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NATURE

## **Bananas in the Backyard**

By ANNE RAVER

**C**ALL it global warming or just call it the weather, but New Yorkers are growing plants that aren't supposed to grow here. The Brooklyn Botanic Garden (in a hardiness zone where the coldest temperatures are supposed to be from zero to minus 10) has for the last five years been growing *Salvia guaranitica*, a gorgeous, deep-blue native of South America that is supposed to die if temperatures go below 20 degrees. Crape myrtle (a Southern belle who never went north of Baltimore) can now be found in Yankee country.

In Boston, "We've been trying to grow a Chinese tulip tree for 100 years," said Peter James Del Tredici, the director of living collections at the Arnold Arboretum of Harvard University, in Jamaica Plain. "It bloomed for the first time this spring."

In Washington, a 15-foot bay tree is thriving in the herb garden of the National Arboretum. "That's unheard of, this far north," said Scott Aker, a horticulturalist there.

New Yorkers used to know to grow salvias as annuals and to take that bay tree inside for the winter. Now, fuzzy kiwis, Italian cypresses and cannas — too tender for Northeastern gardens, according to the Agriculture Department's Plant Hardiness Zone Map — are lounging around New Jersey and Connecticut and Brooklyn. The hardiness zone map, first created in 1960, told people the average coldest temperatures of their area. Although it was updated in 1990, the map had become so outdated that the American Horticultural Society, with a \$70,000 grant from the Agriculture Department, is updating it again. They are adjusting the official zones to reflect warmer temperatures — and in a few cases, cooler ones.

"It could be colder, it could be drier, it could be wetter, it could be warmer," said Katy Moss Warner, the new president of the horticulture society. If you can't exactly point to the climate changes as evidence of global warming, perhaps you can call it global weirding. The 1990 version of the map actually bumped down the zone of an area near Vero Beach, Fla., because of repeated hard frosts that damaged citrus groves there. The newly revised map just might bump those hardiness zones back up again, because winters in Vero Beach these days have been so balmy. Maybe not. It's like Election Night and the votes haven't been counted yet.

"We have to wait for the full analysis," said Mark Kramer, a meteorologist at the Meteorological Evaluation Services Company, in Amityville, N.Y., the organization that is creating the new map.

Most of us experience weather day to day. Is it raining? Will there be frost tonight? But meteorologists take the long view. Ask them if there is global warming and they say, "Come back in 30 years." The new zone map is averaging the rise and fall of the mercury over the last 16 years. Which means zip to your fig tree, if it freezes

one night.

Most serious gardeners and growers, in fact, never even check those maps. They know what grows in their area. They realize that a map won't pick up microclimates, like the south-facing brick wall that allows you to grow fuzzy kiwis in Brooklyn. Or the steam tunnel in Manhattan that means you never wrap your fig tree.

They know that every year is different, and that every part of the country offers exceptions. Remember the roller coaster ride in the Northeast last spring, the exceedingly warm April that tricked the magnolia buds into opening — and the two hard frosts in May that zapped the flowers, and made trees shed their leaves.

The map won't tell you about droughts either, or summers so hot you think you're in Mississippi, or violent rains that washed over the baked soil in a near-biblical flood.

So what good is it? Well, growers have to start somewhere, and so do novice gardeners. Moreover, the preliminary data for the revised map may give us a clue to whether there really is global warming, or if it just feels that way.

The map is taking data from 6,700 national weather stations. "A lot of stations stayed the same, some were warmer and a few were colder," said Mr. Kramer, the meteorologist redrawing the lines. In New York State, 55 weather stations stayed in the same zone, 32 became one zone warmer, none became colder. In Nevada, 40 stations stayed the same, and 2 were warmer but 8 were colder.

"This map is not trying to show that global warming is or is not happening," Mr. Kramer said. That will take another 15 years.

But Mr. Kramer also looks around and notices the anomalies. When I talked to him last week, for instance, he said the leaves were still on the trees throughout Westchester and Long Island. "When I was a kid, we had to rake them by October," he said. "That's a very visible sign of global warming."

Five years ago [the American Horticultural Society created a different kind of map for plant survival, one that plotted high temperatures, that is, days a year that the temperature rose above 86 degrees](#). Extended heat can be as damaging to a fir from New England as below freezing is to an orange tree in Florida.

The Monrovia Nursery, based in Azusa, Calif., was the first wholesale nursery to add heat zones to the hardiness zones on its plant labels. Other big wholesalers, like Goldsmith Seeds and Kurt Bluemel Inc. are following suit. Monrovia sells 22 million plants a year, in 2,000 varieties. "Used together, the two zones give you a quick idea if this plant is suited to your area, and that's a huge help to the gardener," said Tony Mancini, a Monrovia grower in Azusa. "And if you live on the edge of a zone, you can often try things outside your zone."

Gardeners will soon find that something as simple as a tulip bulb will be tagged USDA 3-8 and AHS 8-1. But math phobics need not panic. The first numbers mean the tulip will survive in Hardiness Zones 3 to 8 (where temperatures go down to as low as minus 30 degrees); the second set of numbers indicates that tulips can survive in Heat Zones 8 through 1 (where there are as many as 120 days that are higher than 86 degrees). If you live in Zone 12 on the heat map — a fiery little scarlet blob in southeast Texas, you can't grow tulips. Did we need a heat map to tell us this? Well, maybe not for a tulip. But how about for a tree fern?

[Eventually the heat map and the new zone hardiness map will be joined and available on the Internet](#). Although you won't be able to zoom in on that south-facing wall in Brooklyn, you might be able to find the microclimate of your city. "Cities are holding heat, so they are going to be warmer than surrounding areas," Kim Kaplan of the Agriculture Department said. Next year, Ms. Warner said, gardeners will be able to go to the American Horticultural Society Web site ([www.ahs.org](http://www.ahs.org)), type in their ZIP codes, and come up with "a list of the 25 toughest plants for that area."

And surprise: the new hardiness map has added four new zones on the tropical end of the scale. Zone 15 includes plants hardy only down to 80 degrees. None of the four new zones (12 through 15) will show up on the hardiness map of the continental United States, but Hawaii will have Zones 12 and 13. You may see the highest zone numbers (14 or 15) on the label of that tropical banana plant you bought. Global weirding or no, if you live anywhere other than South Florida, you're still going to have to put it in your glass conservatory for the winter.

The additional zones are reflecting plant lust more than weather. Monrovia Nursery is selling a lot of tropicals to Minnesota. "They want bougainvillea and birds of paradise," said Judy Lynes, a spokeswoman for Monrovia. "And they think, 'Oh, if my local garden center sells it, it must be O.K.' But it's not something you can grow outdoors."

Or you can let that banana plant succumb to Minnesota weather and then buy another one next spring. At least the nursery industry will thank you.