

# LET THEM BREATHE GRAPES: STARLING CONTROL IN CHATTANOOGA, TN

by Gene Hyde, Chattanooga City Forester



*Sturnus vulgaris* Photo credit: Phil Myers, care of the Animal Diversity Web (<http://animaldiversity.org>)

They came not by the dozens or even the hundreds, but by the thousands. In late July 2004, I became aware of the excessive number of starlings roosting in the zelkova trees in Chattanooga's central business district.

Previous attempts at starling control had been unsatisfactory. We tried thinning the zelkova crowns by 25% to persuade the starlings to seek overnight shelter in another location. We tried inflatable owls, noisemakers, and electronic bird squawkers; none of the treatments worked for long.

More heavy-handed treatment options considered and rejected were poisoning (unpopular with the citizenry), aversion tactics using pyrotechnic shells fired from shotguns (the police department was horrified at the thought), predation from peregrine falcons (they don't eat enough birds), and spraying the birds with a detergent agent at 35 degrees Fahrenheit to induce hypothermia (banned by the federal government).

The European starling (*Sturnus vulgaris*) likes to inhabit urban landscapes (see sidebar). Very intelligent and not easily deterred, starlings love to roost in street trees, and therein lies the problem

for city arborists. Starlings defecate all over the roosting trees, sidewalks, cars, and anyone unlucky enough to be underneath the tree!

The feces smell bad and can be a source of airborne fungal spores that can cause respiratory diseases, such as histoplasmosis, in humans. And there is another problem. Starlings can carry bird mites that bite humans, causing mild to severe skin irritation. One Chattanooga apartment dweller experienced this and ultimately needed treatment by a physician for infected bites. As fear and infection spread through the immediate neighborhood, the residents and building owners besieged City Hall with requests for the removal of city street trees in their area.

I was finally given the order to start removing trees. Knowing that the trees would soon be removed, I tried some radical experiments with thinning—up to 90% of the crowns of some zelkovas—and removing every other tree. These radical measures also failed to prevent starling roosting. By the end of 2004, the birds had won the first round.

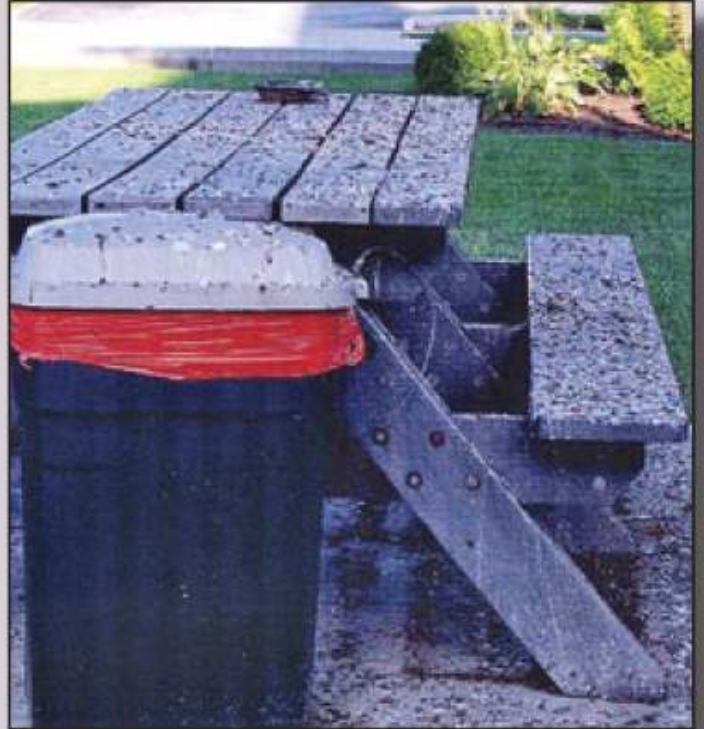
In early 2005, I stumbled onto the Web site of a company that

## European Starlings in North America

The 200 million European starlings (*Sturnus vulgaris*) now inhabiting North America descended from 100 birds released in Central Park in the early 1890s. The responsible party: a group dedicated to bringing to America all the birds mentioned in the works of Shakespeare. Previous attempts to introduce starlings in the American West were not successful. Today, their range spans the entire U.S. and the southern half of Canada.

Starlings are associated with the built environment and roost communally at night. They eat food waste as well as worms, fruits, and berries. Starlings like to return to the same site every day to eat and usually return to the same nest site every year.

Source: Cornell University Lab of Ornithology Web site  
[www.birds.cornell.edu](http://www.birds.cornell.edu)



Copious guano is just one challenge posed by roosting starlings. Photo credit: Auglaize County, Ohio Board of Commissioners

specializes in expelling unwanted birds using a food grade ingredient, methyl anthranilate, that is derived from Concord grapes. Using a specially designed hand-held fogger, the chemical is shot upwards into the canopy of target trees at dusk, as the birds are coming in to roost for the night. Although harmless to humans

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## Looking ahead to the March/April City Trees

- Profile: Santa Rosa, CA
- Urban Forestry Updates from Hurricane-Ravaged LA and MS
- Research Update: Cornell's Urban Horticulture Institute



Getting the fogger ready to fog the birds at night. Photo credit: Gene Hyde



The local news came out to film the fogging operation. Photo credit: Justin Holland

and other mammals, this product is painful to birds when they inhale. After four or five consecutive nights of being fogged, the birds associate the place of treatment with pain and decide to roost elsewhere.

I checked the references of the company, and all seemed to be in order. A contract was signed, plans were made, and a showdown was set for September 2005. We chose two spots in desperate need of starling removal; operations began promptly at dusk.

After four nights of fogging, the starlings in one of the areas got the message very clearly and have not returned. There was less success in the other area, probably because we were trying to fog too large an area and applied the fog for only three consecutive nights.

The total cost was approximately \$7,000 and included the purchase of a fogger, four gallons of methyl anthranilate, and four days of on-site training in Chattanooga. Some of this training involved the use of the fogger but most centered on learning bird behavior, bird psychology, and the interaction of starling family groups.

A question commonly asked is, "Where do the birds go after they are fogged?" The best answer is, "Away!" Sometimes they leave the area entirely but sometimes they roost in the next block, and it then becomes necessary to chase them away from that location as well.

As with so many things, there is no magic bullet for starling control. But I believe that fogging operations with methyl anthranilate hold promise for long-term treatment in areas with high concentrations of humans, especially where those people are concerned about chemicals, pesticides, and animal rights issues.

I recommend that communities formulate a comprehensive plan for application strategies for each nuisance bird species, a media plan, and notification protocols for area residents and businesses before beginning such a highly visible program. Additional information about methyl anthranilate for starling control can be found on the Web or by contacting me. 🍀

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