth is preparing what he calls a "hurry-up mix" of 13 local grass and wildflower seeds that he hopes to eventually spread across the park, transforming the mounds into meadows. The hillocks have already been sown with grasses to hold the soil in place, but in Mr. Toth's view, those plants are a thin mixture that he is eager to replace with one that is more diverse and more local.

"It would be hard to call those grassland ecosystems at this point," he said.

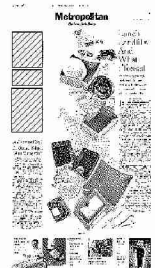
Stockpiling bulk seed for the park is just one of many projects for Mr. Toth and his 20-member staff. The plant center, with six greenhouses and several acres of irrigated nursery yard, provides seed and hundreds of thousands of plants, trees and shrubs for restoration projects across the city's 1,700 parks.

At any given time, some 400,000 plants are growing at the center, which the city bought in the 1990s as part of a legal settlement to keep the landfill open a little longer. The 13 acres had belonged to a family that ran a nursery there for almost a century, but had been put on the market. The settlement stipulated that the city use the property for parkland or horticulture, and so the native plant center was born.

For the first few years, the center was used primarily to propagate a half-million plants for the restoration of the 20-acre Ravine in Prospect Park, Brooklyn, where Mr. Toth got his start on the horticulture crew. The only trained botanist on the crew, Mr. Toth, who is from Ohio, pushed to include as many native species as possible in the restoration, which aimed to be true to Frederick Law Olmsted's original design.

"There wasn't a nursery industry in the 1870s, and Olmsted went off to parts of Brooklyn and ripped up ferns to bring them back to the park," Mr. Toth said.

Under Mr. Toth, who arrived at the



center in 1998, the center's focus has broadened to include the harvesting and banking of seeds for native species, which he says are increasingly threatened by urban development, invasive insects and climate change.

Collecting seeds is time-consuming. But Mr. Toth said it was necessary since there are virtually no commercial suppliers of locally sourced seeds. So two staff members make field trips to far-flung parts of the city, as well as to nearby places like Sandy Hook, N.J., where they have permission to harvest seeds from plants in the wild.

The collectors follow internationally recognized protocols for gathering a genetically diverse sample of seeds within each species. That process includes visiting a site more than once, using a randomized search pattern and taking limited amounts of seed from each plant.

The seeds are then brought to the center, where workers use mesh screens and simple machines to sort and clean them for storage. "It's pretty primitive," he said, demonstrating the technique of rubbing a seed head. "It's the biblical 'separating the wheat from the chaff.'"

The seed bank, a walk-in refrigerator, is kept at a pleasant 65 degrees with bone-dry humidity, under 15 percent — conditions that should preserve the seeds for decades. Along with the city's own stores of seed, kept in canvas bags and paper envelopes, the plant center is stockpiling seeds for the city's Department of Environmental Protection and a nonprofit group called the Long Island Native Plant Initiative.

To generate even more seed for large projects like Freshkills Park, the center recently teamed with the D & R Greenway Land Trust, a nonprofit group in Princeton, N.J. In recent months, the

trust has planted native grasses and wildflowers on its preserve to produce seeds for the center; last week, farmers there harvested seeds from milkweed plants.

The center has even played a small role in the Millennium Seed Bank, a project run by the Royal Botanic Gardens in Kew, England. The millennium bank has collected seeds from 10 percent of the world's wild plant species and is storing them for posterity at extremely low temperatures. The Staten Island center, the only urban source in the Western Hemisphere to provide seed for the international effort, has shipped off 100 species from within 75 miles of New York City, including bayberry, oat grass and hairy Solomon's seal.

The center's next big mission is to represent the mid-Atlantic region in a new national seed bank, called Seeds of Success. New York City's parks department was selected in 2008 to join the national initiative, along with groups like the Lady Bird Johnson Wildflower Center and the Chicago Botanic Garden.

If Mr. Toth is overwhelmed by the task of overseeing the eventual collection of seeds from thousands of native plant species, from northern New York to West Virginia, he is not letting it show.

"The one thing on our side is time," he said. "We're the parks department. In theory, we're here forever — as long as there is a city."

## At an old landfill, safeguarding native species of plants.



### HARVESTS

Ed Toth, director of the Greenbelt Native Plant Center on Staten Island, in one of the center's six greenhouses, right, and with samples from the seed bank, left. Jobe Walker, below, collecting seed.



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